

Refer to page 2 for all door styles

Date

Project

Type

Comments

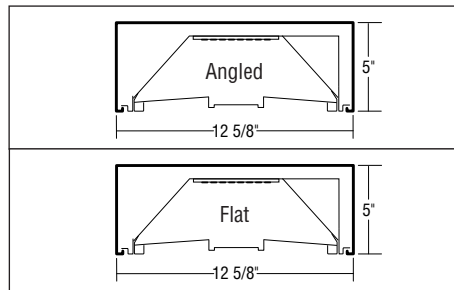
DESCRIPTION

Indigo-Clean Technology is a Continuous Environmental Disinfection System that emits a narrow spectrum light that kills bacteria, Influenza-A⁴, and SARS-CoV-2 – the virus that causes COVID-19⁴ – and is proven effective by recently conducted independent lab testing. Unlike UV disinfection, Indigo-Clean Technology is designed to safely and continuously disinfect a space while it is fully occupied.

Single-Mode Indigo-Clean Technology utilizes a combination of blended white LEDs and 405nm LEDs on a single circuit board design. When the luminaires are on, the disinfection is active.

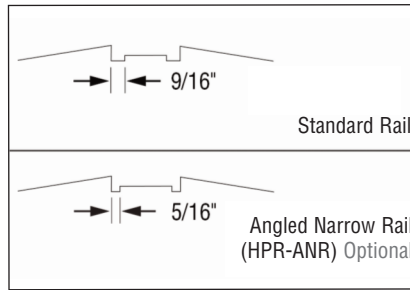
Dual-Mode Indigo-Clean Technology utilizes a mid-power of blended white LEDs and 405nm LEDs on a two circuit board design and full 405nm indigo light using automated controls to disinfect the space. When the space is unoccupied, it utilizes just the 405nm LEDs with increased output to increase disinfection efficacy.

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.



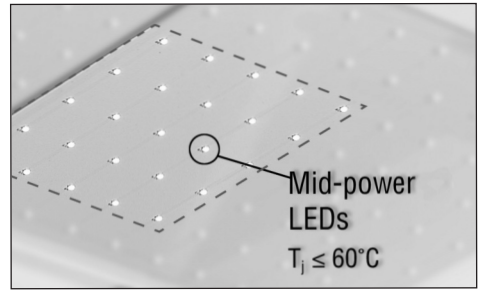
Shown with Surface Mount kit

DIMENSIONS



ANGLED NARROW RAIL OPTION

Available in angled door style with the same center optic choices. The optional narrow rails are approximately 5/16" wide. The standard center rails are approximately 9/16" wide.



THERMAL MANAGEMENT

Mid-power LEDs allow heat to be fully dissipated without the need for additional heat sinks.

ORDERING GUIDE: Sample Number: HPR LED - A - 1x2 - DCO - H - 832-SMIC - 277V - SC - SM - OBO - CP - RLA

	HPR LED											SM			
Finelite Series HPR LED															
Door Styles (A - Angled, ANR - Angled Narrow Rail, F - Flat, DD - Double Diffuse ^{1,2})															
Size (1x2)															
Center Optic (DCO - Diffuse Center, SCO - Slotted Center, RCO - Round Center) ³															
Light Output (H - High, V - Very High)															
LED CRI/CCT (832-SMIC - 80 CRI min, 3200K Single Mode Indigo-Clean, 837-SMIC - 80 CRI min, 3200K Single Mode Indigo-Clean, 843-SMIC - 80 CRI min, 3700K Single Mode Indigo-Clean, 832-DMIC - 80 CRI min, 3200K Dual Mode Indigo-Clean, 837-DMIC - 80 CRI min, 3700K Dual Mode Indigo-Clean, 843-DMIC - 80 CRI min, 4300K Dual Mode Indigo-Clean)															
Voltage (120V, 277V)															
Circuiting (SC - Single Circuit)															
Ceiling Type (SM - Surface Mount)															
Integrated Sensors ⁵ (OBD - Daylight, OBO - Occupancy, W601 - Wattstopper Wireless Sensor ⁶ , BB - Both, VOCC - Lutron Vive Wireless Sensor (VDO) ⁷ , VRF - Lutron Vive Radio Only ⁷)															
Special Options (CP - Chicago Plenum, RLA - Red List Approved, RLD - Declared Label)															

