

Hazardous Area LED Lighting  
HPLN LED lighting

CROUSE-HINDS  
SERIES

# HPLN LED lighting for hazardous areas



**EATON**

*Powering Business Worldwide*



# Safe. Reliable. Efficient.

Featuring the industry's broadest range of LED luminaires for harsh and hazardous environments, Eaton's Crouse-Hinds can deliver a lighting solution that performs reliably in even the worst operating conditions. All the while reducing your energy, maintenance and manpower costs.

## Why LED?

### Useful life

Rated life of 60,000 hours of maintenance-free and safe operation

### Energy efficiency

LED average energy consumption is 50% less than HID and 85% less than incandescent

### Start/restart time

Instant illumination compared to 10 minute restrike time for HID

### Light quality

Higher color rendering and color temperature compared to fluorescent

### Environmental benefits

Mercury-free LED eliminates disposal costs and lower energy consumption for a smaller carbon footprint

## Why Crouse-Hinds?

### Industry-best reliability

Built to withstand extreme temperatures, vibration, water and dust

### Thermal management

Effective heat sinking ensures longer life

### Quality of light

Custom optics designed to maximize light distribution and intensity

### Retrofit compatibility

LED fixtures are compatible with Crouse-Hinds' HID installed base

# HPLN LED features

**Designed for Zone 1 hazardous areas.** HPLN LED luminaires are engineered to provide high quality, maintenance-free illumination in the most demanding hazardous rated environments. The HPLN LED is available in 8 models ranging from 3,000 to 25,000 lumens, providing a lighting solution for areas with mounting heights from 2.5 meters to 12 meters.

**A**

## AC/DC universal input and built-in surge protection device (SPD)

- 4kV protection as standard, but option up to 10kV surge protection for offshore applications

**B**

## Rugged design

- Copper-free aluminum housing, tempered and impact resistant glass globe
- Outstanding corrosion proof capability (C5M-IEC, UL1598A-UL) and anti vibration design
- Lightweight but durable Zone 1 IIC fixture

**C**

## Robust heat sink

- Innovative heat sink facilitates air flow, ensuring long life in extreme environments

**D**

## Mounting style

- IEC (trunnion indirect cable system) and NEC (direct conduit system) mounting style available
- Stanchion, pendant, ceiling, wall and trunnion mounting options for installation flexibility



**E**

## Superior optical performance

- 5000K & 4000K models available; consult factory for additional options (5700K, 3000K)
- Narrow (25°) / medium (60°) / wide (120°) beam optics available to distribute the light where it is needed the most
- Efficiency up to 130 lm/W to save more energy

## Frosted lens option

- Reduces dangerous and unwanted glare on critical applications

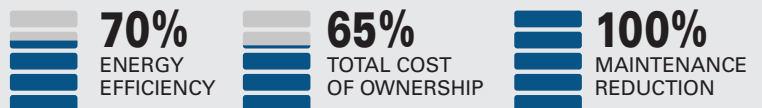
## Why choose HPLN LED lighting?

**Multiple versions** of the HPLN LED are available from 3,000 to 25,000 lumens, providing a single solutions for a wide range of lighting applications.



**Safe, reliable and efficient.** HPLN LED luminaires are engineered to deliver high lumen output and maintenance-free long life in the toughest conditions.

### HPLN 7L vs. 175 watt HID



Assumptions: Calculations based on overall life of the LED system. Energy cost of €0.09 per kilowatt; 24 hour per day operation; labor rate of €75 each for 2 workers; average time for fixture maintenance of 2 hours.

# Features & specifications

## Rugged solutions for challenging environments

HPLN LED luminaires are used for general lighting in hazardous areas where flammable or explosive vapors or gases are present.

The HPLN features a compact, high-efficacy design with custom optics to ensure maximum light distribution and intensity. It is available with a variety of mounting options for installation flexibility.

