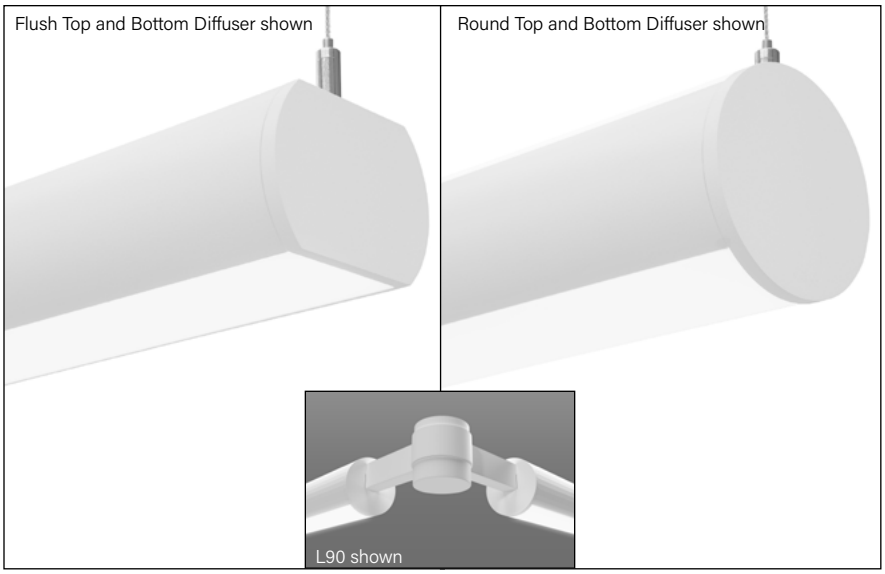
Submitted by:	Date:
Type:	Project:
Ordering Info:	

FINELITE® Better Lighting

HPO Product Family



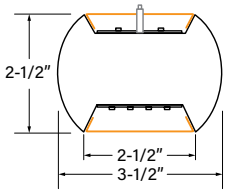
Signal White is standard finish

The High Performance 2.5" Aperture (HPO) is a patented LED linear luminaire with a round 3.5" micro profile and internal driver design. This line of light luminaire delivers excellent performance, and is equipped with a unique LED configuration for superior illumination. Output can be enhanced with advanced optical options. Available in Pendant Mount, HPO can be tailored from 2' to 12' sections in 1' increments. HPO Pendants includes Knuckle options to create unique geometric shapes.

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 **Red List Declared** status.

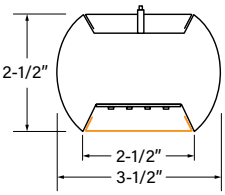
CROSS SECTIONS

Indirect/Direct
Flush Uplight Diffuser



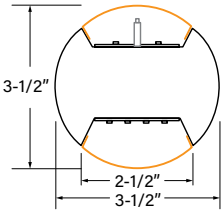
Flush Downlight Diffuser (standard)

Direct
Flush



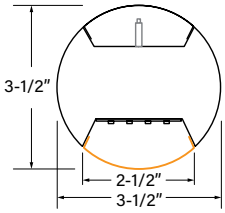
Flush Downlight Diffuser (standard)

Indirect/Direct
Round



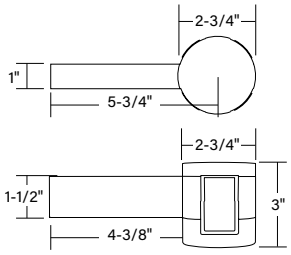
Round Downlight Diffuser (standard)

Direct
Round



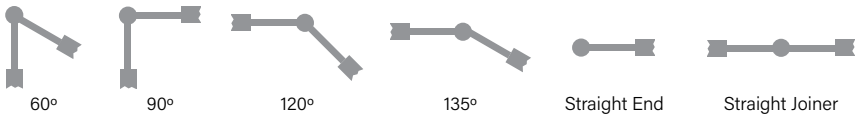
Round Downlight Diffuser (standard)

Knuckle



1XP shown

STANDARD KNUCKLES *



T-Intersection Perpendicular

Y-Intersection 120°

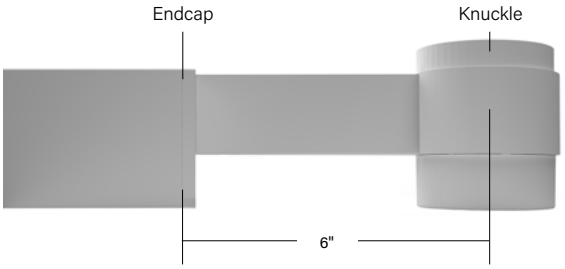
Non-uniform Y-Intersection 135°/90°

X-Intersection Perpendicular

* Each arm field adjustable 10° in either direction for 20° total range of motion.

KNUCKLES WITH ENDCAP

Add 1/4" Endcap to measurement from center of Knuckle to luminaire.



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Type:	Project:	
Ordering Info:		

FINELITE® Better Lighting

HPO Product Family

Clear Form

BODY TYPE

Platform	Series Name	Luminaire Type	Luminaire Distribution	Total Run Length of Configuration
◉ **HP** - High Performance	◉ **O** - 3.5" Round [1]	◉ **P** - Pendant	◯ **D** - Direct ◯ **ID** - Indirect/Direct	_____ Minimum 2' section length. Increments of 1'; 12' maximum section length ◯ **Select Kunckle** Leave length section blank and use "Standard Configuration" to specify size and shape. Total length to be calculated by factory.

OUTPUT and LED TYPE

Uplight Output ID Only	Downlight Output	LED CRI/CCT [2]
◯ **S** - Standard (443 lm/ft) ◯ **B** - Boosted (557 lm/ft) ◯ **H** - High (842 lm/ft) ◯ **V** - Very High (1083 lm/ft) ◯ **TL** - Tailored: _____ lm/ft *	◯ **S** - Standard (426 lm/ft) ◯ **B** - Boosted (535 lm/ft) ◯ **H** - High (809 lm/ft) ◯ **V** - Very High (1040 lm/ft) ◯ **TL** - Tailored: _____ lm/ft *	◯ **830** - 80 CRI min, 3000K ◯ **835** - 80 CRI min, 3500K ◯ **840** - 80 CRI min, 4000K ◯ **930** - 90 CRI min, 3000K ◯ **935** - 90 CRI min, 3500K ◯ **940** - 90 CRI min, 4000K ◯ **8TW** - 80 CRI min, Tunable White ◯ **9TW** - 90 CRI min, Tunable White

Lumen provided above are for Flush lens only, see pg. 12. 2ft. luminaires can only have one output only, **S** or **B**. No dual circuit or separate uplight/downlight. Uplight and downlight can be specified with different outputs and dual circuit on luminaires 3ft and longer. * Specify Tailored lm/ft of outputs between Standard (**S**) and Very High (**V**). Consult factory for tailored lumen output outside of this range.

