

RESPONSES TO QUESTIONS RECEIVED SINCE 10/09/22

1. Are we responsible for any work included in the specifications, but not shown or indicated on the drawings?

Response: Yes.

2. Are we responsible for inspection or testing of concealed conditions and/or of any previous work, that is not specifically specified or included in these plans and specs?

Response: Unforeseen conditions exposed in the course of construction may result in the expansion of the project beyond the scope of the bid documents. This is a normal occurrence that can be handled by means of Change Orders.

3. Unit price questions:

Are the unit prices to be used as a deduct change order for work shown or as an add alternate change order for additional work not specified or shown?

Response: Unit prices are Add and Deduct.

3.1 Unit Price 1: Concrete pathway, 6" depth, unit 1SF:

- Is this a price for misc. under 10 SF where conc is shown on the plans?

Response: Yes. Unit price is to account for discrepancies in estimating.

- Or is this for a major replacement of 1,000's of SF of existing walk not shown to be replaced?

Response: No.

- Is this price to just to pour and place concrete or does it also include saw cutting, demo of existing concrete, with new stone/conc and other unknown restoration not shown?

Response: Unit price should include excavation, subgrade preparation, placement of gravel base, concrete and reinforcement. Please include "Sawcutting/LF" as separate unit price within Unit Price 1.

3.2 Unit Price 4: Installation of natural grass turf, unit 1SF:

- Is this a price for misc. under 10 SF where soil is disturbed outside of areas shown on the plans?
- Or is this for a major replacement of 1,000's of SF of existing grass areas?
- Is this price to include any demo or grading of existing areas not shown on the drawings as to be replaced?

Response: Any damage to the landscape and its repair is the responsibility of the GC. This unit price will not be required as part of the bid.

3.3 Unit Price 2: Replacement and/or patching of wood flooring, unit 1SF:

- Is this a price for additional small areas under 10 SF where existing floor is shown to be cut, if additional surrounding flooring needs replacing or small areas in areas where only finishing is specified?

Response: The unit price is intended to apply to areas of patching between 10 SF and +/- 100SF that may occur within the existing wood floor to be refinished. Please provide separate unit prices for each flooring type—oak, maple, and heartwood pine.

- Or is this for a major replacement of 100's of SF repair &/or replacement of areas not shown or areas only specified as having a new finish?

Response: See above.

3.4 Unit Price 11: Magnesium Oxide Panels unit 1SF:

Response: This unit price is not required as part of the bid.

Magnesium Oxide panels are to be provided as tile backer.

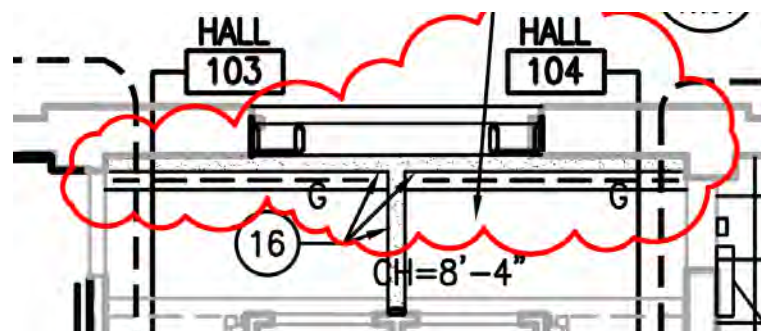
In all other locations, wall and ceiling surfaces are to be 5/8" high-impact gypsum wall board, moisture resistant in Toilet and Utility Rooms, with 1/2 BC plywood backing. For patched areas and areas co-extensive with surrounding wall or ceiling surfaces, provide veneer plaster finish to match existing.

- 2/A602 shows this at a light soffit in 103/104. Is this unit price for additional soffit & ceiling work or a credit for what is shown? What about the framing work relating to the installation?

Response: The lighting soffit shown in 2/A-602 is part of the base scope, including framing, sheathing, and finish as per specification. Surfaces to high-impact gypsum wall board, as noted above.

Is this the soffit detail for note 16 on A-601?

Response: Note 16 refers specifically to the wall surfaces to either side and above the new rear door opening and the facing of the header separating Hall 103 and Hall 104. The RCP will be revised to show the soffit.



- Where is Hall 104, I only see 103 on the plans

Response: Hall 103 is to the Left (South) of the Main Stair; Hall 104 is to the Right (North) as above.

- Is there a detail for the ceiling work in 109B, assuming this is the area behind vestibule 109 with the wood cornice.

Response: 109B is between Vestibule 109A and Lobby 106, as shown on plan A-101. Construction is a suspended metal framing with wood cornice molding. Molding to match existing or similar as approved by Architect.

- The unit price also refers to walls.

Response: Unit price is not required. See above.

- The spec refers to using this under a tile substate. The finish schedule calls for CBU under the tile. Which is correct?

Response: MgO panels are to be used as tile backer as stated above.

- Where is this work to be done, as I do not see MGO on the finish schedule for walls? Is there a detail for this work on the drawings?

Response: Please see above responses.

4. 092613 Gypsum plaster veneer

- 2/A602 specifies a veneer plaster on the soffits is this the only areas with new gypsum veneer plaster?
- I do not see plaster noted on the finish schedule, are any areas to be plastered?
- Is it correct to assume the only areas to be plaster patched are as noted to the plans where demo or fixtures have been removed?

Response: Wall and ceiling surfaces are to be 5/8" high-impact gypsum wall board, moisture resistant in Toilet and Utility Rooms, with 1/2 BC plywood backing. For patched areas and areas co-extensive with surrounding wall or ceiling surfaces, provide veneer plaster finish to match existing.

5. 061516 T&G roof decking

- 2.3 B. 1. Is the areas of T&G roof decking replacement exposed underneath where a finish maybe required?

Response: No. T&G decking is structural; it is not exposed to view.

- Do you have a specific manufacturer for the T&G roof deck or are you looking for custom milled lumber?

Response: In order to match existing thickness and edge profile, custom-milled decking should be assumed.

6. Are there any special or specific historical requirements for any of this work?

Response: No.

7. 011100-1 1.4 A. 2. Has paint been tested?

Response: No. Work is to be done in accordance with the EPA “Renovation, Repair and Painting (RRP) Rule.” The General Contractor and their Subcontractors, and workers are to be EPA Lead-Safe Certified.

8. 024119 3.1 F wants contractor to verify that hazardous materials have been remediated before proceeding with buildings demolition operations.

Response: Specification Sections 028200 Removal of Asbestos Containing Materials and 171000 Removal/Disposal Of PCB, Mercury-Containing And Miscellaneous Materials are attached. Quantities are included in the specifications.

- Has a part 1 or 2 report been done for hazardous materials or materials requiring special handling?

Response: The Phase 1 report will be made available to successful bidder.

- Has any remediation previously been done in this building? If so, can we get a copy of the reports?

Response: See above.

- If not, are we to hire a remediation contractor to perform an evaluation and testing of existing materials and their conditions?

Response: See above.

- 17100 specifies the removal of hazardous materials.
 - Is there a part 1 or part 2 indicating which fixtures and which rooms are to be air monitored?

Response: Specification sections 028200 and 171000 both include air monitoring. An air monitoring schedule is required to be submitted before the start of work.

- Is this only for fixtures noted on the drawings to be replaced or are we expected to check all exist fixtures, even if not being replaced?

Response: If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and City. See Specification 024119.E 1 – 3 for handling of hazardous materials. Section Specification 171000 Section 1.4 E states that “The Contractor shall be responsible to verify all quantities and to determine job site conditions.”

9. Is the contractor required to do any testing? If so, what specifically needs to be tested?

Response: The GC is responsible to coordinate with the Special Inspections team, but is not responsible for the testing it requires. Other testing as required by the specification is the responsibility of the GC.

10. Attachment E Page 7 of 30 specifies "The Contractor shall have total responsibility for all system testing..... The Contractor shall include the testing, maintenance and repair of systems as described herein." The plans and specs indicated do not match the contract plans and spec document. (Also see Engineering and design professional services question below)

Response: The full item in the Contractor Qualifications General Requirements reads: "The Contractor shall have total responsibility for all systems testing, of all components used, and the coordination and installation of the work shown and described in the "G, C, SP, S, D, A, P, M" drawings and Specifications Divisions 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 13, 22, 23, 31, 32, 33. The Contractor shall include the testing, maintenance and repair of systems as described herein."

This item is to be revised: "The Contractor shall have total responsibility for all systems testing, of all components used, and the coordination and installation of the work shown and described in the drawings and specifications divisions provided within the bid package. The Contractor shall include the testing, maintenance and repair of systems as described within the contract documents."

- Throughout all the specifications testing and special inspectors are by owner some places and by contractor in others. Is the Owner hiring the Special Inspector and testing inspection agency and Contractor cooperating as is normally done or are we to follow the specifications with Owner & Contractor multiple testing agencies and special inspectors?

Response: The Owner is hiring the Special Inspector and the GC is cooperating.

- If this is to be included, please specify the scope of work to be included.
 - For example, 033000 3.15 A says concrete special inspection field testing is by the owner, but 033000 3.15 B seems to indicate it is by the contractor. Which is correct?

Response: Quality control testing is responsibility of GC. Special Inspections are to be coordinated by GC.

- 034900-10 2.14 specifies engaging a testing agency to evaluate GFRC quality controls and testing methods.

Response: Please see IBC 2018 Chapter 17 on Special Inspection requirements for fabrications.

- 055100-111 3.5 seems to indicate contractor is required to "engage (hire) a qualified special inspector..... required by City.

Response: Special Inspection services are to be contracted directly by Owner. As stated above, GC is to coordinate the Special Inspections appropriate to the progress of the work.

11. 011100-1 1.4 B. 1. a. For removal of all abandon wiring and devices.

- 260500-2 1.4 spec say abandon in place is okay and complete remove is not specified. Is this correct?

Response: 260500 Section 1.4 D applied only to conductors, outlets, or raceways that are not to be removed. Section 1.4L requires the removal of conductors, outlets, and raceways in the area of work.

- Are we to include previously abandoned wiring and devices or just items we personally are removing?

Response: If previously abandoned wiring and devices are in the area of work, they are to be removed.

- Are all abandoned wires and devices to be removed back to the panels and any demo'd finishes to be replaced?

Response: Remove wiring and devices within the area of work where ever possible. Electrical elements can be abandoned in place if removal would require additional demolition.

12. 260500-6 1.9 inspection and testing. Is this testing including a megger test to be done on all wiring in the building or just the new contracted work?

Response: Testing is just for new contracted work.

13. 011100-1 1.4 B. 1. Refers to doing Work that is included in other Contracts.

- Please describe what other contracts, contractors or other groups or people who will have access to the building while the work is in progress.

Response: No other groups will have access.

- Where we are required to do work for other Contractors on the site, please provided us with these other contractor's scope of work.

Response: This is a single prime contract. GC is responsible for all Subcontractors.

14. 011100-1 1.4 C. Also talks about other Prime Contractors to be performing work. Who are these Prime Contractors?

Response: See above.

15. 011100-1 1.5 Says a hose bid and hydration station will be installed by others.

- What specific work are you expecting us to do for the contractor doing this work?
- Are there any plans or specs for this work?

Response: Disregard citation. Scope as in documents.

16. Engineering and design professional services

- Are we to provide design professional services to supplement the work of your design professionals?

Response: Some elements or systems may require design by the supplier/fabricator. This delegated design should be specified by the GC as part of the procurement process.

- 024119-5 3.1 E Specifies engaging a profession engineer to perform an engineering survey of existing conditions.

Response: Disregard.

- 034900 2.3 A specifies engaging a qualified professional engineer to design GFRC panels.

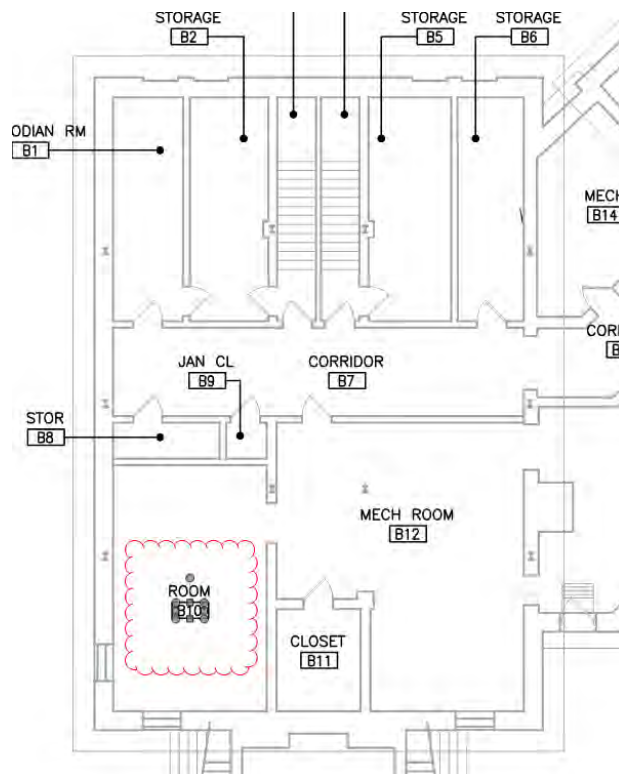
Response: Delegated design to be provided by supplier.

- If so, are we to included design professional insurances such as:
- Professional liability insurances
- "errors & omission insurances" for this design work?

Response: No; see above.

17. Can you provide a basement drawing showing the location of existing Panels MDP & DP?

Response: Panels are located in Room B10, as shown below.



18. Do you have a make and model number for new smoke detectors?

Response: PPR specification are for Honeywell products, and it is assumed that this is what has been installed. Honeywell product number is either Model 6820 (larger installations) or Model 6808 (smaller installations).

- Who is the system manu.? Does the city have a monitoring company we can contact to connect and program new fire alarm devices? What is the location of the Fire Alarm Control Panel?

Response: Fidelity is the City's Fire Alarm/Security installer. A manual will be provided to the successful bidder.

19. What is the size of existing panel RP to be relocated? What is the feeder size? How many existing circuits are we required to relocate to the new panel location?

Response: The existing panel RP is a 100A panel. Feeder size is 3#2+#8G-1-1/4" C.

20. Can you provide a manu. And model number for exit signs and emergency battery packs? They are not shown on the fixture schedule.

Response: Product sheets are attached.

21. Drawing M-2.2, VRF Split System Note 2 states "Indoor unit_ is fed via outdoor unit". Electrical Drawings show a separate 20A feed to the indoor unit and another 20A circuit to the outdoor unit. How are the units wired?

Response: Provide connection as shown on Electrical drawings.

22. Mechanical Drawings show five exhaust fans, electric drawing show four exhaust fans. Can you confirm the number of exhaust fans?

Response: Provide an additional exhaust fan connection for a total of five (5).

23. Panel MP schedule shows two hand dryers, floor plan shows three hand dryers. Should we add another breaker and feed for a hand dryer?

Response: There are 3 dryers. Provide appropriate circuiting.

24. Can you provide Specification Sections 265119-LED Interior Lighting, 265213-Exit & Emergency Lights and 265600-LED Exterior Lights? These sections are in the Table of Contents but not included in the spec's.

Response: Refer to A-602 for the lighting schedule. Product Sheets are attached.

25. Mechanical drawings show five ODU on the roof, Electric Drawings show seven ODU on the roof, Which is correct?

Response: There are 5 ODUs.

26. Spec's contain a section for Coordination & Arc Flash Study. Is this study only for new equipment we are installing or can you provide a list of equipment that can be coordinated for the study?

Response: Coordination & Arc Flash Study shall be provided for both existing and new panels.

27. Spec's contain a section for a SPD. Is and Surge Protection Device required on the new panel we are installing? It is not shown on the panel schedule or drawings

Response: Surge protection is required and will be incorporated on panel drawings.

28. Drawing E-2: Existing MDP is 300A Main Breaker Panel, Federal Pacific Electric. Panel cannot accept a 150A, 3 pole circuit breaker (PANEL & SERVICE ARE SINGLE PHASE). Panel will not accept a 150A circuit breaker. How do we feed Panel MP?

Response: The existing panel is to be removed and replaced. Revised drawings to be provided.

29. Existing Panel RP is 100A, Federal Pacific Electric panel (not made since the 50's). Panel is recessed in a masonry & plaster wall. Panel trim is for a recessed panel and missing all hardware. How do we relocate this panel?

Response: The existing panel is to be removed and replaced. Revised drawings to be provided.

30. The specs call for the G6 entrance mat to be 3/8" in depth.

Response: Entrance Grate is 3/8" depth. See Details for floor assembly in the area of the grate.

31. The Finish Keycode calls for Carpet Inserts. The shortest depth we can go with carpet inserts is 7/8".

Response: No carpet at entry area. See above.

32. The Specs also call out a 316 steel alloy, would standard 304 alloy be accepted?

Response: 316 stainless has been specified for resistance to de-icing salts.

The following questions are repeats of the above, as noted.

33. Can you provide a basement drawing showing the location of existing Panels MDP & DP?
See Question 17 above.

34. Do you have a make and model number for new smoke detectors? Who is the system manu.? Does the city have a monitoring company we can contact to connect and program new fire alarm devices? What is the location of the Fire Alarm Control Panel

See Question 18 above.

35. What is the size of existing panel RP to be relocated? What is the feeder size? How many existing circuits are we required to relocate to the new panel location

See Question 19 above.

36. Can you provide a manu. And model number for exit signs and emergency battery packs? They are not shown on the fixture schedule.

See Question 20 above.

37. Drawing M-2.2, VRF Split System Note 2 states "Indoor unit is fed via outdoor unit". Electrical Drawings show a separate 2DA feed to the indoor unit and another 20A circuit to the outdoor. Unit. How are the units wired?

See Question 21 above.

38. Mechanical Drawings show five exhaust fans, electric drawing show four exhaust fans. Can you confirm the number of exhaust fans?

See Question 22 above.

39. Panel MP schedule shows two hand dryers, floor plan shows three hand dryers. Should we add another breaker and feed for a hand dryer?

See Question 23 above.

40. Can you provide Specification Sections 265119-LED Interior Lighting, 265213-Exit & Emergency Lights and 265600-LED Exterior Lights? These sections are in the Table of Contents but not included in the spec's.

See Question 24 above.

41. Mechanical drawings show five ODU on the roof, Electric Drawings show seven CU on the roof, Which is correct?

See Question 25 above.

42. Spec's contain a section for Coordination & Arc Flash Study. Is this study only for new equipment we are installing or can you provide a list of equipment that can be coordinated for the study?

See Question 26 above.

43. Spec's contain a section for a SPD. Is and Surge Protection Device required on the new panel we are installing? It is not shown on the panel schedule or drawings

See Question 27 above.

44. Can you please provide Plumbing & HVAC Specifications there are none in the package?

Response: Specifications are currently on the drawings. Book specifications will be issued at a later date.

45. Sheet P1.1 shows WC fixtures as wall hung, the architectural BOD is floor mount. Which is correct?

Response: Floor mount. Specification is as below:

“Standard Compliance shall adhere to the design criteria listed below. Coordinate the color, finishes, and manufacturer options with Owner.

- 1. Mounting Type: Floor Mounted**
- 2. Outlet Orientation: Bottom**
- 3. Spud: Top**
- 4. Type: Flushometer Valve**
- 5. Style: Siphon**
- 6. Water Consumption: 1.6 gallons per flush**
- 7. Min. Flow Rate: 25 gallons per minute**
- 8. Material: Vitreous China**
- 9. Manufacturers: KOHLER; ZURN; AMERICAN STANDARD; SLOAN”**

46. What is the address of the project? The building is not on Longshore Ave.

Response: Although the building is sited at 4510 Disston Ave., the official address of the Park and Rec Center is 4423 Longshore Ave, as is noted in the RFP.

END OF QUESTIONS/RESPONSES

SPECIFICATION CHANGES

Item 1: Section 002113 INSTRUCTIONS TO BIDDERS. Revisions/Additions in *italics*.

1.2 INVOLVED PARTIES:

- A. City: City of Philadelphia, PA.
- B. Department: Rebuild
City of Philadelphia, Mezzanine
One Parkway, 1515 Arch Street,
Philadelphia, PA
- C. *Executive Director, Rebuild:* *Kira Strong*
- D. *Director of Construction, Rebuild:* *Luigi Sebastiani*
- E. Rebuild Project Manager: *LeeAnn Suen, Phone 267-882-8404*
- F. Site Owner: *Philadelphia Parks and Recreations*
- G. Owner Liaison: *Francesco Cerrai*
- H. Contracting Agency: Philadelphia Redevelopment Authority
Robert LaBrum, Phone: 215-209-8763
- I. Consulting Firm/*Architect:* *Converse Winkler Architecture LLC
331 Montgomery Ave
Bala Cynwyd, PA 19004
610-664-0806*
- J. *Consultant Contact:* *Peter DiCarlo*

ADDENDUM ACKNOWLEDGMENT

ADDENDUM NO. 1

Dated: 10/14/22

NOTICE

It is the sole responsibility of the bidder to ensure that it has received any and all Addenda and the Philadelphia Redevelopment Authority may in their sole discretion reject any bid for which all Addenda have not been executed and returned.

PROPOSAL FOR

Project No.: 16228E-03-01

Description: Disston Recreation Center – Upgrades

IS AMENDED AS FOLLOWS:

1. Amendments will be posted at [<https://phdcphila.org/rfps-rfqs-sales/construction-rfps/>] Each Bidder shall ascertain prior to submitting a proposal that Bidder has received all Amendments issued, and shall acknowledge their receipt in their proposal submission.
2. Attached are the Answers and Clarifications to questions submitted by prospective sellers.
3. Attached are the following Specifications Sections:
 - a. SECTION 17100, REMOVAL/DISPOSAL OF PCB, MERCURY-CONTAINING AND MISCELLANEOUS MATERIALS.
 - b. SECTION 02820, REMOVAL OF ASBESTOS-CONTAINING MATERIALS.
4. Attached are the following cut sheets:
 - a. Emergency and Exit Lighting Cut Sheets
 - b. Lighting Fixture Cut Sheets

Bidder must acknowledge receipt of Addenda in their proposal submission.

Bidder Signature / Date



Catalog Number
Notes
Type

Contractor Select™

EU2C

Lithonia Lighting Basics™ LED Emergency Light



The Lithonia Lighting® EU2C Emergency Light is suitable for emergency lighting applications such as stairways and hallways. Its dual LED lamp heads makes the EU2C ideal for safely illuminating the path of egress in small spaces at lower mounting heights. It can be wall mounted and will provide 90 minutes of emergency power in the case of power loss.

FEATURES:

- Test switch and status indicator
- UL indoor damp location 50°F to 104°F (10°C to 40°C) listed standard
- For use with multi voltage 120-277VAC, 50/60Hz



† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.

Catalog Number	UPC	Description	Supply Voltage	Input Wattage		Input Amps		Pallet Qty	Carton Qty
				120	277	120	277		
EU2C M6	191848037188	Emergency lighting unit, white housing	120-277, 50/60Hz	.56W	.70W	.072	.072	288	6

Accessories: <i>Order as separate catalog number.</i>	
ELA WG1	Wireguard 15-1/4" W x 13-3/4" H x 6" D (back mount only). See spec sheet ELA-WG .



Specifications

INTENDED USE:

Provides a minimum of 90 minutes illumination for the rated wattage upon loss of AC power to meet code required emergency lighting. Ideal for applications requiring low profile, emergency unit for lower mounting heights.

CONSTRUCTION:

Injection-molded, flame-retardant, high-impact, thermoplastic housing with snap-fit design components with LED lamps for easy installation. Universal J-box pattern (j-box not included). Track and swivel arrangement permits full range of lamp adjustment.

OPTICS:

The typical life of the LED is 10 years. Two 1W LED Lamps.

ELECTRICAL:

Multi volt input, 120-277VAC, 50/60Hz. Emergency unit provided with test switch, status indicator and rechargeable battery. Maintenance-free 3.6V nickel-cadmium battery provides 90 minutes of emergency power.

INSTALLATION:

Wall mount only (not suitable for ceiling mount).

LISTINGS:

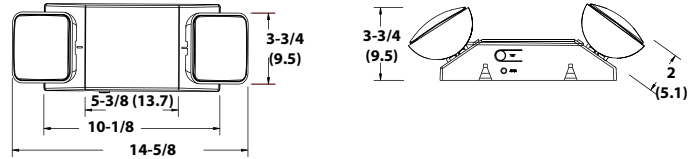
UL Listed. Meets all applicable requirements for UL 924, NFPA 101 (current Life Safety Code), NFPA 70 (NEC), California Energy Commission Title 20 section 1605.3 (W)(4), FCC and OSHA. Indoor damp location 50°F to 104°F (10°C to 40°C) listed standard.

WARRANTY:

2-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Dimensions



Weight (shipping): 1.7 lbs. (0.77 kgs.)

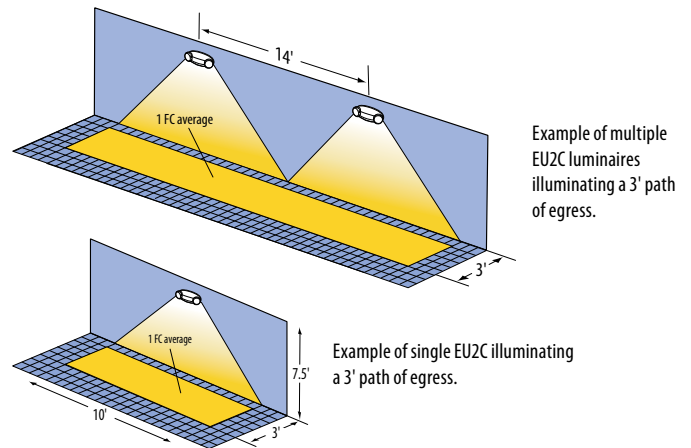
All dimensions are inches (centimeters) unless otherwise indicated.

Spacing guidelines

Maximum Spacing Guidelines - EU2C ¹						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaires		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg	10'	6'	14'	11'	100' Corridor 8' wide, and 9' high with 80/50/20 reflectances

Notes:

- Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.





Catalog Number
Notes
Type

Contractor Select™

EXRG

Lithonia Lighting Basics™

LED Exit



The Lithonia Lighting Basics™ EXRG Exit Sign is suitable for emergency signage applications such as stairways and hallways. This fully assembled single-face exit with extra faceplate is available in red and green letters. It's low profile makes it ideal for safely illuminated the path of egress in small spaces and can be wall or ceiling mounted. The emergency power provides 90 minutes of illumination in the event of a power loss.

FEATURES:

- Internal toggle switch for red or green letter color selection
- Test switch and status indicator for low maintenance (EL emergency models only)
- UL indoor damp location 50° to 104°F (10°C to 40°C) listed standard
- For use with Dual voltage 120/277VAC
- Internal switch for color selection



† Exit Signs Certified in the CA Title 20 Appliance Efficiency Database.

Catalog Number	UPC	Description	Supply Voltage	Input Wattage		Input Amps		Pallet Qty	Carton Qty
				120	277	120	277		
EXRG M6	00194994900658	Red/Green Exit, AC Only	120/277	1W	1W	0.09	0.09	360	6
EXRG EL M6	00194994900696	Red/Green Exit with Ni-MH backup battery	120/277	1W	1W	0.09	0.09	360	6

Accessories¹: Order as separate catalog number.	
ELA WG1	Wireguard (back mount only, 13 3/4"H x 15 1/4"W x 6"D)

NOTES

1. See spec sheet [ELA-WG](#) for more information.



Specifications

INTENDED USE:

LED lighted exit signs for marking the means of egress in accordance with Life Safety Code NFPA 101. The EXRG has an internal switch that ships standard as a red exit and can be switched in the field to green. It is also packaged standard with an extra faceplate along with red and green inserts.

CONSTRUCTION:

Injection-molded, flame-retardant, high-impact, thermoplastic housing with snap-fit design components for easy installation. Universal J-box pattern. Universal chevrons are easily removed for directional indication.

Fully assembled single face with extra faceplate for easy field-conversion to double face.

Letters 6" high with 3/4" stroke, with 100 ft viewing distance rating, based on UL924 standards.

OPTICS:

The typical life of the LED lamp is 10 years.

ELECTRICAL:

Dual-voltage input 120V or 277V AC. Non-emergency (AC only without battery) or Emergency exit with battery. The emergency model includes the test switch, status indicator and rechargeable battery.

Battery: (EL models) maintenance-free Nickel metal hydride battery provides 90 minutes of emergency power.

INSTALLATION:

Top, back or end mounting capability (canopy included).

LISTINGS:

UL Listed. Meets UL 924, NFPA 101 (current Life Safety Code), NFPA 70-NEC, FCC Title 47, Part 15, Subpart B and OSHA illumination standards. Indoor damp location 50° to 104°F (10°C to 40°C) listed standard.

WARRANTY:

2-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

All life safety equipment, including emergency lighting for path of egress must be maintained, serviced, and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Dimensions

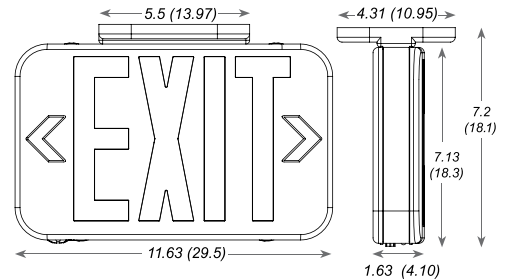
Length: 11.63 (29.5)

Depth: 1.63 (4.1)

Height: 7.2 (18.3)

Weight: EL: 1.6 LB

AC: 1.59 LB



All dimensions are inches (centimeters) unless otherwise indicated.

*DISSTON RECREATION CENTER
Addendum 1, 10/14/22*

LIGHTING CUTS

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ML, MH - PAGE 71

Pavo 8", 10", 12"

SIP12069 10 in

JOB NAME:

TYPE:

NOTES:

DESCRIPTION

Make an impression with this stately fixture. State-of-the-art integrated LED technology balances ambient light with minimal power consumption in this instant classic. But meticulous attention to detail is what really sets it apart. Even illumination (top to bottom and radially) and clean-finished ends satisfy the highest-end applications. And true to its minimalist design, it has no metal collars to break the form. Whether hung as a solitary unit or in arrays, its presence is magnificent. Available in diameters of 8", 10", and 12" and lengths from 2 to 8 feet long.

FEATURES & BENEFITS

- Matching bi-planar finish detail on top and bottom maximizes visual appeal from all angles
- Integrated LED luminaire design features a sophisticated passive cooling system with integrated heat sink
- Integral regressed downlight available in 1500lm or 3000lm and beam spread of narrow (26°), medium (40°), wide (55°), or very wide (90°)
- Ambient and downlight components are standard with separate switching and 0-10v dimming
- Available in either stem or cable mounting with driver located in canopy; remote driver option available for minimal canopy profile
- Handcrafted in USA

SPECIFICATIONS

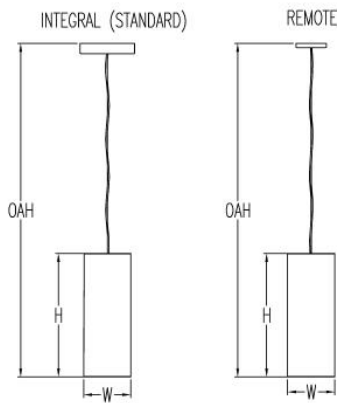
- **LIGHT SOURCE:** White LED light engine
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L80 = >60,000 Hrs.
- **EFFICACY:** up to 101 lm/W delivered
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard
- **DRIVER:** Class 2 power supply integrated in canopy standard; remote optional. Max distance to the driver (including OAH) is: #18 AWG = 50', #16 AWG = 75', #14 AWG = 100'. For extended distances, contact factory.



designed for
LED

- **MAX AMBIENT OPERATING TEMP:** 46° (114°C)
- **DIMMING:** 0-10V controls standard to 1% on LED light engines; Lutron control options available
- **INTEGRATED SURGE PROTECTION:** LED components are protected against minor surge events
- **DIFFUSER:** White matte acrylic diffuser standard; white gloss acrylic diffuser optional
- **CONSTRUCTION:** Aluminum
- **FINISH:** End plates and mounting components finished to match. To specify separately, contact factory. Choose from more than 30 thermoset polyester powder coat paint colors. RAL®, Pantone®, or custom finishes available upon request.
- **MODIFICATIONS:** Consult factory for all modification requests; including longer sizes or clusters
- **APPROVALS:** ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications

DIMENSIONS



2FT	W	H	OAH
	10 in 25.4 cm	23 in 58.4 cm	72 in 182.9 cm

Mounting Weight: Approximate: 20 lb (10 kg)

3FT	W	H	OAH
	10 in 25.4 cm	35 in 88.9 cm	84 in 213.4 cm

Mounting Weight: Approximate: 25 lb (12 kg)

4FT	W	H	OAH
	10 in 25.4 cm	47 in 119.4 cm	96 in 243.8 cm

Mounting Weight: Approximate: 30 lb (14 kg)

6FT	W	H	OAH
	10 in 25.4 cm	71 in 180.3 cm	120 in 304.8 cm

Mounting Weight: Approximate: 40 lb (19 kg)

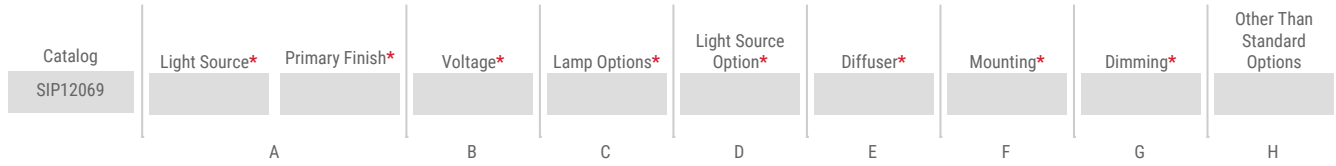
8FT	W	H	OAH
	10 in 25.4 cm	95 in 241.3 cm	144 in 365.8 cm

Mounting Weight: Approximate: 45 lb (21 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/SIP12069. Not all options are available in all configurations; consult factory for details.

Required Field *



A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request.