Model	Nominal* lumens	Wattage	HID Equivalent
HPLN-3L	3483	26	70W-100W
HPLN-5L	5323	40	100W-150W
HPLN-7L	6684	50	150W-175W
HPLN-9L	9574	70	175W-250W
HPLN-11L	11466	85	250W-450W
HPLN-15L	14783	110	400W
HPLN-21L	21128	163	600W
HPLN-25L	24229	190	600W-1000W

\*tolerance  $\pm 10\%$ , nominal lumen data for 5000K, clear glass, wide beam angle

## Application:

- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- For areas with mounting heights up to 12 meters in manufacturing plants, heavy industrial, chemical, petrochemical or pharmaceutical facilities, platforms, loading docks and tunnels etc.

## HPLN LED benefits:

- Instant illumination and strike
- Cold temperature operation/no warm up requirement
- Multiple mounting options provide installation flexibility and ease
- Contains no mercury or other hazardous substance
- Shock-and vibration-resistant



## Certifications and compliances:

Marking accd.to 2014/34/EU:

- II 2 G Ex db eb mb op is IIC T4 Gb
- II 2 D Ex tb op is IICT95°C Db

Certificate No.

- Presafe 20 ATEX 39851X

Permissible ambient temperature

- -40°C up to +55°C

Degree of protection accd. to EN60529

- IP66

## LED system:

- 5000K (CRI70) & 4000K (CRI80) as standard options. Consult factory for 3000K, 5700K
- Narrow (25°) / medium (60°) / wide (120°) beam optics available

## Standard materials:

- Body and mounting modules – copper-free aluminum with C5M coating
- Lens-tempered and impact resistant glass globe
- Gaskets – silicone
- Guard – stainless steel

# Features & specifications

## Electrical rating:

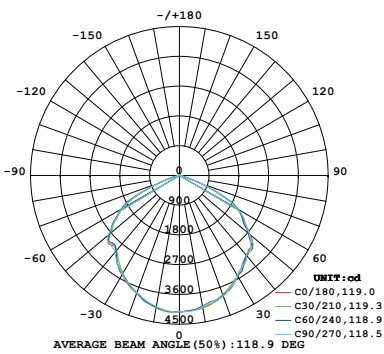
	3L	5L	7L	9L	11L	15L	21L	25L
<b>Voltage range VAC</b>	100-240	100-240	100-240	100-240	100-240	100-240	100-240	100-240
<b>Input power (watts)</b>	26	40	50	70	85	110	163	190
<b>Frequency</b>	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
<b>Inrush current</b>	12A for 1ms	12A for 1ms	12A for 1ms	12.5A for 1ms	12.5A for 1ms	24A for 1ms	25A for 1ms	25A for 1ms
<b>Input amps at 100-240 VAC</b>	0.8A max@100VAC 0.35A max@240VAC			1.3A max@100VAC 0.6A max@240VAC		1.6A max@100VAC 0.7A max@240VAC		2.6A max@100VAC 1.2A max@240VAC
<b>Power factor</b>	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95
<b>Voltage range VDC</b>	127-250	127-250	127-250	127-250	127-250	127-250	127-250	127-250
<b>THD</b>	<10%	<10%	<10%	<10%	<10%	<10%	<10%	<10%

## Weight:

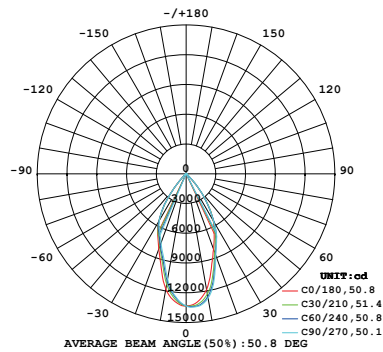
Model	Appr. kg
3L-11L	11kg
15L	14kg
21/25L	15kg

## Polar Curves

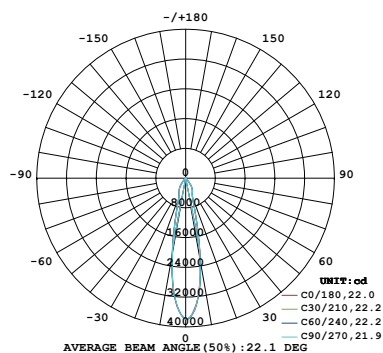
3L-25L wide 120°



3L-25L medium 60°



3L-25L narrow 25°



# Ordering information

Part number example

**HPLN-9L-C2-25C-W**

HPLN LED fixture, 9574 lumens, 5000K (CRI 70), 25mm ceiling mount, 120° wide light beam, clear lens, without guard, 4kV surge protection