MECHANICAL/OPTICAL OPTIONS

Uplight Option ID Only	Downlight Option
◯ **TG** - Top Glow (Standard) ◯ **RT** - Round Top (Standard) [3] ◯ **F** - Flush Diffuser ◯ **WSO** - Widespread Optic [4] ◯ **WSOTG** - Widespread Optic with Top Glow [4] ◯ **ASYTG-L** - Asymmetric Left Optic with Top Glow [4] ◯ **ASYTG-R** - Asymmetric Right Optic with Top Glow [4]	◯ **F** - Flush (Standard) [4] ◯ **RB** - Round Bottom (Standard) [5]

ELECTRICAL OPTIONS

Voltage	Circuiting [6]	Driver Selection [7]
◯ **120** - 120 Voltage ◯ **277** - 277 Voltage ◯ **347** - 347 Voltage 347 Voltage not available for Knuckle options.	◯ **SC** - Single Circuit* One single circuit in a run ◯ **DC** - Dual Circuit* Independent control of up and down separately in an I/D style fixture ◯ **MC** - Multi Circuit* More than one switch leg or zone (not 'DC' indepedent control of up and down separately for an I/D style fixture). Factory shop drawings required *Battery, Night Light, and Emergency to Generator circuits are in addition to the normal luminaire circuit(s)	**0-10V Driver Options** ◯ **FC-10%** - 0-10V 10% (standard) ◯ **FC-1%** - 0-10V 1% ◯ **OTi-10%** - EldoLED OTi, 0-10V 10% [8] ◯ **OTi-1%** - EldoLED OTi, 0-10V 1% [8] ◯ **ELD-10V-0%** - EldoLED SOLOdrive, 0-10V 0.1% ◯ **10V-TW-10%** - EldoLED OTi, 0-10V 10% *(Tunable White)* [8] **DALI Driver Options** ◯ **FC-DALI-1%** - DALI 1% ◯ **DXL-DALI-1%** - EldoLED Dexal, 1% ◯ **ELD-DALI-0%** - EldoLED SOLOdrive, DALI 0.1% ◯ **ELD-DALI-TW** - EldoLED Dual Drive Light Shape, 0.1% *(Tunable White)* **DMX Driver Options** ◯ **FIN-DMX** - Finelite DMX 1% *(Tunable White - FineTUNE Controls Only)* [9] ◯ **ELD-DMX** - EldoLED POWERdrive, 0.1% ◯ **ELD-DMX-TW** - EldoLED POWERdrive, 0.1% *(Tunable White)* **Lutron Driver Options** ◯ **LUT-ES1** - Lutron, Ecosystem 1% ◯ **LUT-TW** - Lutron T-Series, EcoSystem 0.1% *(Tunable White)* See Page 3 for additional driver options and details

MOUNTING OPTIONS

Mounting Method
◯ **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 [10]

MOUNTING OPTIONS

Ceiling Hardware Type	Endcap Style
◯ **C1** - 15/16" T-Bar ◯ **C2** - 9/16" T-Bar ◯ **C3** - Screw Slot ◯ **C4** - Hard Ceiling ◯ **C1T** - 15/16" Tegular ◯ **C2T** - 9/16" Tegular	◯ **FE** - Flat Endcap (Standard) [11] ◯ **RE** - Round Endcap (Standard) [12]

Finish

◯ **SW** - Signal White (Standard)
◯ **FB** - Finelite Black
◯ **SA** - Satin Aluminum
◯ **####** - RAL Color Code [13]
_____

OTHER OPTIONS

Emergency Style (Optional) See page 5 Backup Battery table — Clear Selection	Integrated Sensor (Optional) [14] — Clear Selection		Special Options (Optional) — Clear Selection
◯ **LGD18W** - Legrand 18W Brand Battery Back-up [14] ◯ **LGD10W** - Legrand 10W Brand Battery Back-up ◯ **EM/GEN** - Emergency to Generator ◯ **NL** - Night Light ◯ **BSL310LP** - Bodine Battery Back up Low Profile ◯ **GTD** - Generator Transfer Device ◯ **ALCR** - Automatic Load Control Relay	◯ **OBO** - Occupancy ◯ **OBD** - Daylight ◯ **W601** - Wattstopper Sensor [15] ◯ **OBE** - Enlighted Sensor [16] ◯ **REE** - Remote Enlighted [16] ◯ **CLM** - Encelium Sensor ◯ **RE7** - nLight Air Sensor	◯ **AOCC-W** - Lutron Athena Sensor [17] (Device Color White) ◯ **AOCC-B** - Lutron Athena Sensor [17] (Device Color Black) ◯ **ARF-W** - Lutron Athena RF [17] (Device Color White) ◯ **ARF-B** - Lutron Athena RF [17] (Device Color Black) ◯ **VOCC** - Lutron Vive Sensor [18] ◯ **VRF** - Lutron Vive RF [18]	◯ **CP** - Chicago Plenum [19] ◯ **RLA** - Red List Approved ◯ **RLD** - Red List Declared

OTHER OPTIONS

Standard Configurations (see page 6 - 7) — Clear Selection

◯ **SQ x_____x 4L90** - Square
◯ **REC x_____x _____x 4L90** - Rectangle
◯ **TRI x_____x 3L60** - Triangle
◯ **HEX x_____x 6L120** - Hexagon
◯ **OCT x_____x 8L135** - Octagon
◯ **PLS x_____x 1XP** - Plus
◯ **T x_____x_____x_____x TP** - T Configuration
◯ **CRS x_____x _____x_____x_____x 1XP** - Cross [20]
◯ **YINT x_____x 1Y120** - 120° Y-Intersection [20]
◯ **YINT x_____x 1Y135/90** - Non-uniform Y-Intersection [20]
◯ _____**x L60 x**_____ - "L" Shape with 60°
◯ _____**x L90 x**_____ - "L" Shape with 90°
◯ **E180 x_____x E180** - Straight
◯ _____**x L120 x**_____ - "L" Shape with 120°
◯ _____**x L135 x**_____ - "L" Shape with 135°
◯ **E180** - Single Knuckle
◯ **CFG** - Configuration [21]

Select CFG when specifying custom configuration. Please provide plan drawings to clearly communicate.

[1] Diameter 3.5"; 2.5" tall with Flush uplight and downlight diffusers diffuser
[2] Tunable white is not available with Knuckle
[3] Only available with Round Bottom diffuser
[4] Not available with Round Top diffuser
[5] Only available with Round Top diffuser
[6] Contact factory for switching options
[7] For Indirect/Direct lengths 3' and greater, separate dimming for uplight and downlight available
[8] Add DTO to gain "Dim to Off" functionality (FC-10% - DTO, FC-1% - DTO)
[9] B & V outputs only
[10] Direct only
[11] Not available with Round Top and Bottom diffusers
[12] Only available with Round Top and Bottom diffusers
[13] 20 Business day lead time for color
[14] Minimum 8ft required
[15] LMFS-601 w/ 0-10V driver(s) and LMFI-111, up to 6 drivers may be connected. LMFS-601 w/ Dali driver, only 1 driver can be connected
[16] Enlightened components installed by Finelite; Provided by OTHER
[17] 0-10V Drivers - **AOCC** up to 10 drivers may be connected; **ARF** up to 40 driver may be connected. DALI Drivers - **AOCC** & **ARF** up to 4 drivers can be connected
[18] Lutron Vive Ingrated Sensors require a DALI driver.
[19] Only available with C1, C2, and C3 mounting hardware with Finelite Gridbox
[20] Require 2 power feed locations
[21] 4 weeks lead time for custom configurations