¹ Double Diffuse door not available with Center Optic options

² Not available with sensors

³ Only available on Angled (A), Angled Narrow Rail (ANR) and Flat (F) door options

⁴ Indigo-Clean Research Reports

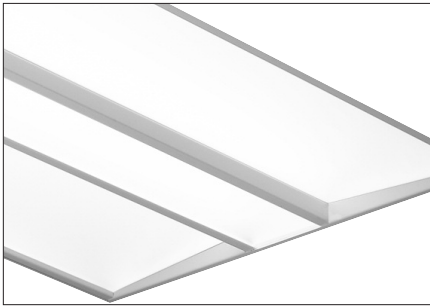
⁵ Not available for Dual-Mode

⁶ LMFS-601 w/ 0-10V driver(s) and LMFI-111, up to 8 drivers may be connected

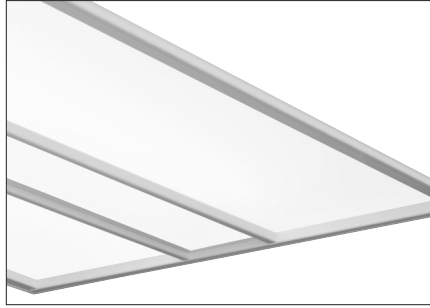
⁷ LMFS-601 w/ DALI driver, only 1 driver can be connected.

⁷ Lutron Vive Integrated Sensors require a DALI driver

DOOR STYLES



A - Angled
ANR - Angled Narrow Rail



F - Flat



DD - Double Diffuse

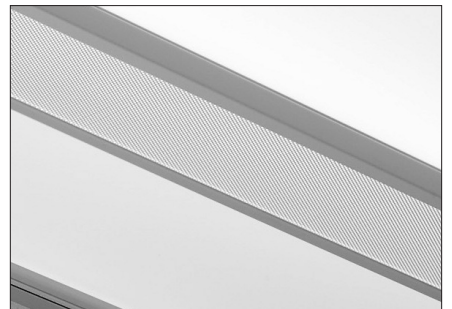
CENTER OPTICS



DCO - Diffuse Center



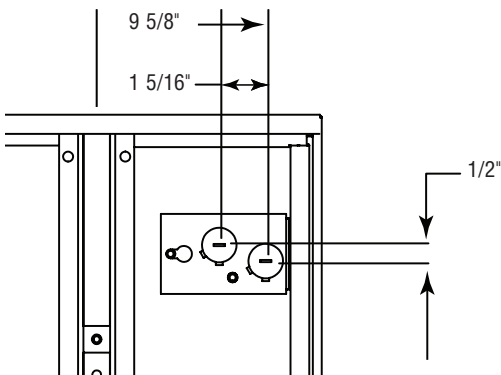
SCO - Slotted Center



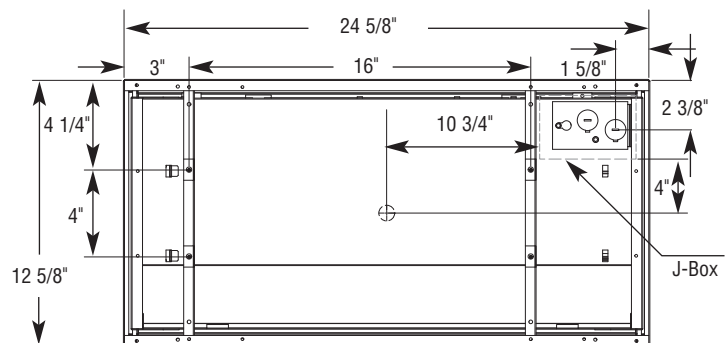
RCO - Round Center

DCO, SCO, and RCO are only available on Angled (A), Angled Narrow Rail (ANR), and Flat (F) doors.

WIRING ACCESS DETAIL



MOUNTING INFORMATION: 1x2



Consult www.finelite.com for 3000K, 3500K, and 4000K photometric reports.