## HPLN

## -9L\*

### Total lumens

3L	3483
5L	5323
7L	6684
9L	9574
11L	11466
15L	14783
21L	21128
25L	24229

## -C2

### Color Temp.

C1	4000K**
C2	5000K**

## -25C

### Mounting type

Blank◇	no cover
25J***◇	1-1/2" Stanchion, 25° Angled
25P***◇	1-1/2" Stanchion, Straight
20C◇	20mm Ceiling
25C	25mm Ceiling
20TW◇	20mm Wall
25TW	25mm Wall

## -W

### Beam angle

W	Wide (120°)
M◇	Medium (60°)
N◇	Narrow (25°)

## -F

### Glass

Blank	Clear Glass
F◇	Frosted Glass

## -G

### Guard

Blank	without guard
G◇	with guard

## -S

### Surge

Blank	4kV
S◇	10kV

\* Tolerance ±10%, nominal lumen data for 5000K, clear glass, wide beam angle

\*\* Please contact Eaton's Crouse-Hinds sales representative for additional color temperatures

\*\*\* For 1-1/2" / M20 stanchion mounts, change "25" to "20" (ex. 20J, 20P)

◇ Available upon request. Please consult factory

## Typical ordering codes for HPLN LED luminaire

	Lumen output	Color temp	Mounting type	Beam pattern	Ordering Code
HPLN	-3L (3483)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1754651C40E
HPLN	-5L (5323)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1754779C40E
HPLN	-7L (6684)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1754907C40E
HPLN	-9L (9574)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1755035C40E
HPLN	-11L (11466)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1755163C40E
HPLN	-15L (14783)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1755291C40E
HPLN	-21L (21128)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1755419C40E
HPLN	-25L (24229)	-C1 (4000K)	-25C (25mm ceiling)	-W (120°)	CCL1755547C40E
HPLN	-3L (3483)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1766939C40E
HPLN	-5L (5323)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767067C40E
HPLN	-7L (6684)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767195C40E
HPLN	-9L (9574)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767323C40E
HPLN	-11L (11466)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767451C40E
HPLN	-15L (14783)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767579C40E
HPLN	-21L (21128)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767707C40E
HPLN	-25L (24229)	-C1 (4000K)	-25TW (25mm wall)	-W (120°)	CCL1767835C40E

## Safety cable

Mounting type	Config	Part no
Ceiling with U bracket	3L-25L	CHR6196
	3L-11L	CCL1625591
Other mounting	3L-11L	CHR7005
	15L-25L	CCL1622490

## Trunion mounting bracket (for ceiling mounting only)

Part no	Config
CHLAS2182-06	Trunion bracket for 3L-11L
CHLAS2183-06	Trunion bracket for 15L
CHLAS2184-06	Trunion bracket for 21L-25L