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SUPPLEMENTARY DRIVER PAGE

0-10V Driver Options	
FC-10%	Factory Choice, 0-10V 10% Dimming (Linear)
FC-10%-DTO	Factory Choice, 0-10V 10% Dimming, Dim-to-Off (Linear)
FC-1%	Factory Choice, 0-10V 1% Dimming (Linear)
FC-1%-DTO	Factory Choice, 0-10V 1% Dimming, Dim-to-Off (Linear)
ELD-10V-0%	EldoLED SOLOdrive, 0-10V 0.1% Dimming (Linear)
ELD-10V-1%	EldoLED ECOdrive, 0-10V 1% Dimming (Linear)
10V-TW-10%	EldoLED OTi, 0-10V 10% Dimming, **Tunable White** (Linear)
10V-TW-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off, **Tunable White** (Linear)
OTi-10%	EldoLED OTi, 0-10V 10% Dimming (Linear)
OTi-10%-DTO	EldoLED OTi, 0-10V 10% Dimming, Dim-to-Off (Linear)
OTi-1%	EldoLED OTi, 0-10V 1% Dimming (Linear)
OTi-1%-DTO	EldoLED OTi, 0-10V 1% Dimming, Dim-to-Off (Linear)

DALI Driver Options	
FC-DALI-1%	Factory Choice, DALI 1% Dimming (Logarithmic)
DXL-DALI-1%	EldoLED Dexal, DALI 1% Dimming (Logarithmic)
ELD-DALI-0%	EldoLED SOLOdrive, DALI 0.1% Dimming (Logarithmic)
ELD-DALI-1%	EldoLED ECOdrive, DALI 1% Dimming (Logarithmic)
ELD-DALI-TW	EldoLED DUALdrive Light Shape, DALI 1% Dimming, **Tunable White** (Logarithmic Dimming, Linear CCT Control)

DMX Driver Options	
FIN-DMX	Finelite, DMX 1% Dimming, **Tunable White** - **FineTUNE Controls Only** (Linear)
ELD-DMX	EldoLED POWERdrive, DMX 0.1% Dimming (8 Bit, 1CH) (Linear)
ELD-DMX-16	EldoLED POWERdrive, DMX 0.1% Dimming (16 Bit, 2CH) (Linear)
ELD-DMX-TW	EldoLED POWERdrive, DMX 0.1% Dimming, **Tunable White** (8 Bit, 2CH - CH1 Warm / CH2 Cool) (Linear)
ELD-DMX-TW16	EldoLED POWERdrive, DMX 0.1% Dimming, **Tunable White** (16 Bit, 4CH - CH1, 2 Warm / CH3, 4 Cool) (Linear)

Lutron Driver Options	
LUT-ES1	Lutron, Ecosystem 1% Dimming
LUT-TW	Lutron T-Series, EcoSystem 1% Dimming, **Tunable White**

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FINELITE® Better Lighting

HPO Product Family

Specifications

BODY TYPE

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

LENGTHS: Any length, 2' minimum section length. Increments of 1'. 12' maximum section length. For Indirect/Direct, select a minimum body length of 3' or greater when requiring dual circuiting or when uplight and downlight outputs differ.

ARRAY TYPE

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

MECHANICAL FEATURES

UPLIGHT OPTION: Flush (**F**) or Rounded Top (**RT**) Frost White Diffuser, standard. 12' maximum diffuser length. Also available with patented Top Glow (**TG**). Optical distribution pattern options include Widespread Optic (**WSO/WSOTG**) [1]; WSO enables increased luminaire spacing with improved ceiling uniformity, and Asymmetric (**ASYTG-L / ASYTG-R**) [1]. Asymmetric optic directs light in a specific direction. ASYTG-L distributes light to the left, ASYTG-R distributes light to the right of the luminaire. Consult factory for more tailored lumen outputs.

DOWNLIGHT OPTION: 12' maximum diffuser length. Flush (**F**) or Rounded (**RB**) frost white snap-in diffuser; 73% transmissive, 99% diffusion. 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.

ELECTRICAL FEATURES

STATIC WHITE FEED: 18-gauge/5-conductor single-circuit feed, standard. 14-gauge feed used when luminaire current exceeds 5 amps (14-gauge plug together connection not available on Knuckle arms).

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. Tunable White is not available with Knuckle installations.

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%. Dimming to 1% available; Consult factory. 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:
- **LUTES1 (LDE1) -** Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black dimming (LDE1 series)

TUNABLE WHITE DRIVER: Replaceable LED driver. Driver is accessible from below the ceiling. 120V/277V.
- **Power factor:** ≥0.9
- **Total Harmonic Distortion (THD):** <20%
- **Dimming Range:** 100 - 1%
- **Expected driver lifetime:** 100,000 hours

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

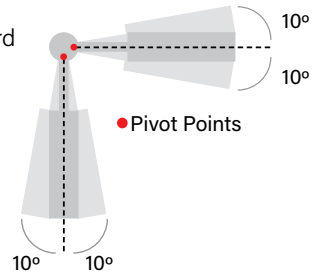
MOUNTING TYPE

HANGING HARDWARE: 50" Fully Adjustable (**FA**) plated steel aircraft cable with safety stop hardware standard. Contact factory for additional lengths up to 150". The Flexible Mounting Bracket (**FM**) [2] adjusts the suspension points to accommodate existing architecture. Suspension points adjust up to 2' in from the end of 8' to 12' fixture lengths and up to 1' in on shorter lengths.

OTHER FEATURES

ENDCAPS: Flat diecast aluminum endcaps add 1/4" to each end of luminaire. Knuckle endcaps include attachments brackets for easy installation.

ALL KNUCKLES:
- **Mounting:** Knuckle with Endcap adds 6" per Knuckle to overall length of suspension-to-suspension spacing. Knuckle is designed for use with Pendant mounted HPO.
- **Power Feed:** Our Standard Configurations are available with a single 18/5 feed into 1 or 2 arm Knuckle. 3 and 4 arm Knuckles do not accept power feeds. EM feeds will be in the luminaire section adjacent to the Knuckle. Consult factory for available options regarding feeds, multiple circuits, and emergency wiring. Feed locations will be confirmed on the shop drawings.
- **Standard Configurations:**
  See pages 1 & 7-9 for various standard angles with 1, 2, 3, and 4 arms. Each arm can be field adjusted +/-10 degrees for a total of 20 degrees. For example, L90, accommodates angles of 70 to 110 degrees; L60, accommodates 40 to 80 degrees.