2 FOOT NOMINAL FIXTURE

- L21W** | White 21W LED Light Engine | Delivered Lumens: 2,058
- L42W** | White 42W LED Light Engine | Delivered Lumens: 4,116

3 FOOT NOMINAL FIXTURE

- L35W** | White 35W LED Light Engine | Delivered Lumens: 3,430
- L71W** | White 71W LED Light Engine | Delivered Lumens: 6,958

4 FOOT NOMINAL FIXTURE

- L49W** | White 49W LED Light Engine | Delivered Lumens: 4,802
- L92W** | White 92W LED Light Engine | Delivered Lumens: 9,016

6 FOOT NOMINAL FIXTURE

- L78W** | White 78W LED Light Engine | Delivered Lumens: 7,644

8 FOOT NOMINAL FIXTURE

- L106W** | White 106W LED Light Engine | Delivered Lumens: 10,388

See last page for finish options

B - VOLTAGE *

- 120-277V** | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.

3000K¹ | 3000K CCT

3500K² | 3500K CCT

4000K | 4000K CCT

¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens

D - LIGHT SOURCE OPTION *

Downlight CCT will match the Lamp Options selection above. Please choose one:

14W-26° Narrow | 14W (1500 delivered lumens) Downlight - 26° Beam

14W-40° Medium | 14W (1500 delivered lumens) Downlight - 40° Beam

14W-55° Wide | 14W (1500 delivered lumens) Downlight - 55° Beam

14W-90° Very Wide | 14W (1500 delivered lumens) Downlight - 90° Beam

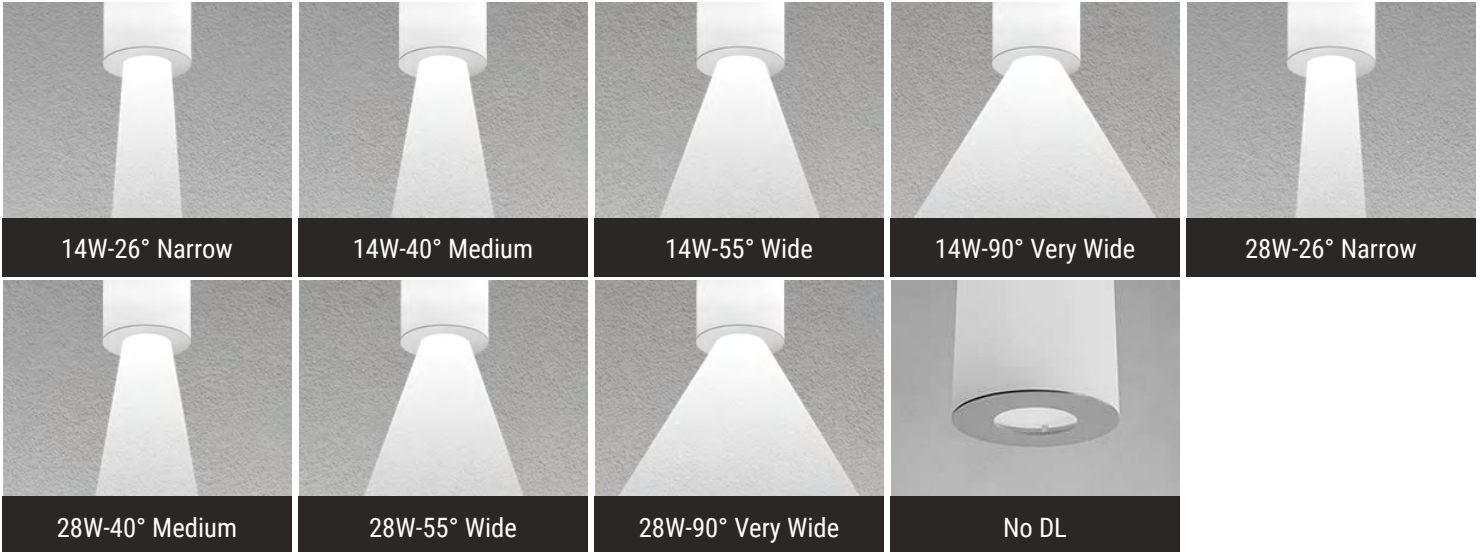
28W-26° Narrow | 28W (3000 delivered lumens) Downlight - 26° Beam

28W-40° Medium | 28W (3000 delivered lumens) Downlight - 40° Beam

28W-55° Wide | 28W (3000 delivered lumens) Downlight - 55° Beam

28W-90° Very Wide | 28W (3000 delivered lumens) Downlight - 90° Beam

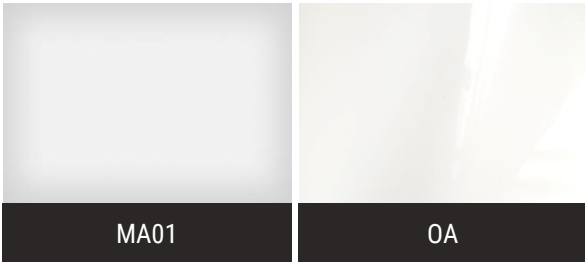
No DL | No Downlight



E - DIFFUSER *

DF_MA01 | Matte Acrylic Diffuser Lens (default)

OA | White Gloss Acrylic Diffuser



F - MOUNTING *

Mounts to standard 4" octagonal junction box; however, when the power supply is located in the canopy, auxiliary mounting holes are required. Power supply canopies feature a 45 degree swivel: 2' fixtures have a 10" diameter canopy and 3' to 8' fixtures have a 12" diameter canopy. Canopies for the remote power supplies swivel 22.5 degrees. Aircraft cable mounts feature a white power cord. Field adjustable aircraft cable allows the fixture to be mounted at an application appropriate height (up to OAH). Choose a mounting from below:

- DF_PSA**³ | 10"/12" Power Supply Canopy & Aircraft Cable (default)
- CAA** | 5.5" Canopy & Aircraft Cable, Remote Supply
- CAS** | 5.5" Canopy & Stem, Remote Supply
- PSS**³ | 10"/12" Power Supply Canopy & Stem

³ 2' size has a 10" canopy and 3' to 8' sizes have a 12" canopy

G - DIMMING *

When specifying a Lutron driver with the 92W 4' fixture or the 8' fixture in combination with a downlight and power supply canopy option (PSA or PSS), the canopy will be larger. Contact factory for more information.

- DF_DIM1** | 1% dimming with 0-10V control (default)
- LUT0** | Lutron Hi-Lume, (LDE1) Eco System, Fade to Black Dimming
- LUT2** | Lutron Hi-Lume, (LTEA2W) 2-Wire, 1% Dimming (120V Forward Phase Only)
- LUT5** | Lutron 5 Series, (LDE5) Eco System 5% Dimming

H - OTHER THAN STANDARD OPTIONS

Specify overall height required from ceiling to the bottom of the fixture.

OAH | Pendant suspension length other than standard

Available Finishes

Not all finishes are available in all configurations; consult factory for details.

Paint Colors

PT01 Super White (Gloss)	PT02 White (Textured)	PT03 Morning Light (Textured)	PT04 Warm White (Textured)	PT05 Putty (Textured)
PT06 Warm Beige (Textured)	PT07 Light Taupe (Textured)	PT08 Medium Taupe (Textured)	PT09 Medium Grey (Textured)	PT10 Dark Grey (Textured)
PT11 Black (Textured)	PT12 Dark Chocolate (Textured)	PT13 Warm Grey (Textured)	PT14 Light Grey (Textured)	PT15 Sage (Textured)
PT16 Spruce (Textured)	PT17 Red (Textured)	PT18 Deep Red (Textured)	PT19 Blue (Textured)	PT20 Dark Green (Textured)
PT21 Pearl White (Metallic Gloss)	PT22 Platinum (Metallic Gloss)	PT27 Deep Copper (Metallic Gloss)	PT28 Dark Stainless (Metallic Gloss)	PT29 Red Brass (Metallic Gloss)
PT31 Medium Bronze (Metallic Gloss)	PT32 Dark Bronze (Metallic Gloss)	PT33 Dark Blue (Textured)	PT40 Yellow (Textured)	PT41 Orange (Textured)
PT42 Sky Blue (Textured)	PT43 Teal (Textured)	PT44 Green (Textured)	PT45 Purple (Textured)	PT46 Aluminum (Metallic Textured)
PT47 Deep Red Brass (Metallic Textured)	PT48 Brass (Metallic Textured)	PT49 Bronze (Metallic Textured)	PT51 Matte White (Textured)	

Vallejo LC - Ceiling

SIC12100 8 in

SPILIGHTING

PROJECT DETAILS

JOB NAME:

TYPE:

NOTES:

TYPE B

DESCRIPTION

Add elegance and radiance to your most discerning spaces. This luminous cylinder's integral regressed downlight delivers correct light levels where needed. Ambient illumination provides a gentle visual warm-up to the higher output downlight source while adding light to the vertical plane to open up spaces. Meticulous attention to detail ensures suitability for the highest-end applications. Integral power supply simplifies installation.

FEATURES & BENEFITS

- Fixture has a bi-planar ambient finished bottom detail with or without the regressed downlight component
- Integral regressed downlight available in 1900lm and beam spread of narrow, medium, wide, or very wide
- Matte acrylic ambient cylinder diffuser is balanced with the proper amount of illumination while providing a sensible wattage allotment
- Integrated LED luminaire design features a sophisticated passive cooling system with integrated heat sink
- Ambient and downlight components are standard with separate switching and 0-10v dimming
- Handcrafted in USA

SPECIFICATIONS

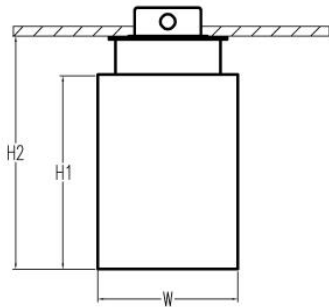
- **LIGHT SOURCE:** White LED light engine
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L70 = >50,000 Hrs.
- **EFFICACY:** up to 103 lm/W delivered
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard
- **DRIVER:** Integral Class 2 power supply standard
- **DIMMING:** 0-10V controls standard to 1% on LED light engines
- **INTEGRATED SURGE PROTECTION:** LED components are protected against minor surge events
- **DIFFUSER:** White matte acrylic diffuser standard; white gloss acrylic diffuser optional



designed for
LED

- **CONSTRUCTION:** Aluminum
- **FINISH:** End plate and mounting components finished to match. To specify separately, contact factory. Choose from more than 30 thermoset polyester powder coat paint colors. RAL®, Pantone®, or custom finishes available upon request.
- **MOUNTING:** Mounts to standard 4" octagonal junction box
- **MODIFICATIONS:** Consult factory for all modification requests
- **APPROVALS:** ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications

DIMENSIONS



W	H1	H2
8 in	11.1 in	13.3 in
20.3 cm	28.2 cm	33.8 cm

Mounting Weight
Approximate: 15 lb (7 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/SIC12100. Not all options are available in all configurations; consult factory for details.

Required Field *

Catalog SIC12100	Light Source*	Primary Finish*	Voltage*	Lamp Options*	Light Source Option*	Diffuser*
	A		B	C	D	E

A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request.

L10W | White 10W LED Light Engine | Delivered Lumens: 980

[See last page for finish options](#)

B - VOLTAGE *

120-277V | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.

- 3000K**¹ | 3000K CCT
- 3500K**² | 3500K CCT
- 4000K** | 4000K CCT

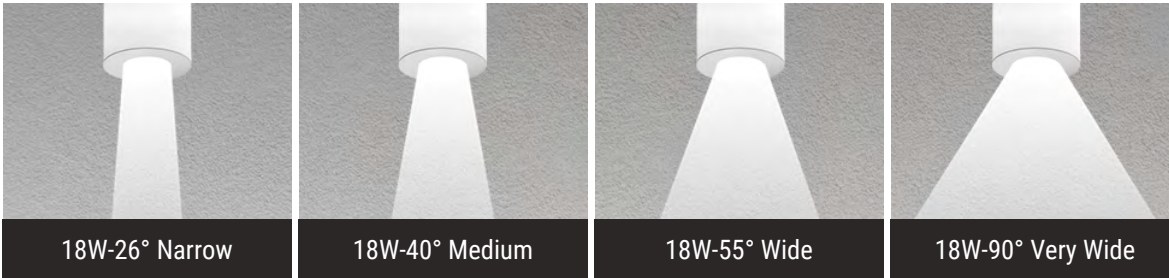
¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens

D - LIGHT SOURCE OPTION *

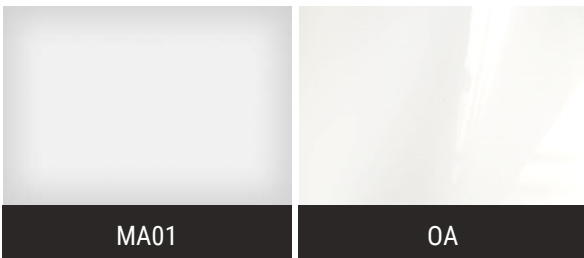
If you're specifying a downlight option, layer the ambient and downlight IES files. Downlight CCT will match the Lamp Options selection above.
Please choose one:

- 18W-26° Narrow** | 18W (1900 delivered lumens) Downlight - 26° Beam
- 18W-40° Medium** | 18W (1900 delivered lumens) Downlight - 40° Beam
- 18W-55° Wide** | 18W (1900 delivered lumens) Downlight - 55° Beam
- 18W-90° Very Wide** | 18W (1900 delivered lumens) Downlight - 90° Beam
- No DL** | No Downlight



E - DIFFUSER *

- DF_MA01** | Matte Acrylic Diffuser Lens (default)
- OA** | White Gloss Acrylic Diffuser



Available Finishes

Not all finishes are available in all configurations; consult factory for details.

Paint Colors

PT01 Super White (Gloss)	PT02 White (Textured)	PT03 Morning Light (Textured)	PT04 Warm White (Textured)	PT05 Putty (Textured)
PT06 Warm Beige (Textured)	PT07 Light Taupe (Textured)	PT08 Medium Taupe (Textured)	PT09 Medium Grey (Textured)	PT10 Dark Grey (Textured)
PT11 Black (Textured)	PT12 Dark Chocolate (Textured)	PT13 Warm Grey (Textured)	PT14 Light Grey (Textured)	PT15 Sage (Textured)
PT16 Spruce (Textured)	PT17 Red (Textured)	PT18 Deep Red (Textured)	PT19 Blue (Textured)	PT20 Dark Green (Textured)
PT21 Pearl White (Metallic Gloss)	PT22 Platinum (Metallic Gloss)	PT27 Deep Copper (Metallic Gloss)	PT28 Dark Stainless (Metallic Gloss)	PT29 Red Brass (Metallic Gloss)
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PT42 Sky Blue (Textured)	PT43 Teal (Textured)	PT44 Green (Textured)	PT45 Purple (Textured)	PT46 Aluminum (Metallic Textured)
PT47 Deep Red Brass (Metallic Textured)	PT48 Brass (Metallic Textured)	PT49 Bronze (Metallic Textured)	PT51 Matte White (Textured)	

Kendo RL | Recessed linear illumination system



Features

- 24VDC Class 2 fixtures made to order up to 144". Fixtures can be linked up to 16' depending on output
- Suitable for undercabinet, millwork ground recessed, and ceiling recessed applications
- Approved for closet/storage space installation per NEC 410.16(A)(3) and 410.16(C)(5)
- Vibrant colors with R9 values up to 98
- Single micro binned LEDs +/- 30 CCT
- Dims with minimal color shift
- Class 2 listed for damp locations
- Proprietary strong bond solder method handles up to 50lbs of torque on wire leads and connectors
- 5 Year warranty



IC RATED

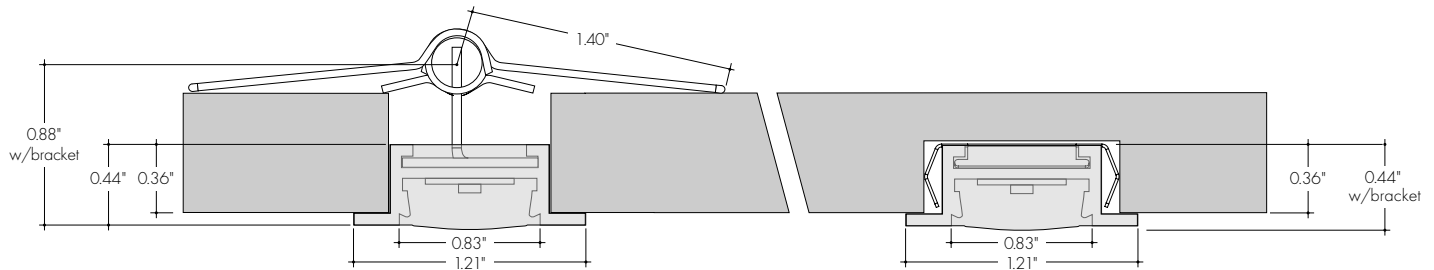
RoHS



Finish Options

- Silver anodized
- Black powder coated
- Bronze powder coated
- White powder coated

Profile dimensions



Technical information

OUTPUT OPTIONS	SO	HO	CCT INFO/LUMEN MULTIPLIER		TM-30-15		
	(LL36X2)	(LL54X2)	Color Temperature	Multiplier (reference - 3000K)	CRI	R _f	R _g
Lumens at 3000K (with clear lens)	426 lm/ft	632 lm/ft	2200K	0.87	86	87	98
Average power consumption at 4'	6.5 W/ft	10.4 W/ft	2400K	0.73	98	95	102
Lumens / Watt (with clear lens)	66 lm/W	61 lm/W	2700K	0.81	97	95	101
Maximum system length (in series)	16'	10'	2900K	0.86	97	94	101
			3000K	1.00	91	89	98
			3500K	1.05	94	90	102
			4100K	1.28	94	86	96

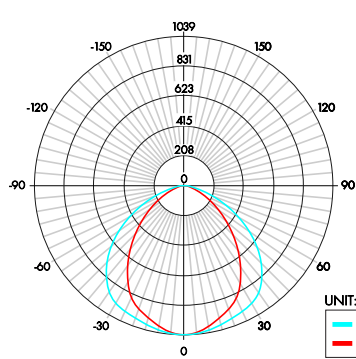
Ordering Code

MODEL	LENGTH	CCT	OUTPUT	LENS	MOUNTING	FINISH	POWER FEED / TYPE
KRL	12	22K	SO	C	HS	SA	B
KRL - Kendo RL	12" - 144" 4" increments	22K - 2200 K 24K - 2400 K 27K - 2700 K 29K - 2900 K 30K - 3000 K 35K - 3500 K 41K - 4100 K	SO - Standard *HO - High	C - Clear HF - Half-Frosted F - Frosted	HS - Hard surface mounting bracket GS - Gypsum surface mounting bracket NB - No bracket	SA - Silver BK - Black BZ - Bronze WH - White (BK, BZ, WH finishes will have an upcharge and require longer lead times)	B - Back 1 - 72" wire leads 1X2 - 72" wire leads at both ends 2 - 72" wire leads at one end and quick connect at other 3 - Single quick connect 4 - Dual quick connect

*Not available over 120"

Photometry

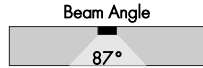
KRL-48-30K-HO-C-XX



Zonal Lumen Summary 3000K

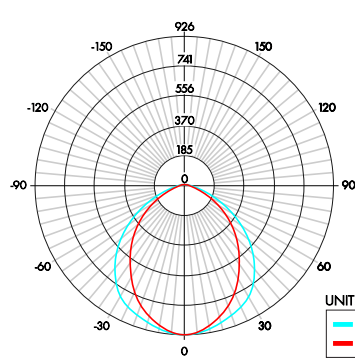
Zone	Lumen	% Fixture
0-30	818	32%
0-40	1325	52%
0-60	2186	87%
0-90	2505	99%
0-180	2527	100%

Total



UNIT: CD
 — C0/180
 — C90/270

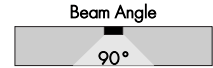
KRL-48-30K-HO-HF-XX



Zonal Lumen Summary 3000K

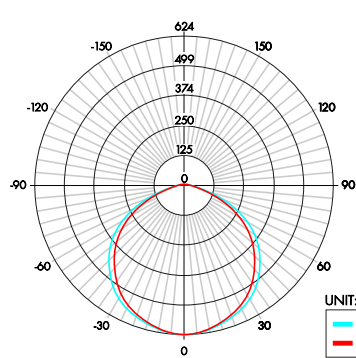
Zone	Lumen	% Fixture
0-30	700	31%
0-40	1124	50%
0-60	1870	83%
0-90	2245	99%
0-180	2265	100%

Total



UNIT: CD
 — C0/180
 — C90/270

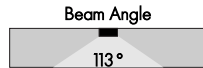
KRL-48-30K-HO-F-XX



Zonal Lumen Summary 3000K

Zone	Lumen	% Fixture
0-30	494	26%
0-40	819	43%
0-60	1468	77%
0-90	1876	99%
0-180	1898	100%

Total



UNIT: CD
 — C0/180
 — C90/270

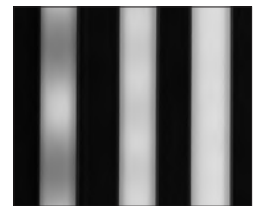
Light Transmission

Lens/Accessory	Transmission Percentage
clear lens	100%
half frosted lens	90%
frosted lens	75%

LED Dotting Per Extrusion

Output	Lens		
	Clear	Half Frosted	Frosted
SO (LL36X2)	CD	CD	CD
HO (LL54X2)	CD	CD	SD

CD = Clear Dotting
 SD = Slight Dotting
 ND = No Dotting



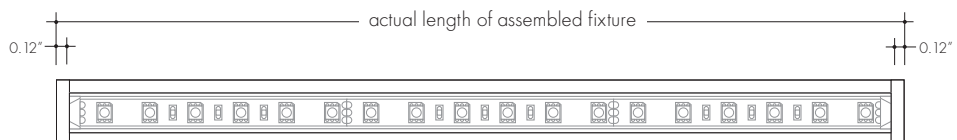
Clear Dotting Slight Dotting NO Dotting

Power Consumption Per Fixture Length

Based on operation with PSD series of power supplies.

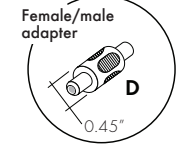
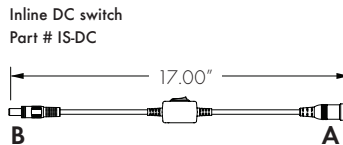
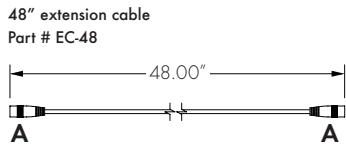
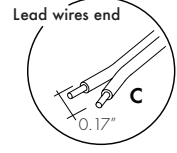
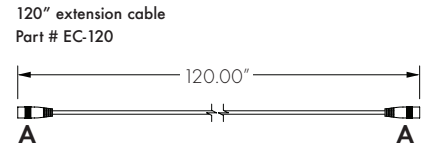
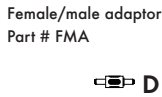
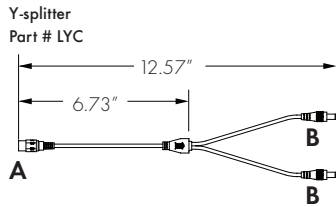
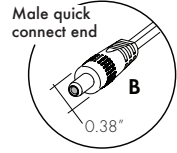
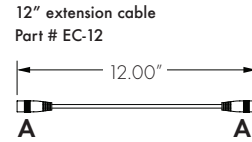
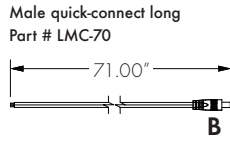
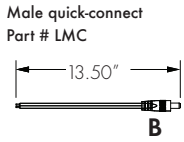
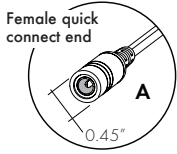
Nominal Length	SO			HO		
	Actual Length	W/ft	Total wattage	Actual Length	W/ft	Total wattage
12"	13-2/16"	6.80	6.8	13-1/16"	10.80	10.8
16"	17 "	6.78	8.9	17 "	10.73	13.8
20"	21 "	6.76	11.5	21 "	10.67	16.8
24"	24-14/16"	6.75	13.5	24-15/16"	10.60	19.8
28"	28-13/16"	6.72	15.8	28-13/16"	10.50	23.5
32"	32-13/16"	6.69	17.9	32-13/16"	10.40	27.2
36"	36-11/16"	6.65	19.95	36-12/16"	10.30	30.9
40"	40-10/16"	6.62	22	40-11/16"	10.29	34.3
44"	44-10/16"	6.59	24	44-10/16"	10.28	37.7
48"	48-9/16"	6.55	26.2	48-9/16"	10.28	41.1
52"	52-8/16"	6.50	28	53-13/16"	10.27	44.6
56"	56-7/16"	6.45	30	57-12/16"	10.26	48.1
60"	60-6/16"	6.40	32	61-11/16"	10.25	51.6
64"	64-5/16"	6.37	34	65-10/16"	10.23	55.5
68"	70-3/16"	6.34	35.5	69-9/16"	10.22	59
72"	74-2/16"	6.30	37.8	73-8/16"	10.20	63.2
76"	78-1/16"	6.27	39.66	77-7/16"	10.17	66.2
80"	82-1/16"	6.24	41.5	81-7/16"	10.14	69.12
84"	85-15/16"	6.20	43.4	85-6/16"	10.10	72.1
88"	89-14/16"	6.17	45.2	89-4/16"	10.00	74.5
92"	93-13/16"	6.14	47	93-3/16"	9.96	76.9
96"	97-12/16"	6.10	48.8	97-3/16"	9.90	79.4
100"	101-12/16"	6.07	50.5	101-2/16"	9.87	82.3
104"	105-10/16"	6.04	52.3	105-1/16"	9.83	85.2
108"	109-10/16"	6.00	54	109 "	9.80	88.1
112"	113-9/16"	5.98	55.8	112-15/16"	9.77	90.7
116"	117-7/16"	5.97	57.7	116-14/16"	9.73	93.3
120"	121-7/16"	5.95	59.5	120-14/16"	9.70	96
124"	125-6/16"	5.92	61.1			
128"	129-4/16"	5.89	62.7			
132"	133-4/16"	5.85	64.35			
136"	137-3/16"	5.83	66			
140"	141-2/16"	5.81	67.9			
144"	145-1/16"	5.80	69.6			

to calculate cutout for recess opening subtract 0.25" from actual fixture length

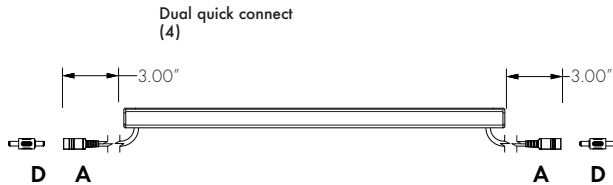
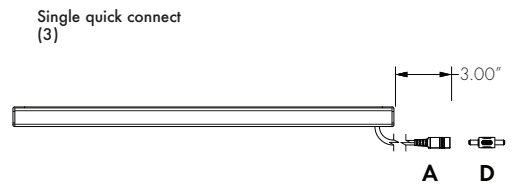
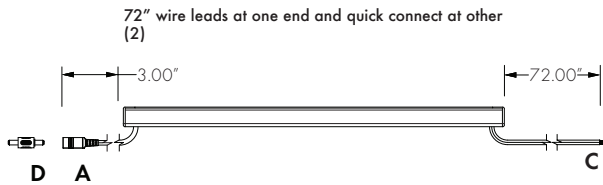
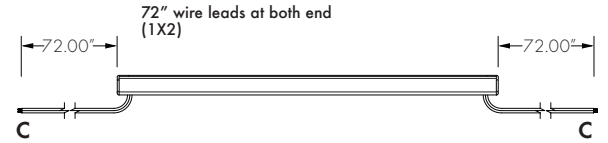
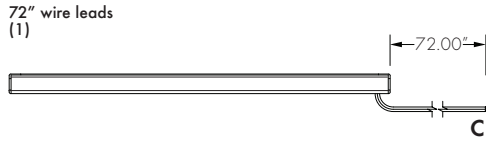
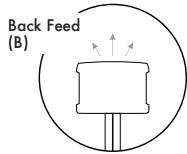


Connectors & Accessories

Linking and extension cable options



Powerfeed Position / Type



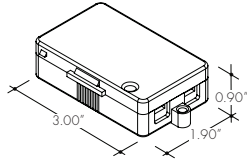
3, and 4 powerfeed options require #LMC to connect to PSD series of power supplies.

Accessories

Splice Box

LVSP-4T-BK

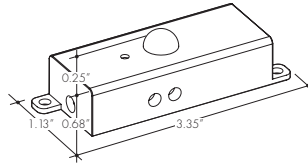
Low voltage, 4 terminal splice box, black



PIR Infrared Occupancy Sensor

OS-DC-F4-BK

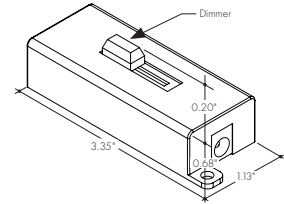
OS-DC-F4-BK - Occupancy Sensor



24VDC Low Voltage In-Line Dimmer Module

DIM-DC-F4-BK

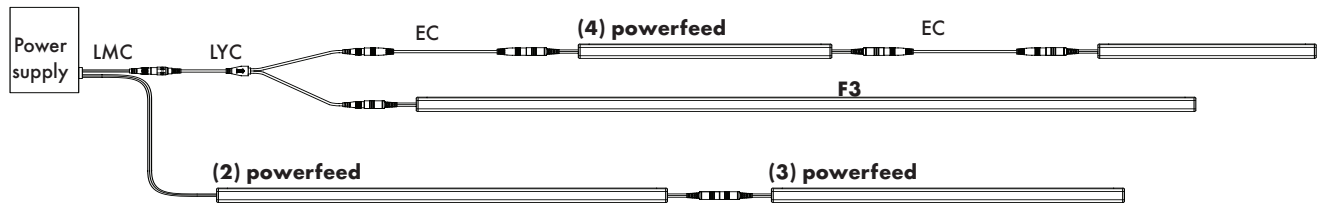
DIM-DC-F4-BK - 24VDC Low Voltage In-Line Dimmer Module



Note: a Male quick connector for input and output is required.

Note: a Male quick connector for input and output is required.