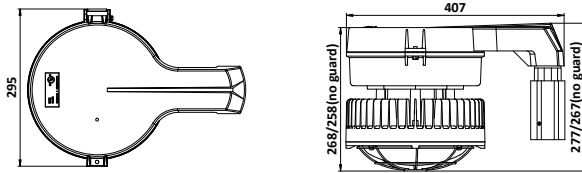


Trunion for floodlight applications

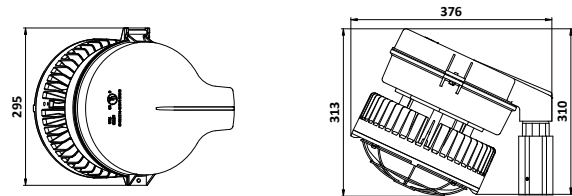
# Mounting options and dimensions

## 3- 11L

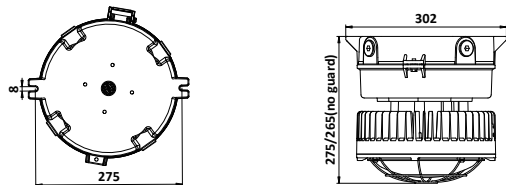
### Stanchion – straight



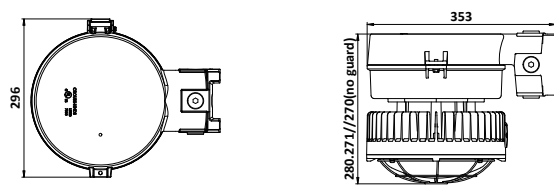
### Stanchion – 25° angled



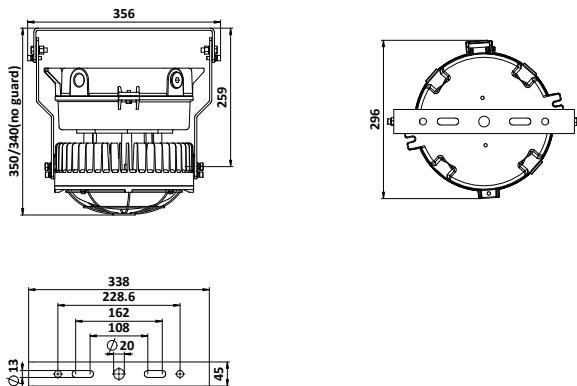
### Ceiling



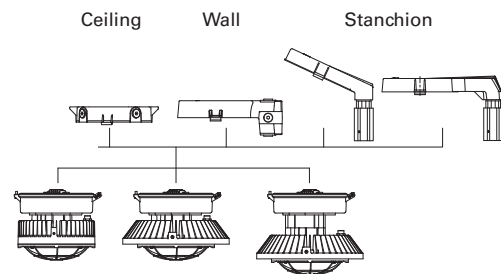
### Wall



### Trunnion

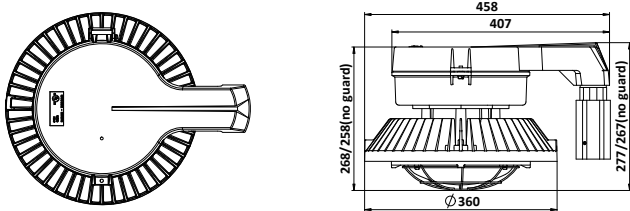


### Mounting module

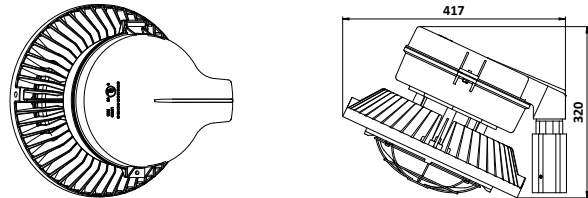


# Mounting options and dimensions 15L

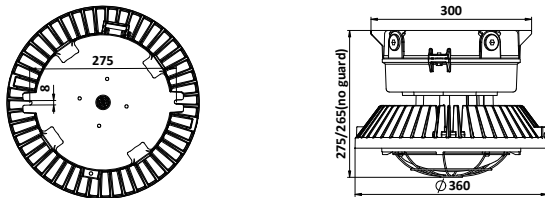
## Stanchion – straight



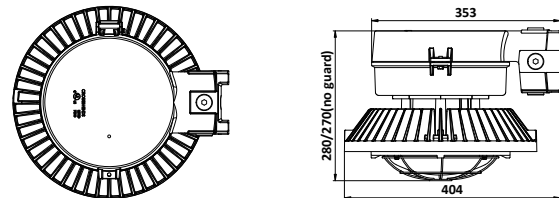