[1] Indirect/Direct (ID) only
[2] Direct (D) only

Continued

Submitted by:		Date:
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SPECIFICATIONS

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

Backup Battery

	Legrand 18W	Legrand 10W/ Bodine BSL310LP
HPO-P-D		
Min. Housing Length	8'*	8'*
EM Lumen Output	2024	1202
EM Section Illuminated	2'	2' or 4'
HPO-P-ID		
Min. Housing Length	12'	8'
EM Lumen Output	2024	1202
EM Section Illuminated	2'	2' or 4'

* Minimum fixture housing length for battery pack approved without sensor
** Exception: 5' not available, 6'+ okay

TUNABLE WHITE ELECTRICAL OPTIONS:
- **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 (**OBO**) or Daylight Sensors (**OBD**) available with Flush and Bottom Glow downlight diffusers. PIR sensors not recommended for stairwell applications. Refer to Occupancy Sensor & Daylight Sensor tech sheet and the Embedded Intelligence landing page for more information and additional sensor options. Minimum fixture length: Direct with a sensor is 4ft.

FINISHES: Finelite Signal White (**SW**) powder coat standard. Finelite Black (RAL 9005) with semi gloss fine texture (**FB**) and Satin Aluminum (**SA**) are available. Optional Adders: 179 RAL colors.[3]

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, contact factory for more details. 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. HPO can be used to comply with 2016 Title 24, Part 6 (JA8); high efficacy LED light source requirements. Finelite makes the specification process easy when putting healthier products on your projects. Simply add – **RLA** (Red List Approved) or – **RLD** (Red List Declared) to your part number.

WEIGHT: 2.8 lb/ft.

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

[3] Enlighte components installed by Finelite; provided by other
[4] 20 Business day lead time for color

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Type:	Project:	
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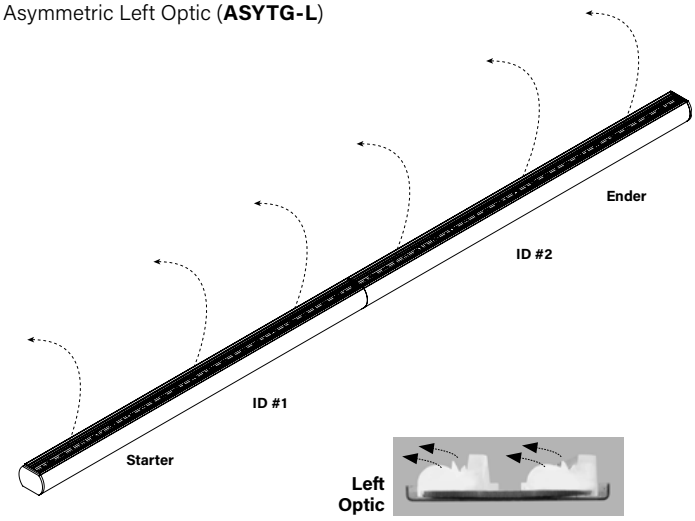
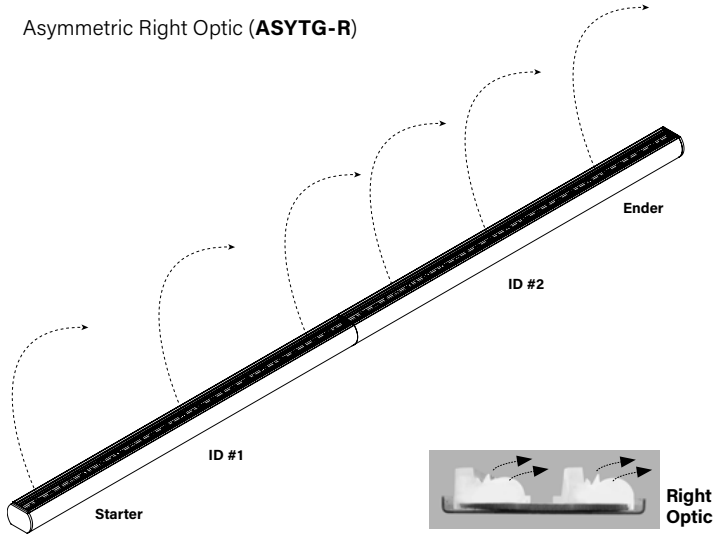
ASYMMETRIC OPTIC OPTIONS

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, ASYTG-L distributes light to the left or ASYTG-R distributes light to the right.

Asymmetric Left Optic (**ASYTG-L**)



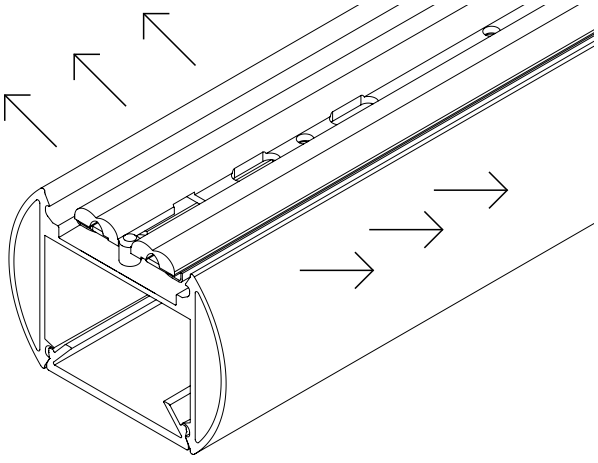
Asymmetric Right Optic (**ASYTG-R**)



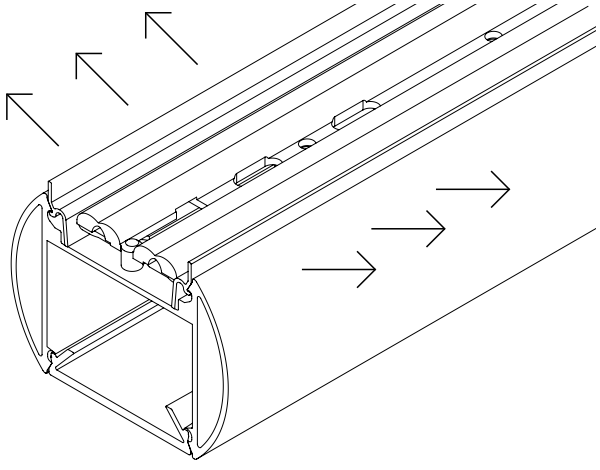
WIDESPREAD OPTIC OPTIONS

Wide Spread Optic (**WSO**) delivers a batwing distribution for improved performance.

Widespread Optic (**WSO**)



Widespread Optic Top Glow (**WSOTG**)



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

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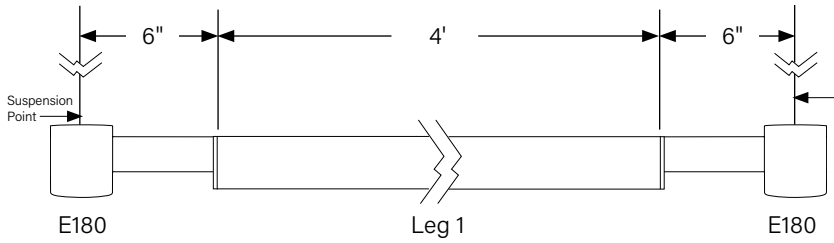
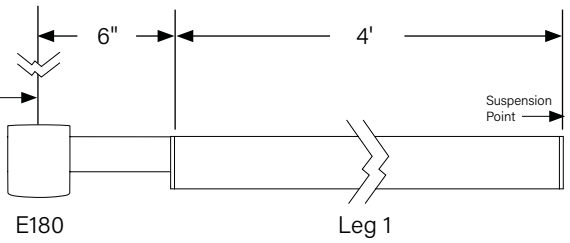
STANDARD CONFIGURATION EXAMPLES [1, 2]

Luminaires can be join by traditional joint or Knuckle joint for longer runs to fit your design needs.
EM feeds will drop on the knuckle adjacent to the luminaire section.