Sample layout



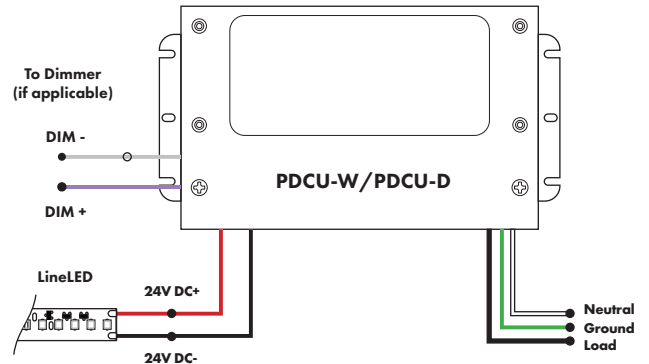
Power Supply

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

Universal Power Supply

MODEL	POWER	OUTPUT
PDCU-W	96	24
PDCU-W - IP66 Wet Series	96 - 96 W 3X96 - 3X96 W	24 - 24 VDC
PDCU-D - IP20 Dry Series	30 - 30 W 60 - 60 W 96 - 96 W 3X96 - 3X96 W	

0-10V - 1% dimming
MLV/ELV/TRIAC - 1% dimming, consult dimming compatibility chart
Compatibility:
View a complete list of compatible dimmers on product page ([Link](#))

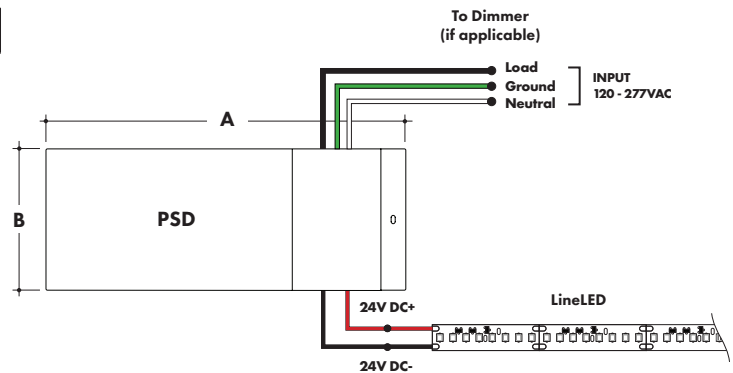


MODELS	PDCU-W 96W	PDCU-W 3X96W	PDCU-D 30W	PDCU-D 60W	PDCU-D 96W	PDCU-D 3X96W
A Length	8.66"	11.85"	6.10"	7.93"	8.25"	9.57"
B Width	3.73"	4.32"	3.35"	3.35"	4.10"	5.94"
Depth	1.61"	1.81"	1.33"	1.32"	1.56"	1.13"

Magnetic Low Voltage Dimming Power Supplies

MODEL	POWER	OUTPUT	INPUT
PSD	48	24	
PSD - PSD Series dims down to 0%	48 - 48 Watt 96 - 96 Watt 288 - 288 Watt (3 x 96Watt)	24 - 24 VDC	Blank - 120 V 240 - 240 V 277 - 277 V

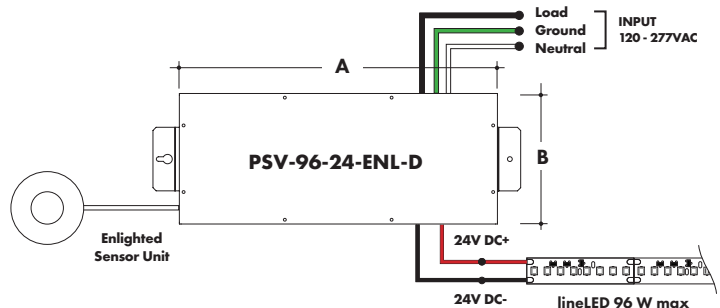
MODELS	48W	96W	288W
A Length	11.25"	11.25"	13.06"
B Width	3.42"	3.42"	8.42"
Depth	3.42"	3.27"	4.47"



Enlighted Enabled Dimming Power Supplies:

MODEL	POWER	OUTPUT	DIMMING	LOCATION
PSV	96	24	ENL	D
PSV - PSV Series	96 - 96 Watt	24 - 24 VDC	ENL - Enlighted Dimming	D - Damp

MODELS	96W
A Length	14.40"
B Width	5.20"
Depth	2.60"



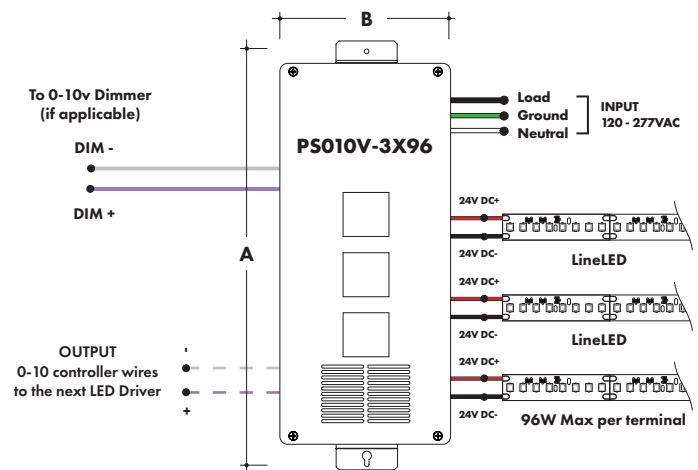
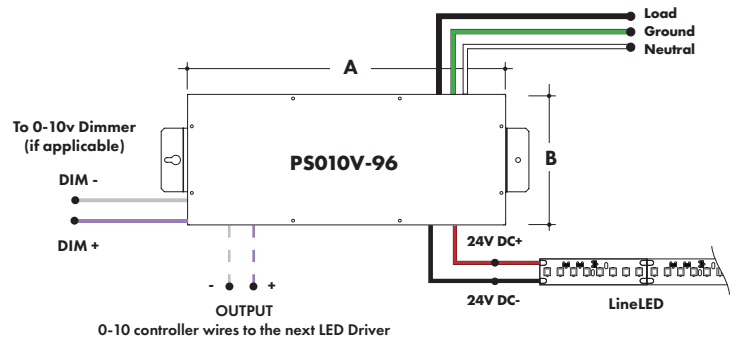
Power Supply

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

0-10V Dimming Power Supplies

MODEL	POWER	OUTPUT	DIMMING
PS010V	96	24	LIN
PS010V - 0-10V Power Supply dims down to 0%	96 - 96 Watt 3X96 - 3 X 96 Watt	24 - 24 VDC	LIN - Linear LOG - Logarithmic

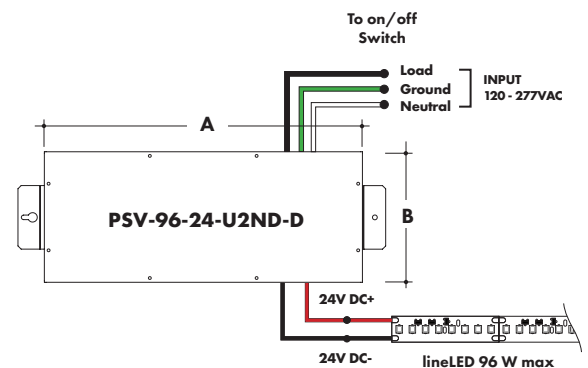
MODELS	96W	3X96
A Length	14.40"	15.75"
B Width	5.20"	6.62"
Depth	2.60"	4.95"



Non-Dimming Power Supply

MODEL	POWER	OUTPUT	DIMMING	LOCATION
PSV	96	24	U2ND	D
PSV - PSV Series	96 - 96 Watt	24 - 24 VDC	U2ND - Non Dimming	D - Damp

MODELS	96W
A Length	14.40"
B Width	5.20"
Depth	2.60"



Power Supply

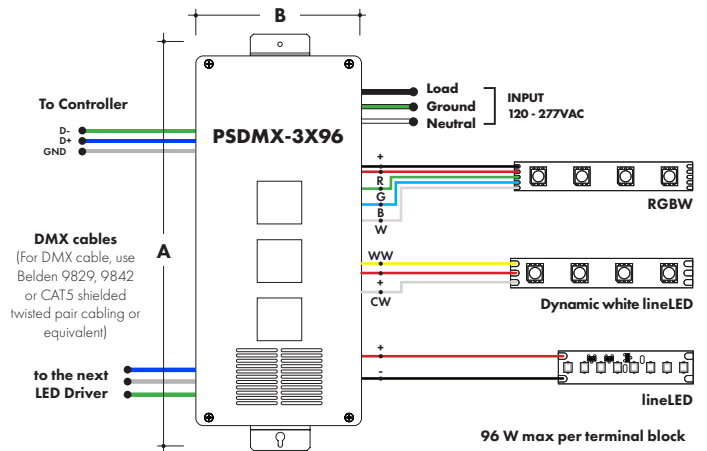
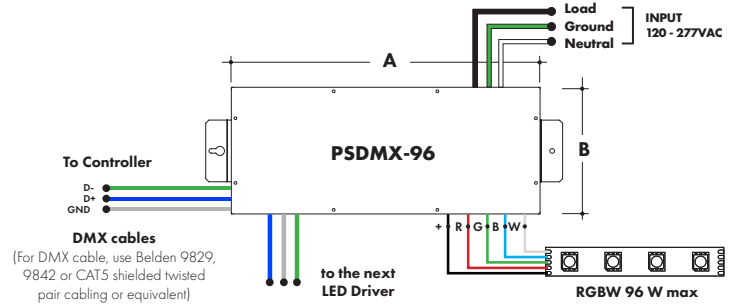
See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

DMX Dimming Power Supplies

MODEL	POWER	OUTPUT
PSDMX	96	24
PSDMX - DMX Power Supply	96 - 96 Watt 3X96 - 3 X 96 Watt	24 - 24 VDC

Features eldoLED's LINEARdrive configurable dimmable drivers

MODELS	96W	3X96
A Length	14.40"	15.75"
B Width	5.20"	6.62"
Depth	2.60"	4.95"

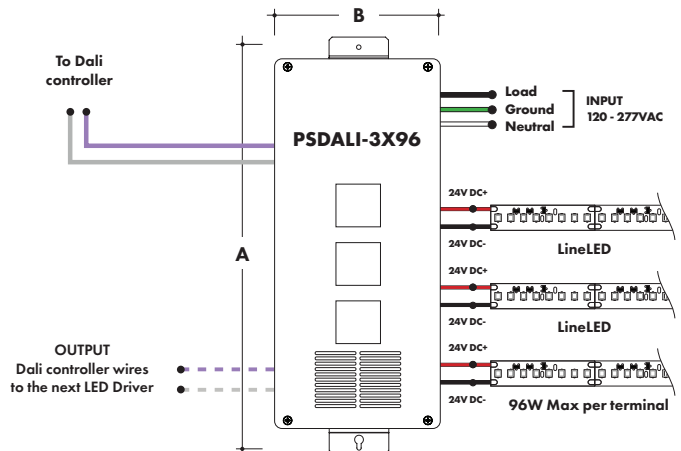
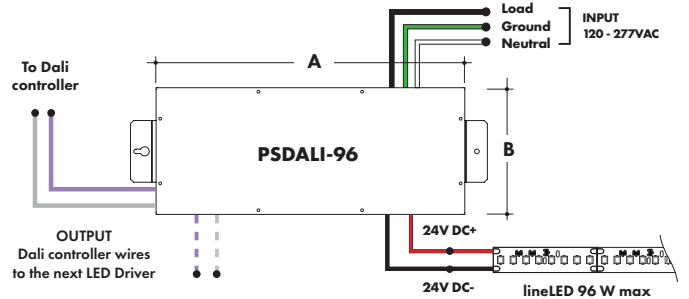


DALI Dimming Power Supplies

MODEL	POWER	OUTPUT
PSDALI	96	24
PSDALI - DALI Power Supply	96 - 96 Watt 3X96 - 3 X 96 Watt dims down to 0%	24 - 24 VDC

Features eldoLED's LINEARdrive configurable dimmable drivers

MODELS	96W	3X96
A Length	14.40"	15.75"
B Width	5.20"	6.62"
Depth	2.60"	4.95"



Power Supply

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.



Luminii is a Lutron OEM Advantage Partner

MODEL

LTEA4U1UKL-CV240

Lutron - HiLume™ 1% 2-wire LED Driver

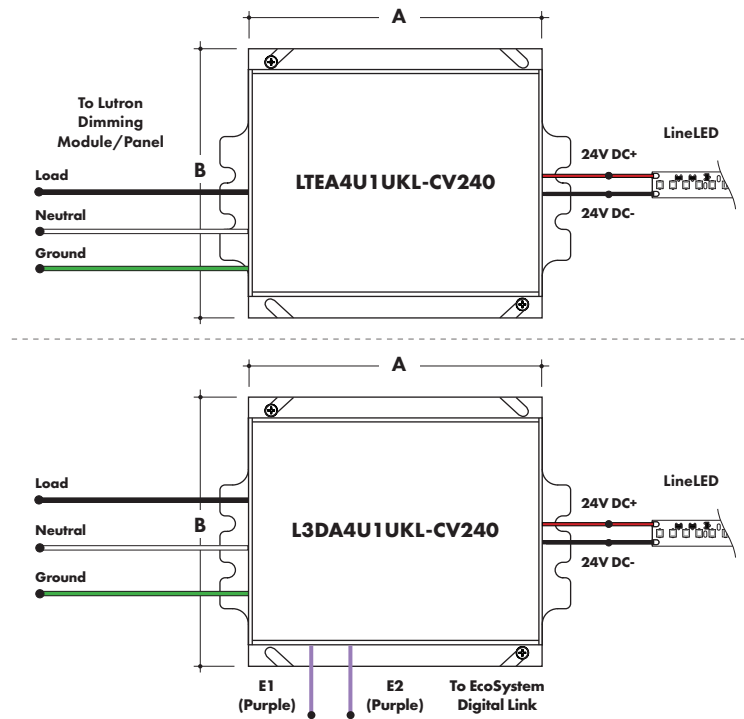
(120V forward phase only)

MODEL

L3DA4U1UKL-CV240

HiLume™ 1% EcoSystem Voltage LED driver

MODELS	LTEA4U1UKL-CV240	L3DA4U1UKL-CV240
A Length	4.89"	4.98"
B Width	4.00"	4.00"
Depth	2.62"	2.62"



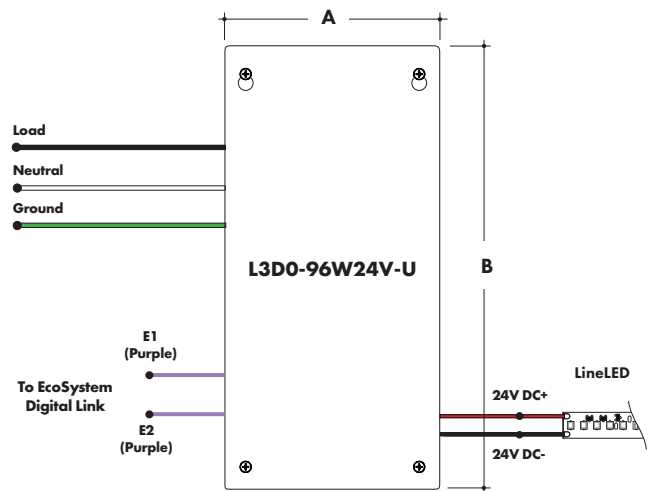
Luminii is a Lutron OEM Advantage Partner

MODEL

L3D0-96W24V-U

HiLume™ 0.1% EcoSystem Voltage LED Driver with Soft-On, Fade-to-Black™

MODELS	L3D0
A Length	10.50"
B Width	5.50"
Depth	2.00"



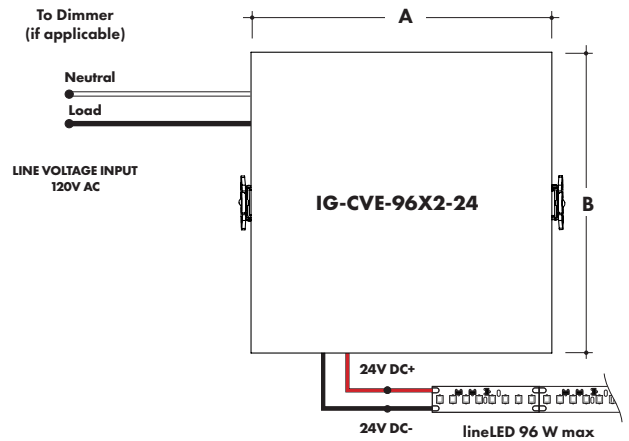
Power Supply

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

In ground, Electronic Low Voltage Dimming Power Supplies

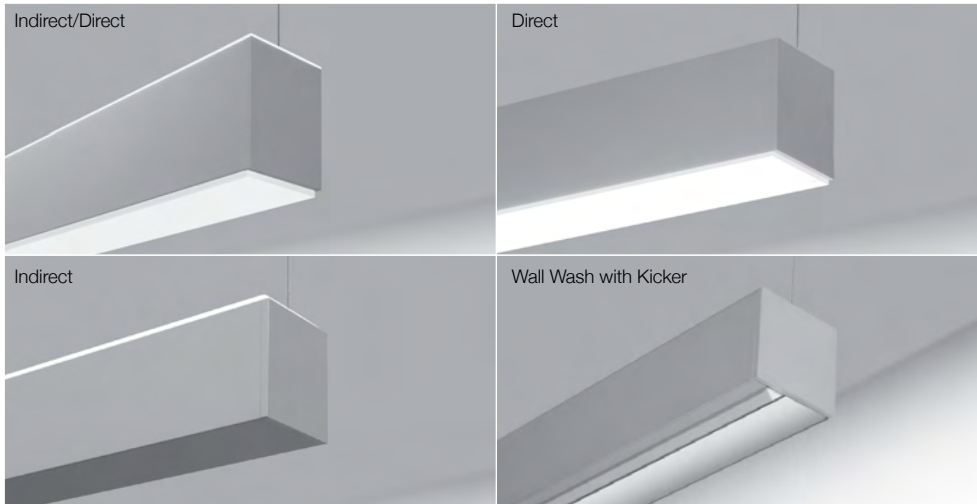
MODEL	POWER	OUTPUT	INPUT
IG - CVE	96X2	24	Blank - 120 V 277 - 240/277 V
IG - In ground CVE Series	96X2 - 2 X 96 Watt	24 - 24 VDC	
CVE - ELV Dimming DALI - eldoLED Dali dimming Both dims down to 0.1%			

MODELS	Dual Circuit
A Length	8.40"
B Width	8.30"
Depth	8.10"



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Pendant TYPE J



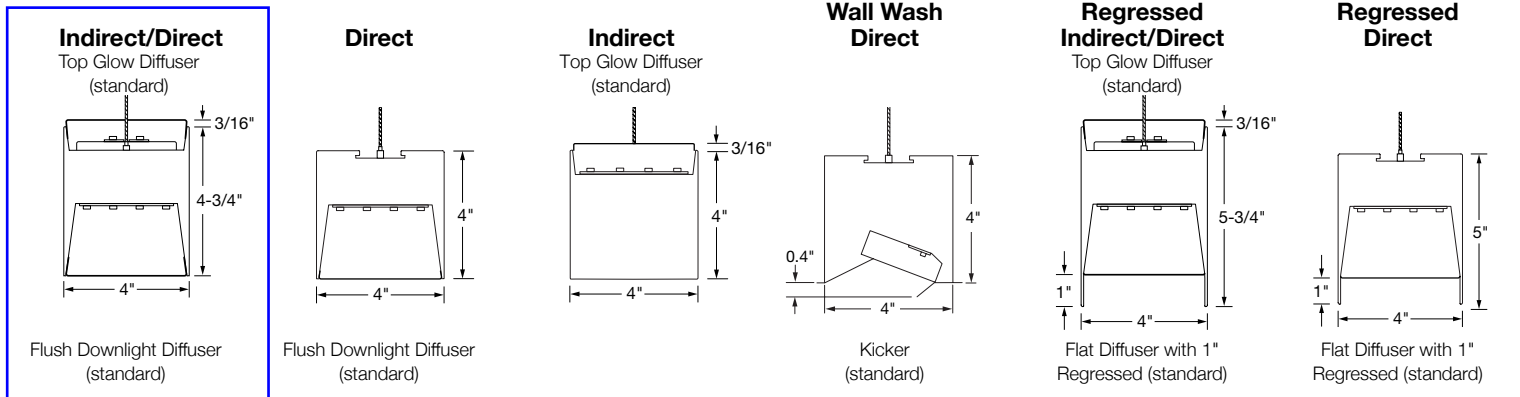
High Performance 4" Aperture is a patented, linear LED luminaire family. HP-4 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Declared** status.

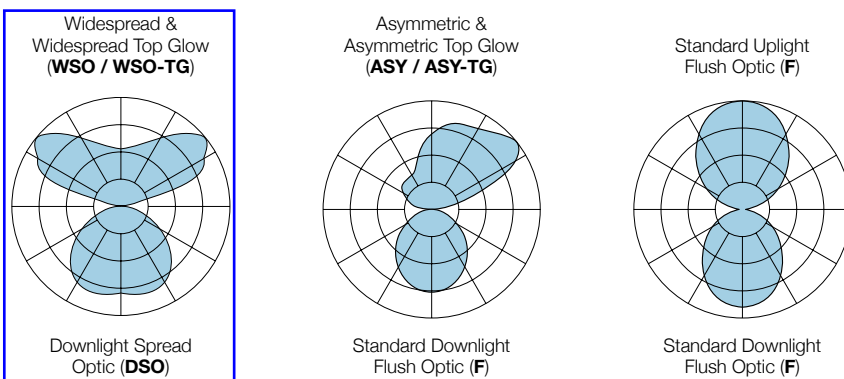
Signal White is standard finish

Note: see page 6 for all aesthetic options

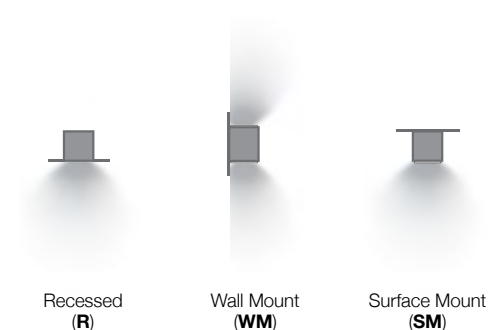
CROSS SECTIONS



OPTIC OPTIONS



ALSO AVAILABLE IN



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Pendant

BODY TYPE

OUTPUT AND LED TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Length of Run	Uplight Output ID & I Only (Flush)	Downlight Output ID & D Only (Flush)
HP - High Performance	4	P - Pendant PRG - Pendant Regressed ¹ (Wall Wash not available)	D - Direct WW-D - Wall Wash Direct ID - Indirect/Direct I - Indirect	Minimum 2' section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.	S - Standard (428 lm/ft) B - Boosted (538 lm/ft) H - High (813 lm/ft) V - Very High (1045 lm/ft) TL - Tailored: _____lm/ft*	S - Standard (379 lm/ft) B - Boosted (477 lm/ft) H - High (721 lm/ft) V - Very High (927 lm/ft) TL - Tailored: _____lm/ft*

* Specify lm/ft of outputs between Standard (S) and Very High (V). Consult factory for tailored lumen output outside of this range.

OUTPUT AND LED TYPE

MECHANICAL/OPTICAL OPTIONS

ELECTRICAL OPTIONS

LED CRI/CCT	Uplight Optics ID & I Only	Downlight Optics ID & D Only	Reflector System	Voltage
830 - 80 CRI, 3000K	TG - Top Glow (standard)	F - Flush (standard) ²	96LG - 96 Low Gloss White	120 - 120 Voltage
835 - 80 CRI, 3500K	F - Flush	BG - Bottom Glow ²	SSA - Semi-Specular Aluminum for Wall Wash only	277 - 277 Voltage
840 - 80 CRI, 4000K	WSO - Widespread Optic	DL - 1" Drop Down Lens ²		347 - 347 Voltage
930 - 90 CRI, 3000K	WSOTG - Widespread Optic with Top Glow	RG-D - Flat Diffuser with 1" Regress ^{2,3}		
935 - 90 CRI, 3500K	ASY-L - Asymmetric Left Optic	RG-WCB - White Cross Blade Baffle ^{2,3}		
940 - 90 CRI, 4000K	ASY-R - Asymmetric Right Optic	RG-LHE - Hollowed Ellipse Louver ^{2,3}		
8TW - 80 CRI, Tunable White	ASYTG-L - Asymmetric Left Optic with Top Glow	RG-LHC - Hex Louver ^{2,3}		
9TW - 90 CRI, Tunable White	ASYTG-R - Asymmetric Right Optic with Top Glow	DSO - Downlight Spread Optic ⁴		
		K - Kicker for Wall Wash only (standard)		
		FO - Fully Open for Wall Wash only		

ELECTRICAL OPTIONS

MOUNTING OPTIONS

Circuiting ⁵	Driver Selection	Mounting Method
SC - Single Circuit* One single circuit in a run DC - Dual Circuit* ⁶ Independent control of up and down separately in an I/D style fixture MC - Multi-Circuit* More than one switch leg or zone. Factory shop drawings required	0-10V Driver Options FC-10% - 0-10V 10% ⁷ (standard) FC-1% - 0-10V 1% ⁷ OSR-10% - Osram OTI, 0-10V 10% ⁷ OSR-1% - Osram OTI, 0-10V 1% ⁷ ELD-10V-0% - EldoLED SOLOdrive, 0-10V 0.1% OSR-10V-TW - Osram OTI, 0-10V 10% (Tunable White) ⁷ DALI Driver Options FC-DALI-1% - DALI 1% OSR-DALI-1% - Osram Dexal, 1% ELD-DALI-0% - EldoLED SOLOdrive, 0.1% ELD-DALI-TW - EldoLED DUALdrive LightShape, 0.1% (Tunable White)	DMX Driver Options FIN-DMX - Finelite DMX 1% (Tunable White - FineTune Controls Only) ⁸ ELD-DMX - EldoLED POWERdrive, 0.1% ELD-DMX-TW - EldoLED POWERdrive, 0.1% (Tunable White) Lutron Driver Options LUT-ES1 - Lutron, Ecosystem 1% LUT-2W - Lutron, 2-wire (120V only) 1% LUT-TW - Lutron T-Series, EcoSystem 0.1% (Tunable White) See Page 3 for additional driver options and details
* Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)		FA50 - Fully Adjustable 50" (standard) FA100 - Fully Adjustable 100" FA150 - Fully Adjustable 150" FA200 - Fully Adjustable 200" FA250 - Fully Adjustable 250" FA300 - Fully Adjustable 300" FM - Flexible Mounting ⁹

MOUNTING OPTIONS

OTHER OPTIONS

Ceiling Hardware Type	Endcap Style	Finish	Emergency Style (Optional)	Integrated Sensor (Optional)	Special Options (Optional)
C1 - 1" T-Bar C2 - 9/16" T-Bar C3 - Screw Slot C4 - Hard Ceiling	FE - Flat Endcap (standard) DE - 1" Drop Endcap ¹⁰ OE - Open Endcap ¹¹	SW - Signal White (standard) FB - Finelite Black ¹² SA - Satin Aluminum ¹² #### - RAL Color Code ¹²	FAC CHO - Factory Choice Battery Back-up EM/GEN - Emergency to Generator NL - Night Light BSL722 - Bodine Battery Back up BSL310LP - Bodine Battery Back up Low Profile GTD - Generator Transfer Device	OBO - Occupancy ² OBD - Daylight ² OBE - Enlighted ¹³ REE - Remote Enlighted ¹⁴	CP - Chicago Plenum ¹⁵ RLA - Red List Approved RLD - Declared

¹ Not available with Indirect

² Not available with Wall Wash

³ Pendant Regressed only

⁴ Not available with Regressed or Curves

⁵ Contact factory for switching options

⁶ Indirect/Direct only

⁷ Add DTO to gain "Dim to Off" functionality (FC-10% - DTO)

⁸ B & V outputs only

⁹ Direct only

¹⁰ 1" Drop Down Lens downlight only

¹¹ Available with Hollowed Ellipse Louver (LHE) only

¹² 20 business days lead time for color

¹³ Enlighted components installed by Finelite, provided by others

¹⁴ Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor

¹⁵ Only available with C1, C2, and C3 mounting hardware with Finelite Gridbox

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Pendant

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6061-T6 extruded aluminum body. Internal joiner system, plug-together wiring, standard.

LENGTHS: Any length, 2' minimum, in increments down to 1/16" ($\pm 1/32"$). 12' maximum section length. Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**), and White Cross Blade Baffle (**WCB**) are available in 1' increments.

MITERED CORNERS¹: Illuminated corners of greater than 60° and less than 180° in a single plane, available with Flush Diffuser, Bottom Glow Diffuser, 1" Drop Down Lens², Regressed Diffuser, or White Cross Blade Baffle³. Corners not available with Wall Wash (**WW-D**), Hollowed Ellipse Louver (**LHE**) or Hex Louver (**LHC**). Consult factory for tailored lighting options.

OUTPUT AND LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For lengths 3' and greater, the uplight and downlight can be specified with different lumen packages and dual controls. For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. Light engines are replaceable.

MECHANICAL/OPTICAL OPTIONS

UPLIGHT OPTION⁴: Patented Top Glow frost white diffuser standard. 12 ft. maximum diffuser length. 73% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination options include: Flush frost white snap-in diffuser, 73% transmissive, 99% diffusion; Widespread Optic (**WSO**) and Widespread Optic with Top Glow (**WSOTG**); WSO enables increased luminaire spacing with improved ceiling uniformity. Asymmetric optic directs light in a specific direction. **ASY-L** distributes light to the left, **ASY-R** distributed light to the right of the luminaire. Consult factory for more tailored lumen outputs.

DOWNLIGHT OPTION⁵: 12' maximum diffuser length. Flush frost white snap-in diffuser standard, 77% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination. Available with Flush (**F**), Bottom Glow (**BG**), 1" Drop Down Lens (**DL**), White Cross Blade Baffle (**WCB**)⁶, Hollowed Ellipse Louver (**LHE**)⁶, Hex Louver (**LHC**)⁶, Downlight Spread Optic (**DSO**), and Regressed downlight diffusers (**RG**)⁶. 1" Drop Down Lens made of acrylic. Available with a solid endcap or an endcap with a diffuse filler to continue the luminous aesthetic. Downlight Spread Optic is an extruded lens with a subtle ribbed appearance providing a batwing distribution for improved optical performance. Consult factory for more tailored lumen outputs.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint. The standard Semi-Specular Aluminum (**SSA**) Kicker (**K**) reflector delivers light high on the vertical surface. The Kicker reflector can be easily removed for open distribution (**FO**).

ELECTRICAL OPTIONS

STATIC WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed controlling uplight and downlight together (power and dimming). Specify dual feeds for independent control of uplight and downlight. 14-gauge feed used when luminaire current exceeds 5 amps.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. 14-gauge feed used when fixture current exceeds 5 amps. DMX and power feed at same location (standard), DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V constant current reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 100%-10% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.

- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON DRIVER OPTIONS:

- **LUT-ES (LDE1)** - (Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series))
- **LUT-W2 (LTES2W)** - (Hi-lume 1% 2-wire, 120V forward phase dimming (LTEA series)).

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V, 277V, and 347V.

- **Power factor:** ≥ 0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime.:** 100,000 hours
- **FineTune DMX:** 1%

LUTRON TUNABLE WHITE DRIVER OPTION: LUT-TW (0.1% T-Series 2-Channel Digital Tunable White (PSQ Series)).

¹ Not available with Wall Wash
² Indirect/Direct and Direct only

³ White Cross Blade (WCB) baffles not available with custom angles. Available in 90 degrees only

⁴ Pendant Indirect/Direct, Pendant Regressed Indirect/Direct, and Pendant Indirect only

⁵ Pendant Indirect/Direct, Pendant Regressed Indirect/Direct, Pendant Direct, and Pendant Regressed Direct only

⁶ Pendant Regressed Indirect/Direct & Pendant Regressed Direct only

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Pendant

SPECIFICATIONS

MOUNTING OPTIONS

HANGING HARDWARE: 50" Fully Adjustable (**FA**) plated steel aircraft cable with safety stop hardware standard. The Flexible Mounting Bracket (**FM**) adjusts the suspension points to accommodate existing architecture. Suspension points adjust up to 2' in from the end of 8' or 12' fixture lengths and up to 1' in on shorter lengths. Consult factory for tailored lighting options.

TUNABLE WHITE DMX HANGING HARDWARE: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5' (standard), 12', and 30'.

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are pre-wired with plug-and-play interconnection cables to support easy plug-together joining of fixture runs. If a non-FineTune DMX system is specified, a DMX to RJ45 adapter is provided.

OTHER OPTIONS

ENDCAPS: Flat diecast aluminum endcaps (**FE**) add 1/4" to each end of luminaire. 1" Drop Down Lens Endcap (**DE**)⁷ includes diffuse element to continue luminance of drop lens. Open Endcap (**OE**) is for use with the Hollowed Ellipse Louver (**LHE**); following the curve of the louver.

EMERGENCY STYLE: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery.

Backup Battery			
	Factory Choice	Bodine BSL310LP	Bodine BSL722
HP4-P-D			
Min. Housing Length	8'	4'	4**
EM Lumen Output	1854	1102	1854
EM Section Illum.	2'	2' or 4'	2'
HP4-P-WW-D			
Min. Housing Length	8*	4**	4**
EM Lumen Output	2000	1189	2000
EM Section Illum.	4'	4'	4'

* Minimum fixture housing length for battery pack approved without sensor

Backup Battery			
	Factory Choice	Bodine BSL310LP	Bodine BSL722
HP4-P-ID			
Min. Housing Length	8'	4'	4**
EM Lumen Output	1854	1102	1854
EM Section Illum.	2'	2' or 4'	2'
HP4-P-I			
Min. Housing Length	8'	4'	4**
EM Lumen Output	2057	1222	2057
EM Section Illum.	2'	2' or 4'	2'

TUNABLE WHITE ELECTRICAL OPTIONS⁸:

- **TW Driver Options 0-10V:** EM/GEN, GTD or Battery Back up
- **FineTune DMX:** EM/GEN or Battery Back up
- **DMX:** Battery Back up
- **DALI:** EM/GEN, GTD or Battery Back up
- **LUTRON:** EM/GEN, GTD or Battery Back up

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) occupancy or daylight sensors available with Flush and Bottom Glow downlight diffusers. Refer to Occupancy Sensor and Daylight Sensor tech sheets for more info.

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**)⁹, and Satin Aluminum (**SA**)⁹ are standard. Optional Adder: 185 RAL colors⁹ are available.

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 - PoE options available on request. These fixtures are rated for Damp Location. Chicago Plenum options available for C1, C2, or C3 suspension using our GridBox. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add - **RLA** (Red List Approved) or - **RLD** (Declared Label) to your part number.

WEIGHT¹⁰: ID - 3.4 lb/ft; D - 2.8 lb/ft; I - 2.8 lb/ft; WW - 2.9 lb/ft

DLC QUALIFIED: Configurations of this product are listed on the DLC Qualified Products List (QPL). www.designlights.org/search

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

⁷ Available in Indirect/Direct Regressed & Direct Regressed only

⁸ Consult Finelite for Generator Transfer Device and Battery Backup fit

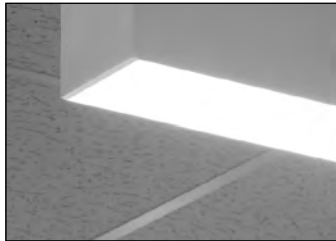
⁹ 20 business days lead time for color

¹⁰ Excludes Battery Backup and Generator Transfer Device weight

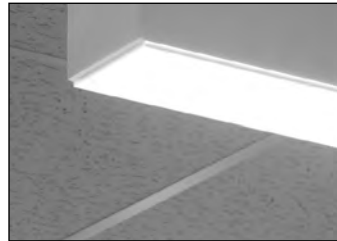
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Pendant

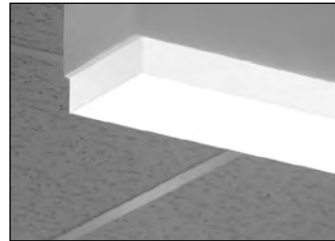
AESTHETIC OPTIONS



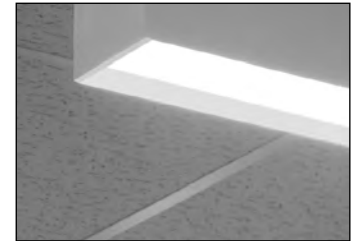
Flush Diffuser (**F**)



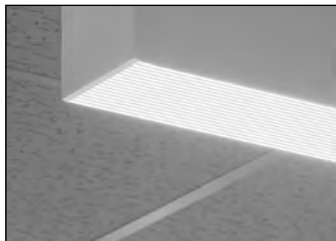
Bottom Glow Diffuser (**BG**)



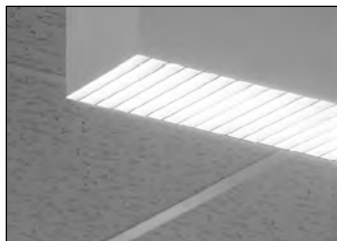
1" Drop Down Lens (**DL**)



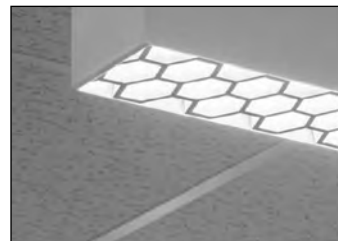
Flat Diffuser with 1" Regressed (**RG-D**)



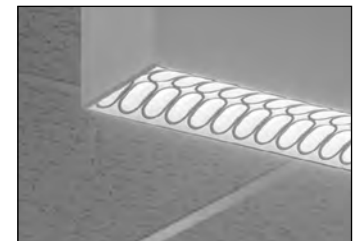
Downlight Spread Optic (**DSO**)
Externally flush



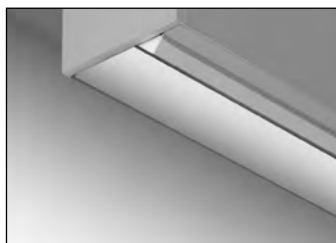
White Cross Blade Baffle¹ (**RG-WCB**)



Hex Louver¹ (**RG-LHC**)



Hollowed Ellipse Louver¹ (**RG-LHE**)

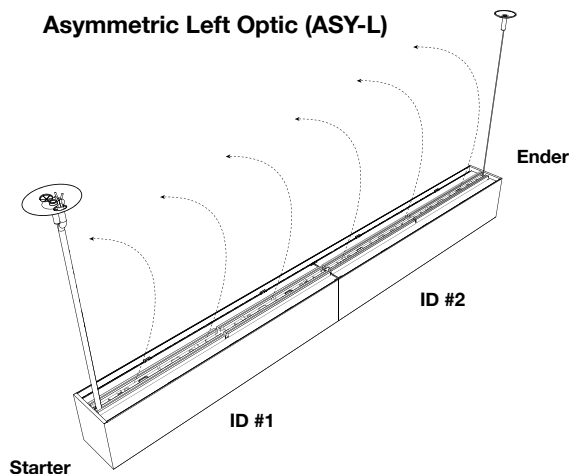


Kicker (**K**) - Wall Wash only

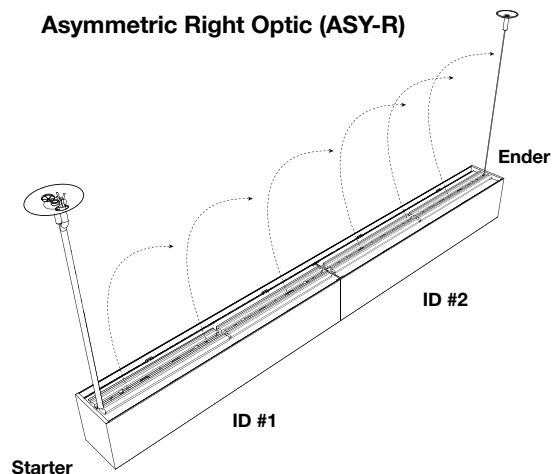
ASYMMETRIC OPTIONS

Use this tool to understand how to specify Asymmetric for your project. The diagrams below show a linear run from power feed to ender. Specify ASY-L distributes light to the left or ASY-R distributes light to the right.

