FINELITE®
Better Lighting

High Performance Recessed (HPR-LED) 1x1

Declare. Third Party Verified | Indigo-Clean® A brand of legrand | IC – RATED

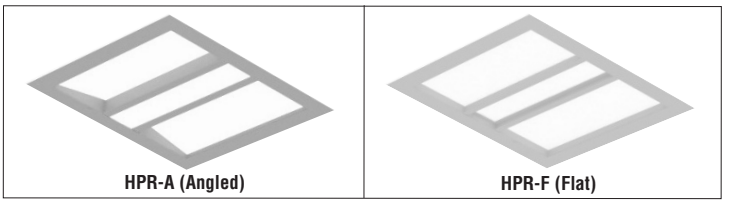
Indigo-Clean is a registered trademark of Kenall Manufacturing Co., a Legrand Company

Date

Project

Type

Comments



HPR-A (Angled) | HPR-F (Flat)

Refer to page 2 for all door styles

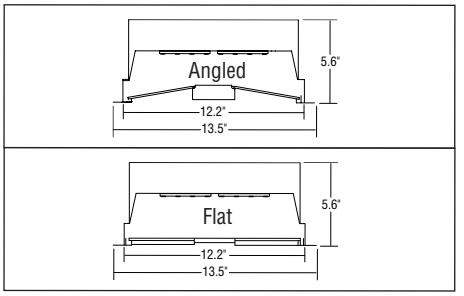
DESCRIPTION

Indigo-Clean Technology is a Continuous Environmental Disinfection System that emits a narrow spectrum light that kills bacteria, Influenza-A[1], and SARS-CoV-2 – the virus that causes COVID-19[1] – 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.

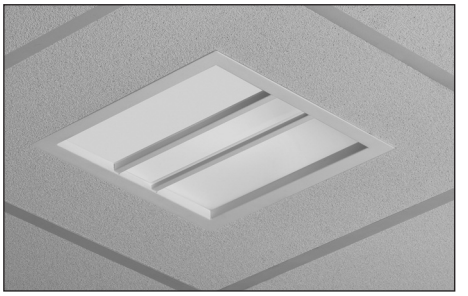
Single-Mode Indigo-Clean Technology utilizes a combination of blended white LEDs and 405nm LEDs on a single circuit board design. When the luminaires are on, the disinfection is active.

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.

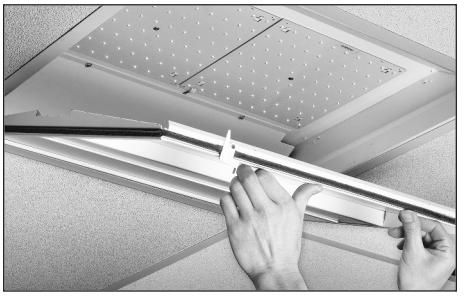


DIMENSIONS



GLARE-FREE ILLUMINATION:

A glare-free experience is attained with mid-powered LEDs properly distributed and paired with a precise diffuser to eliminate pixilation.



100% SERVICEABLE FROM BELOW

The replaceable light engine and driver are easy to access from below the ceiling.

ORDERING GUIDE: Sample Number: HPR LED - A - 1x1 - DCO - H - 832-SMIC - 277V - SC - C1 - CP - RLA

HPR LED

Finelite **Series HPR LED**
Door Styles (**A** - Angled, **F** - Flat, **DD** - Double Diffuse[1, 2])
Size (**1x1**)
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 (**C1** - 1" T-Bar, **C2** - 9/16" T-Bar, **C3** - screw slot, **DW** - Drywall Kit)
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 with Angled (A) and Flat (F) door options
[4] Indigo-Clean Research Reports

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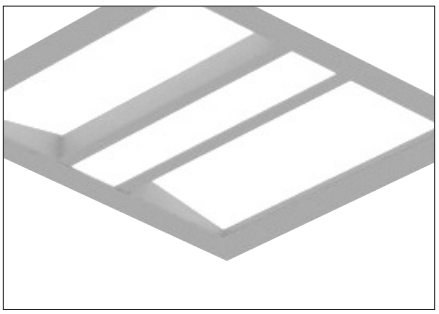
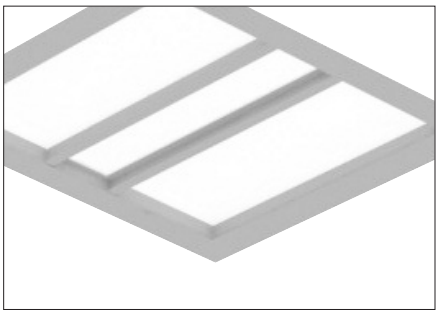
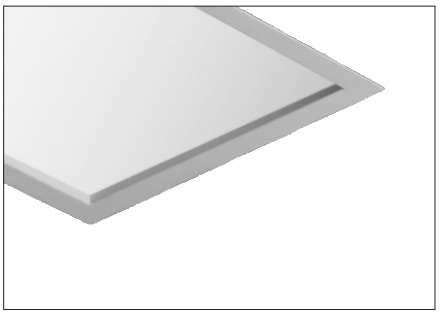
DOOR STYLES