Support to Support Location Example
E180 x 4' x E180



Support to Support Location Example
E180 x 4'



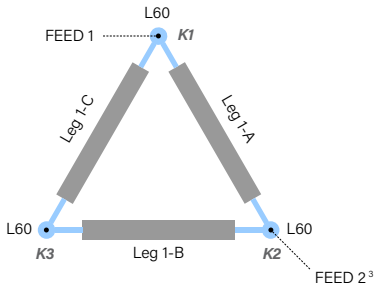
Potential location for joining note near " L " configuration example on page 9.

STR x _____ x 2E180
Straight - Provide Leg 1 dimension

Example - STR x 4' x 2E180

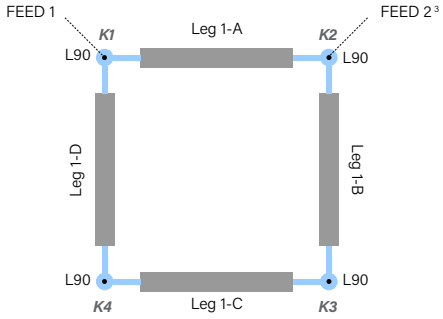
TRI x _____ x 3L60
Triangle - Provide Leg 1 dimension

Example - TRI x 4' x 3L60



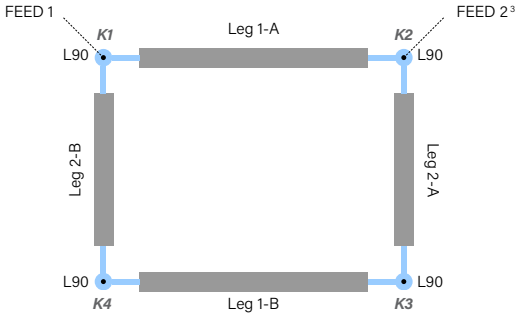
SQ x _____ x 4L90
Square - Provide Leg 1 dimension

Example - SQ x 4' x 4L90



REC x _____ x _____ x 4L90
Rectangle - Provide Leg 1, Leg 2 dimension

Example - REC x 6' x 4' x 4L90



● = Suspension Points
[1] Drawings are not to scale
[2] 2' minimum length for linear sections
[3] Used for Dual Circuit Designs

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

FINELITE® Better Lighting

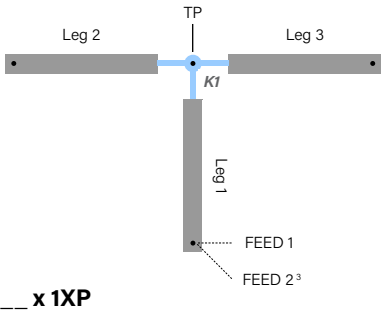
HPO Product Family

STANDARD CONFIGURATION EXAMPLES [1, 2]

Luminaires can be join by traditional joint or Knuckle joint for longer runs to fit your design needs.
EM feeds will drop on the knuckle adjacent to the luminaire section.

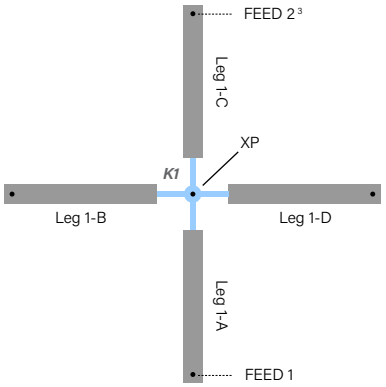
T x _____ x _____ x _____ x 1Y120
T-Intersection - Provide Leg 1, Leg 2, Leg 3 dimension

Example - T x 4' x 4' x 4' x 1Y120



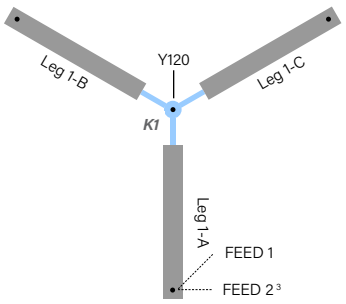
PLS x _____ x 1XP
Plus - Provide Leg 1 dimension

Example - PLS x 4' x 1XP



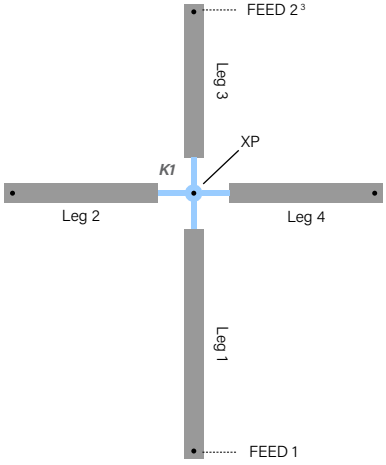
YINT x _____ x 1Y120
Y-Intersection - Provide Leg 1 dimension

Example - YINT x 4' x 1Y120



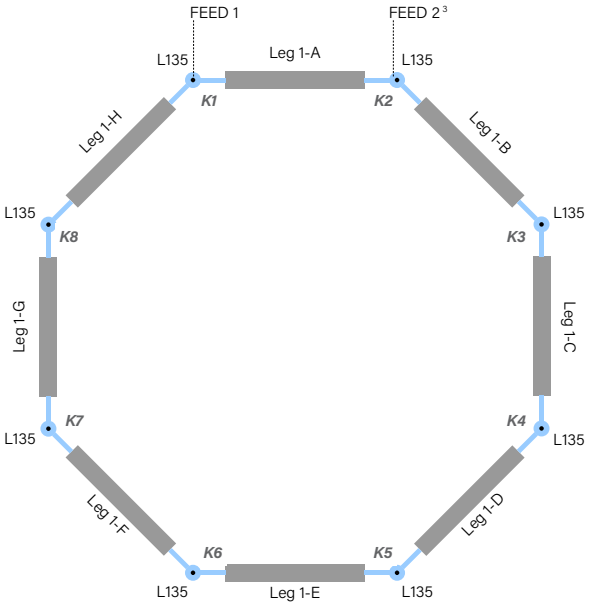
CRS x _____ x _____ x _____ x _____ x 1XP
CRS - Provide Leg 1, Leg 2, Leg 3, and Leg 4 dimension

Example - CRS x 6' x 4' x 4' x 4' x 1XP



OCT x _____ x 8L135
Octagon - Provide Leg 1 dimension

Example - OCT x 4' x 8L135



● = Suspension Points
[1] Drawings are not to scale
[2] 2' minimum length for linear sections
[3] Used for Dual Circuit Designs

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

FINELITE® Better Lighting

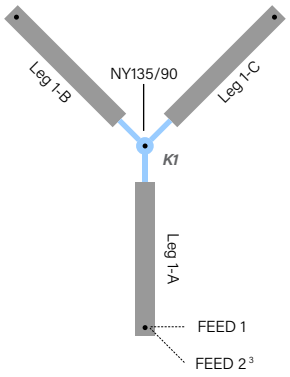
HPO Product Family

STANDARD CONFIGURATION EXAMPLES [1, 2]

Luminaires can be join by traditional joint or Knuckle joint for longer runs to fit your design needs.
EM feeds will drop on the knuckle adjacent to the luminaire section.