PHOTOMETRY

HPR LED-F-1x2

Very High Output

Efficacy: 85 lumens per watt

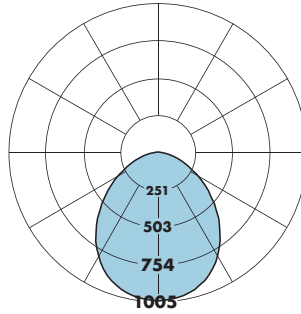
Total luminaire output: 2463 Lumens

28.9 Watts

Peak Candela Value: 682 @ 0°

CCT: 3700K

ITL LM79 Report 85140 (Family Correlated)



CANDELA DISTRIBUTION						
	0.0	22.5	45.0	67.5	90.0	Flux
0	1274	1274	1274	1274	1274	
5	1267	1267	1267	1267	1269	95
10	1246	1248	1248	1250	1253	
15	1213	1213	1216	1218	1221	270
20	1161	1165	1166	1171	1173	
25	1099	1100	1103	1105	1105	400
30	1022	1023	1025	1025	1023	
35	935	936	936	932	932	460
40	842	842	837	829	824	
45	744	742	732	721	715	445
50	641	638	628	614	606	
55	541	538	525	508	498	369
60	447	440	424	405	395	
65	353	345	329	310	302	257
70	262	257	239	223	217	
75	182	175	159	145	138	134
80	108	103	88	75	72	
85	47	40	29	27	27	32
90	0	0	0	0	0	

Information in charts below are for reference and based on ITL LM79 report 85140 (Family Correlated)

Flat (F) Total Light Output, 3700K, 80 CRI (Lumens)					
H			V		
1891			2463		
Single Mode Power (Watts)					
H			V		
21.5			28.9		
Dual Mode Power (Watts)					
H			V		
Occupied	LPD	Unoccupied	Occupied	LPD	Unoccupied
21.9	17.2	13.5	29.2	23.1	17.6
Efficacy, 3700, 80 CRI (Lumens per Watt)					
H			V		
87			84		

Lumen Adjustment Factors - 80 CRI

Indigo-Clean	
3200K	0.98
3700K	1.00
4300K	1.03

SAMPLE LUMEN ADJUSTMENT CALCULATION

High Output (H) Flat (F)
3200K, 80 CRI

Lumen Adjustment Factor = 0.98

Total Light Output =
1891 lm x 0.98 = 1853 lm

$$\text{Efficacy} = \frac{1853 \text{ lm}}{21.5 \text{ W}} = 86 \text{ lm/W}$$

H - High Output, V - Very High Output

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SPECIFICATIONS

CONSTRUCTION: Die-formed 20-gauge cold-rolled steel housing. All components are hard-tooled to tolerances of +/- 0.010". UV stabilized weather-strip pile gasket with polypropylene backing. Hinged door frame assembly provides easy access to light arrays and driver compartment for servicing from below. Seismic brackets are integrated into the luminaire assembly.

REFLECTORS: Die-formed 20-gauge cold-rolled steel reflectors are finished in 96LG high reflectance matte white powder coat paint.

OPTICAL SYSTEM: Components include diffuser panels and a central optic element held in place with a frame constructed from die-formed cold-rolled steel. The diffusers are UV-stabilized and impact-resistant frosted virgin acrylic, 0.120" thick. They are either angled toward the central optic or parallel to the ceiling plane. The standard center rails are approximately 9/16" wide. Optional narrow rails are approximately 5/16" wide. For optimum performance, continuously provide an average 50-60 footcandles on the work plane (24/7). Dimming generally reduces effectiveness and increases the variation in the disinfecting light's visual appearance.

INDIGO-CLEAN TECHNOLOGY: Single-Mode Indigo-Clean Technology utilizes a combination of blended white LEDs, and safe 405nm LEDs to continually disinfect a space and kill bacteria, Influenza-A¹, and SARS-CoV-2 – the virus that causes COVID-19¹. Unlike UV disinfection, Indigo-Clean Technology is designed to safely and continuously disinfect a space while it is fully occupied. When the Indigo-Clean Technology light is on, disinfection is active. For optimum performance, continuously provide an average 50-60 footcandles on the work plane and high touch surfaces (24/7). Dimming generally reduces effectiveness and increases the variation in the disinfecting light's visual appearance.