A - Angled

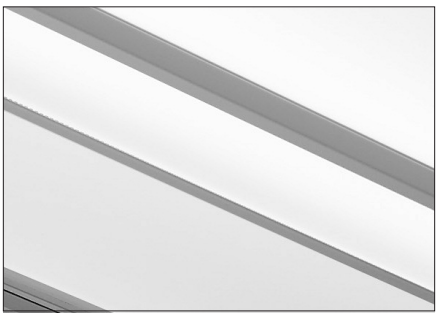


F - Flat

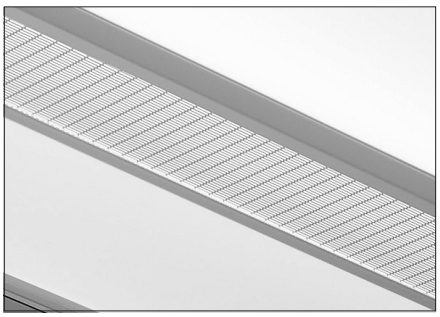


DD - Double Diffuse

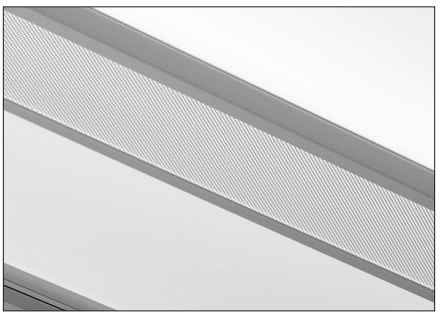
CENTER OPTICS



DCO - Diffuse Center



SCO - Slotted Center



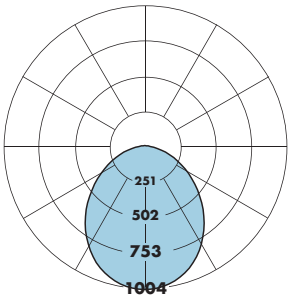
RCO - Round Center

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

High Performance Recessed (HPR-LED) 1x1

PHOTOMETRY

HPR-LED-A-1x1
Very High Output - Angled Rail
Efficacy: 84 lumens per watt
Total luminaire output: 2426 Lumens
28.9 Watts
Peak Cadela Value: 1272 @ 0˚
CCT: 3700K
ITL LM79 Report 85139 (Family Correlated)



CANDLEPOWER SUMMARY

	0.0	22.5	45	67.5	ACROSS	Flux
0	1272	1272	1272	1272	1272	
5	1264	1264	1266	1264	1266	95
10	1238	1240	1242	1242	1243	
15	1198	1120	1120	1203	1203	267
20	1142	1144	1145	1148	1152	
25	1075	1075	1076	1079	1083	391
30	994	996	996	999	1002	
35	908	906	908	909	914	448
40	811	810	811	813	816	
45	713	713	713	713	713	434
50	617	612	614	610	610	
55	520	517	514	509	509	362
60	427	424	418	411	413	
65	337	334	326	321	321	257
70	252	251	241	236	236	
75	175	172	164	157	156	138
80	106	101	92	84	82	
85	45	40	32	32	31	34
90	0	0	0	0	0	

Information in charts below are for reference and based on ITL LM79 report 85139 (Family Correlated)

Flat (F) Total Light Output, 3700K, 80 CRI (Lumens)					
H			V		
1863			2426		
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	28.9	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 =
1863 lm x 0.98 = 1826 lm

$$\textit{Efficacy} = \frac{1826\ \text{lm}}{21.5\ \text{W}} = 85\ \text{lm/W}$$

H - High Output, V - Very High Output

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. Additional wire entrances are positioned on the ends of the housing to allow easy wiring access for the installer.

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.

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-A[1], and SARS-CoV-2 – the virus that causes COVID-19[1]. 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) 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: Four lumen packages available, Standard (**S**), Boosted Standard (**B**), High (**H**), and Very High (**V**). 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.

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%.

LUTRON DRIVER OPTIONS: Lut3W-3-wire, LutES - EcoSystem, Lut2W-2-wire.

ELECTRICAL: Optional emergency to generator/inverter wiring, internal generator transfer switch, nightlight wiring, step-dimming driver. Chicago Plenum option. Bodine BSL722 battery backup also available.