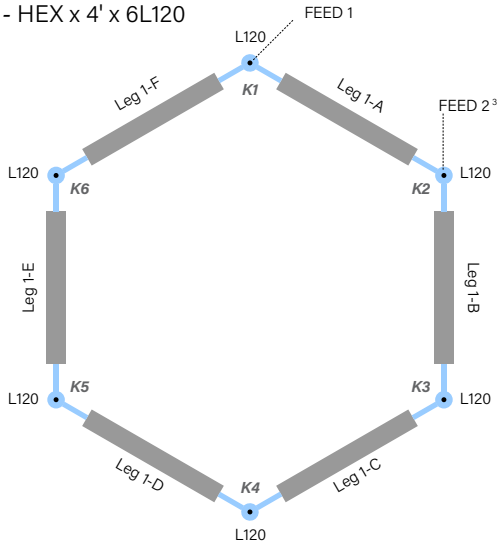
YINT x _____ x 1NY135/90
Y-Intersection - Provide Leg 1 dimension

Example - YINT x 4' x 1NY135/90



HEX x _____ x 6L120
Hexagon - Provide Leg 1 dimension

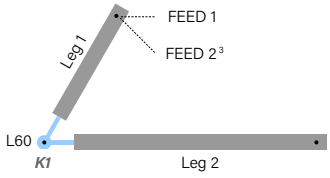
Example - HEX x 4' x 6L120



Luminaires can be join by traditional joint or Knuckle joint for longer runs to fit your design needs.

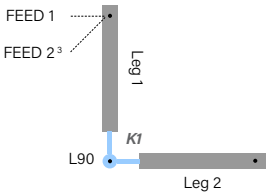
L x _____ x _____ x L60
L Shape - Provide Leg 1 and Leg 2 dimension

Example - L x 4' x 8' x L60



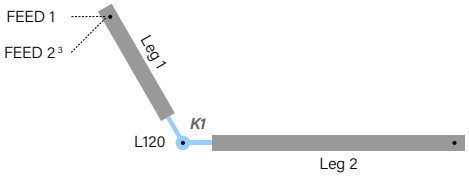
L x _____ x _____ x L90
L Shape - Provide Leg 1 and Leg 2 dimension

Example - L x 4' x 4' x L90



L x _____ x _____ x L120
L Shape - Provide Leg 1 and Leg 2 dimension

Example - L x 4' x 8' x L120



L x _____ x _____ x L135
L Shape - Provide Leg 1 and Leg 2 dimension

Example - L x 4' x 12' x L135

● = Suspension Points

[1] Drawings are not to scale
[2] 2' minimum length for linear sections
[3] Used for Dual Circuit Designs

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

FINELITE® Better Lighting

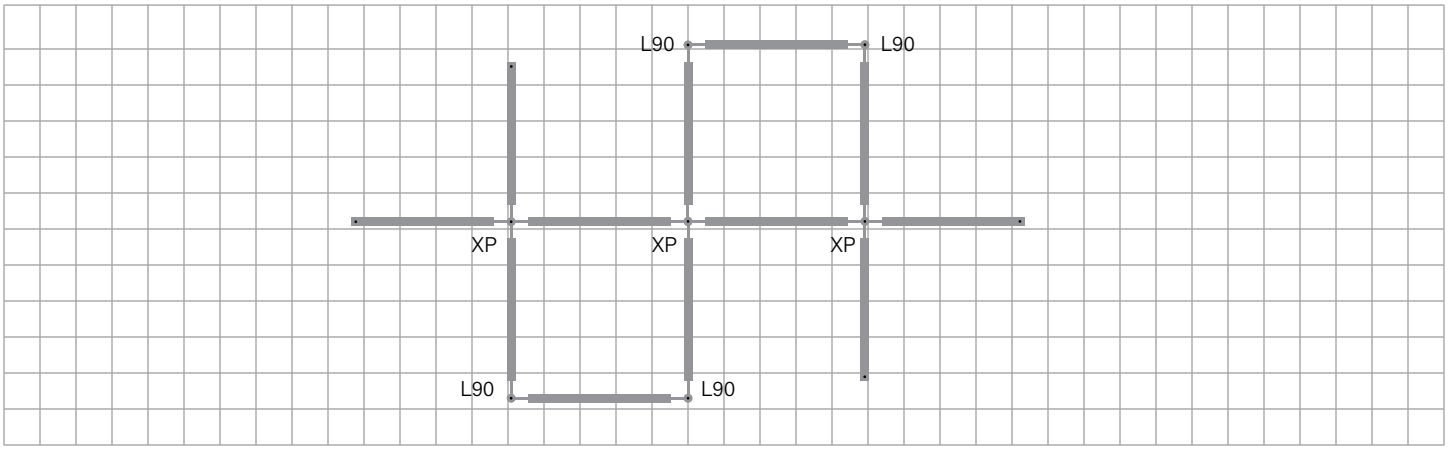
HPO Product Family

CUSTOM CONFIGURATION EXAMPLE [1, 2]