## Stanchion – 25° angled



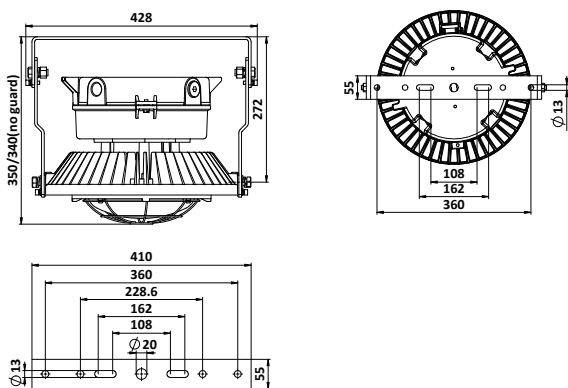
## Ceiling



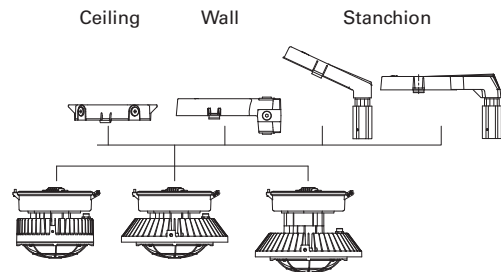
## Wall



## Trunnion



## Mounting modules

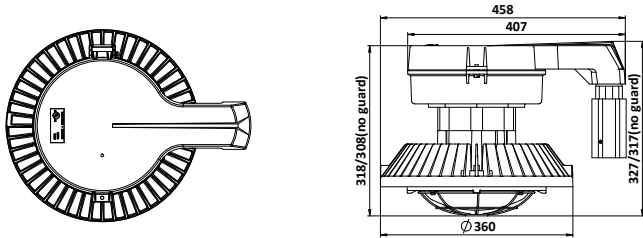




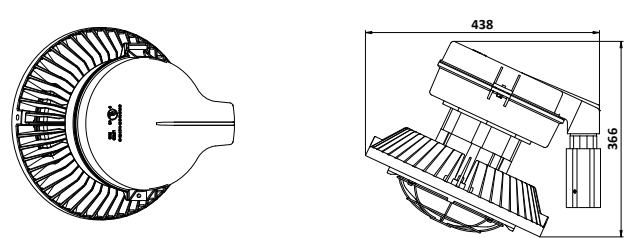
# Mounting options and dimensions

## 21L/25L

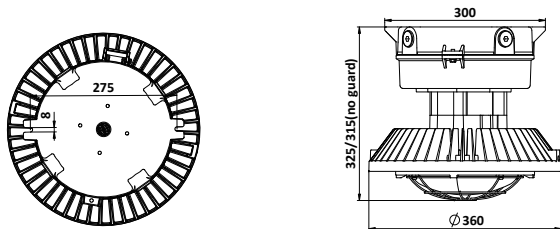
### Stanchion – straight



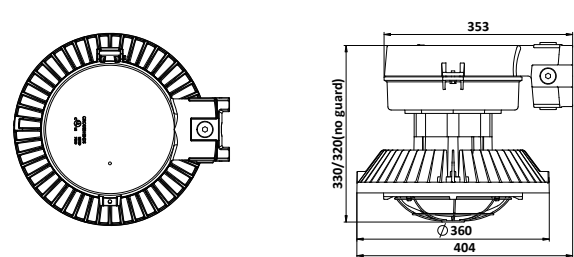
### Stanchion – 25° angled



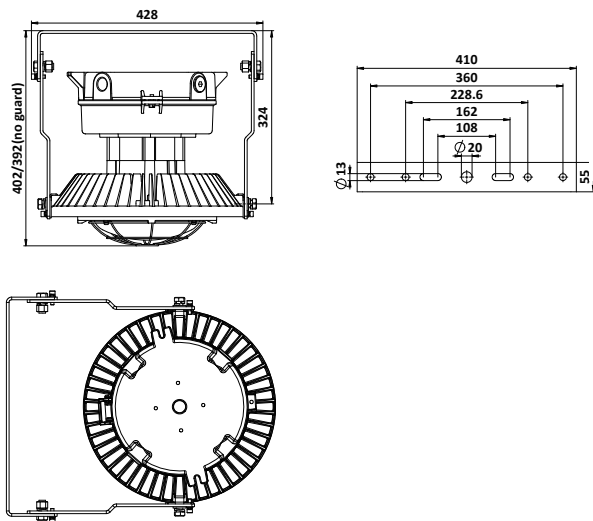
### Ceiling



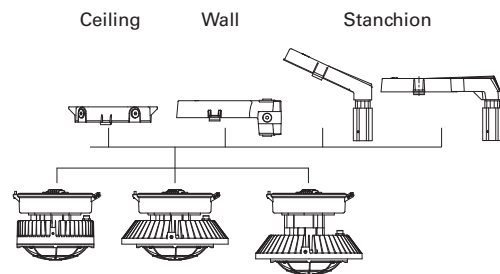
### Wall



### Trunnion



### Mounting modules



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