Asymmetric Left Optic (ASY-L)



Asymmetric Right Optic (ASY-R)



¹ Available for Regressed

Protected by one or more US Patents: 8915613; D702,391; D702,390; D700,732

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Pendant

Indirect/Direct Photometry - 4' Luminaire 3500K

HP4-P-ID-4'-V-V-835-WSO-DSO

Uplight: Widespread Optic

Downlight: Downlight Spread Optic

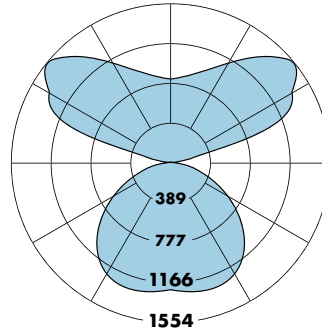
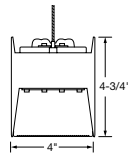
Distribution: 54% Up (V) / 46% Down (V)

Efficacy: 111 lm/W

Uplight: 4302 lumens (1076 lumens/foot)

Downlight: 3763 lumens (941 lumens/foot)

Total luminaire output: 8065 lumens (2016 lm/ft)
72.8 watts (18.2 W/ft)



CANDELA DISTRIBUTION

	0.0	0.0	22.5	45.0	67.5	90.0	FLUX
0.0	1250	1250	1250	1250	1250	1250	
5.0	1241	1243	1249	1255	1257	119	
15.0	1187	1204	1242	1287	1298	351	
25.0	1053	1091	1197	1277	1300	546	
35.0	887	950	1096	1193	1205	669	
45.0	707	780	930	1002	1014	689	
55.0	528	591	717	765	768	608	
65.0	356	399	482	508	507	451	
75.0	196	217	257	265	263	257	
85.0	58	61	68	66	66	73	
90.0	2	6	9	13	15		
95.0	38	87	213	102	80	97	
105.0	147	224	828	907	636	485	
115.0	264	341	787	1684	1840	804	
125.0	362	441	794	1456	1717	852	
135.0	437	504	786	1218	1413	752	
145.0	506	555	741	994	1109	585	
155.0	566	593	693	807	856	409	
165.0	609	619	656	693	707	240	
175.0	631	632	636	640	642	79	
180.0	634	634	634	634	634		

CRI: 80 / CCT: 3500K

ITL LM79 Report 89033 and 92993

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire

	↑S ¹	↑B ¹	↑H ¹	↑V ²
↓S ¹	3301 [↑54% 46%↓]	3754 [↑60% 40%↓]	4886 [↑69% 31%↓]	5842 [↑74% 26%↓]
↓B ¹	3698 [↑48% 52%↓]	4151 [↑54% 46%↓]	5283 [↑64% 36%↓]	6239 [↑70% 30%↓]
↓H ¹	4688 [↑38% 62%↓]	5141 [↑44% 56%↓]	6273 [↑54% 46%↓]	7229 [↑60% 40%↓]
↓V ²	5524 [↑32% 68%↓]	5977 [↑38% 62%↓]	7109 [↑48% 52%↓]	8065 [↑54% 46%↓]

Light Output, 3500K, 80 CRI (Lumens Per Foot)

	↑S ¹	↑B ¹	↑H ¹	↑V ²
↓S ¹	825	939	1222	1461
↓B ¹	925	1039	1321	1560
↓H ¹	1172	1285	1568	1807
↓V ²	1381	1494	1777	2016

Power, 3500K (Watts Per Foot)

	↑S ¹	↑B ¹	↑H ¹	↑V ²
↓S ¹	7.1	8.1	10.6	12.7
↓B ¹	8.1	9.1	11.6	13.7
↓H ¹	10.5	11.5	14.0	16.1
↓V ²	12.6	13.6	16.1	18.2

Efficacy, 3500K, 80 CRI (Lumens Per Watt)

	↑S ¹	↑B ¹	↑H ¹	↑V ²
↓S ¹	116	116	116	115
↓B ¹	114	114	114	114
↓H ¹	111	112	112	112
↓V ²	109	110	111	111

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

¹ Family Correlation based on 4' luminaire 3500K Very High Output (V) test - 120V.

² Based on ITL reports: 89033, 92993

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI

3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI

3000K	0.746
3500K	0.760
4000K	0.789

High Output (H) / Standard Output (S), 4000K, 90 CRI

Lumen Adjustment Factor: 0.789

Total Light Output: 4886 lm x 0.789 = 3855 lm

Total Light Output per Foot: 1222 lm/ft x 0.789 = 964 lm/ft.

watts/foot: 10.6 W/ft.

$$\text{Efficacy} = \frac{964 \frac{\text{lm}}{\text{ft.}}}{10.6 \frac{\text{W}}{\text{ft.}}} = 91 \text{ lm/W}$$

Kendo RL | Recessed linear illumination system



Features

- 24VDC Class 2 fixtures made to order up to 144". Fixtures can be linked up to 16' depending on output
- Suitable for undercabinet, millwork ground recessed, and ceiling recessed applications
- Approved for closet/storage space installation per NEC 410.16(A)(3) and 410.16(C)(5)
- Vibrant colors with R9 values up to 98
- Single micro binned LEDs +/- 30 CCT
- Dims with minimal color shift
- Class 2 listed for damp locations
- Proprietary strong bond solder method handles up to 50lbs of torque on wire leads and connectors
- 5 Year warranty



IC RATED

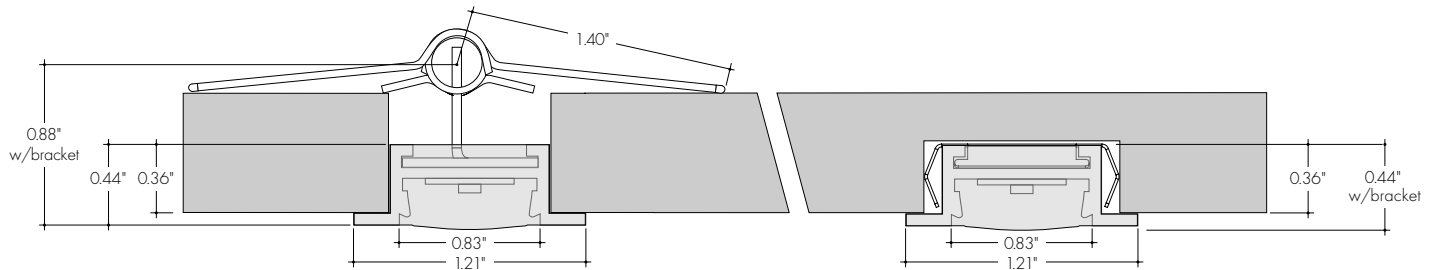
RoHS



Finish Options

- Silver anodized
- Black powder coated
- Bronze powder coated
- White powder coated

Profile dimensions



Technical information

OUTPUT OPTIONS	SO	HO	CCT INFO/LUMEN MULTIPLIER		TM-30-15		
	(LL36X2)	(LL54X2)	Color Temperature	Multiplier (reference - 3000K)	CRI	R _f	R _g
Lumens at 3000K (with clear lens)	426 lm/ft	632 lm/ft	2200K	0.87	86	87	98
Average power consumption at 4'	6.5 W/ft	10.4 W/ft	2400K	0.73	98	95	102
Lumens / Watt (with clear lens)	66 lm/W	61 lm/W	2700K	0.81	97	95	101
Maximum system length (in series)	16'	10'	2900K	0.86	97	94	101
			3000K	1.00	91	89	98
			3500K	1.05	94	90	102
			4100K	1.28	94	86	96

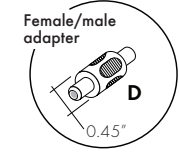
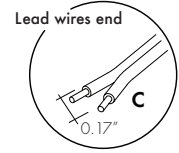
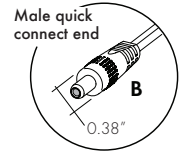
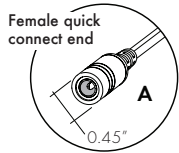
Ordering Code

MODEL	LENGTH	CCT	OUTPUT	LENS	MOUNTING	FINISH	POWER FEED / TYPE
KRL	12	22K	SO	C	HS	SA	B
KRL - Kendo RL	12" - 144" 4" increments	22K - 2200 K 24K - 2400 K 27K - 2700 K 29K - 2900 K 30K - 3000 K 35K - 3500 K 41K - 4100 K	SO - Standard *HO - High	C - Clear HF - Half-Frosted F - Frosted	HS - Hard surface mounting bracket GS - Gypsum surface mounting bracket NB - No bracket	SA - Silver BK - Black BZ - Bronze WH - White (BK, BZ, WH finishes will have an upcharge and require longer lead times)	B - Back 1 - 72" wire leads 1X2 - 72" wire leads at both ends 2 - 72" wire leads at one end and quick connect at other 3 - Single quick connect 4 - Dual quick connect

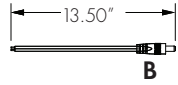
*Not available over 120"

Connectors & Accessories

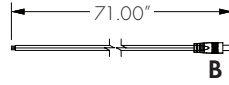
Linking and extension cable options



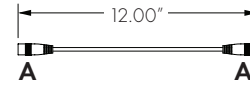
Male quick-connect
Part # LMC



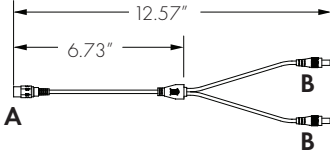
Male quick-connect long
Part # LMC-70



12" extension cable
Part # EC-12



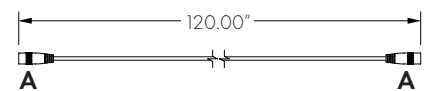
Y-splitter
Part # LYC



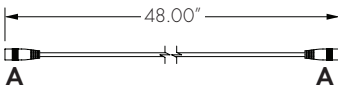
Female/male adaptor
Part # FMA



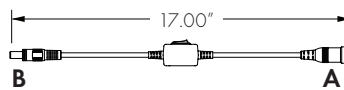
120" extension cable
Part # EC-120



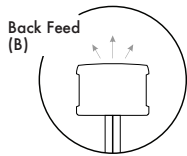
48" extension cable
Part # EC-48



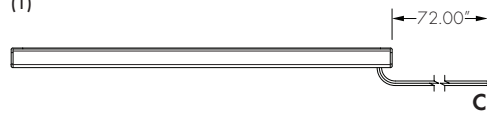
Inline DC switch
Part # IS-DC



Powerfeed Position / Type



72" wire leads
(1)



72" wire leads at both end
(1X2)



72" wire leads at one end and quick connect at other
(2)



Single quick connect
(3)



Dual quick connect
(4)



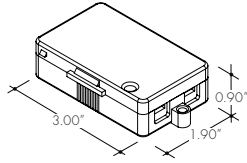
3, and 4 powerfeed options require #LMC to connect to PSD series of power supplies.

Accessories

Splice Box

LVSP-4T-BK

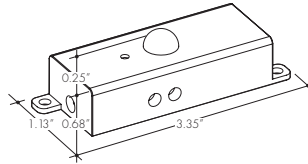
Low voltage, 4 terminal splice box, black



PIR Infrared Occupancy Sensor

OS-DC-F4-BK

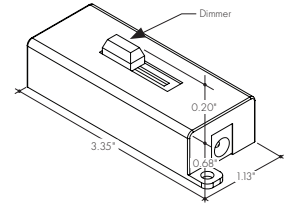
OS-DC-F4-BK - Occupancy Sensor



24VDC Low Voltage In-Line Dimmer Module

DIM-DC-F4-BK

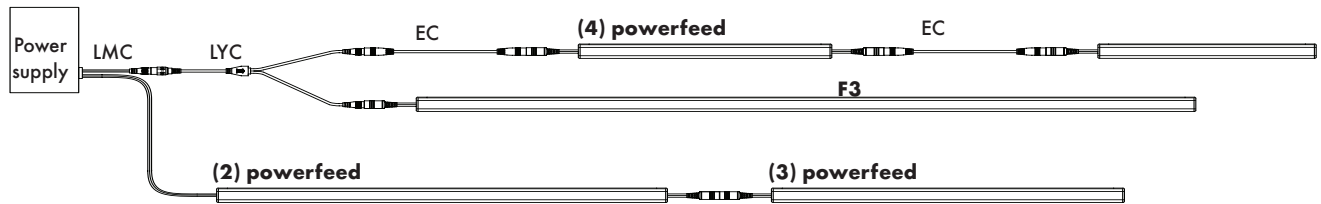
DIM-DC-F4-BK - 24VDC Low Voltage In-Line Dimmer Module



Note: a Male quick connector for input and output is required.

Note: a Male quick connector for input and output is required.

Sample layout



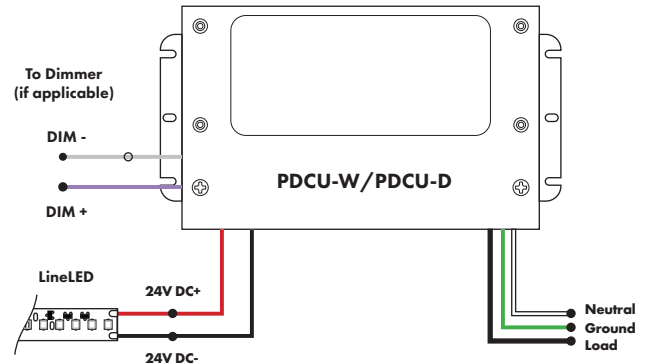
Power Supply

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

Universal Power Supply

MODEL	POWER	OUTPUT
PDCU-W	96	24
PDCU-W - IP66 Wet Series	96 - 96 W 3X96 - 3X96 W	24 - 24 VDC
PDCU-D - IP20 Dry Series	30 - 30 W 60 - 60 W 96 - 96 W 3X96 - 3X96 W	

0-10V - 1% dimming
MLV/ELV/TRIAC - 1% dimming, consult dimming compatibility chart
Compatibility:
View a complete list of compatible dimmers on product page ([Link](#))

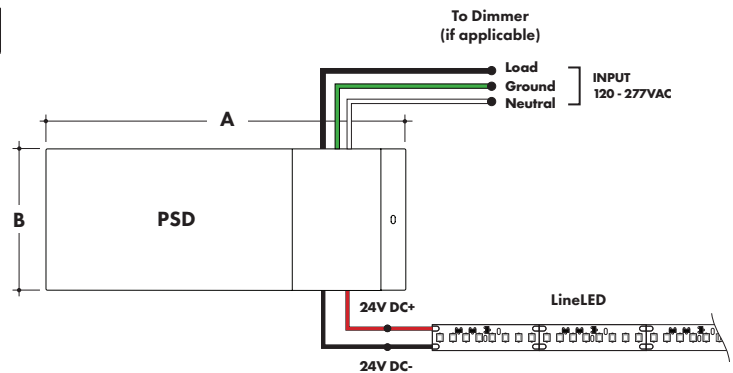


MODELS	PDCU-W 96W	PDCU-W 3X96W	PDCU-D 30W	PDCU-D 60W	PDCU-D 96W	PDCU-D 3X96W
A Length	8.66"	11.85"	6.10"	7.93"	8.25"	9.57"
B Width	3.73"	4.32"	3.35"	3.35"	4.10"	5.94"
Depth	1.61"	1.81"	1.33"	1.32"	1.56"	1.13"

Magnetic Low Voltage Dimming Power Supplies

MODEL	POWER	OUTPUT	INPUT
PSD	48	24	
PSD - PSD Series dims down to 0%	48 - 48 Watt 96 - 96 Watt 288 - 288 Watt (3 x 96Watt)	24 - 24 VDC	Blank - 120 V 240 - 240 V 277 - 277 V

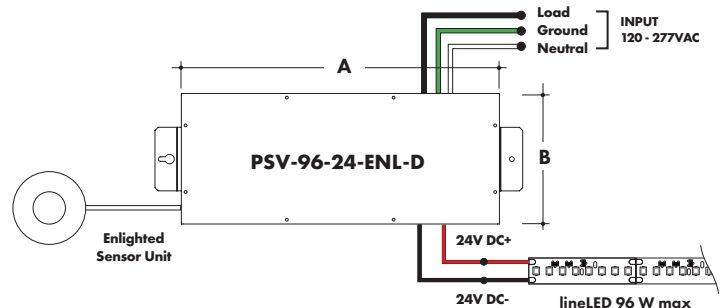
MODELS	48W	96W	288W
A Length	11.25"	11.25"	13.06"
B Width	3.42"	3.42"	8.42"
Depth	3.42"	3.27"	4.47"



Enlighted Enabled Dimming Power Supplies:

MODEL	POWER	OUTPUT	DIMMING	LOCATION
PSV	96	24	ENL	D
PSV - PSV Series	96 - 96 Watt	24 - 24 VDC	ENL - Enlighted Dimming	D - Damp

MODELS	96W
A Length	14.40"
B Width	5.20"
Depth	2.60"



Scaler™ 2x2 Panel

2' X 2' EDGE-LIT FLAT PANEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

TYPE F

FEATURES

- Edge-lit flat panel with options provides a wide variety of configurations to match any application
- Appropriate for offices, schools, medical, and public spaces
- Superior construction provides even light across the face of the fixture
- Standard and HE lumen packages available
- IC rated
- Suitable for ISO Class 5–9 positive pressure cleanrooms



RELATED PRODUCTS

[CFP](#)

CONTROLS TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Extruded aluminum frame has a matte white finish and clean frame-to-lens transition

OPTICS

- Acrylic blend light guide with frosted/ textured outer lens provides edge to edge illumination without pixelation or bright spots

INSTALLATION

- Integral T-bar clips for secure mounting to grid ceiling
- For surface/cable mount applications use surface/cable mount kit accessories
- For plaster or sheet rock installations, use flange kit

ELECTRICAL

- 54,000 hour LEDs at L70 for reduced maintenance

CONTROLS

- Optional SpectraSync™ offers a Tunable White solution and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for wired or wireless connectivity for NX system deployments

CERTIFICATIONS

- All luminaires are built to UL 1598 standards and bear appropriate cULus labels
- Damp location label standard
- Tested in accordance with ISO 14644-1; suitable for ISO Class 5–9 positive pressure cleanrooms
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- UL Sanitation certified to NSF standards

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems UL certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- Adheres to LM79, LM80, and TM21 industry standards for photometrics and lifetime calculations

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1492–4746
Wattage Range	12–41
Efficacy Range (LPW)	103–142
Reported Life (Hours)	170/54,000

Scaler™ 2x2 Panel

2' X 2' EDGE-LIT FLAT PANEL

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: SRP22-35LWG-EDU-ELL14-NXE

CATALOG # _____

SRP22									G		
Model	CRI	Color Temp		Lumen Output				Ceiling	Driver		
SRP22 2' x 2' Scaler™ Panel Edge-Lit	Blank >80	30	3000K	VW	1492-1678	ML	3062-3445	G	Grid	ED	0-10V Dimming
		35	3500K	VWHE	1597-1692	MLHE	3286-3482			ED1	0-10V 1% Dimming
		40	4000K	MW	2071-2330	HL	3546-3989			EDD	0-10V Dim-to-Dark
		50	5000K	MWHE	2098-2224	HLHE	3571-3785			ESD	Step Dimming
		3050T	3000-5000K	LW	2643-2973	VL	4218-4746			LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{1,2}
				LWHE	2641-2799	VLHE	4324-4582			LUTT	T-Series 1% 2-Channel Tunable White driver ^{1,2,3}
				See Product Availability Table (next page)							

Voltage	Options	Control Options
U 120V-277V 347 347V	ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{2,4} ELL14ST Emergency Battery Pack Installed, 1400 Lumens w/ Self Test ^{2,4} ELL14H2 Emergency Battery Pack, 2-Hour Run Time ^{2,4} DTS Dimming Bypass Module ^{2,4,5} CP Chicago Plenum GLR Fast Blow Fuse C3xx 3-wire Flex ⁶ C4xx 4-wire Flex ⁶ C5xx 5-wire Flex ⁶	NX Networked – Wired NXE NX, Dual SmartPORTs ^{2,6,7} NX Networked – Wireless NXWE NX Wireless Enabled ^{2,6,7} NX Networked – Wired/Wireless Hybrid NXWD NX Wireless, Dual SmartPORTs ^{2,6,7}

Accessories	
<input type="checkbox"/> FK22	2x2 Single Flange Kit (Shipped separately)
<input type="checkbox"/> PLRTS	Remote Test Switch Module ⁸
<input type="checkbox"/> SRPSMK-22	2x2 SRP Surface Mount Kit (HE lumen packages available on) ⁹
<input type="checkbox"/> CFPCM36Y SC5F-KIT	36" Cable Mount Kit for 1' or 2' wide Cable Mount fixtures, 5-wire

Notes:

- 1 Limitations apply based on lumen packages (see [Product Exceptions & Details](#))
- 2 Not available in 347V
- 3 For use only with Lutron T series controls
- 4 For compatibility with Dual-Lite Litegear inverters, contact Hubbell Lighting representative
- 5 For emergency circuit control loads including sensors and wireless systems UL certified to UL 924. See page 6 for wiring diagram

NX In-Fixture Control Options:

- 6 For NX control and flex wire together consult factory
- 7 NX is not available with ESD, LUTH or LUTT driver options

Accessory Notes:

- 8 Use with emergency battery pack
 - 9 Surface mount kit can not be used with NXWE or NXWD options
- For questions about configuration options, contact Hubbell Representative

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE												
	VW	VWHE	MW	MWHE	LW	LWHE	ML	MLHE	HL	HLHE	VL	VLHE
ED	X	X	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X	X	X
EDD	X	X	X	X	X	X	X	X	X	X	X	X
ESD	X	X	X	X	X	X	X	X	X	X	X	X
LUTH	X	X	X	X	X	X	X	X	X	X	X	X
LUTT	X	X	X	X	X	X	X	X	X	X		X
347	X	X	X	X	X	X	X	X	X	X	X	X

Scaler™ 2x2 Panel

2' X 2' EDGE-LIT FLAT PANEL

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NX Networked – Wireless								
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

- 1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network
- 2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

SpectraSync™ Color Tuning Technology:

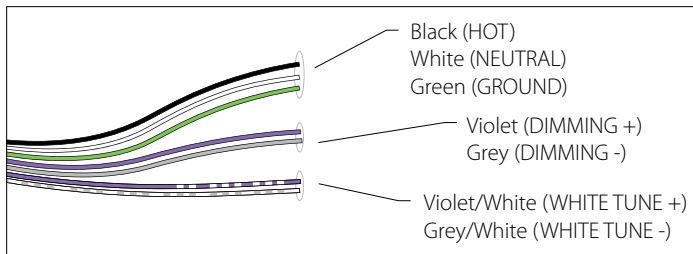
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	3000K–5000K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

3050T (3000K–5000K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

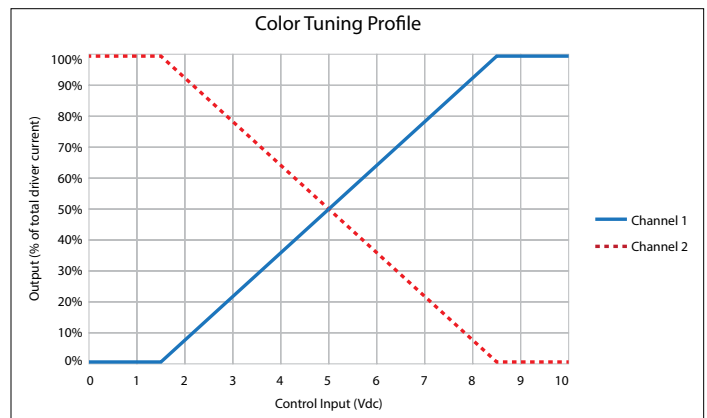


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

Scaler™ 2x2 Panel

2' X 2' EDGE-LIT FLAT PANEL

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS, SPECTRASync™



Lumen Output	Watts	3000		3500		4000		5000	
		Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
VW	13	1492	111	1554	115	1616	120	1678	125
MW	18	2071	113	2157	118	2243	122	2330	127
LW	23	2643	114	2753	118	2863	123	2973	128
ML	30	3062	103	3190	107	3317	111	3445	115
HL	33	3546	108	3694	112	3841	117	3989	121
VL	41	4218	104	4394	108	4570	113	4746	117

DELIVERED LUMENS

Product Availability			
Lumen Package	Lumens	Input Watts	LPW
SRP22-30VW-EDU	1492	13	111
SRP22-30VWHE-EDU	1597	12	130
SRP22-35VW-EDU	1554	13	115
SRP22-35VWHE-EDU	1618	12	132
SRP22-40VW-EDU	1616	13	120
SRP22-40VWHE-EDU	1671	12	136
SRP22-50VW-EDU	1678	13	125
SRP22-50VWHE-EDU	1692	12	138
SRP22-30MW-EDU	2071	18	113
SRP22-30MWHEG-EDU	2098	16	132
SRP22-35MW-EDU	2157	18	118
SRP22-35MWHEG-EDU	2126	16	134
SRP22-40MW-EDU	2243	18	122
SRP22-40MWHEG-EDU	2196	16	138
SRP22-50MW-EDU	2330	18	127
SRP22-50MWHEG-EDU	2224	16	140
SRP22-30LW-EDU	2643	23	114
SRP22-30LWHEG-EDU	2641	20	133
SRP22-35LW-EDU	2753	23	118
SRP22-35LWHEG-EDU	2676	20	135
SRP22-40LW-EDU	2863	23	123
SRP22-40LWHEG-EDU	2764	20	139
SRP22-50LW-EDU	2973	23	128
SRP22-50LWHEG-EDU	2799	20	141

Product Availability			
Lumen Package	Lumens	Input Watts	LPW
SRP22-30ML-EDU	3062	30	103
SRP22-30MLHE-EDU	3286	25	130
SRP22-35ML-EDU	3190	30	107
SRP22-35MLHE-EDU	3329	25	132
SRP22-40ML-EDU	3317	30	111
SRP22-40MLHE-EDU	3439	25	136
SRP22-50ML-EDU	3445	30	115
SRP22-50MLHE-EDU	3482	25	138
SRP22-30HL-EDU	3546	33	108
SRP22-30HLHEG-EDU	3571	27	134
SRP22-35HL-EDU	3694	33	112
SRP22-35HLHEG-EDU	3618	27	135
SRP22-40HL-EDU	3841	33	117
SRP22-40HLHEG-EDU	3738	27	140
SRP22-50HL-EDU	3989	33	121
SRP22-50HLHEG-EDU	3785	27	142
SRP22-30VL-EDU	4218	41	104
SRP22-30VLHE-EDU	4324	33	131
SRP22-35VL-EDU	4394	41	108
SRP22-35VLHE-EDU	4381	33	133
SRP22-40VL-EDU	4570	41	113
SRP22-40VLHE-EDU	4525	33	137
SRP22-50VL-EDU	4746	41	117
SRP22-50VLHE-EDU	4582	33	139

Scaler™ 2x2 Panel

2' X 2' EDGE-LIT FLAT PANEL

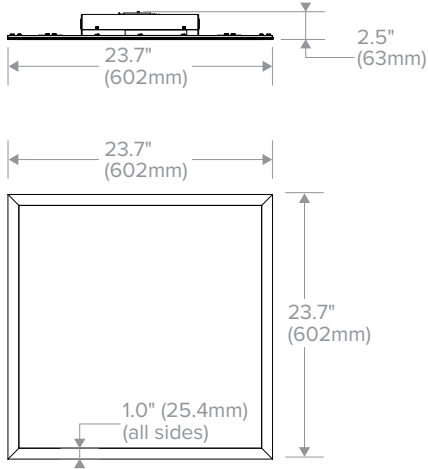
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TYPE: _____ PROJECT: _____

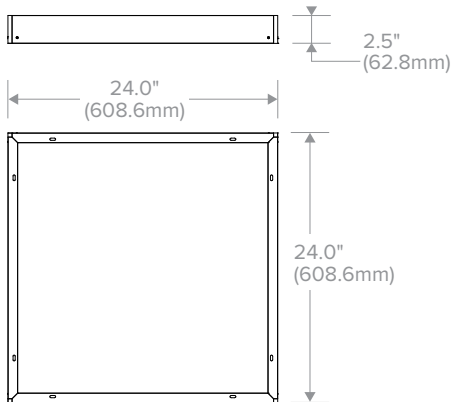
CATALOG #: _____

DIMENSIONS

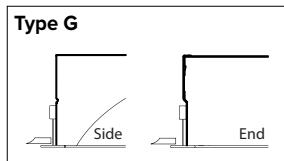
GRID



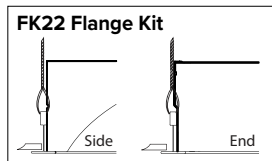
SURFACE MOUNT



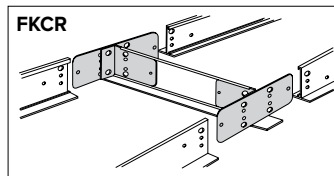
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK22 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.



For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK22 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK22 & (1) FKCR)

Row cut out dimensions using FK22s & FKCR adapters:
Width 24³/₈", Length [24" × (# in row)] + ³/₈".
Example: [24" × 2] + ³/₈" = 48³/₈"

Flange kit cut out dimension for single unit only: 24³/₈" × 24³/₈"

Scaler™ 2x2 Panel

2' X 2' EDGE-LIT FLAT PANEL

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PHOTOMETRY

SRP22-35LW

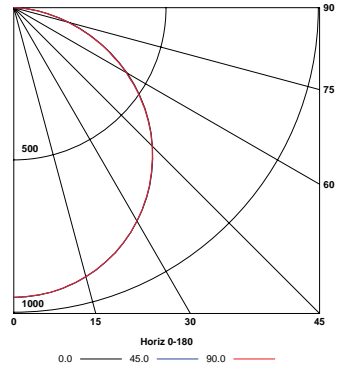
LUMINAIRE DATA

Test No.	19.02119
Description	2' x 2' LED SRP Scaler Panel
Delivered Lumens	2755
Watts	23.28
Efficacy	118
Mounting	Recessed
Spacing Criterion	0° = 1.26 90° = 1.26

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	741	26.9
0-40	1216	44.1
0-60	2161	78.5
0-90	2755	100.0
0-180	2755	100.0

POLAR GRAPH



SRP22-35ML

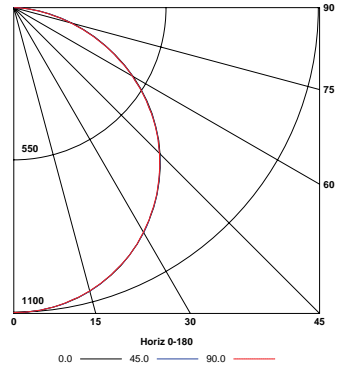
LUMINAIRE DATA

Test No.	19.01989
Description	2' x 2' LED SRP Scaler Panel
Delivered Lumens	3192
Watts	29.83
Efficacy	107
Mounting	Recessed
Spacing Criterion	0° = 1.26 90° = 1.26

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	858	26.9
0-40	1409	44.1
0-60	2504	78.5
0-90	3192	100.0
0-180	3192	100.0

POLAR GRAPH



SRP22-35HL

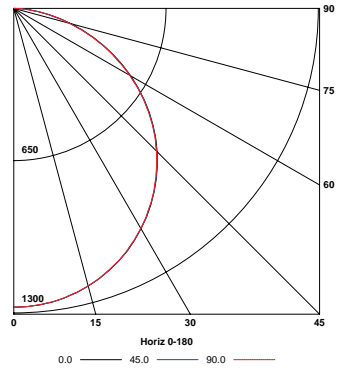
LUMINAIRE DATA

Test No.	19.02070
Description	2' x 2' LED SRP Scaler Panel
Delivered Lumens	3696
Watts	32.86
Efficacy	112
Mounting	Recessed
Spacing Criterion	0° = 1.26 90° = 1.26

ZONAL LUMEN SUMMARY

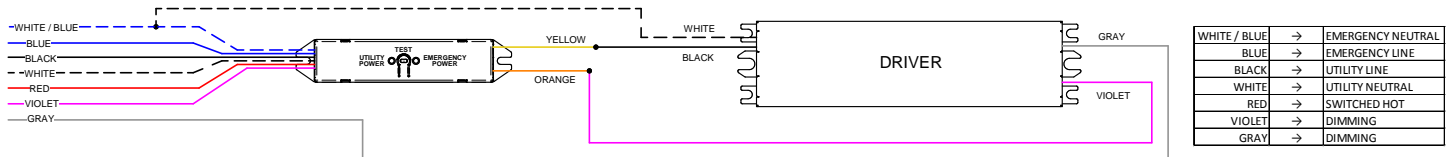
Zone	Lumens	% Luminaire
0-30	994	26.9
0-40	1631	44.1
0-60	2900	78.5
0-90	3696	100.0
0-180	3696	100.0

POLAR GRAPH



ADDITIONAL INFORMATION

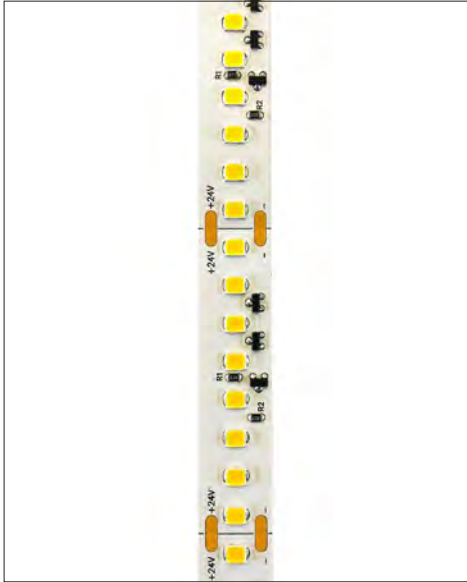
DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



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PHOTOMETRY IES PDF IES PDF IES PDF IES PDF DTS Integration Guide

LineLED 48 HE | Linear LED strip - 24 VDC



LineLED 48 HE series is a small form factor high performance constant voltage LED strip. Designed to deliver best in class efficacy while operating at low temperature, LL48HE delivers constant light output, outstanding color consistency and dimming performance without the need of an additional heat sink.