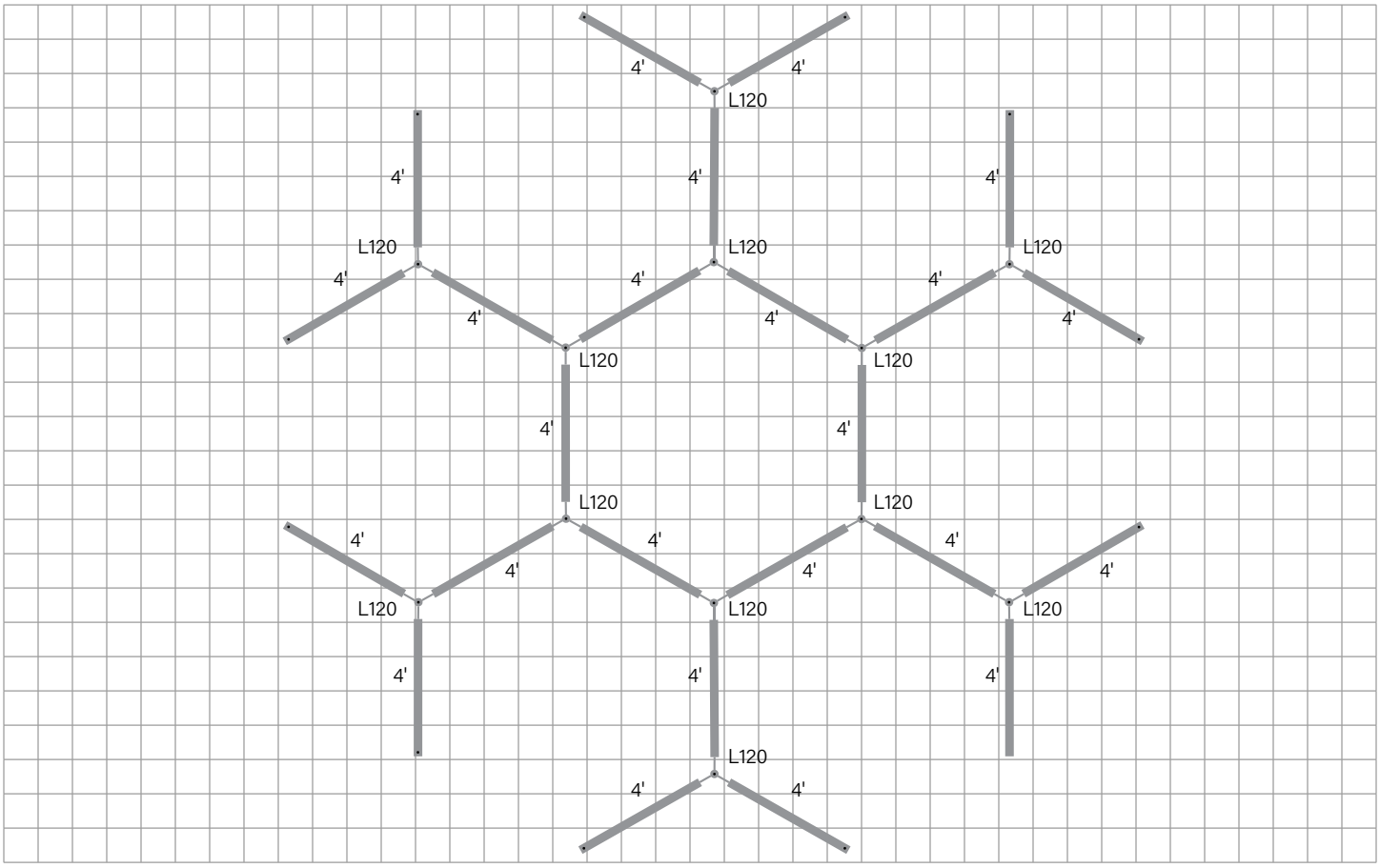
99CFG

Custom Configuration - Please provide a sketch or drawing showing desired configurations.

Examples



= 1 ft²



● = Suspension Points

[1] Drawings are not to scale

[2] 2' minimum length for linear sections

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

FINELITE® Better Lighting

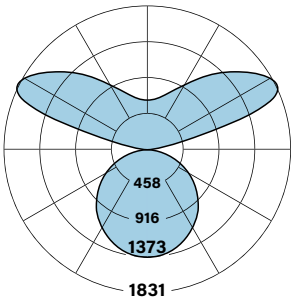
HPO Product Family

Indirect/Direct Flush with Widespread Optic Photometry

4' Luminaire 3500K

HPO-P-ID-V-V-835-WSO-F
Uplight: Widespread Optic / **Downlight:** Flush

Distribution: 51% Up (**V**) / 49% Down (**V**)
Efficacy: 119 lm/W
Uplight: 4223 lumens (1055 lumens/ft)
Downlight: 4005 lumens (1001 lumens/ft)
Total luminaire output: 8228 lumens
69.0 watts
Peak Candela Value: 1831 @ 115°
CRI: 80 / CCT: 3500K
ITL LM79 Report 92549



Total Light Output, 3500K, 80 CRI (Lumens)- 4' Luminaire				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	3368 [↑51% | 49%↓]	3813 [↑57% | 43%↓]	4924 [↑67% | 33%↓]	5862 [↑72% | 28%↓]
↓B[1]	3790 [↑46% | 54%↓]	4234 [↑51% | 49%↓]	5346 [↑61% | 39%↓]	6284 [↑67% | 33%↓]
↓H[1]	4844 [↑36% | 64%↓]	5288 [↑41% | 59%↓]	6400 [↑51% | 49%↓]	7338 [↑58% | 42%↓]
↓V[1]	5734 [↑30% | 70%↓]	6179 [↑35% | 65%↓]	7290 [↑45% | 55%↓]	8228 [↑51% | 49%↓]

Light Output, 3500K, 80 CRI (Lumens Per Foot)				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	842	953	1231	1466
↓B[1]	947	1059	1336	1571
↓H[1]	1211	1322	1600	1835
↓V[1]	1433	1545	1822	2057

Power, 3500K, 80 CRI (Watts Per Foot)				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	6.8	7.7	10.0	12.0
↓B[1]	7.7	8.6	10.9	12.9
↓H[1]	10.0	10.9	13.2	15.2
↓V[1]	12.0	12.9	15.2	17.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	125	124	123	122
↓B[1]	124	123	123	122
↓H[1]	121	121	121	120
↓V[1]	119	120	120	119

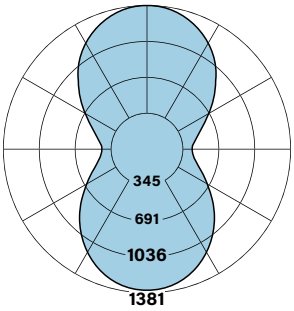
S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output
[1] Based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 92549

Indirect/Direct Round Photometry

4' Luminaire 3500K

HPO-P-ID-V-V-835-RT-RB
Uplight: Round Top / **Downlight:** Round Bottom

Distribution: 51% Up (**V**) / 49% Down (**V**)
Efficacy: 123 lm/W
Uplight: 4331 lumens (1079 lumens/ft)
Downlight: 4159 lumens (1040 lumens/ft)
Total luminaire output: 8490 lumens
69.0 watts
Peak Candela Value: 1381 @ 180°
CRI: 80 / CCT: 3500K
ITL LM79 Report 93792



Total Light Output, 3500K, 80 CRI (Lumens)- 4' Luminaire				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	3475 [↑51% | 49%↓]	3931 [↑57% | 43%↓]	5071 [↑66% | 34%↓]	6034 [↑72% | 28%↓]
↓B[1]	3913 [↑45% | 55%↓]	4369 [↑51% | 49%↓]	5509 [↑61% | 39%↓]	6471 [↑67% | 33%↓]
↓H[1]	5008 [↑35% | 65%↓]	5464 [↑41% | 59%↓]	6603 [↑51% | 49%↓]	7566 [↑57% | 43%↓]
↓V[1]	5932 [↑30% | 70%↓]	6388 [↑35% | 65%↓]	7528 [↑45% | 55%↓]	8490 [↑51% | 49%↓]

Light Output, 3500K, 80 CRI (Lumens Per Foot)				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	869	983	1268	1508
↓B[1]	978	1092	1377	1618
↓H[1]	1252	1366	1651	1891
↓V[1]	1483	1597	1882	2123

Power, 3500K, 80 CRI (Watts Per Foot)				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	6.8	7.7	10.0	12.0
↓B[1]	7.7	8.6	10.9	12.9
↓H[1]	10.0	10.9	13.2	15.2
↓V[1]	12.0	12.9	15.2	17.3

Efficacy, 3500K, 80 CRI (Lumens Per Watt)				
	↑S[1]	↑B[1]	↑H[1]	↑V[2]
↓S[1]	129	128	127	126
↓B[1]	128	127	126	125
↓H[1]	125	125	125	124
↓V[1]	124	124	124	123