Single-Mode Indigo-Clean Technology: Continuous environmental disinfection system that uses a blended white LEDs and 405nm Indigo-Clean LEDs. The narrow spectrum light provides a safe visible light that disinfects the space. When the light is on, disinfection is active.

Dual-Mode Indigo-Clean Technology: Utilizes a two circuit board design. When the space is occupied it utilizes a combination of blended white LEDs and 405nm LEDs. When the space is unoccupied, it utilizes just the 405nm LEDs with increased output to increase disinfection efficacy.

Dual-Mode Indigo-Clean Technology Controller: It is a low voltage internal device that determines the operational mode based on the input received from the external automated controls. An Off manual push will not turn the lights off, but rather turn the lights to Blue Mode. Please refer to Dual-Mode Application Guide for wiring diagram. Dim to Off not available.

DOUBLE DIFFUSE: Visible diffuser: UV-stabilized and impact-resistant frosted virgin acrylic, 0.120" thick. Inner diffuser: 0.120" thick with 60% round perforations white/white.

CENTER OPTIC OPTIONS: Only available with Angled (A), Angled Narrow Rail (ANR), and Flat (F) door styles.

Diffuse Center Optic (DCO): UV-stabilized and impact-resistant frosted virgin acrylic.

Slotted Center Optic (SCO): Die-formed cold-rolled steel panel with a 1/16" x 1/2" rectangular hole pattern. Virgin acrylic overlay.

Round Center Optic (RCO): Die-formed cold-rolled steel panel with precision-punched 3/32" round hole pattern arranged in staggered formation. Virgin acrylic overlay.

LIGHT OUTPUT: Two lumen packages available, High (H), and Very High (V). A separate chart summarizes lumen distribution and wattage. Light engines are replaceable.

LUMEN MAINTENANCE: White LEDs: 90% of initial light output (L90) at 100,000+ hours; 70% of initial light output (L70) at 200,000+ hours. 405nm LEDs: 70% of initial output at L70 @ 60,000 hours.

DRIVER: Replaceable 120V/277V 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. 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: LUTES1 (Hi-lume 1% EcoSystem with Soft-On, Fade to Black dimming (LDE1 series)); LUT2W (Hi-lume 1% 2-wire, 120V forward phase dimming (LTEA series)); Contact factory for availability of discontinued Lutron drivers, L3DA-3-wire and L3DA EcoSystem.

ELECTRICAL: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver. Chicago Plenum option.

INTEGRATED SENSORS: Integrated PIR (Passive Infrared) occupancy and/or daylight sensors available. Refer to Occupancy Sensor and Daylight Sensor tech sheets for more info. Integrated Sensor not available with Dual-Mode.

MOUNTING: Luminaire is compatible with recessed junction boxes. Electrical connections can be made directly to wiring access plate shown above. Junction boxes can also be placed between mounting bars. Maximum center of feed location from luminaire center is 10 3/4" along the dimension parallel to the mounting bars, and 4" along dimension perpendicular to the mounting bars.

PATENT: Indigo-Clean products and technology covered by U.S. Patent No. US 9,039,966 and US 8,398,264. Product may also be covered by patents found at www.kenall.com/patents.

FINISH: Housing and door assembly painted with 96 LG high reflectance matte white powder coat paint. Optional adder: Anti-microbial paint. Contact factory.

FEED: Optional whips (with flex connectors) supplied in a maximum of 11' lengths. Lead Wires.

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. EPA Est.No. 99530-CA-1. These fixtures are rated for Damp Location. IC-rated and Chicago Plenum options available. 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. HPR can be used to comply with 2016 Title 24, Part 6 (JA8); high efficacy LED light source requirements. 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.

WEIGHT: 12 lbs maximum.

WARRANTY: 5-year performance-based warranty on all standard components. Optional accessories such as emergency battery packs are covered by their individual manufacturer warranties.



¹ Indigo-Clean Research Reports