Available in 5 different outputs with a tight LED pitch of 0.25", LL48HE offers a clean dot free illumination in most Luminii profiles when paired with our frosted lenses.

Mounting
 LLED strip is equipped with 3M™ adhesive transfer tape (9472LE).

Applications
 Indoor only - above and below cabinets, cove lighting, counter accent, architectural reveals, under banister, display and book cases, etc.

Approvals
 Class 2 damp listed

Operating voltage
 24 VDC

Lumen Maintenance:
 Calculated L90 at 173,000 hours for High Output

Warranty
 5 years



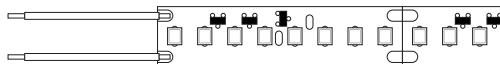
Technical information

MODEL	LO-1W	LO	SO	MO	HO
LEDS/ft	48	48	48	48	48
Light output 3000K	128 lum/ft	257 lum/ft	367 lum/ft	490 lum/ft	786 lum/ft
Average power consumption (for 15' section)	1.0 W/ft	2.0 W/ft	2.8 W/ft	3.7 W/ft	5.9 W/ft
Cutting increment	2.00"	2.00"	2.00"	2.00"	2.00"
Pitch length	0.25"	0.25"	0.25"	0.25"	0.25"
Efficacy lum/watt	128	129	131	132	133
Maximum run length (in series)	60 ft	55 ft	38 ft	27 ft	17 ft
Dimensions	0.48" W 0.06" H	0.48" W 0.06" H	0.48" W 0.06" H	0.48" W 0.06" H	0.48" W 0.06" H

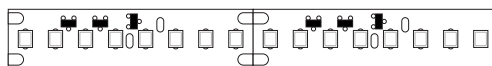
Color temperature	CCT INFO/LUMEN MULTIPLIER		TM-30-15		
	Multiplier <small>(referenced from 3000K)</small>	CRI	R _f	R _g	R _a
2200K	0.73	92	91	97	
2500K	0.81	93	96	96	
2700K	0.94	92	90	99	
3000K	1.00	92	89	99	
3500K	1.02	92	89	99	
4000K	1.02	92	86	94	

SECTION START/END OPTIONS

Soldered leads (72")

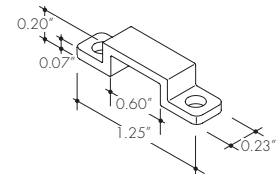


No connector

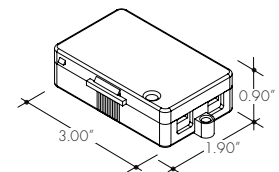


ACCESSORIES

Mounting clip:
 recommended at every 12" when LineLED strip is facing down.
Part # CL-2



Splice Box:
 low voltage, 4 terminal splice box, black.
Part # LVSP-4T-BK



Ordering code

MODEL	OUTPUT	CCT	SECTION START	SECTION END	LENGTH
LL48HE	SO	22K	SL	NC	
LL48HE - LL48HE	*LO-1W - Low, 1 watt LO - Low SO - Standard MO - Medium HO - High	22K - 2200K 25K - 2500K 27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K	SL - Soldered lead wires (72") NC - No connector	SL - Soldered lead wires (72") NC - No connector	view table above for increment options and maximum run limits

* Not available with 22K & 25K

Lens options / light transmission percentage per lens

C	HF	G	SI	S	Q	F	M	R	C36	C10
Clear	Half (50%) Frosted	Graze	Satin Ice	Square Frosted	Round Square Frosted	Frosted	Medium Beam Frosted	Raised	Clear 36° Beam Angle	Clear 10° Beam Angle
KS Channel (KSC-XX) C F HF C36 R 85% 55% 72% 83% 51%		KM Channel (KMC-XX) C F HF C10 R 71% 42% 58% 67% 39%		K45V Channel (K45VC-XX) C F HF C10 71% 42% 58% 67%		K45R Channel (K45RC-XX) F 42%		BOS Channel (BOSC-XX) F SI R G 43% 56% 46% 67%		
KL Channel (KLC-XX) C F HF 83% 55% 68%		KXL Channel (KXLC-XX) C F HF 74% 46% 61%		CLA Channel (CLAC-XX) S Q 62% 63%		ALC Channel (ALC-XX) C F HF 79% 58% 69%		KRS Channel (KRSC-XX) C F HF 85% 55% 72%		
KRM Channel (KRM-XX) C F HF 71% 42% 58%		KRL Channel (KRLC-XX) C F HF 83% 55% 68%		KRXL Channel (KRXLC-XX) C F HF 74% 46% 61%		Wall+ Channel (WPC-XX) C F 47% 44%		RO Channel (RO-XX) C F 75% 52%		
ALS20 Channel (ALS20-XX) C F 78% 43%		FL Channel (FL-XX) C F HF 85% 63% 75%								

Installation

All mounting channels are field cuttable using miter saw with circular blade suitable for cutting aluminum.

Ordering

Extrusions are sold separately. View respective specsheets for details on ordering extrusions and their accessories (endcaps, mounting brackets, etc).

Discontinued Extrusion Reference Link

<https://www.luminii.com/media/4351/extrusion-update-02.pdf>

LED Dotting per extrusion

using the frosted lens option

Extrusion	LED Model LL48HE
KSC, KRSC, FL, ALC	SD
KMC, KRM, K45VC, K45RC	ND
KXLC, KRXLC	ND
KLC, KRLC	ND
WPC	ND
RO, ALS20	ND
BOSC	ND
CLAC	ND



Clear Dotting (CD) Slight Dotting (SD) NO Dotting (ND)

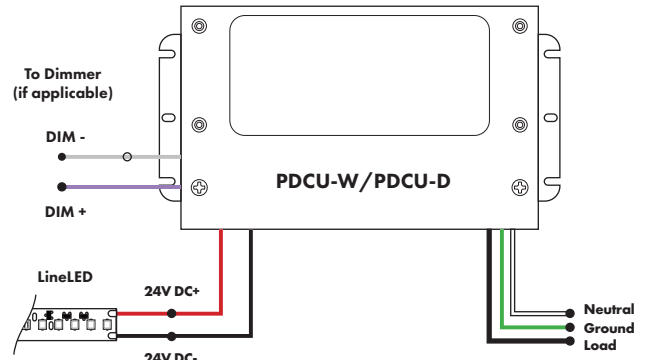
Power Supply

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

Universal Power Supply

MODEL	POWER	OUTPUT
PDCU-W	96	24
PDCU-W - IP66 Wet Series	96 - 96 W 3X96 - 3X96 W	24 - 24 VDC
PDCU-D - IP20 Dry Series	30 - 30 W 60 - 60 W 96 - 96 W 3X96 - 3X96 W	

0-10V - 1% dimming
MLV/ELV/TRIAC - 1% dimming, consult dimming compatibility chart
Compatibility:
View a complete list of compatible dimmers on product page ([Link](#))

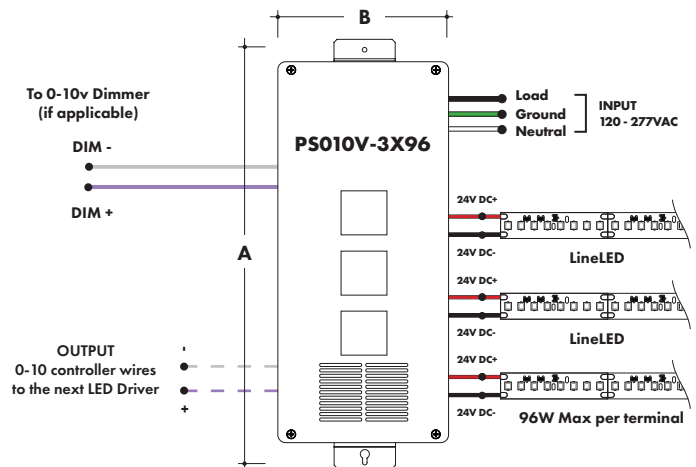
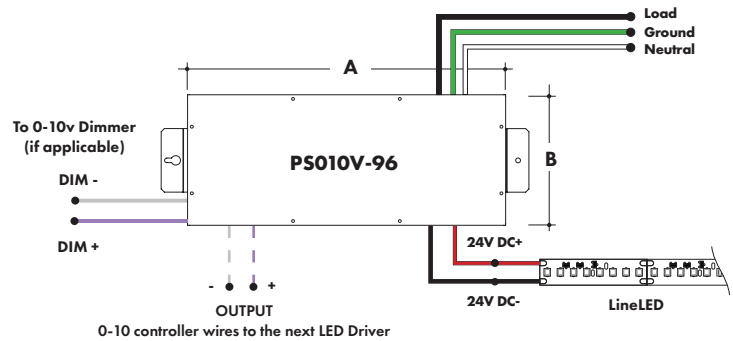


MODELS	PDCU-W 96W	PDCU-W 3X96W	PDCU-D 30W	PDCU-D 60W	PDCU-D 96W	PDCU-D 3X96W
A Length	8.66"	11.85"	6.10"	7.93"	8.25"	9.57"
B Width	3.73"	4.32"	3.35"	3.35"	4.10"	5.94"
Depth	1.61"	1.81"	1.33"	1.32"	1.56"	1.13"

0-10V Dimming Power Supplies

MODEL	POWER	OUTPUT	DIMMING
PS010V	96	24	LIN
PS010V - 0-10V Power Supply dims down to 0%	96 - 96 Watt 3X96 - 3 X 96 Watt	24 - 24 VDC	LIN - Linear LOG - Logarithmic

MODELS	96W	3X96
A Length	14.40"	15.75"
B Width	5.20"	6.62"
Depth	2.60"	4.95"



Styk Wall - Bracket

SIW12138 2 in

JOB NAME:

TYPE:

NOTES:

DESCRIPTION

Styk was built to provide the most lumens with the smallest luminaire package, while optimizing life. Not limited to decorative lighting, effective functional lighting is provided through the optimal light control in this minimal package. It's three optical offerings enable tremendous flexibility including wall washing, wall grazing, and asymmetric lighting solutions. The family features wall, ceiling, and pendant models in a variety of stylish, clean mounting options. Available in 1' to 8' lengths, Styk can be mounted individually or configured in runs.

FEATURES & BENEFITS

- A forward throw optic, for even wall wash illumination, is standard
- Symmetrical optic options are available for more volumetric illumination
- Lamp body can be rotated up to 330° and locks into position for precise fixture alignment
- Up to 1,450 lumens per foot delivered (with Forward Throw distribution)
- Anodized finish provides durable corrosion protection
- All visible fasteners are flush mounted, providing a clean design
- Handcrafted in USA



designed for
LED

EMR

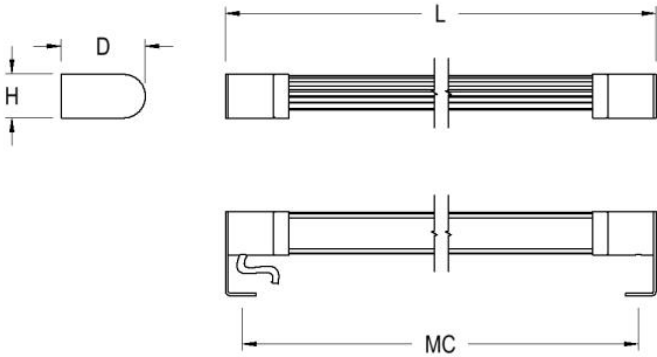
SPECIFICATIONS

- **LIGHT SOURCE:** White LED light engine
- **CRI:** 80+ (contact factory for 90+)
- **LUMEN MAINTENANCE:** L70 = >50,000 Hrs.
- **EFFICACY:** 102 lm/W delivered (with Forward Throw distribution)
- **CCT:** 3000K, 3500K, or 4000K
- **VOLTAGE:** 120-277V standard
- **DRIVER:** Includes remote Class 2 power supply and enclosure. 36" lead length standard; black power cord standard unless otherwise specified. Continuous runs are supplied with one power supply per fixture. Max distance to the driver (including OAP) is: #18 AWG = 50', #16 AWG = 75', #14 AWG = 100'. For

extended distances, contact factory.

- **DIMMING:** 0-10V controls standard to 1%
- **EMERGENCY:** Emergency battery remote optional
- **INTEGRATED SURGE PROTECTION:** LED components are protected against minor surge events
- **CONSTRUCTION:** Extruded aluminum construction provides durable protection for internal components and is recyclable
- **FINISH:** Housing available in anodized finishes only. End caps and mounting components painted to match.
- **MODIFICATIONS:** Consult factory for all modification requests, including RGB and static LED colors
- **APPROVALS:** ETL listed to UL standards (US & Canada) for use in damp locations; not recommended for exterior applications

DIMENSIONS



1FT	L	H	D	MC
	16.4 in 41.7 cm	1.6 in 4.1 cm	3 in 7.6 cm	15.2 in 38.6 cm

Mounting Weight: Approximate: 5 lb (3 kg)

2FT	L	H	D	MC
	28.2 in 71.6 cm	1.6 in 4.1 cm	3 in 7.6 cm	26.9 in 68.3 cm

Mounting Weight: Approximate: 5 lb (3 kg)

3FT	L	H	D	MC
	39.9 in 101.3 cm	1.6 in 4.1 cm	3 in 7.6 cm	38.7 in 98.3 cm

Mounting Weight: Approximate: 5 lb (3 kg)

4FT	L	H	D	MC
	51.4 in 130.6 cm	1.6 in 4.1 cm	3 in 7.6 cm	50.2 in 127.5 cm

Mounting Weight: Approximate: 5 lb (3 kg)

5FT	L	H	D	MC
	63.4 in 161 cm	1.6 in 4.1 cm	3 in 7.6 cm	62.2 in 158 cm

Mounting Weight: Approximate: 10 lb (5 kg)

6FT	L	H	D	MC
	77.2 in 196.1 cm	1.6 in 4.1 cm	3 in 7.6 cm	75.9 in 192.8 cm

Mounting Weight: Approximate: 10 lb (5 kg)

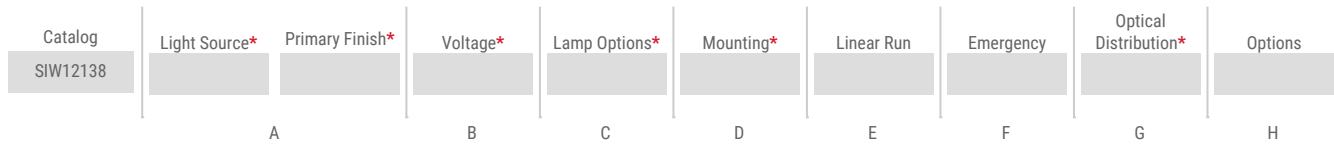
8FT	L	H	D	MC
	101.2 in 257 cm	1.6 in 4.1 cm	3 in 7.6 cm	99.9 in 253.7 cm

Mounting Weight: Approximate: 10 lb (5 kg)

CONFIGURATOR

To configure your spec sheet online, go to www.spilighting.com/SIW12138. Not all options are available in all configurations; consult factory for details.

Required Field *



A - LIGHT SOURCE *

To ensure color consistency, SPI uses precise bin selection and strict quality processes to maintain a 3-step (MacAdam) SDCM on all white LED lampings. Published LED luminaire wattages are calculated using a typical power supply efficiency of 88%; exact wattages may vary based on application. Alternative wattages available upon request. Delivered lumens shown below are for Forward Throw distribution.

1 FOOT NOMINAL FIXTURE

- 1FT-L4W** | White 4W LED Light Engine | Delivered Lumens: 407
- 1FT-L7W** | White 7W LED Light Engine | Delivered Lumens: 712
- 1FT-L14W** | White 14W LED Light Engine | Delivered Lumens: 1,424

2 FOOT NOMINAL FIXTURE

- 2FT-L8W** | White 8W LED Light Engine | Delivered Lumens: 814
- 2FT-L14W** | White 14W LED Light Engine | Delivered Lumens: 1,424
- 2FT-L28W** | White 28W LED Light Engine | Delivered Lumens: 2,848

3 FOOT NOMINAL FIXTURE

- 3FT-L12W** | White 12W LED Light Engine | Delivered Lumens: 1,220
- 3FT-L21W** | White 21W LED Light Engine | Delivered Lumens: 2,136
- 3FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 4,271

4 FOOT NOMINAL FIXTURE

- 4FT-L16W** | White 16W LED Light Engine | Delivered Lumens: 1,627
- 4FT-L28W** | White 28W LED Light Engine | Delivered Lumens: 2,848
- 4FT-L56W** | White 56W LED Light Engine | Delivered Lumens: 5,695

5 FOOT NOMINAL FIXTURE

- 5FT-L20W** | White 20W LED Light Engine | Delivered Lumens: 2,034
- 5FT-L35W** | White 35W LED Light Engine | Delivered Lumens: 3,560
- 5FT-L71W** | White 71W LED Light Engine | Delivered Lumens: 7,221

6 FOOT NOMINAL FIXTURE

- 6FT-L24W** | White 24W LED Light Engine | Delivered Lumens: 2,441
- 6FT-L42W** | White 42W LED Light Engine | Delivered Lumens: 4,271
- 6FT-L85W** | White 85W LED Light Engine | Delivered Lumens: 8,645

8 FOOT NOMINAL FIXTURE

- 8FT-L32W** | White 32W LED Light Engine | Delivered Lumens: 3,254
- 8FT-L56W** | White 56W LED Light Engine | Delivered Lumens: 5,695
- 8FT-L113W** | White 113W LED Light Engine | Delivered Lumens: 11,492

See last page for finish options

B - VOLTAGE *

120-277V | Universal Voltage

C - LAMP OPTIONS *

Delivered lumens shown are at 4000K CCT; apply multiplier for delivered lumens at other CCT.

3000K ¹ | 3000K CCT

3500K ² | 3500K CCT

4000K | 4000K CCT

¹ Apply .95 multiplier for delivered lumens

² Apply .97 multiplier for delivered lumens

D - MOUNTING *

Additional mounting structure and hardware required (by others). BRK is limited to 3" OAP. For longer projections, choose LBK. LBK mounts to standard 2" x 4" switch box. INSTALLATION NOTES: During installation the contractor is responsible to use actual fixtures to ensure accurate mounting centers from one fixture to the next along the length of the linear run. Choose a mounting from below:

DF_BRK | Bracket Mount (default)

LBK6 | 6.0" Fixed Bracket

LBK12 | 12.0" Fixed Bracket

LBK18 | 18.0" Fixed Bracket



E - LINEAR RUN

Select this option only for runs longer than 8'.

RUN ³ | Continuous Run OAL | Specify Length of Run

Length:

³ For a take-off and pricing, contact factory

F - EMERGENCY

EMR | Emergency Battery Remote

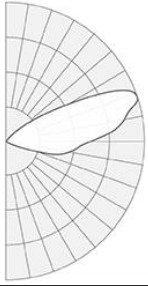
G - OPTICAL DISTRIBUTION *

See IES zip file for photometrics for each distribution.

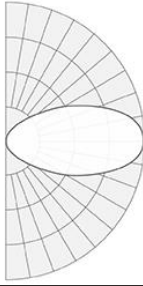
- DF_FT** | Forward Throw (default)
- SMA**⁴ | Symmetric 60 Degree Beam - 120 Degree spread
- SMB**⁵ | Symmetric 30 Degree Beam - 60 Degree spread

⁴ Apply .90 multiplier to Forward Throw output shown above for delivered lumens

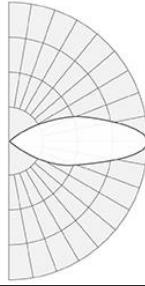
⁵ Apply 1.04 multiplier to Forward Throw output shown above for delivered lumens



FT



SMA



SMB

H - OPTIONS

- F** | Fusing

Available Finishes

Not all finishes are available in all configurations; consult factory for details.

Anodized



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture Circle (HP-4 C) TYPE K



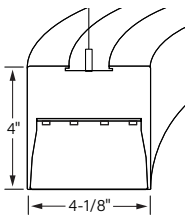
High Performance 4" Aperture Circle (HP-4 C) is a patented, circular LED luminaire. Constructed with an extruded aluminum body and single-piece direct diffuser, the HP-4 C provides a seamless finish aesthetic. Delivering excellent performance using an advanced optical design and mid-power LEDs to achieve 90% of initial light output at 100,000+ hours.

This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving Red List Approved and Declared status.

Signal White is standard finish

CROSS SECTION

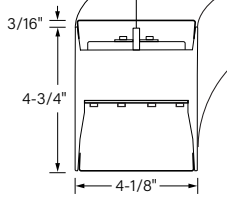
Direct Pendant



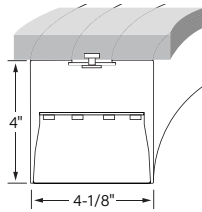
Flush Downlight Diffuser (standard)

Indirect/Direct

Top Glow Diffuser (standard)

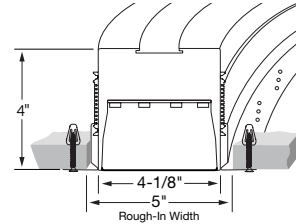


Surface Mount



Recessed

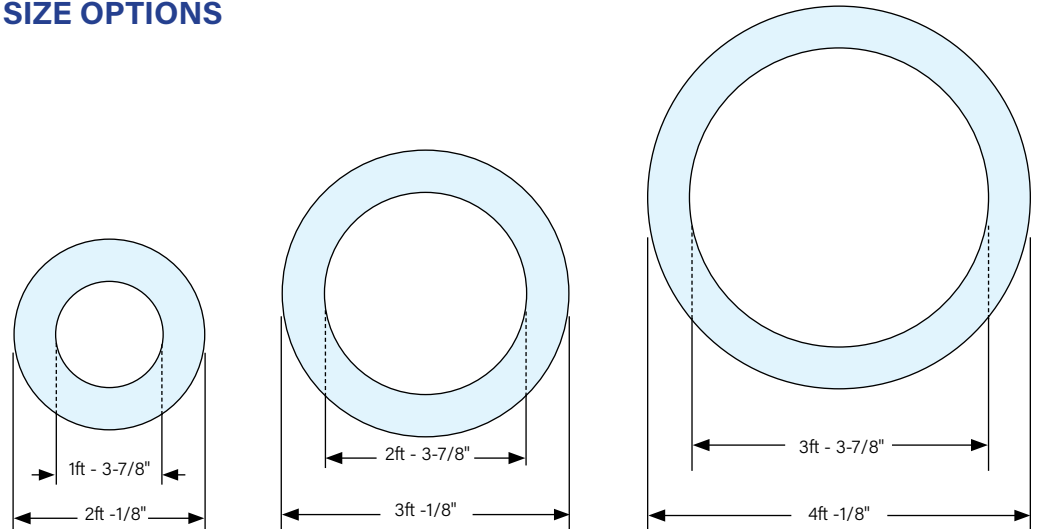
(Spackle Flange Only)



GET MORE WITH TAILORED LIGHTING

- Tailored Color
- Tailored Output
- Tailored Control

SIZE OPTIONS



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture Circle (HP-4 C)

BODY TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Size (Diameter) ¹
HP - High Performance	4 C	P - Pendant R - Recessed (<i>Spackle Flange Only</i>) SM - Surface Mount	D - Direct ID - Indirect/Direct (<i>Pendant Only</i>)	2' 3' 4'

OUTPUT and LED TYPE

MECHANICAL/OPTICAL OPTIONS

Uplight Output ID only	Downlight Output	LED CRI/CCT	Uplight ID only	Downlight	Reflector System
S - Standard B - Boosted Standard H - High V - Very High TL - Tailored: _____lm/ft*	S - Standard B - Boosted Standard H - High V - Very High TL - Tailored: _____lm/ft*	830 - 80 CRI, 3000K 835 - 80 CRI, 3500K 840 - 80 CRI, 4000K 930 - 90 CRI, 3000K 935 - 90 CRI, 3500K 940 - 90 CRI, 4000K 8TW - 80 CRI, Tunable White 9TW - 90 CRI, Tunable White	TG - Top Glow (standard) F - Flush	F - Flush	96 - 96 Low Gloss

* Specify lm/ft of outputs between Standard (S) and Very High (V). Consult factory for tailored lumen output outside of this range.

ELECTRICAL OPTIONS

Voltage	Circuiting ²	Driver Selection
120 - 120 Voltage 277 - 277 Voltage 347 - 347 Voltage	SC - Single Circuit* One single circuit in a run DC - Dual Circuit* ³ Independent control of up and down separately in an I/D style fixture * Emergency to Generator circuits are in addition to the normal luminaire circuit(s)	0-10V Driver Options FC-10% - 0-10V 10% (standard) ⁴ FC-1% - 0-10V 1% ⁴ OSR-10% - Osram OTi, 0-10V 10% ⁴ OSR-1% - Osram OTi, 0-10V 1% ⁴ ELD-10V-0% - EldoLED SOLOdrive, 0-10V 0.1% ⁵ ELD-10V-1% - EldoLED SOLOdrive, 0-10V 1% ⁵ OSR-10V-TW - Osram OTi, 0-10V 10% (<i>Tunable White</i>) ⁴ DALI Driver Options ⁵ FC-DALI-1% - DALI 1% OSR-DALI-1% - Osram Dexal, 1% ELD-DALI-0% - EldoLED SOLOdrive, DALI 0.1% ELD-DALI-TW - EldoLED DUALdrive LightShape, 1% (<i>Tunable White</i>)

DMX Driver Options
FIN-DMX - Finelite DMX 1% (*Tunable White - FineTUNE Controls Only*) ⁶
Lutron Driver Options ⁵
LUT-ES1 - Lutron, Ecosystem 1%
LUT-ES5 - Lutron, Ecosystem 5%
LUT-2W - Lutron, 2-wire (120v only) 1%
LUT-TW - Lutron T-Series, EcoSystem 1% (*Tunable White*)
 See Page 3 for additional driver options and details

MOUNTING OPTIONS

OTHER OPTIONS

Mounting Method	Ceiling Hardware Type ⁷	Finish	Emergency Style (Optional)	Special Options (Optional)
FA50 - Fully Adjustable 50" (Standard) ⁸ FA100 - Fully Adjustable 100" ⁸ FA150 - Fully Adjustable 150" ⁸ FA200 - Fully Adjustable 200" ⁸ FA250 - Fully Adjustable 250" ⁸ FA300 - Fully Adjustable 300" ⁸ SF - Spackle Flange ⁹	C1 - 1" T-Bar ⁷ C2 - 9/16" T-Bar ⁷ C3 - Screw Slot ⁷ C4 - Hard Ceiling ⁷	SW - Signal White FB - Finelite Black ¹⁰ SA - Satin Aluminum ¹⁰ #### - RAL Color Code ¹⁰ _____	EM/GEN - Emergency to Generator ALCR - Automatic Load Control Relay	CP - Chicago Plenum ¹¹ FLX - Flex Whip ¹¹ RLA - Red List Approved RLD - Declared

¹ Nominal size

² Contact factory for switching options

³ Indirect/Direct only

⁴ Add DTO to gain "Dim to Off" functionality (FC-10% - DTO)

⁵ 3' & 4' diameters only

⁶ B & V outputs only

⁷ Pendant and Surface Mount only

⁸ Pendant only

⁹ Recessed only

¹⁰ 20 business days lead time for color

¹¹ Recessed and Pendant (Only available with C1, C2, and C3 mounting hardware with Finelite Gridbox)

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture Circle (HP-4 C)

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6063-T4 extruded aluminum with 16 gauge steel assembly body.

SIZES: Circles are available in nominal diameters of 2', 3' and 4'.

OUTPUT and LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. A separate chart summarizes lumen distribution and wattage. Light engines are replaceable.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

MECHANICAL FEATURES

UPLIGHT DIFFUSER: Patented Top Glow frost white diffuser standard. 80% transmissive, 99% diffusion. Optional: Flush frost white snap-in diffuser, 80% transmissive, 99% diffusion.

DOWNLIGHT DIFFUSER: Single piece, seamless lens. Flush frost white snap-in lens standard, 80% transmissive, 99% diffusion.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint.

ELECTRICAL FEATURES

STATIC FEED: Standard with one 18-gauge/5-conductor single-circuit feed.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. DMX and power feed at same location (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V constant current reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 100%-10% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.

- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON STATIC DRIVER OPTIONS ¹:

- **LUTES1** (Hi-lume 1% EcoSystem with Soft-On, Fade to Black dimming (LDE1 series))
- **LUTES5** (5-Series 5% EcoSystem (LDE5 Series))
- **LUT2W** (Hi-lume 1% 2-wire, 120V forward phase dimming (LTEA series))

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V, 277V, and 347V.

- **Power factor:** ≥ 0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime:** 100,000 hours
- FineTune DMX is 1%

LUTRON TUNABLE WHITE DRIVER OPTION ¹: LUTDTW (1% T-Series 2-Channel Digital Tunable White (PSQ Series)).

MOUNTING TYPE

MOUNTING:

- **Pendant:** 50" to 300" Fully Adjustable (**FA**) plated steel aircraft cable with safety stop hardware standard. Mounted with three equidistant vertical suspension cables.
- **Recessed Spackle Flange:** Drywall surfaces (walls or ceilings): 1/4" 20 stud and nut (provided by others). Mounted with three equidistant suspension points.
- **Surface Mount:** Lay-in ceiling types: caddy clip with 1/4" 20 stud and nut. Drywall or concrete surfaces (walls or ceilings): 1/4" 20 stud and nut (provided by others). Mounted with three equidistant suspension points.

TUNABLE WHITE DMX MOUNTING: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5', 12', and 30' (5' standard).

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are prewired with plug-and-play interconnection cables to support easy plug-together joining of fixture runs. If a non-FineTune DMX system has been specified, a DMX to RJ45 converter is provided.

OTHER FEATURES

EMERGENCY STYLE: Optional emergency to generator/inverter wiring.

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture Circle (HP-4 C)

SPECIFICATIONS

TUNABLE WHITE ELECTRICAL OPTIONS:

- **TW Driver Options 0-10V:** EM/GEN
- **FineTune DMX:** EM/GEN
- **DALI:** EM/GEN
- **LUTRON:** EM/GEN

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**)², and Satin Aluminum (**SA**)² are standard. Optional Adder: 185 RAL colors² are available.

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 PoE options available on request. These fixtures are rated for Damp Location. Chicago Plenum options

available for C1, C2, or C3 suspension using our GridBox. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add - **RLA** (Red List Approved) or - **RLD** (Declared Label) to your part number.

WEIGHTS:

- Direct (pendant and surface mount): 2' = 15 lbs, 3' = 27 lbs, 4' = 42 lbs
- Recessed (spackle flange): 2' = 18 lbs, 3' = 30 lbs, 4' = 45 lbs
- Indirect/Direct (pendant): 2' = 18 lbs, 3' = 30 lbs, 4' = 45 lbs

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories are covered by their individual manufacturer warranties.

² 20 business day lead time for color

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture Circle (HP-4 C)

Static White Photometry - 4' Circle

HP-4C-P-D-4'-V-835

Efficacy: 100 lm/W

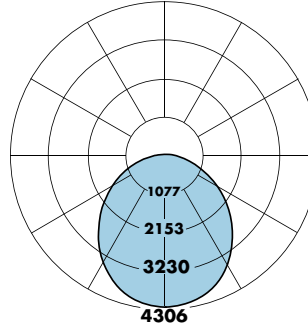
Total luminaire output: 11311 lumens
113 watts (9.0 watts/foot³)

Peak Candela Value ⁴: 4306 @ 0°

CRI: 80

CCT: 3500K

ITL LM79 Report 91221



CANDELA DISTRIBUTION ⁴

	0	22.5	45.0	67.5	90.0	FLUX
0	4306	4306	4306	4306	4306	
5	4282	4282	4282	4282	4282	407
15	4056	4064	4080	4083	4103	1151
25	3654	3662	3685	3717	3741	1702
35	3124	3140	3168	3208	3220	1988
45	2539	2555	2579	2607	2631	1997
55	1922	1934	1958	1978	1998	1754
65	1301	1309	1325	1341	1349	1316
75	704	712	720	728	728	764
85	203	203	203	203	203	232
90	0	0	0	0	0	

Total Light Output, 3500K, 80 CRI (Lumens)

	S ¹	B ¹	H ¹	V ²
2'	2377	2988	4516	5806
3'	3934	4945	7474	9610
4'	4630	5821	8797	11311

Power, 3500K (Watts Per Foot)³

	S ¹	B ¹	H ¹	V ²
2'	3.6	4.6	7.1	9.2
3'	4.0	5.1	7.8	10.2
4'	3.5	4.5	6.9	9.0

Efficacy, 3500K, 80 CRI (Lumens Per Watt)

	S ¹	B ¹	H ¹	V ²
2'	105	104	102	100
3'	105	104	102	100
4'	105	104	102	100

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI

3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI

3000K	0.746
3500K	0.760
4000K	0.789

High Output (H), 2', 4000K, 90 CRI

Lumen Adjustment Factor: 0.789

Total Light Output: 4516 lm x 0.789 = 3563 lm

Total Light Output per Foot³: 3563lm / 12.6 = 566 lm/ft.
watts/foot: 7.1 W/ft.

$$\text{Efficacy} = \frac{566 \frac{\text{lm}}{\text{ft.}}}{7.1 \frac{\text{W}}{\text{ft.}}} = 80 \text{ lm/W}$$

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

¹Family Correlation based on 4' Circle, 3500K, Very High Output (V) test - 120V.