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output
[1] Based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
[2] Based on ITL report: 93792

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

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: 4924 lm x 0.789 = 3885 lm
Total Light Output per Foot: 1231 lm/ft x 0.789 = 971 lm/ft.
watts/foot: 10.0 W/ft.

$$\textbf{Efficacy} = \frac{971\ \frac{\text{lm}}{\text{ft.}}}{10.0\ \frac{\text{W}}{\text{ft.}}} = 97\ \text{lm/W}$$

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

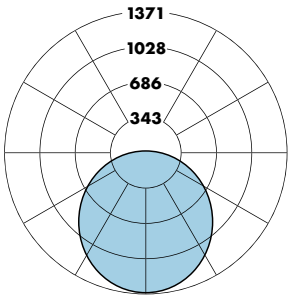
FINELITE® Better Lighting

HPO Product Family

Direct Flush - 4' Luminaire 3500K

HPO-P-D-V-835-F

Efficacy: 120 lm/W
Total luminaire output: 4011 lumens (1003 lumens/ft)
33.5 watts (8.4 watts/ft)
Peak Candela Value: 1371 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 92552



Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaure			
S¹	**B¹**	**H¹**	**V²**
1642	2064	3120	4011

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S¹	**B¹**	**H¹**	**V²**
410	516	780	1003

Power, 3500K, CRI (Watts Per Foot)			
S¹	**B¹**	**H¹**	**V²**
3.3	4.2	6.4	8.4

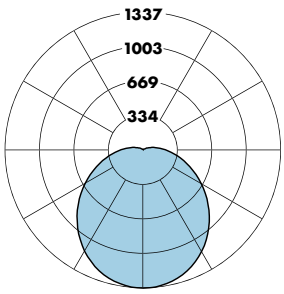
Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S¹	**B¹**	**H¹**	**V²**
125	124	121	120

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output
¹ Based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
² Based on ITL report: 92552

Direct Flush - 4' Luminaire 3500K

HPO-P-D-V-835-RB

Efficacy: 120 lm/W
Total luminaire output: 4189 lumens (1047 lumens/ft)
33.4 watts (8.4 watts/ft)
Peak Candela Value: 1337 @ 0°
CRI: 80 / CCT: 3500K
ITL LM79 Report 93795



Total Light Output, 3500K, 80 CRI (Lumens) - 4' Luminaure			
S¹	**B¹**	**H¹**	**V²**
1715	2156	3258	4189

Light Output, 3500K, 80 CRI (Lumens Per Foot)			
S¹	**B¹**	**H¹**	**V²**
429	539	815	1047

Power, 3500K, CRI (Watts Per Foot)			
S¹	**B¹**	**H¹**	**V²**
3.3	4.2	6.4	8.4

Efficacy, 3500K, 80 CRI (Lumens Per Watt)			
S¹	**B¹**	**H¹**	**V²**
131	130	127	125

S - Standard Output, B - Boosted Standard Output, H - High Output, V - Very High Output
¹ Based on 4' luminaire 3500K Very High Output (**V**) test - 120V.
² Based on ITL report: 93795

Wattage is Real Power. If you would like additional details to calculate Apparent Power, please contact your local Finelite representative.

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: 3120 lm x 0.789 = 2462 lm
Total Light Output per Foot: 780 lm/ft x 0.789 = 615 lm/ft.
watts/foot: 6.4 W/ft.

$$\textbf{Efficacy} = \frac{615\ \frac{\text{lm}}{\text{ft.}}}{6.4\ \frac{\text{W}}{\text{ft.}}} = 96\ \text{lm/W}$$

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

0-10V Tunable White

Finelite's award-winning, contractor friendly Tunable White luminaires are available at low cost, with powerful and simple 0-10V tuning and intensity controls.

TUNABLE WHITE FEATURES

- CCT range: 2700K - 6500K
- Dimming Range: 100% to 10%
- CRI Options: 80 CRI or 90 CRI

PHOTOMETRY

Apply a power adjustment factor to calculate wattage usage

POWER	CONVERSION FACTOR
	1.1X

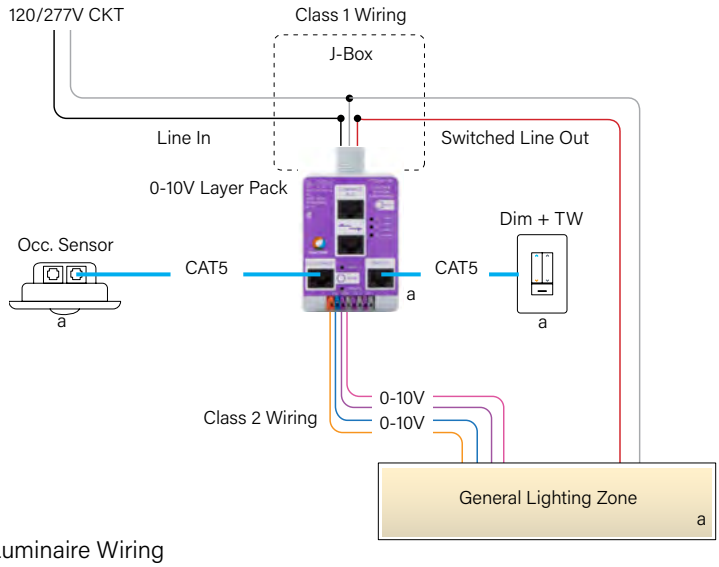
(Example: a 50 watt luminaire in static white would draw 55 watts using 0-10V Tunable White)

TUNABLE WHITE LUMINAIRE FAMILY MODIFICATIONS/RESTRICTIONS

	Section Lengths										
Direct	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'
Output S,B,H,V Single Circuit	Rows can be comprised of 2'-12' sections.										
Integral Battery Backup (BSL310LP)							✓		✓		✓
Indirect/Direct											
Output S,B Single Circuit	✓		✓		✓		✓		✓		✓
Integral Battery Backup (BSL310LP)							✓		✓		✓
Output H,V Single Circuit			✓				✓				✓
Integral Battery Not Available	Remote Battery backup solution available. Contact Factory.										
Output S,B,H,V Dual Circuit			✓				✓				✓
Integral Battery Not Available	Remote Battery backup solution available. Contact Factory.										

EN/GEN sections available for all body lengths

WIRING DIAGRAM - DIMMABLE TO 10%

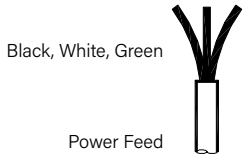


Luminaire Wiring

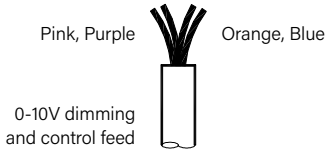
- **Purple** (+) / **Pink** (-) control wires are for intensity control
- **Orange** (+) / **Blue** (-) control wires are for Tunable White control

Note:
Load or Dim to Off options available.

DUAL FEED DETAIL



WIRING LEGEND		
Black	Hot	Line Voltage
White	Neutral	Line Voltage
Green	Ground	



WIRING LEGEND		
Pink	Dimming	0-10V DC
Purple	Dimming	0-10V DC
Orange	TW	0-10V DC
Blue	TW	0-10V DC