MOUNTING: Standard flange design works with most lay-in ceiling types. Integral pry-out tabs secure the luminaire to the ceiling grid from above. Tie-in locations for tie-wire on all corners. Consult local code for appropriate tie-wire recommendations. Drywall Kit available.

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.

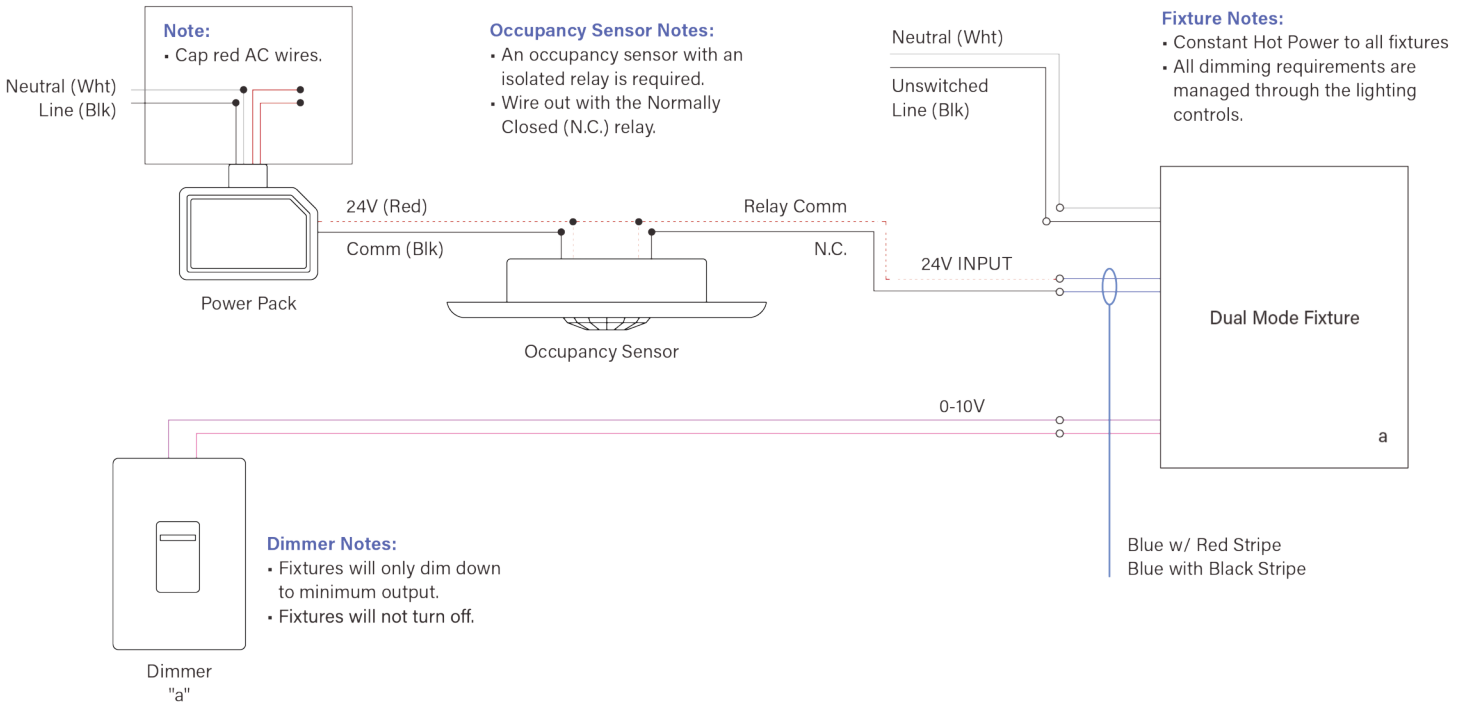
LABELS: Luminaire and electrical components are ETL-listed conforming to UL 916, 1598, 8750, 924 in the U.S.A. and CAN/CSA C22.2 No. 205, 250, and 141 in Canada. In accordance with NEC Code 410.73 (G), this luminaire contains an internal driver disconnect. Damp Location. IC-rated. Finelite products use 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 2002/95/EC.

WEIGHT: 10 lbs maximum.

WARRANTY: 10-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

WIRING DIAGRAM



DUAL FEED DETAIL

CONTROL FEED
Blue / Red
Blue / Black

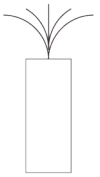
24V Dual Mode Control Pair

Each Indigo-Clean Dual Mode fixture will have a pair of #18awg low voltage wires

OCC 24V +

OCC 24V -

POWER FEED
Black, White, Green,
Purple, Pink



WIRING LEGEND	
Black	Hot
White	Neutral
Green	Ground
Purple	0-10V +
Pink	0-10V -