²Based on ITL report: 91221

³Watts per foot calculated using approximate outer circumferences of 6.3', 9.4', & 12.6' respectively for 2', 3', & 4' circles

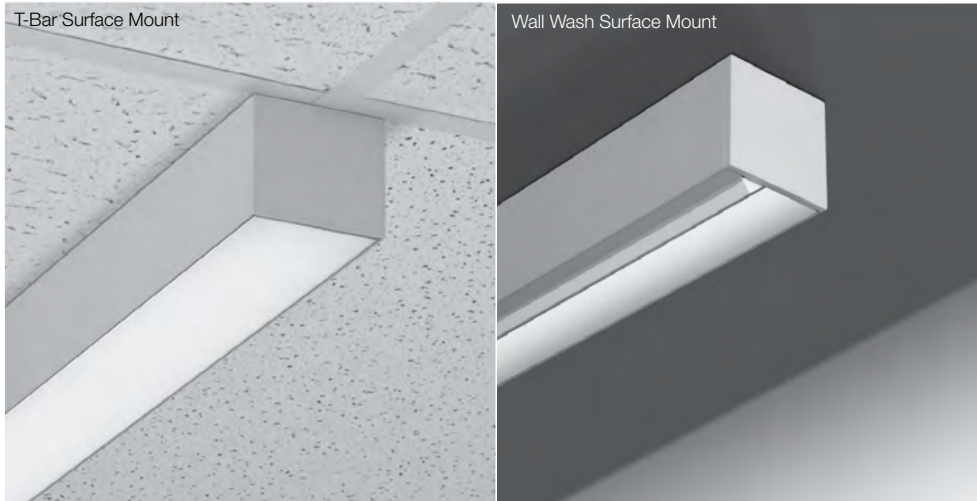
⁴Values derived from testing a 90-degree section.

Protected by one or more US Patents: 8915613; D702,391; D702,390; D700,732

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

TYPE L



High Performance 4" Aperture is a patented, linear LED luminaire family. HP-4 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

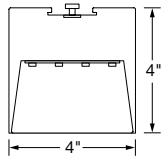
This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Declared** status.

Signal White is standard finish

Note: see page 6 for all aesthetic options

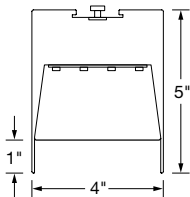
CROSS SECTIONS

Surface Mount



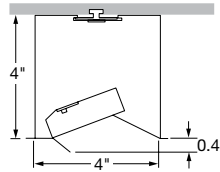
Flush Downlight Diffuser (standard)

Surface Mount Regressed



Flat Diffuser with 1" Regressed (RG)

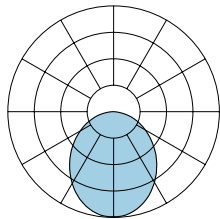
Wall Wash Surface Mount



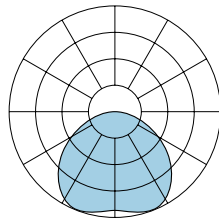
Kicker (standard)

X SHAPE WITH 4' LEGS

OPTIC OPTIONS



Standard Downlight Optic (F)



Downlight Spread Optic (DSO)

ALSO AVAILABLE IN



Pendant (D, ID, I)



Wall Mount (WM)



Surface Mount (SM)



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

BODY TYPE

OUTPUT AND LED TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Length of Run	Downlight Output (Flush)	LED CRI/CCT
HP - High Performance	4	SM - Surface Mount SM RG - Direct Regressed	D - Direct WW-D - Wall Wash Direct	Minimum 2' section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.	S - Standard (379 lm/ft) B - Boosted (477 lm/ft) H - High (720 lm/ft) V - Very High (926 lm/ft) TL - Tailored: _____ lm/ft*	830 - 80 CRI, 3000K 835 - 80 CRI, 3500K 840 - 80 CRI, 4000K 930 - 90 CRI, 3000K 935 - 90 CRI, 3500K 940 - 90 CRI, 4000K 8TW - 80 CRI, Tunable White 9TW - 90 CRI, Tunable White

* Specify lm/ft of outputs between Standard (S) and Very High (V). Consult factory for tailored lumen output outside of this range.

MECHANICAL/OPTICAL OPTIONS

ELECTRICAL OPTIONS

Downlight	Reflector System	Voltage	Circuiting ⁴
F - Flush (standard) BG - Bottom Glow DL - 1" Drop Down Lens RG-D - Flat Diffuser with 1" Regress ² RG-WCB - White Cross Blade Baffle ² RG-LHE - Hollowed Ellipse Louver ² RG-LHC - Hex Louver ² DSO - Downlight Spread Optic ³ K - Kicker for Wall Wash only (standard) FO - Fully Open for Wall Wash only	96LG - 96 Low Gloss White SSA - Semi-Specular Aluminum for Wall Wash only	120 - 120 Voltage 277 - 277 Voltage 347 - 347 Voltage	SC - Single Circuit* Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

MOUNTING OPTIONS

Driver Selection ⁵	Ceiling Hardware Type	
0-10V Driver Options FC-10% - 0-10V 10% ⁶ (standard) FC-1% - 0-10V 1% ⁶ OSR-10% - Osram OTI, 0-10V 10% ⁶ OSR-1% - Osram OTI, 0-10V 1% ⁶ ELD-10V-0% - EldoLED SOLOdrive, 0-10V 0.1% OSR-10V-TW - Osram OTI, 0-10V 10% (Tunable White) ⁶ DALI Driver Options FC-DALI-1% - DALI 1% OSR-DALI-1% - Osram Dexas, 1% ELD-DALI-0% - EldoLED SOLOdrive, 0.1% ELD-DALI-TW - EldoLED DUALdrive LightShape, 0.1% (Tunable White)	DMX Driver Options FIN-DMX - Finelite DMX 1% (Tunable White - FineTune Controls Only) ⁷ ELD-DMX - EldoLED POWERdrive, 0.1% ELD-DMX-TW - EldoLED POWERdrive, 0.1% (Tunable White) Lutron Driver Options LUT-ES1 - Lutron, Ecosystem 1% LUT-2W - Lutron, 2-wire (120V only) 1% LUT-TW - Lutron T-Series, EcoSystem 0.1% (Tunable White)	C1 - 1" T-Bar C2 - 9/16" T-Bar C3 - Screw Slot C4 - Hard Ceiling

See Page 3 for additional driver options and details

OTHER OPTIONS

Endcap Style	Finish	Emergency Style (Optional)	Integrated Sensor (Optional) ¹¹	Special Options (Optional)
FE - Flat Endcap (standard) DE - 1" Drop Endcap ⁸ OE - Open Endcap ⁹	SW - Signal White (standard) FB - Finelite Black ¹⁰ SA - Satin Aluminum ¹⁰ #### - RAL Color Code ¹⁰	FAC CHO - Factory Choice Battery Back-up EM/GN - Emergency to Generator NL - Night Light BSL722 - Bodine Battery Back up BSL310LP - Bodine Battery Back up Low Profile GTD - Generator Transfer Device	OBO - Occupancy ¹¹ OBD - Daylight ¹¹ OBE - Enlighted ¹² REE - Remote Enlighted ¹³	RLA - Red List Approved RLD - Declared

¹ Consult factory for tailored lumen output
² Regressed only
³ Not available with Regressed or Curves
⁴ Contact factory for switching options
⁵ See page 3 for more details

⁶ Add DTO to gain "Dim to Off" functionality (FC-10% - DTO)
⁷ B & V outputs only
⁸ 1" Drop Down Lens downlight only
⁹ Available with Hollowed Ellipse Louver (LHE) only
¹⁰ 20 business days lead time for color

¹¹ Not available with Wall Wash
¹² Enlighted components installed by Finelite, provided by others
¹³ Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6061-T6 extruded aluminum body. Internal joiner system, plug-together wiring, standard.

LENGTHS: Any length, 2' minimum, in increments down to 1/16" ($\pm 1/32"$). 12' maximum section length. Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**), and White Cross Blade Baffle (**WCB**) are available in 1' increments.

MITERED CORNERS¹: Illuminated corners of greater than 60° and less than 180° in a single plane, available with Flush Diffuser, Bottom Glow Diffuser, 1" Drop Down Lens, Regressed Diffuser, White Cross Blade Baffle² or Wall Wash. Corners not available with Wall Wash (**WW-D**), Hollowed Ellipse Louver (**LHE**) or Hex Louver (**LHC**). Consult factory for tailored lighting options.

OUTPUT AND LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For lengths 3' and greater, the uplight and downlight can be specified with different lumen packages and dual controls. For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. Light engines are replaceable.

MECHANICAL/OPTICAL OPTIONS

DOWNLIGHT OPTION: 12' maximum diffuser length. Flush frost white snap-in diffuser standard, 77% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination. Available with Flush (**F**), Bottom Glow (**BG**), 1" Drop Down Lens (**DL**), White Cross Blade Baffle (**WCB**)³, Ellipse Louver (**LHE**)³, Hex Louver (**LHC**)³, Downlight Spread Optic (**DSO**), and Regressed downlight diffusers (**RG**). 1" Drop Down Lens made of acrylic. Available with a solid endcap or an endcap with a diffuse filler to continue the luminous aesthetic. Downlight Spread Optic is an extruded lens with a subtle ribbed appearance providing a batwing distribution for improved optical performance. Consult factory for more tailored lumen outputs.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint. The standard Semi-Specular Aluminum (**SSA**) Kicker (**K**) reflector delivers light high on the vertical surface. The Kicker reflector can be easily removed for open distribution (**FO**).

ELECTRICAL OPTIONS

STATIC WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed controlling uplight and downlight together (power and dimming). Specify dual feeds for independent control of uplight and downlight. 14-gauge feed used when luminaire current exceeds 5 amps.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. 14-gauge feed used when fixture current exceeds 5 amps. DMX and power feed at same location (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V Constant Current Reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 10%- 100% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.

- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON DRIVER OPTIONS:

- **LUT-ES1 (LDE1)** - (Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series)).
- **LUT-2W (LTEA2W)** - (Hi-lume 1% 2-wire, 120V forward phase dimming (LTEA series)).

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V, 277V, and 347V.

- **Power factor:** ≥ 0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime:** 100,000 hours
- **FineTune DMX:** 1%

LUTRON TUNABLE WHITE DRIVER OPTION: LUT-TW (0.1% T-Series 2-Channel Digital Tunable White (PSQ Series)).

MOUNTING OPTIONS

HANGING HARDWARE: Lay-in ceiling types: caddy clip with 1/4" - 20 stud and nut. Drywall or concrete surfaces (walls or ceilings): 1/4" - 20 stud and nut (provided by others).

¹ Not available with Wall Wash

² White Cross Blade (WCB) baffles not available with custom angles. Available in 90 degrees only

³ Regressed only

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

Specifications

TUNABLE WHITE DMX HANGING HARDWARE: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5' (standard), 12', and 30'.

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are pre-wired with plug-and-play interconnection cables to support easy plug-together joining of fixture runs. If a non-FineTune DMX system has been specified, a DMX to RJ45 converter is provided.

OTHER FEATURES

ENDCAPS: Flat diecast aluminum endcaps (**FE**) add 1/4" to each end of luminaire. 1" Drop Down Lens Endcap (**DE**) includes diffuse element to continue luminance of drop lens. Open Endcap (**OE**) is for use with the Hollowed Ellipse Louver (**LHE**)⁷; following the curve of the louver.

EMERGENCY STYLE: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery.

Backup Battery			
	Factory Choice	Bodine BSL310LP	Bodine BSL722
HP4-SM-D			
Min. Housing Length	8'	4'	4 [*]
EM Lumen Output	1854	1102	1854
EM Section Illum.	2'	2' or 4'	2'
HP4-SM-WW-D			
Min. Housing Length	8 [*]	4 [*]	4 [*]
EM Lumen Output	2000	1189	2000
EM Section Illum.	4'	4'	4'

^{*} Minimum fixture housing length for battery pack approved without sensor

TUNABLE WHITE ELECTRICAL OPTIONS⁸:

- **TW Driver Options 0-10V:** EM/GEN, GTD or Battery Back up
- **FineTune DMX:** EM/GEN or Battery Back up
- **DMX:** Battery Back up
- **DALI:** EM/GEN, GTD or Battery Back up
- **LUTRON:** EM/GEN, GTD or Battery Back up

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) occupancy or daylight sensors available with Flush and Bottom Glow downlight diffusers. Refer to Occupancy Sensor, Daylight Sensor, and Enlighted Sensor tech sheets for more info.

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**)⁹, and Satin Aluminum (**SA**)⁹ are standard. Optional Adder: 185 RAL colors⁹ are available.

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 - PoE options available on request. These fixtures are rated for Damp Location. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Declared Label) to your part number.

WEIGHT¹⁰: SM - 2.8 lb/ft; WW - 2.9 lb/ft

DLC QUALIFIED: Configurations of this product are listed on the DLC Qualified Products List (QPL). www.designlights.org/search

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

⁷ Regressed only

⁸ Consult Finelite for Generator Transfer Device and Battery Backup fit

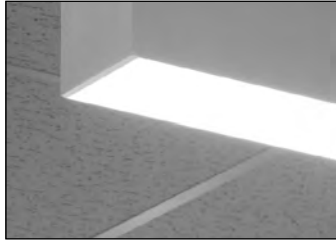
⁹ 20 business days lead time for color

¹⁰ Excludes Battery Backup and Generator Transfer Device weight

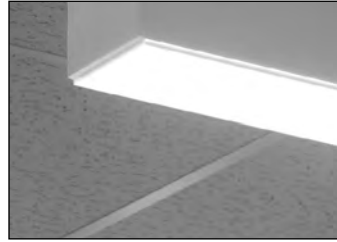
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Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

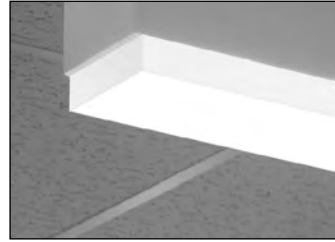
AESTHETIC OPTIONS



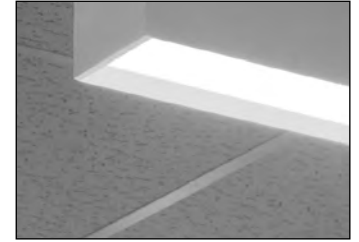
Flush Diffuser (**F**)



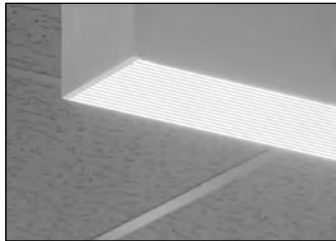
Bottom Glow Diffuser (**BG**)



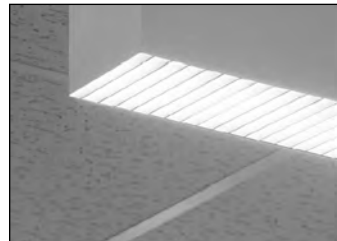
1" Drop Down Lens (**DL**)



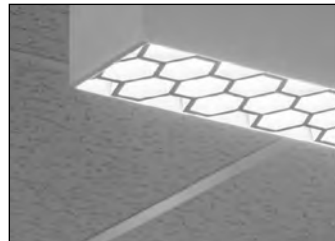
Flat Diffuser with 1" Regressed (**RG-D**)



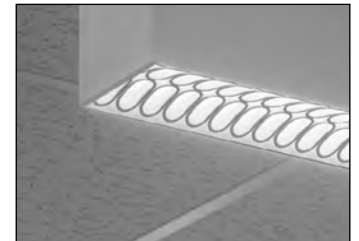
Downlight Spread Optic (**DSO**)
Externally flush



White Cross Blade Baffle¹ (**RG-WCB**)



Hex Louver¹ (**RG-LHC**)



Hollowed Ellipse Louver¹ (**RG-LHE**)



Kicker (**K**) - Wall Wash only

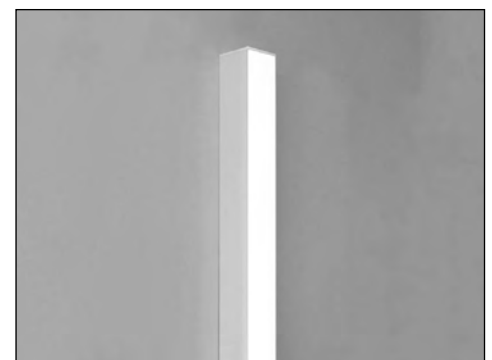
SURFACE MOUNT OPTIONS



Ceiling Surface Mount



Horizontal Surface Mount



Vertical Surface Mount

¹ Not available with Wall Wash

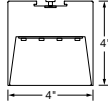
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

Direct Photometry - 4' Luminaire 3500K

HP4-SM-D-4'-V-835

Downlight: Flush Diffuser



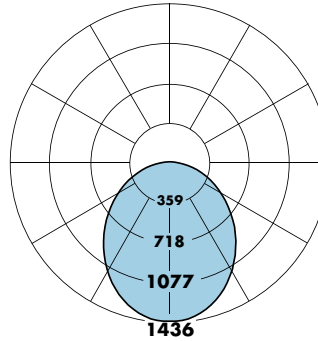
Efficacy: 100 lm/W

Total luminaire output: 3705 lumens (926 lm/ft)
37 watts (9.3 W/ft)

Peak Candela Value: 1436 @ 0

CRI: 80 / CCT: 3500K

ITL LM79 Report 85124



CANDELA DISTRIBUTION						
	0.0	22.5	45	67.5	90	Flux
0	1436	1436	1436	1436	1436	
5	1428	1428	1427	1427	1427	135
15	1363	1353	1358	1357	1350	382
25	1236	1221	1226	1219	1212	563
35	1060	1047	1048	1037	1030	653
45	859	849	848	836	831	652
55	647	639	637	628	623	568
65	434	432	431	425	424	425
75	236	236	237	235	236	250
85	67	68	69	70	69	77
90	0	0	0	0	0	

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire

S ¹	B ¹	H ¹	V ²
1517	1907	2882	3705

Light Output, 3500K, 80 CRI (Lumens Per Foot)

S ¹	B ¹	H ¹	V ²
379	477	720	926

Power, 3500K (Watts Per Foot)

S ¹	B ¹	H ¹	V ²
3.6	4.6	7.1	9.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)

S ¹	B ¹	H ¹	V ²
105	107	102	100

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI

3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI

3000K	0.746
3500K	0.760
4000K	0.789

High Output (H), 4000K, 90 CRI

Lumen Adjustment Factor: 0.789

Total Light Output: 2882 lm x 0.789 = 2274 lm

Total Light Output per Foot: 720 lm/ft x 0.789 = 568 lm/ft.

watts/foot: 7.1 W/ft.

$$\text{Efficacy} = \frac{568 \frac{\text{lm}}{\text{ft.}}}{7.1 \frac{\text{W}}{\text{ft.}}} = 80 \text{ lm/W}$$

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

¹ Family Correlation based on 4' luminaire 3500K Very High Output (V) test - 120V.

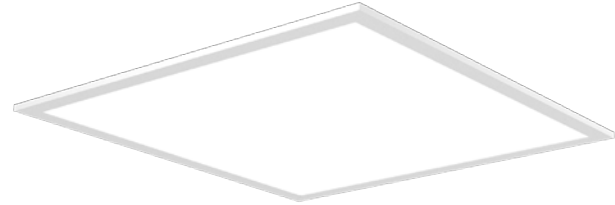
² Based on ITL report: 89124

Protected by one or more US Patents: 8915613; D702,391; D702,390; D700,732

Page 8

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

tradeSELECT®



FEATURES

- Switchable Lumen technology:
4400/3300/2750 lumens (2x2)
5500/4400/3300 lumens (2x4)
- 2x2, and 2x4 sizes
- 80 CRI
- 1–10V dimming to 10%
- Recessed or surface mount
- Universal voltage (120–277V)
- IC rated
- Smooth even illumination across the face of the luminaire



SPECIFICATIONS

CONSTRUCTION

- Aluminum lens frame has a matte white finish
- Luminaire housing is die formed code-gauge steel

OPTICS

- Acrylic micro-optics over each LED provide edge to edge illumination without pixelation or bright spots
- Frosted/textured lens provides smooth surface brightness

INSTALLATION

- Integral T-bar clips for secure mounting to grid ceiling
- For surface mount applications use surface mount kit accessories

INSTALLATION (CONTINUED)

- For plaster or sheet rock installations, use flange kit accessories

ELECTRICAL

- 60,000 hour LEDs at L70 for reduced maintenance
- Operates at 120–277V
- Dimming capability at 120V only
- Switchable Lumen technology allows for easy field-adjustable lighting output with three level switch located on back of panel
- Switchable Lumen fixtures ship at the highest lumen output

CERTIFICATIONS

- All luminaires are built to UL 1598 standards and bear appropriate cULus labels
- Damp location label standard
- Adheres to LM79, LM80, and TM21 industry standards for photometrics and lifetime calculations
- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

ORDERING GUIDE

Catalog Number	UPC	Description	Delivered Lumens	Watts	LPW
CBT22-LS35	840141400037	2X2 Back-Lit Troffer, 4400/3300/2750 Switchable Lumens, 3500K CCT	2970	24	124
			3358	28	120
			4385	38	115
CBT22-LS40	840141400044	2x2 Back-Lit Troffer, 4400/3300/2750 Switchable Lumens, 4000K CCT	3000	24	125
			3390	28	121
			4459	38	117
CBT24-LS35	840141400051	2x4 Back-Lit Troffer, 5500/4400/3300 Switchable Lumens, 3500K CCT	3633	28	130
			5014	38	132
			6037	48	126
CBT24-LS40	840141400068	2x4 Back-Lit Troffer, 5500/4400/3300 Switchable Lumens, 4000K CCT	3654	28	131
			5064	38	133
			6140	48	128

Accessories (Order Separately)	
FK22	2x2 Single Flange Kit
FK24	2x4 Single Flange Kit
SRPSMK22	2x2 Surface Mount Kit
SRPSMK24	2x4 Surface Mount Kit

KEY DATA	
Lumen Range	2970–6140
Wattage Range	24–48
Efficacy Range (LPW)	115–133
Reported Life (Hours)	L70/60,000

CBT

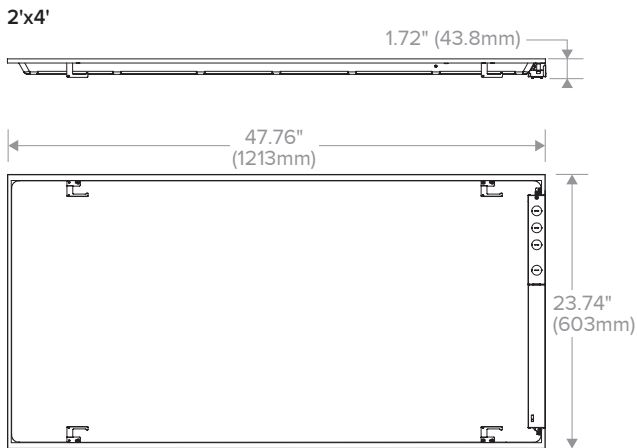
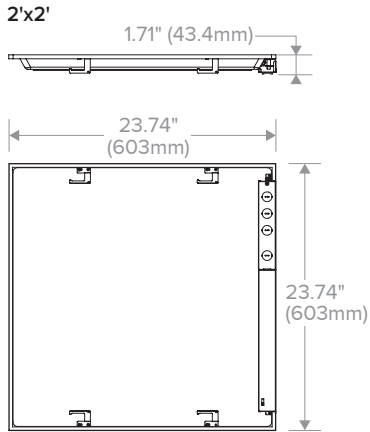
BACK-LIT TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DIMENSIONS



ADDITIONAL INFORMATION

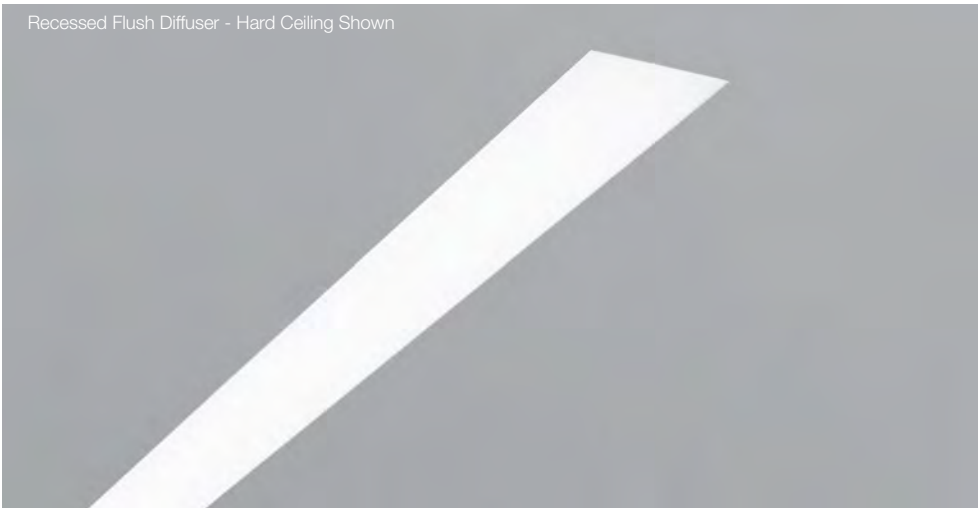


Switchable Lumen technology

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Recessed

TYPE L3A, LBB

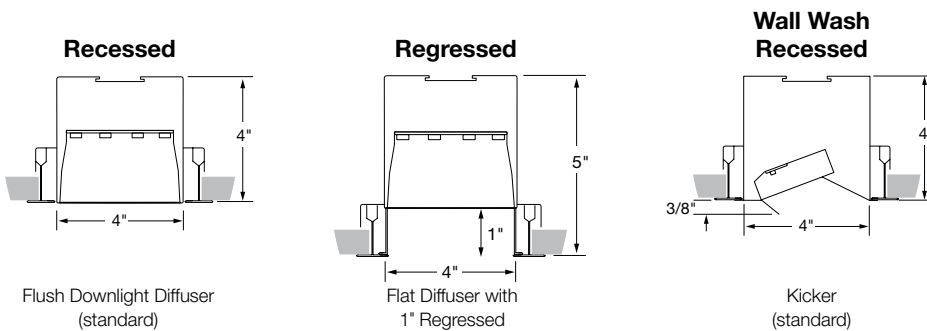


High Performance 4" Aperture is a patented, linear LED luminaire family. HP-4 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

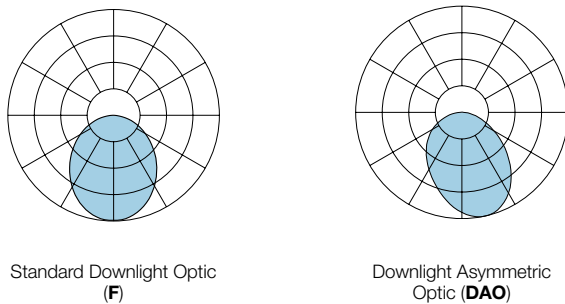
This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Declared** status.

Note: see page 6 for all aesthetic options

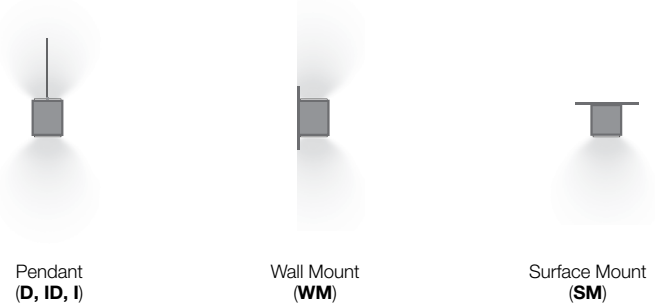
CROSS SECTIONS



OPTIC OPTIONS



ALSO AVAILABLE IN



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Recessed

BODY TYPE

OUTPUT and LED TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Length of Run	Downlight Output (Flush)	LED CRI/CCT
HP - High Performance	4	R - Recessed R RG - Recessed Regressed (Wall Wash not available)	D - Direct WW-D - Wall Wash Direct	Minimum 2' section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.	S - Standard (381 lm/ft) B - Boosted (479 lm/ft) H - High (725 lm/ft) V - Very High (932 lm/ft) TL - Tailored: _____ lm/ft*	830 - 80 CRI, 3000K 835 - 80 CRI, 3500K 840 - 80 CRI, 4000K 930 - 90 CRI, 3000K 935 - 90 CRI, 3500K 940 - 90 CRI, 4000K 8TW - 80 CRI, Tunable White 9TW - 90 CRI, Tunable White

MECHANICAL/OPTICAL OPTIONS

ELECTRICAL OPTIONS

Downlight	Reflector System	Voltage	Circuiting ³
F - Flush (standard) DL - 1" Drop Down Lens DSO - Downlight Spread Optic ^{2,7} DAO-L - Downlight Asymmetric Optic Left ^{2,7} DAO-R - Downlight Asymmetric Optic Right ^{2,7} FO - Fully Open for Wall Wash only K - Kicker for Wall Wash only RG-D - Flat Diffuser with 1" Regress ¹ RG-WCB - White Cross Blade Baffle ¹ RG-LHE - Hollowed Ellipse Louver ¹ RG-LHC - Hex Louver ¹	96LG - 96 Low Gloss White SSA - Semi-Specular Aluminum for Wall Wash only	120 - 120 Voltage 277 - 277 Voltage 347 - 347 Voltage	SC - Single Circuit* * Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

MOUNTING OPTIONS

Driver Selection	Ceiling Hardware Type
0-10V Driver Options FC-10% - 0-10V 10% ⁴ (standard) FC-1% - 0-10V 1% ⁴ OSR-10% - Osram OTi, 0-10V 10% ⁴ OSR-1% - Osram OTi, 0-10V 1% ⁴ ELD-10V-0% - EldoLED SOLOdrive, 0-10V 0.1% OSR-10V-TW - Osram OTi, 0-10V 10% (Tunable White) ⁴ DALI Driver Options FC-DALI-1% - DALI 1% OSR-DALI-1% - Osram Dexal, 1% ELD-DALI-0% - EldoLED SOLOdrive, 0.1% ELD-DALI-TW - EldoLED DUALdrive LightShape, 0.1% (Tunable White)	DMX Driver Options FIN-DMX - Finelite DMX 1% (Tunable White - FineTune Controls Only) ⁵ ELD-DMX - EldoLED POWERdrive, 0.1% ELD-DMX-TW - EldoLED POWERdrive, 0.1% (Tunable White) Lutron Driver Options LUT-ES1 - Lutron, Ecosystem 1% LUT-2W - Lutron, 2-wire (120V only) 1% LUT-TW - Lutron T-Series, EcoSystem 0.1% (Tunable White) See Page 3 for additional driver options and details
	C1 - 1" T-Bar C1T - 1" Tegular C2 - 9/16" T-Bar C2T - 9/16" Tegular C3 - Screw Slot C3F - Flush Screw Slot SF - Spackle Flange VF - Visible Flange TZ6 - Tech Zone 6" _____ (C1, C2, C2T, C3, C3F)

OTHER OPTIONS

Endcap Style	Finish	Emergency Style (Optional)	Integrated Sensor (Optional)	Special Options (Optional)
FE - Flat Endcap (standard)	SW - Signal White (standard) FB - Finelite Black ⁶ SA - Satin Aluminum ⁶ #### - RAL Color Code ⁶	FAC CHO - Factory Choice Battery Back-up EM/GEN - Emergency to Generator NL - Night Light BSL722 - Bodine Battery Back up BSL310LP - Bodine Battery Back up Low Profile GTD - Generator Transfer Device	OBO - Occupancy ⁷ OBD - Daylight ⁷ OBE - Enlighted ⁸ REE - Remote Enlighted ⁹	CP - Chicago Plenum FLX - Flex Whip RLA - Red List Approved RLD - Declared

¹ Recessed Regressed only

² Not available with Regressed or Curves

³ Contact factory for switching options

⁴ Add DTO to gain "Dim to Off" functionality (FC-10% - DTO)

⁵ B & V outputs only

⁶ 20 business days lead time for color

⁷ Not available with Wall Wash

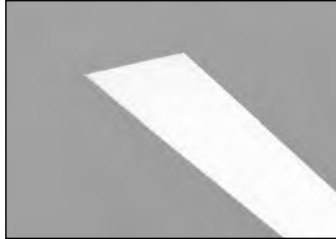
⁸ Enlighted components installed by Finelite, provided by others

⁹ Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor.

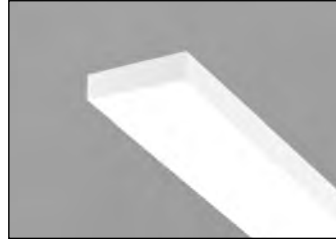
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Recessed

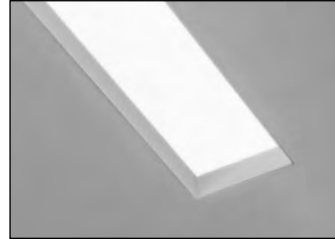
AESTHETIC OPTIONS



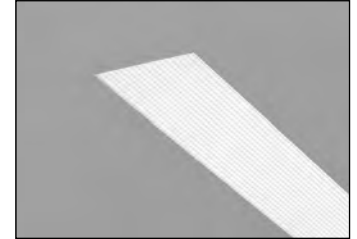
Flush Diffuser (**F**)



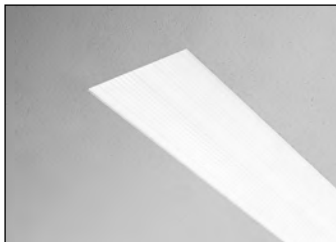
1" Drop Down Lens (**DL**)



Flat Diffuser with 1" Regressed (**RG-D**)



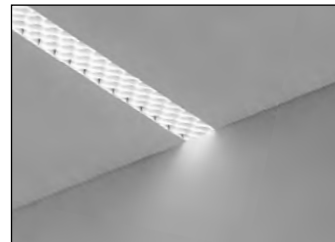
Downlight Spread Optic (**DSO**)
Externally flush



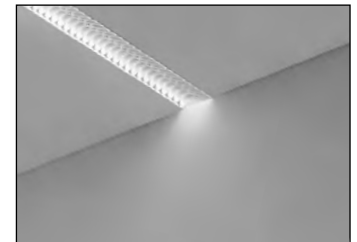
Downlight Asymmetric Optic (**DAO**)
Externally flush



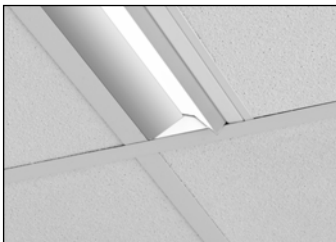
White Cross Blade Baffle ¹ (**RG-WCB**)



Hex Louver ¹ (**RG-LHC**)



Hollowed Ellipse Louver ¹ (**RG-LHE**)

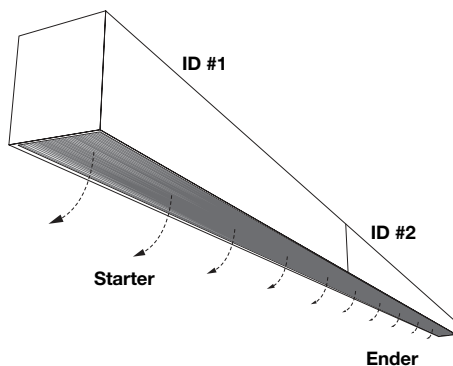


Kicker (**K**) - Wall Wash only

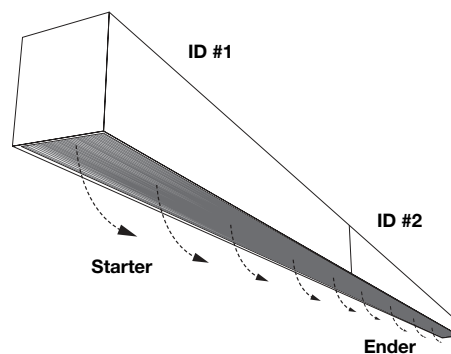
DOWNLIGHT ASYMMETRIC OPTIONS

Use this tool to understand how to specify Downlight Asymmetric for your project. The diagrams below show a linear run from power feed to ender. Specify DAO-L distributes light to the left or DAO-R distributes light to the right.

Downlight Asymmetric Optic Left (DAO-L)



Downlight Asymmetric Optic Right (DAO-R)



PREINSTALLED LABEL

For DAO, Preinstalled label on diffuser shows direction of light. Remove after installation.



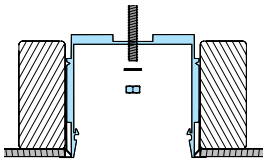
¹ Regressed only

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

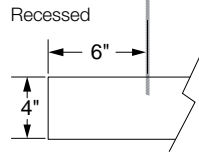
High Performance 4" Aperture (HP-4) Recessed

HARD CEILING MOUNTING OPTIONS

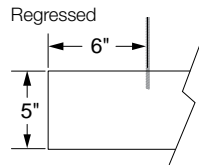
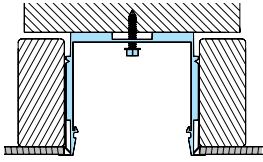
Threaded Rod Option



Mounting Location for Securing to Structure

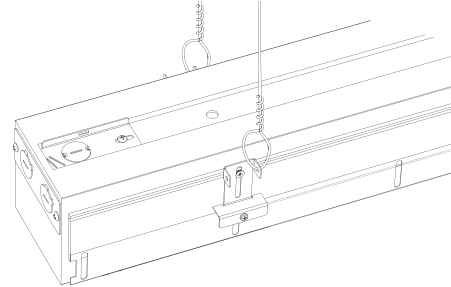


Screw Mount Option



Two mounting options: threaded rod and screw mounting options. Mounting locations are located on each end of the luminaire. Mounting location is 6" away from each end of luminaire.

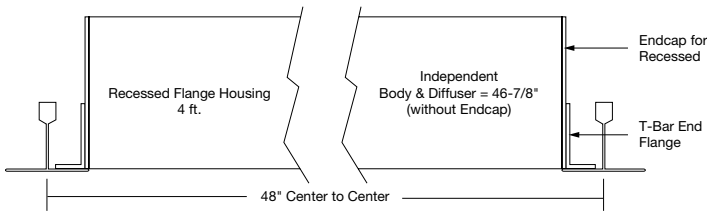
T-BAR INSTALLATION



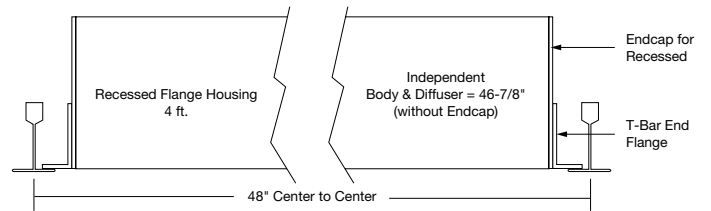
HP-4 R for T-Bar installations comes standard with a splice plate at the end of the luminaire. Mounting brackets (supplied) secure the luminaire to T-Bar and provide support to structure location. All even foot length (2, 4, 6, ...) luminaire runs are reduced in length by an appropriate amount to fit within typical 2x2 and 2x4 T-Bar grid systems. For uncommon T-Bar systems please consult factory.

GRID LENGTH DETAIL - 4' EXAMPLE

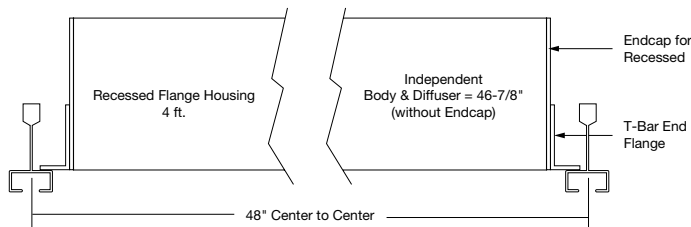
1" T-Bar



9/16" T-Bar

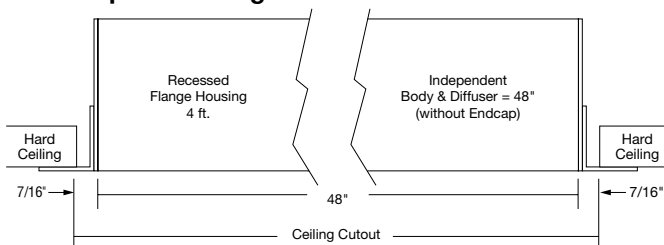


9/16" Screw Slot

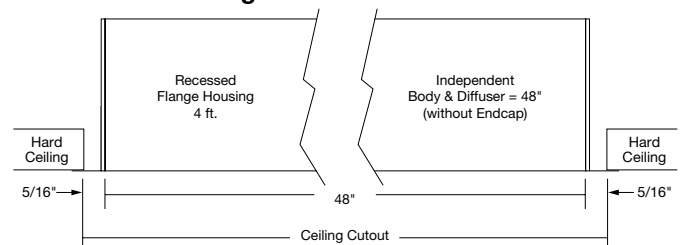


HARD CEILING LENGTH DETAIL - 4' EXAMPLE

Spackle Flange



Visible Flange

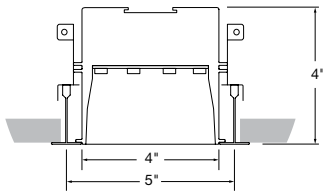


Submitted by:		Date:
Type:	Project:	
Ordering Info:		

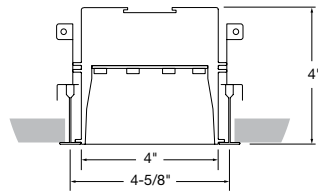
High Performance 4" Aperture (HP-4) Recessed

RECESSED MOUNTING TYPES - T-BAR

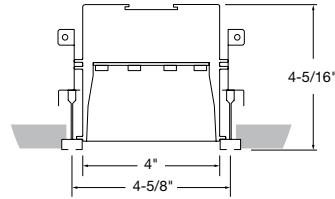
Rough-In Dimensions



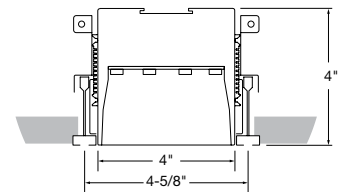
1" T-Bar (C1)



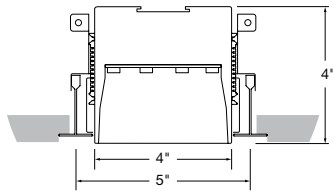
9/16" T-Bar (C2)



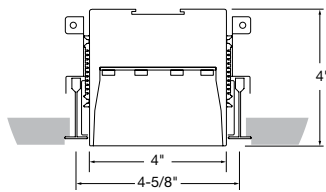
Standard Screw Slot (C3)



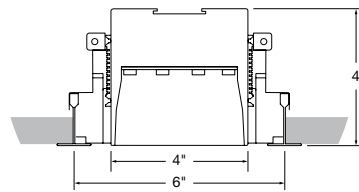
Flush Screw Slot (C3F)



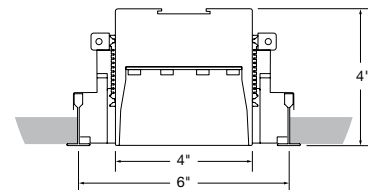
1" Tegular (C1T)



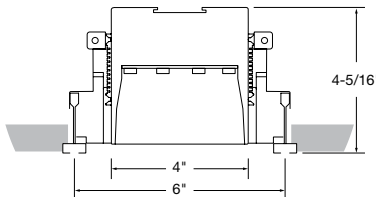
9/16" Tegular (C2T)



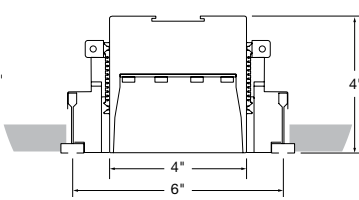
Tech Zone 6" (TZ6)
1" T-Bar (C1)



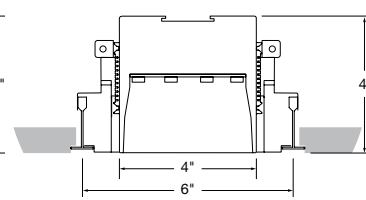
Tech Zone 6" (TZ6)
9/16" T-Bar (C2)



Tech Zone 6" (TZ6)
Standard Screw Slot (C3)

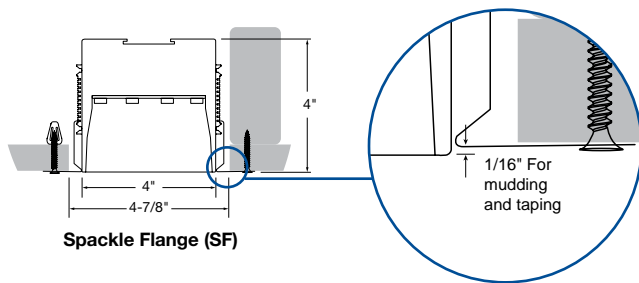


Tech Zone 6" (TZ6)
Flush Screw Slot (C3F)

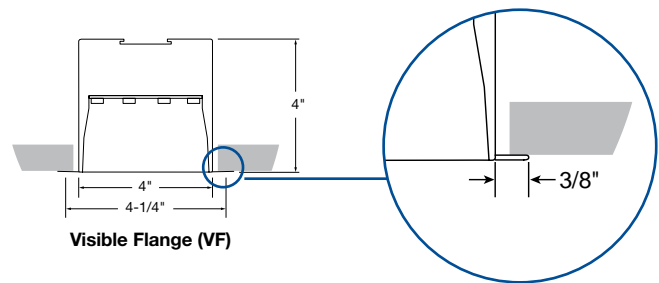


Tech Zone 6" (TZ6)
9/16" Tegular (C2T)

RECESSED MOUNTING TYPES - CUTOUT DIMENSIONS

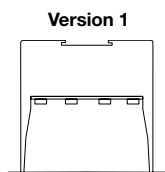


Spackle Flange (SF)

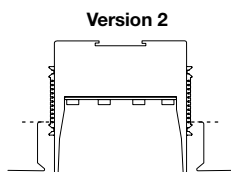


Visible Flange (VF)

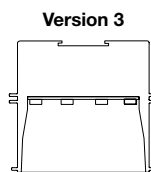
HOUSING



Ceiling Option VF



Ceiling Options
C1T, C2T, C3F, SF, TZ6



Ceiling Options
C1, C2, C3

Note: +/- 1/16"

Protected by one or more US Patents: 8915613; D702,391; D702,390; D700,732



WEDGE3 LED

Architectural Wall Sconce



Buy American



Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

TYPE L4A, L4B

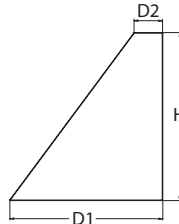
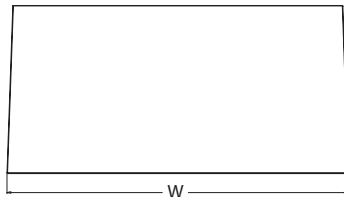
Introduction

The WEDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WEDGE family provides additional energy savings and code compliance.

WEDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

Specifications

- Depth (D1):** 8"
- Depth (D2):** 1.5"
- Height:** 9"
- Width:** 18"
- Weight:** 19.5 lbs (without options)



WEDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WEDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WEDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WEDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WEDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WEDGE3 LED P3 40K 70CRI R3 MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting		
WEDGE3 LED	P1	30K 3000K	70CRI	R2 Type 2	MVOLT	SRM Surface mounting bracket	Shipped separately	AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.
	P2	40K 4000K	80CRI	R3 Type 3	347 ¹			
	P3	50K 5000K		R4 Type 4	480 ¹	ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)*		
	P4			RFT Forward Throw				

Options			Finish
E15WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (15W, 5°C min)	Standalone Sensors/Controls	DDBXD Dark bronze
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)	PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.	DBLXD Black
PE ²	Photocell, Button Type	PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	DNAXD Natural aluminum
DMG ³	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.	DWHXD White
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.	PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	DSSXD Sandstone
SPD10KV	10kV Surge pack	Networked Sensors/Controls	DDBTXD Textured dark bronze
		NLTAIR2 PIR nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.	DBLBXD Textured black
		NLTAIR2 PIRH nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.	DNATXD Textured natural aluminum
		See page 4 for out of box functionality	DWHGXD Textured white
			DSSTXD Textured sandstone

Accessories

Ordered and shipped separately.

- WDGEAWS DDBXD WEDGE 3/8inch Architectural Wall Spacer (specify finish)
- WDGE3PBBW DDBXD U WEDGE3 surface-mounted back box (specify finish)

NOTES

- 1 347V and 480V not available with E15WH and E20WC.
- 2 PE not available in 480V and with sensors/controls.
- 3 DMG option not available with sensors/controls.
- 4 Not qualified for DLC. Not available with emergency battery backup or sensors/controls



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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WEDGE3 LED
Rev. 08/31/21

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1	52W	R2	7,037	136	1	0	1	7,649	148	2	0	1	7,649	148	2	0	1
		R3	6,922	134	1	0	2	7,524	145	1	0	2	7,524	145	1	0	2
		R4	7,133	138	1	0	2	7,753	150	1	0	2	7,753	150	1	0	2
		RFT	6,985	135	1	0	2	7,592	147	1	0	2	7,592	147	1	0	2
P2	59W	R2	7,968	135	2	0	1	8,661	147	2	0	1	8,661	147	2	0	1
		R3	7,838	133	1	0	2	8,519	144	1	0	2	8,519	144	1	0	2
		R4	8,077	137	1	0	2	8,779	149	1	0	2	8,779	149	1	0	2
		RFT	7,909	134	1	0	2	8,597	146	2	0	2	8,597	146	2	0	2
P3	71W	R2	9,404	132	2	0	1	10,221	143	2	0	1	10,221	143	2	0	1
		R3	9,250	130	2	0	2	10,054	141	2	0	2	10,054	141	2	0	2
		R4	9,532	134	2	0	2	10,361	145	2	0	2	10,361	145	2	0	2
		RFT	9,334	131	2	0	2	10,146	142	2	0	2	10,146	142	2	0	2
P4	88W	R2	11,380	129	2	0	1	12,369	140	2	0	1	12,369	140	2	0	1
		R3	11,194	127	2	0	2	12,167	138	2	0	2	12,167	138	2	0	2
		R4	11,535	131	2	0	2	12,538	142	2	0	2	12,538	142	2	0	2
		RFT	11,295	128	2	0	2	12,277	139	2	0	2	12,277	139	2	0	2

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	52W	0.437	0.246	0.213	0.186	0.150	0.110
P2	59W	0.498	0.287	0.251	0.220	0.175	0.126
P3	71W	0.598	0.344	0.300	0.262	0.210	0.152
P4	88W	0.727	0.424	0.373	0.333	0.260	0.190

Lumen Output in Emergency Mode (4000K, 70 CRI)

Option	Dist. Type	Lumens
E15WH	R2	3,185
	R3	3,133
	R4	3,229
	RFT	3,162
E20WC	R2	3,669
	R3	3,609
	R4	3,719
	RFT	3,642

Lumen Multiplier for 80CRI

CCT	Multiplier
30K	0.891
40K	0.906
50K	0.906

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.98	>0.97	>0.92



**NLTAIR2 PIR – nLight AIR
Motion/Ambient Sensor**

D = 8"
H = 11"
W = 18"



PBBW – Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"
H = 9"
W = 18"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"
H = 4.4"
W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE

Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION

The single-piece die-cast aluminum housing to optimize thermal transfer from the light engine and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Individually formed acrylic lenses are engineered for superior application efficiency which maximizes the light in the areas where it is most needed. Light engines are available in 3000 K, 4000 K or 5000 K configurations. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L92/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2).

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature and SRM mounting only.

BUY AMERICAN

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FARS, DFARS and DOT. Please refer to www.acuitybrands.com/resources/buy-american for additional information.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



WEDGE4 LED

Architectural Wall Sconce



Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

TYPE L5

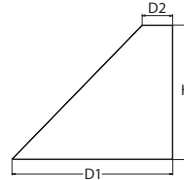
Introduction

The WEDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WEDGE family provides additional energy savings and code compliance.

WEDGE4 has been designed to deliver up to 25,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

Specifications

- Depth (D1):** 10"
- Depth (D2):** 2"
- Height:** 9"
- Width:** 25"
- Weight:** 30.5 lbs
(without options)



WEDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WEDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WEDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WEDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WEDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WEDGE4 LED P3 40K 70CRI R3 MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WEDGE4 LED	P1	30K 3000K	70CRI	R2 Type 2	MVOLT	Shipped included
	P2	40K 4000K	80CRI	R3 Type 3	347 ¹	SRM Surface mounting bracket
	P3	50K 5000K		R4 Type 4 RFT Forward Throw	480 ¹	ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) ⁴
						Shipped separately
						AWS 3/8inch Architectural wall spacer
						PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.

Options	Finish
PE² Photocell, Button Type DS³ Dual switching (comes with 2 drivers and 2 light engines) DMG³ 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points. SPD10KV 10kV Surge pack	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone
Standalone Sensors/Controls PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching. PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching. PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation. PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation. Networked Sensors/Controls NLTAIR2 PIR nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights. NLTAIR2 PIRH nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights. See page 3 for out of box functionality	

Accessories

Ordered and shipped separately.

- WDGEAWS DDBXD WEDGE 3/8inch Architectural Wall Spacer (specify finish)
- WDGE4PBBW DDBXD U WEDGE4 surface-mounted back box (specify finish)

NOTES

- 1 347V and 480V not available with DS.
- 2 PE not available in 480V and with sensors/controls.
- 3 DS and DMG not available with sensors/controls.
- 4 Not qualified for DLC. Not available with emergency battery backup.



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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WEDGE4 LED
 Rev. 08/23/21

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1	77W	R2	11,173	146	2	0	1	12,125	158	2	0	1	12,125	158	2	0	1
		R3	10,951	143	2	0	2	11,884	155	2	0	2	11,884	155	2	0	2
		R4	11,224	147	2	0	2	12,180	159	2	0	2	12,180	159	2	0	2
		RFT	11,104	145	2	0	2	12,050	157	2	0	2	12,050	157	2	0	2
P2	106W	R2	14,960	141	3	0	2	16,235	153	3	0	2	16,235	153	3	0	2
		R3	14,663	138	2	0	2	15,912	150	2	0	3	15,912	150	2	0	3
		R4	15,028	141	2	0	2	16,308	153	2	0	3	16,308	153	2	0	3
		RFT	14,868	140	2	0	2	16,134	152	2	0	2	16,134	152	2	0	2
P3	123W	R2	16,993	138	3	0	2	18,441	150	3	0	2	18,441	150	3	0	2
		R3	16,655	136	2	0	3	18,074	147	3	0	3	18,074	147	3	0	3
		R4	17,070	139	2	0	3	18,524	151	3	0	3	18,524	151	3	0	3
		RFT	16,888	138	2	0	3	18,327	149	2	0	3	18,327	149	2	0	3
P4	140W	R2	18,958	136	3	0	2	20,573	147	3	0	2	20,573	147	3	0	2
		R3	18,581	133	3	0	3	20,164	144	3	0	3	20,164	144	3	0	3
		R4	19,044	136	3	0	3	20,667	148	3	0	3	20,667	148	3	0	3
		RFT	18,841	135	2	0	3	20,446	146	3	0	3	20,446	146	3	0	3
P5	156W	R2	20,919	134	3	0	2	22,702	146	3	0	2	22,702	146	3	0	2
		R3	20,503	132	3	0	3	22,250	143	3	0	3	22,250	143	3	0	3
		R4	21,014	135	3	0	3	22,804	147	3	0	4	22,804	147	3	0	4
		RFT	20,790	134	3	0	3	22,561	145	3	0	3	22,561	145	3	0	3
P6	185W	R2	23,725	128	3	0	2	25,746	139	3	0	2	25,746	139	3	0	2
		R3	23,253	126	3	0	4	25,234	136	3	0	4	25,234	136	3	0	4
		R4	23,832	129	3	0	4	25,863	140	3	0	4	25,863	140	3	0	4
		RFT	23,578	127	3	0	3	25,587	138	3	0	4	25,587	138	3	0	4

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	77W	0.635	0.366	0.319	0.280	0.223	0.161
P2	106W	0.889	0.514	0.449	0.395	0.309	0.228
P3	123W	1.014	0.585	0.510	0.447	0.356	0.258
P4	140W	1.159	0.668	0.582	0.509	0.403	0.294
P5	156W	1.296	0.743	0.647	0.564	0.451	0.326
P6	185W	1.512	0.864	0.751	0.655	0.526	0.378

Lumen Multiplier for 80CRI

CCT	Multiplier
30K	0.891
40K	0.906
50K	0.906

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C / 32°F	1.05
10°C / 50°F	1.03
20°C / 68°F	1.01
25°C / 77°F	1.00
30°C / 86°F	0.99
40°C / 104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

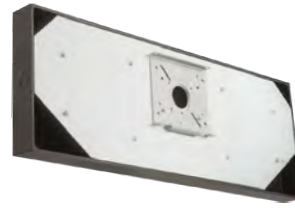
Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.98	>0.96	>0.92





**NLTAIR2 PIR – nLight AIR
Motion/Ambient Sensor**

D = 10"
H = 11"
W = 25"



**PBBW – Surface-Mounted Back Box
Use when there is no junction box available.**

D = 1.75"
H = 9"
W = 25"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"
H = 4.4"
W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE

Common architectural look, with clean rectilinear shape, of the WEDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION

The single-piece die-cast aluminum housing to optimize thermal transfer from the light engine and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

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Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L92/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2).

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

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BUY AMERICAN

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WARRANTY

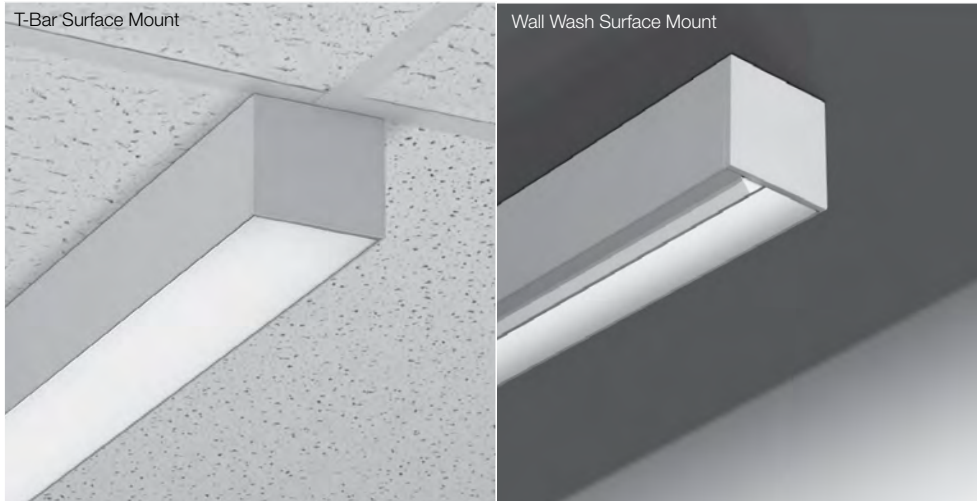
5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

TYPE ML, MH



High Performance 4" Aperture is a patented, linear LED luminaire family. HP-4 delivers excellent performance using an advanced optical design and mid-power LEDs. Achieving 90% of initial light output at 100,000+ hours and backed by a 10-year performance-based warranty on all standard components.

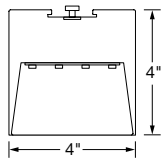
This product is enrolled in the International Living Future Institute (ILFI) Declare 2.0 Program and is third-party verified with options achieving **Red List Approved** and **Declared** status.

Signal White is standard finish

Note: see page 6 for all aesthetic options

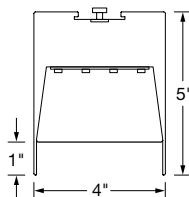
CROSS SECTIONS

Surface Mount



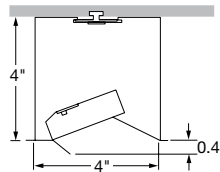
Flush Downlight Diffuser (standard)

Surface Mount Regressed



Flat Diffuser with 1" Regressed (RG)

Wall Wash Surface Mount

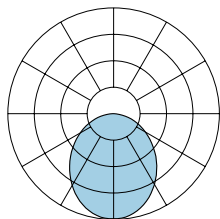


Kicker (standard)

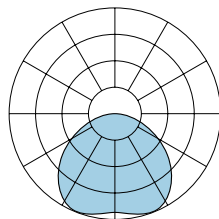
FORMED INTO A SQUARE 38'X36'

**38' LEGS ARE STANDARD OUTPUT
36" LEGS ARE BOOSTED OUTPUT**

OPTIC OPTIONS



Standard Downlight Optic (F)



Downlight Spread Optic (DSO)

ALSO AVAILABLE IN



Pendant (D, ID, I)



Wall Mount (WM)



Surface Mount (SM)



Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

BODY TYPE

OUTPUT AND LED TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Length of Run	Downlight Output (Flush)	LED CRI/CCT
HP - High Performance	4	SM - Surface Mount SM RG - Direct Regressed	D - Direct WW-D - Wall Wash Direct	Minimum 2' section length. Increments accurate to 1/16" (±1/32"), standard. 12' maximum section length.	S - Standard (379 lm/ft) B - Boosted (477 lm/ft) H - High (720 lm/ft) V - Very High (926 lm/ft) TL - Tailored: _____ lm/ft*	830 - 80 CRI, 3000K 835 - 80 CRI, 3500K 840 - 80 CRI, 4000K 930 - 90 CRI, 3000K 935 - 90 CRI, 3500K 940 - 90 CRI, 4000K 8TW - 80 CRI, Tunable White 9TW - 90 CRI, Tunable White

* Specify lm/ft of outputs between Standard (S) and Very High (V). Consult factory for tailored lumen output outside of this range.

MECHANICAL/OPTICAL OPTIONS

ELECTRICAL OPTIONS

Downlight	Reflector System	Voltage	Circuiting ⁴
F - Flush (standard) BG - Bottom Glow DL - 1" Drop Down Lens RG-D - Flat Diffuser with 1" Regress ² RG-WCB - White Cross Blade Baffle ² RG-LHE - Hollowed Ellipse Louver ² RG-LHC - Hex Louver ² DSO - Downlight Spread Optic ³ K - Kicker for Wall Wash only (standard) FO - Fully Open for Wall Wash only	96LG - 96 Low Gloss White SSA - Semi-Specular Aluminum for Wall Wash only	120 - 120 Voltage 277 - 277 Voltage 347 - 347 Voltage	SC - Single Circuit* Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)

ELECTRICAL OPTIONS

MOUNTING OPTIONS

Driver Selection ⁵	Ceiling Hardware Type	
0-10V Driver Options FC-10% - 0-10V 10% ⁶ (standard) FC-1% - 0-10V 1% ⁶ OSR-10% - Osram OTI, 0-10V 10% ⁶ OSR-1% - Osram OTI, 0-10V 1% ⁶ ELD-10V-0% - EldoLED SOLOdrive, 0-10V 0.1% OSR-10V-TW - Osram OTI, 0-10V 10% (Tunable White) ⁶ DALI Driver Options FC-DALI-1% - DALI 1% OSR-DALI-1% - Osram Dexal, 1% ELD-DALI-0% - EldoLED SOLOdrive, 0.1% ELD-DALI-TW - EldoLED DUALdrive LightShape, 0.1% (Tunable White)	DMX Driver Options FIN-DMX - Finelite DMX 1% (Tunable White - FineTune Controls Only) ⁷ ELD-DMX - EldoLED POWERdrive, 0.1% ELD-DMX-TW - EldoLED POWERdrive, 0.1% (Tunable White) Lutron Driver Options LUT-ES1 - Lutron, Ecosystem 1% LUT-2W - Lutron, 2-wire (120V only) 1% LUT-TW - Lutron T-Series, EcoSystem 0.1% (Tunable White) See Page 3 for additional driver options and details	C1 - 1" T-Bar C2 - 9/16" T-Bar C3 - Screw Slot C4 - Hard Ceiling

OTHER OPTIONS

Endcap Style	Finish	Emergency Style (Optional)	Integrated Sensor (Optional) ¹¹	Special Options (Optional)
FE - Flat Endcap (standard) DE - 1" Drop Endcap ⁸ OE - Open Endcap ⁹	SW - Signal White (standard) FB - Finelite Black ¹⁰ SA - Satin Aluminum ¹⁰ #### - RAL Color Code ¹⁰	FAC CHO - Factory Choice Battery Back-up EM/GN - Emergency to Generator NL - Night Light BSL722 - Bodine Battery Back up BSL310LP - Bodine Battery Back up Low Profile GTD - Generator Transfer Device	OBO - Occupancy ¹¹ OBD - Daylight ¹¹ OBE - Enlighted ¹² REE - Remote Enlighted ¹³	RLA - Red List Approved RLD - Declared

¹ Consult factory for tailored lumen output
² Regressed only
³ Not available with Regressed or Curves
⁴ Contact factory for switching options
⁵ See page 3 for more details

⁶ Add DTO to gain "Dim to Off" functionality (FC-10% - DTO)
⁷ B & V outputs only
⁸ 1" Drop Down Lens downlight only
⁹ Available with Hollowed Ellipse Louver (**LHE**) only
¹⁰ 20 business days lead time for color

¹¹ Not available with Wall Wash
¹² Enlighted components installed by Finelite, provided by others
¹³ Enlighted for Wall Wash fixtures. Enlighted Control Unit & Sensor Cable installed for Remote mounting sensor

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

SPECIFICATIONS

BODY TYPE

CONSTRUCTION: Precision-cut 6061-T6 extruded aluminum body. Internal joiner system, plug-together wiring, standard.

LENGTHS: Any length, 2' minimum, in increments down to 1/16" ($\pm 1/32"$). 12' maximum section length. Hollowed Ellipse Louver (**LHE**), Hex Louver (**LHC**), and White Cross Blade Baffle (**WCB**) are available in 1' increments.

MITERED CORNERS¹: Illuminated corners of greater than 60° and less than 180° in a single plane, available with Flush Diffuser, Bottom Glow Diffuser, 1" Drop Down Lens, Regressed Diffuser, White Cross Blade Baffle² or Wall Wash. Corners not available with Wall Wash (**WW-D**), Hollowed Ellipse Louver (**LHE**) or Hex Louver (**LHC**). Consult factory for tailored lighting options.

OUTPUT AND LED TYPE

LIGHT OUTPUT: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). For lengths 3' and greater, the uplight and downlight can be specified with different lumen packages and dual controls. For Tailored Outputs outside of range from Standard (**S**) to Very High (**V**), consult factory. Light engines are replaceable.

MECHANICAL/OPTICAL OPTIONS

DOWNLIGHT OPTION: 12' maximum diffuser length. Flush frost white snap-in diffuser standard, 77% transmissive, 99% diffusion. Internal secondary diffusers at corners ensure visually seamless, uniform, continuous illumination. Available with Flush (**F**), Bottom Glow (**BG**), 1" Drop Down Lens (**DL**), White Cross Blade Baffle (**WCB**)³, Ellipse Louver (**LHE**)³, Hex Louver (**LHC**)³, Downlight Spread Optic (**DSO**), and Regressed downlight diffusers (**RG**). 1" Drop Down Lens made of acrylic. Available with a solid endcap or an endcap with a diffuse filler to continue the luminous aesthetic. Downlight Spread Optic is an extruded lens with a subtle ribbed appearance providing a batwing distribution for improved optical performance. Consult factory for more tailored lumen outputs.

LUMEN MAINTENANCE: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors finished in 96LG High Reflectance white powder coat paint. The standard Semi-Specular Aluminum (**SSA**) Kicker (**K**) reflector delivers light high on the vertical surface. The Kicker reflector can be easily removed for open distribution (**FO**).

ELECTRICAL OPTIONS

STATIC WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed controlling uplight and downlight together (power and dimming). Specify dual feeds for independent control of uplight and downlight. 14-gauge feed used when luminaire current exceeds 5 amps.

TUNABLE WHITE FEED: Standard with one 18-gauge/5-conductor single-circuit feed. 14-gauge feed used when fixture current exceeds 5 amps. DMX and power feed at same location (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths.

STATIC WHITE DRIVER: Replaceable 120V, 277V, and 347V Constant Current Reduction dimming driver standard. Can be wired dimming or non-dimming. 0-10V dimming controls with a range of 10%- 100% standard. Dimming to 1% available. Separate dimming for uplight and downlight available. Driver is fully accessible from below the ceiling.

- **Power Factor:** ≥ 0.9
- **Total Harmonic Distortion (THD):** <20%
- **Expected driver lifetime:** 100,000 hours

LUTRON DRIVER OPTIONS:

- **LUT-ES1 (LDE1)** - (Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series)).
- **LUT-2W (LTEA2W)** - (Hi-lume 1% 2-wire, 120V forward phase dimming (LTEA series)).

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V, 277V, and 347V.

- **Power factor:** ≥ 0.90
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100%-10%
- **Expected driver lifetime:** 100,000 hours
- **FineTune DMX:** 1%

LUTRON TUNABLE WHITE DRIVER OPTION: LUT-TW (0.1% T-Series 2-Channel Digital Tunable White (PSQ Series)).

MOUNTING OPTIONS

HANGING HARDWARE: Lay-in ceiling types: caddy clip with 1/4" - 20 stud and nut. Drywall or concrete surfaces (walls or ceilings): 1/4" - 20 stud and nut (provided by others).

¹ Not available with Wall Wash

² White Cross Blade (WCB) baffles not available with custom angles. Available in 90 degrees only

³ Regressed only

Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

Specifications

TUNABLE WHITE DMX HANGING HARDWARE: For grid ceiling applications the dual GridBox™ mounting is supplied (standard). For hard ceiling applications the ceiling mounting box is supplied (standard). DMX feeds cannot be cut or spliced. DMX feeds should be ordered based on fixed lengths. Available DMX pendant feed lengths are 5' (standard), 12', and 30'.

TUNABLE WHITE DMX INTERCONNECTION CABLES: Luminaires are pre-wired with plug-and-play interconnection cables to support easy plug-together joining of fixture runs. If a non-FineTune DMX system has been specified, a DMX to RJ45 converter is provided.

OTHER FEATURES

ENDCAPS: Flat diecast aluminum endcaps (**FE**) add 1/4" to each end of luminaire. 1" Drop Down Lens Endcap (**DE**) includes diffuse element to continue luminance of drop lens. Open Endcap (**OE**) is for use with the Hollowed Ellipse Louver (**LHE**)⁷; following the curve of the louver.

EMERGENCY STYLE: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver, backup battery.

Backup Battery			
	Factory Choice	Bodine BSL310LP	Bodine BSL722
HP4-SM-D			
Min. Housing Length	8'	4'	4 [*]
EM Lumen Output	1854	1102	1854
EM Section Illum.	2'	2' or 4'	2'
HP4-SM-WW-D			
Min. Housing Length	8 [*]	4 [*]	4 [*]
EM Lumen Output	2000	1189	2000
EM Section Illum.	4'	4'	4'

^{*} Minimum fixture housing length for battery pack approved without sensor

TUNABLE WHITE ELECTRICAL OPTIONS⁸:

- **TW Driver Options 0-10V:** EM/GEN, GTD or Battery Back up
- **FineTune DMX:** EM/GEN or Battery Back up
- **DMX:** Battery Back up
- **DALI:** EM/GEN, GTD or Battery Back up
- **LUTRON:** EM/GEN, GTD or Battery Back up

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) occupancy or daylight sensors available with Flush and Bottom Glow downlight diffusers. Refer to Occupancy Sensor, Daylight Sensor, and Enlighted Sensor tech sheets for more info.

FINISHES: Finelite Signal White (**SW**) powder coat, Finelite Black (RAL 9005) with semi gloss fine texture (**FB**)⁹, and Satin Aluminum (**SA**)⁹ are standard. Optional Adder: 185 RAL colors⁹ are available.

LABELS: Luminaire and electrical components are ETL-listed conforming to UL 1598 in the U.S.A. and CAN/CSA C22.2 No. 250.0 in Canada. In accordance with NEC Code 410.130 (G), this luminaire contains an internal driver disconnect. UL 924 and UL 2108 - PoE options available on request. These fixtures are rated for Damp Location. Finelite products use electronic components that are RoHS compliant, and the mechanical components of the luminaire have been verified to not knowingly contain any restricted substances listed per RoHS Directive 2015/863. Consult factory for tailored lighting options. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Declared Label) to your part number.

WEIGHT¹⁰: SM - 2.8 lb/ft; WW - 2.9 lb/ft

DLC QUALIFIED: Configurations of this product are listed on the DLC Qualified Products List (QPL). www.designlights.org/search

WARRANTY: 10-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.

⁷ Regressed only

⁸ Consult Finelite for Generator Transfer Device and Battery Backup fit

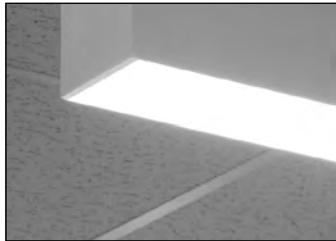
⁹ 20 business days lead time for color

¹⁰ Excludes Battery Backup and Generator Transfer Device weight

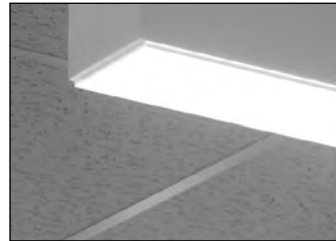
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

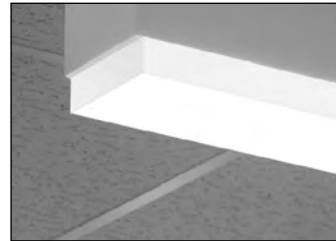
AESTHETIC OPTIONS



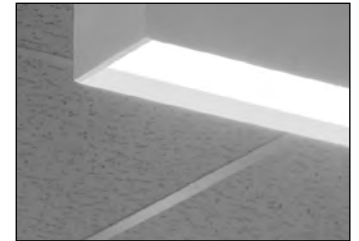
Flush Diffuser (**F**)



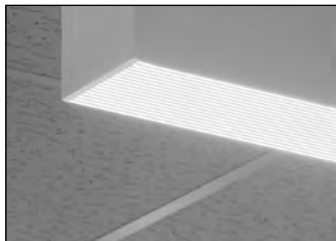
Bottom Glow Diffuser (**BG**)



1" Drop Down Lens (**DL**)



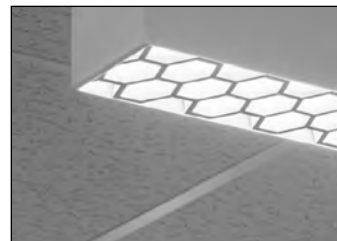
Flat Diffuser with 1" Regressed (**RG-D**)



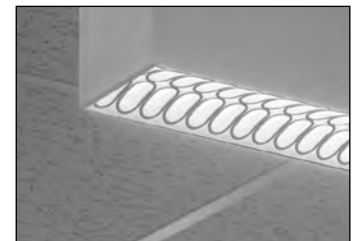
Downlight Spread Optic (**DSO**)
Externally flush



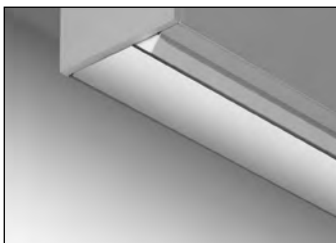
White Cross Blade Baffle¹ (**RG-WCB**)



Hex Louver¹ (**RG-LHC**)



Hollowed Ellipse Louver¹ (**RG-LHE**)



Kicker (**K**) - Wall Wash only

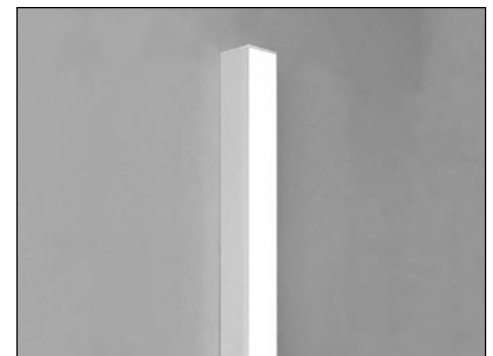
SURFACE MOUNT OPTIONS



Ceiling Surface Mount



Horizontal Surface Mount



Vertical Surface Mount

¹ Not available with Wall Wash

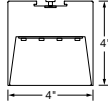
Submitted by:		Date:
Type:	Project:	
Ordering Info:		

High Performance 4" Aperture (HP-4) Surface Mount

Direct Photometry - 4' Luminaire 3500K

HP4-SM-D-4'-V-835

Downlight: Flush Diffuser



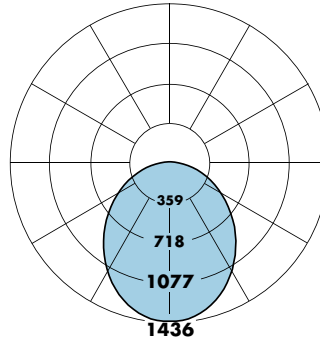
Efficacy: 100 lm/W

Total luminaire output: 3705 lumens (926 lm/ft)
37 watts (9.3 W/ft)

Peak Candela Value: 1436 @ 0

CRI: 80 / CCT: 3500K

ITL LM79 Report 85124



CANDELA DISTRIBUTION						
	0.0	22.5	45	67.5	90	Flux
0	1436	1436	1436	1436	1436	
5	1428	1428	1427	1427	1427	135
15	1363	1353	1358	1357	1350	382
25	1236	1221	1226	1219	1212	563
35	1060	1047	1048	1037	1030	653
45	859	849	848	836	831	652
55	647	639	637	628	623	568
65	434	432	431	425	424	425
75	236	236	237	235	236	250
85	67	68	69	70	69	77
90	0	0	0	0	0	

Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaire

S ¹	B ¹	H ¹	V ²
1517	1907	2882	3705

Light Output, 3500K, 80 CRI (Lumens Per Foot)

S ¹	B ¹	H ¹	V ²
379	477	720	926

Power, 3500K (Watts Per Foot)

S ¹	B ¹	H ¹	V ²
3.6	4.6	7.1	9.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)

S ¹	B ¹	H ¹	V ²
105	107	102	100

Sample Lumen Adjustment Calculation

Lumen Adjustment Factors 80 CRI

3000K	0.985
3500K	1.000
4000K	1.032

Lumen Adjustment Factors 90 CRI

3000K	0.746
3500K	0.760
4000K	0.789

High Output (H), 4000K, 90 CRI

Lumen Adjustment Factor: 0.789

Total Light Output: 2882 lm x 0.789 = 2274 lm

Total Light Output per Foot: 720 lm/ft x 0.789 = 568 lm/ft.

watts/foot: 7.1 W/ft.

$$\text{Efficacy} = \frac{568 \frac{\text{lm}}{\text{ft.}}}{7.1 \frac{\text{W}}{\text{ft.}}} = 80 \text{ lm/W}$$

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output

¹ Family Correlation based on 4' luminaire 3500K Very High Output (V) test - 120V.

² Based on ITL report: 89124

Protected by one or more US Patents: 8915613; D702,391; D702,390; D700,732

SECTION 02820

REMOVAL OF ASBESTOS-CONTAINING MATERIALS – Addendum 1, 10/14/2022

PART 1 GENERAL

1.1 STIPULATIONS

- A. The procedures specified in this section are guidelines for minimum performance. The Contractor is responsible for their own methods of operation and conformance to regulatory codes, rules and guidelines. The Contractor is required to obtain all permits, licenses and approvals to perform the work, including any rights to use patented systems.

1.2 SCOPE OF WORK

- A. Furnish all materials, labor, equipment and supervision necessary to perform the work as indicated on the documents for the removal, residual encapsulation, and disposal of asbestos containing material (ACM). The work shall be performed in accordance with the current EPA and OSHA Regulations, State Labor and Industry and Department of Environmental Protection Regulations, The City of Philadelphia, and any other applicable Federal, State and Local Regulations.
- B. Contractor shall submit an Action Plan which describes specifically how abatement work is to be completed for each abatement phase. At a minimum the work Plan shall address work area preparation, work practices, decontamination location, estimated completion dates, respiratory protection, and disposal. Approval of the Action Plan must be obtained through the Professional prior to the start of work. Procedures outlined in the Action Plan must be followed throughout the abatement phase. Any changes in Action Plan must obtain prior approval from Professional.
- C. Without intending to limit and/or restrict the volume of work required by this specification, the work generally consists of removal, decontamination and disposal of designated ACM Roofing component.
- D. Removal and disposal of:

Disston Recreational Center		
Location	Material Description	Quantity
Main Lobby	Pipe Insulation	8 linear feet (LF)

1.3 SUBMITTALS

- A. Contractor Submittal Register: Minimum pre-mobilization Contractor submittals should include but is not limited to the following:

1. Asbestos Demolition/Renovation Notification to Appropriate Regulatory Agencies (EPA, PA DEP, PA L&I, City of Philadelphia Air Management Services).
 2. Physician's Written Medical Opinion Form for each worker.
 3. Fit Test Certification for each worker.
 4. Analytical Laboratory Accreditation Name of Laboratory used for Personal Air Sample Analysis (AIHA Preferred NIOSH PAT accredited minimum) and Air Monitoring.
 5. Name and License Number of Waste Hauler
 6. Name, Address, License Number (or copy of Certification), Telephone Number, and Contact Person of Landfill.
- B. The Contractor shall submit an air monitoring schedule for approval prior to work.
- C. Final payment to the Contractor will not be processed until the final report from the QA Firm has been received and approved.

1.4 REGULATORY SUBMITTALS (CONTRACTOR RESPONSIBILITY)

- A. The Contractor is required to notify the following agencies in writing ten (10) days prior to starting work for notification and instructions concerning proper disposal of asbestos waste material.
1. United States Environmental Protection Agency – Region III
Asbestos-NESHAP Coordinator (3AT33)
1650 Arch Street
Philadelphia, Pennsylvania 19103
 2. Asbestos Notification
P.O. Box 8468
400 Market Street
Harrisburg, Pennsylvania 17105-8468
 3. Pennsylvania Department of Labor and Industry
Asbestos Occupation Accreditations & Certification
Bureau of Occupational and Industrial Safety
Room 1623 – Labor and Industry Building
Seventh and Foster Streets
Harrisburg, Pennsylvania 17120
 4. City of Philadelphia Air Management Services (AMS)
321 S University Avenue
Philadelphia, Pennsylvania 19104

1.5 MONITORING AND AIR TESTING

- A. Quality assurance and air testing services will be hired by the Professional for its use only.

- B. OSHA personnel air monitoring shall be provided by Contractor to collect STEL and breathing zone samples as required.
- C. Quality Assurance Firm contracted by Department shall collect building air samples, enforce specification, complete visual inspections, and perform all other related tasks in accordance with the City of Philadelphia Asbestos Control Regulation (ACR).

1.6 CERTIFICATION

A. Worker Certification

1. The Contractor shall furnish proof that his employees have had instruction on the dangers of asbestos exposure, on respirator use, decontamination and current OSHA and EPA regulations.
2. Documentation of workers medical exams, consist of x-rays and pulmonary function shall be submitted and as may be required by current OSHA and EPA regulations and any applicable State and Local Government regulations.
3. There must be on site at all times, an EPA Certified Asbestos Abatement Supervisor. The Asbestos Abatement Supervisor shall have successfully completed a 5-day EPA Certified Practices and Procedures Course as per 40 CFR, Part 763, Subpart E, Appendix C-EPA Model Accreditation Plan (must provide a copy of certificate from EPA approved course). All asbestos workers shall have successfully completed a 4-day EPA Certified Practices and Procedures Course as per 40 CFR, Part 763, Subpart E, Appendix C-EPA Model Accreditation Plan. The Contractor must provide copies of certificates from Pennsylvania Department of Labor and Industry for all workers, and supervisors as required by regulation.
4. When required by the Pennsylvania Department of Labor and Industry (PDL&I) the Contractor, Abatement Supervisor, and Abatement Workers shall be licensed by (PDL&I) and the City of Philadelphia. Each worker/supervisor shall have a current photo identification issued by PDL&I available on request by the Department and the City of Philadelphia Inspectors when required.

1.7 REGULATORY REQUIREMENTS

A. Commonwealth of Pennsylvania State and Local Codes and Regulations:

1. DEP: Pa Code Title 25
Allegheny County Health Department (ACHD)
Article XX; City of Philadelphia Asbestos Control Regulations
2. Department of Labor & Industry:
Act 194 of 1990: Certificate for Asbestos Abatement Work

B. Federal Codes and Regulations and Guidelines:

1. EPA: Environmental Protection Agency Regulations
2. 'Guidelines for Controlling Asbestos Containing Materials in Building', EPA, Federal Register, 40 CFR 61, Subpart M, latest edition

3. AHERA: Asbestos Hazard Emergency Response Act; 40 CFR 763, Part E, Bulk Sampling and Clearances
 4. OSHA: Occupational Safety and Health Administration Standards, with specific reference to 29 CFR; 1910.1001; 1910.134; 1910.1200; 29 CFR 1926.1108
 5. DOT: Transportation of Asbestos Containing Materials
- C. Independent Regulatory Agencies:
1. NVLAP: National Voluntary Laboratory Accreditation Program
 2. NIOSH PAT Program: National Institute for Occupational Safety and Health Proficiency Analytical Testing Program for Testing Laboratories
 3. AIHA: American Industrial Hygiene Association
 4. MSHA: The Mine Safety and Health Administration
- D. Reference Standard ASTM E 1468-90 Standard Practice for Visual Inspection of Asbestos Abatement Projects.

PART 2 PRODUCTS

2.1 The list of required materials will include, but is not necessarily limited to the following:

- A. Respirators: Provide respiratory protection in accordance with OSHA Regulations 29 1926.11011, appendices ANSI Z 88.2-1980 and 29 CFR 1910.134. Respiratory protection shall be as listed below:
1. Respiratory protection shall be used when there is a disturbance of friable asbestos containing materials.
 2. Require that a respirator be worn by anyone in a work area at all times, regardless of activity, during a period that starts with any operation which could cause airborne fibers, until all visible ACM has been removed and the work area cleared.
 3. The minimum level of respiratory protection that can be used is a half-face air purifying respirators with high efficiency filters. The use of single use, disposable or quarter-face respirators for any purpose is prohibited.
 4. Employees or visitors shall wear this type of respirator. Respirators shall be NIOSH/MSHA approved.
- B. Protective Clothing
1. Disposable Clothing: Manufactured by "Tyvek" by DuPont, or approved equal. Clothing shall consist of coverall, head cover, and foot cover. Gloves will be worn for hand cover as required.

- C. Wetting Agents: Wetting agents are used prior to disturbance of asbestos containing materials.
 - 1. Amended Water: Amended water consists of 1/2 ounce of surfactant mixed in a gallon of water. A surfactant is a mixture of 50% polyoxyethylene ester and 50% polyoxyethylene ether, or equal.
 - 2. Removal Encapsulant: A removal encapsulant is a penetrating type encapsulant that is used in areas requiring a longer removal time span or is subject to rapid evaporation of amended water. Removal encapsulants wet the asbestos containing material and retard fiber release during disturbance of the material equal to or greater than that provided by amended water.
- D. Polyethylene Sheeting: Six (6) mil, for vertical protection (walls, doors, windows) and for all other uses (floors, fixed equipment, HVAC supply and return openings).
- E. Polyethylene Bags with Caution Labels: Six (6) mil minimum for disposal. All asbestos that is removed shall be double bagged.
- F. Tape: High quality vinyl or fabric duct tape. Paper masking tape will not be permitted.
- G. Airless Spray Equipment: Electric airless spray equipment for saturating and mist fiber control. Low pressure (500 psi) equipment must be available on-site and utilized as required.
- H. Vacuum: HEPA rated for surface cleaning and housekeeping. Hand operated and power tools such as, but not limited to, saws, scorers, abrasive wheels, and drills should be provided with local exhaust ventilation systems with HEPA filters.
- I. Hand Tools: Brooms, plastic shovels, scrapers, brushes, etc., in sufficient quantity to ensure the appropriate level of housekeeping.
- J. GFI Equipment: All electrical connections in the work area must be through "ground fault" protected outlets/circuits.

2.2 PERSONNEL PROTECTION

- A. Personnel protection is required for laborers, mechanics, supervision, and visitors at the work site during the set-up and abatement operations.
- B. Each worker shall be supplied with a minimum of two (2) complete protective work clothes and respirator filter changes per day for the complete duration of the project. Hard hats should be available as appropriate which meet ANSI Z-89.1 standards. Safety toe footwear is to be worn underneath the disposable shoe covers and must meet the requirements and specifications in ANSI Z-41.1. Eye wear and face protection must meet the standards and specifications of ANSI Z-87.1.1.
- C. In addition to protective work clothes for workers, the Contractor shall have on hand two (2) additional sets of work clothes, per day and respirators for personnel who are authorized to inspect the work site. Hard hats should be available as appropriate which meet ANSI Z-89.1 standards. Safety toe footwear is to be worn underneath the disposable shoe covers and must meet the requirements and specifications in

ANSI Z-41.1. Eye wear and face protection must meet the standards and specifications of ANSI Z-87.1.

- D. Respirators approved for asbestos use and protective work clothes will be worn by laborers and mechanics as a minimum during set-up and pre-cleaning operations.
- E. Appropriate respirators will be worn by all personnel in the active work area.
- F. Upon leaving the active work area, filters will be discarded, cartridges removed, and respirators cleaned in disinfectant solution and clean water rinse.
- G. Clean respirators will be stored in plastic bags when not in use.
- H. Respirators will be inspected daily for broken, missing or deteriorated parts.

PART 3 EXECUTION

3.1 PREPARATION AND REMOVAL

- A. Install isolation barriers to separate work areas from building occupants whenever work is occurring in hallways or other areas that are not enclosed in walls with lockable entrances unless all building occupants can be removed from the entire floor while the abatement work is occurring. The isolation barriers shall be constructed with wood or equivalent framing and plywood (minimum 3/8" thickness). A lockable door may need to be installed at the barrier for access to the work area(s).
- B. Install a worker decontamination shower facility, equipped with a shower room and clean room at a remote location on the floor in the building central to the abatement work occurring on each floor. The shower facility shall consist of a clean room and shower room separated from each other by airlocks with a minimum of two (2) layers of 6-mil polyethylene sheeting or equivalent in each room. A separate chamber for the bag out of asbestos waste may be attached to the side of the dirty / equipment room or placed at another entrance to the work area.
- C. Pre-clean each work area prior to prepping enclosures using a HEPA-filtered vacuum and wet wiping methods where feasible. Movable objects in the work area(s) shall be pre-cleaned and removed from the work area(s). All fixed objects within the work area(s) shall be sealed with one (1) layer of 6-mil polyethylene.
- D. Erect the removal enclosure around the pipe insulation and/or fittings to be abated sealing all surfaces in one (1) layer of 6 mil polyethylene sheeting on the floor, walls, and ceiling forming an airtight seal with an airlock (*3 layers of 6 mil polyethylene overlapping each other sealed at the top and on alternating sides*) opening for entry and to allow make up air to enter the enclosure. Install a single stage decontamination chamber where the workers can remove their outer layer coveralls before proceeding to the next work area or the remote decon located on that floor.
- E. The enclosure will have at least one HEPA vacuum or junior HEPA machine (as appropriate for the size of the enclosure) connected the enclosure to establish a negative pressure differential (NPD) within the enclosure. Exhaust from the HEPA machine shall be vented outside the building. The NPD must be demonstrated through smoke testing and sufficient to provide at least two (2) air changes in the

enclosure per hour. Exhaust from the HEPA AFD shall be vented outside the building.

- F. The contractor shall follow proper removal procedures at all times in accordance with the City of Philadelphia, Air Management Services, Asbestos Control Regulation (ACR), the US EPA Regulations and Standards including the National Emissions Standards for Hazardous Air Pollutants (NESHAPS), and OSHA Asbestos in Construction Regulations, 1926.1101. All asbestos containing materials shall be continually wetted with amended water during removal procedures. Dry removal of asbestos will not be permitted. All Regulated Asbestos Containing Materials (RACM) shall be regularly cleaned up and stored in industry standard waste bags, drums, or wrapped in two (2) layers of 6 mil polyethylene or equivalent with NESHAP and waste generator labels affixed to them. Asbestos waste material must be adequately wet and the bags shall be goose necked, sealed with duct tape, and wiped clean prior to being removed from the work area. RACM waste will be bagged out of the work area and stored in a lockable waste container.
- G. Remove all the accessible pipe and fitting insulation in each work area using proper containment-bag (glove bag) techniques. A minimum of two workers are required for each containment-bag. Each containment bag shall be equipped with a pump sprayer filled with amended water, tools for the removal of pipe insulation, and a HEPA vacuum attached to the bag. Each containment bag is only to be used once and not to be repositioned elsewhere. Containment bags will be smoke tested for air tightness by the Contractor and overseen by the API. 6-mil polyethylene sheeting shall be installed on the floor beneath the pipe or pipe fitting insulation being removed, extending a minimum of five (5) feet in all directions or the full extent of the floor space in the enclosure.
- H. After removal and final cleaning of all accessible pipe and pipe fitting insulation in each work area, seal up all openings in the floor, walls, and ceilings where the pipe enters with heat resistant and fire retardant foam to a depth of at least 1 inch into the cavity. (All insulation should be removed to a depth of at least 1 inch into the penetration whenever feasible.)
- I. After complete removal and final cleaning of all asbestos containing materials throughout each work area, the API and the Contractor's supervisor will inspect each work area. Once the work area passes a visual inspection and contains no visible asbestos debris, then encapsulation of the work area shall occur prior to running final air tests.
- J. Final air tests will be performed by the API in accordance with the ACR. Aggressive air sampling protocol will be used during final clearance testing.

3.2 MONITORING AND AIR TESTING

A. Monitoring and Air Testing Firm

- 1. The Department shall contract with a Quality Assurance (QA) Firm affiliated with a fully accredited testing laboratory which specializes in performing air sampling, monitoring and inspections.
- 2. The QA Firm will be responsible for certifying the project was completed in accordance with all EPA/DEP, OSHA, and City of Philadelphia standards and

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REMOVAL OF ASBESTOS-CONTAINING MATERIALS

regulations and ensure work practices used do not create asbestos contamination to adjacent area(s).

3. Air sampling of the work areas and surrounding environment will be conducted during the performance of this contract by the Monitoring Firm to ensure compliance with all codes, regulations, ordinances and this specification. Surrounding environments or interior areas shall be deemed contaminated if air tests are greater than .01 f/cc or background levels.
 4. The Contractor shall fully cooperate with the QA Firm and all others responsible for testing and inspecting the work. An air testing and monitoring schedule shall be submitted prior to the start of work.
 5. Air testing and analyses shall be in accordance with Federal, State and Local Codes.
- B. Interior air sampling may be performed in and around occupied building spaces immediately adjacent to the work area.
- C. The QA Firm shall provide certification that the work area meets the following clearances:
1. Visual inspection indicates no ACM remains.
 2. Completion of certificate of visual inspection form.
- D. The Contractor shall inform the Department immediately of any elevated OSHA personnel air test data.
- E. Contractor shall be responsible for OSHA personal air sampling daily on a worker(s) in the most potential area of exposure.

3.3 SITE CLEAN UP

- A. All bagging and handling activities of ACM or contaminated wastes shall be accomplished wearing full protective clothing and respirators.
- B. Carefully load containerized waste on sealed trucks, dumpster or other acceptable vehicle for transport. Care must be taken before and during transport to ensure that no unauthorized persons have access to the material.
- C. Bagged material ready for disposal shall not be stored outside of the work area. Bags are to be taken from the work area directly to a sealed truck or dumpster.
- D. Bagged materials shall not be transported in open trucks. Drums, if used, shall be marked with same warning labels as bags. Uncontaminated drums may be reused. Drums that have been contaminated shall be treated as asbestos containing waste and disposed of in accordance with this specification.
- E. The sanitary landfill operator shall be advised of the quantity of material to be delivered, at least forty-eight (48) hours in advance of transport.

3.4 TRANSPORTATION AND DISPOSAL

- A. All friable asbestos (RACM) containing material shall be double bagged with OSHA and NESHAP required labeling on each bag. Waste shall be transported in enclosed or covered truck to a landfill approved for asbestos by the Pennsylvania Department of Environmental Protection. A waste shipment record shall be provided in accordance with NESHAP regulations at project end.
 - 1. Friable material (dust, debris, etc.) generated from a cutting machine or rotating blade shall be included in this.
- B. Waste disposal provisions of the latest NESHAP revision will apply.

END OF SECTION

SECTION 17100

REMOVAL/DISPOSAL OF PCB, MERCURY-CONTAINING AND MISCELLANEOUS MATERIALS – Addendum 1, 10/14/2022

PART 1 GENERAL

1.1 STIPULATIONS

- A. The specifications sections “General Conditions”, “Special Requirements” and “General Requirements” form a part of this section by reference thereto and shall have the same force and effect as if printed herewith in full.

1.2 RELATED DOCUMENTS

- A. The specifications sections “General Conditions”, “Special Requirements” and “General Requirements” form a part of this section by reference thereto and shall have the same force and effect as if printed herewith in full.
- B. The Contractor is responsible to furnish all labor, materials, facilities, equipment, services, permits and agreements necessary to perform the work required for removal of PCB-containing ballasts, mercury-containing light tubes, mercury-containing thermostat devices, and Miscellaneous Materials in accordance with these specifications, and all local, state and federal regulations; (40 CFR 761, Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce and Use Prohibitions); (49 CFR 178, Shipping Container Specifications).

1.3 SCOPE OF WORK

- A. Contractor Submittal Register: Minimum pre-mobilization Contractor submittals should include but is not limited to the following:
- B. The Contractor shall submit an air monitoring schedule for approval prior to work.
- C. Final payment to the Contractor will not be processed until the final report from the QA Firm has been received and approved.

1.4 REGULATORY SUBMITTALS (CONTRACTOR RESPONSIBILITY)

- A. Work required by this section includes removal, handling and disposal / recycling of all PCB-containing ballasts, mercury-containing fluorescent light tubes and mercury-containing thermostats located at Disston Recreational Center and the disposal of Miscellaneous Materials.
- B. For the purpose of this project, all ballasts which do not have the term “No PCB’s” printed on the label must be assumed to be PCB-containing and be removed and disposed of as such. Ballasts which have the term “No PCB’s” printed on the label may be disposed of as construction and demolition waste. Intact, non-leaking PCB containing ballasts (small capacitor) may be disposed of as municipal solid waste, as allowed by regulation. Municipal solid waste landfills, at its option, may not accept non-leaking PCB containing ballasts (small capacitor) due to permitting

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REMOVAL/DISPOSAL OF PCB, MERCURY-CONTAINING AND MISCELLANEOUS
MATERIALS

requirements. It is recommended that mercury florescent bulbs and mercury switch items shall be recycled, as applicable, as opposed to being treated as a hazardous waste items per EPA disposal requirements as outlined in Part 6.

C. Location and quantity of PCB Ballasts, Fluorescent Light Tubes and Thermostats are as follows:

D. Location and quantity of Miscellaneous Materials are as follows:

Disston Recreational Center		
PCB Ballasts	Mercury Containing Light Tubes	Mercury Thermostat
21	30	0

E. The Contractor shall be responsible to verify all quantities and to determine job site conditions.

Disston Recreational Center		
Miscellaneous Cleaning Chemical	Paint/Flammable/Combustible Liquids	Fire Extinguishers
15 gallons	4	1
Light Bulbs	Radiators	Exit Signs
4	5	2
Fire Alarms	Engine Oil	Stripper
1	12 oz	2 gallons

PART 2 ENVIRONMENTAL REQUIREMENTS

2.1 Use special clothing, including but not limited to disposable gloves (polyethylene) and eye protection.

PART 3 EXECUTION

3.1 Ensure that work operations or processes involving PCB ballasts, PCB-contaminated materials, mercury, and Miscellaneous Materials are conducted in accordance with 40 CFR 761 and the applicable requirements of this section, including but not limited to:

- A. Obtaining advance arrangements of recycling / disposal sites.
- B. Notifying Contracting Officer prior to commencing the operation.

- C. Reporting leaks and spills to the Contracting Officer.
 - D. Cleaning up spills.
 - E. Inspecting waste containers for leaks and forwarding copies of inspection reports to the Contracting Officer.
 - F. Maintaining inspection, inventory, and spills.
- 3.2 Spill/Cleanup requirements.

- A. Immediately report to the Contracting Officer any PCB or mercury spills/leaks.
- B. Rope off area around edges of leak or spill and post caution signs at the area.
- C. Initiate cleanup of spills as soon as possible. Mop up any liquid with rags or other conventional absorbent. The spent absorbent shall be properly contained and disposed of as solid waste.
- D. Document the cleanup with records of decontamination in accordance with 40 CFR 761, Section 125, Requirements for PCB Spill Cleanup. Provide certification of documentation.

PART 4 STORAGE / LABELING OF CONTAINERS

- 4.1 Store materials in DOT Specification 5, 5B or 17C containers with removable heads – 49 CFR 178. Boxes shall be suitable for fluorescent light tubes. Label containers with the following:
- A. Date the item was placed in storage and the name of the cognizant activity and building.
 - B. Affix caution labels to all hazardous waste containers.

PART 5 IDENTIFICATION NUMBER

- 5.1 Identification Number – Federal regulations require that generators, transporters, commercial storers, and disposers of regulated hazardous waste possess U.S. EPA identification numbers. The Contractor shall verify that the activity has a U.S. EPA generator identification number for use on the Uniform Hazardous Waste Manifest (EPA Form 8700-22). If not, the Contractor shall advise the activity that it must file and obtain an identification number with EPA prior to commencement of removal work. (Not applicable to item listed in 6.1)

PART 6 TRANSPORTER CERTIFICATION / CERTIFICATE OF DISPOSAL

- 6.1 Comply with disposal requirements and procedures as outlined in 40 CFR.
- A. Intact, non-leaking PCB containing ballasts (small capacitor) may be disposed of as municipal solid waste per 40 CFR 761.60(b)(2)(ii). Ensure that the

municipal solid waste landfill will accept non-leaking PCB containing ballasts before transport.

- B. Mercury containing fluorescent lamp bulbs may be recycled as universal waste, as an option, instead of a hazardous waste.
 - C. Mercury containing thermostats may be recycled as universal waste, as an option, instead of a hazardous waste. DEP, at their option, may accept mercury as a small quantity exempt generator on a one time basis only. Call for information at (814) 332-6839 or (814) 451-6009 (Erie).
- 6.2 Certificate for the hazardous materials disposed of / recycled shall include:
- A. The identity of the disposal facility, by name, address and EPA identification number.
 - B. The identity of the hazardous waste affected by the Certificate of Disposal including reference to the manifest number for shipment.
 - C. A statement certifying the fact of disposal / recycling of the identified hazardous waste, including the dates of disposal and identifying the disposal process used.
 - D. A certification (for PCB's) as identified in 40 CFR 761, Section 3.

END OF SECTION