

# Hazard•Gard® EVLL LED



*Powering Business Worldwide*



Hazard•Gard EVLL LED

# 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

# Why Hazard•Gard EVLL LED?

**Designed for hazardous areas.** Hazard•Gard EVLL LED luminaires are engineered to stand up to the demanding conditions faced in Class I, Division 1 environments. The rugged design and efficient heat dissipation stands up to challenging conditions while delivering long life and high lumen performance.

## Factory sealed

- No external sealing fittings required in Groups B, C and D.



## Optional color temperatures

- Warm and cool white color temperatures available.

## Rugged design

- The LED housing is constructed of durable die cast aluminum, providing an efficient thermal path to the heat sink assembly.
- Impact-resistant lens is sealed from the outside environment and provides ingress protection against water and dust.
- Multi-die LEDs are used to provide energy-efficient, long life white light.



## Robust heat sink

- Heat sink designed to perform in high ambient temperatures up to +65°C\* and as low as -25°C.
- Thick walled castings make for a tough, rugged housing that keeps the internal driver and LED temperature down.

\* EVLL5L-EVLL9L models

## Easy installation and replacement

- Contractor-friendly design is ideal for both retrofit and new construction applications.
- Installed using the same mounting modules as existing Hazard•Gard Series luminaires.
- Quick-connect design facilitates installation – install and wire the mounting module, then screw in your luminaire. Two start Acme threads ease and reduce installation time.



## Case study: HID to LED retrofit

### Location:

Petrochemical facility

### Challenge:

Find a rugged, low maintenance solution to replace existing 400W pulse start metal halide HID luminaires

### Solution:

Install EVLL13L, 149W LEDs

### Results:

Energy consumption was reduced by 62%. Quick-connect design mounting modules made installation easy, and lamp maintenance was virtually eliminated.



# Features & benefits

## Hazard•Gard EVLL LED luminaires

The hazardous rated Hazard•Gard EVLL LED luminaire is used for general lighting in areas where flammable or explosive vapors or gases are present.



Model number	Nominal lumens	Wattage*	Equivalent HID luminaire	Typical energy savings/lifetime
EVLL5L	5,734	56	100W-150W	<b>62% energy savings and over 60,000 hours of continuous operation!</b>
EVLL7L	8,293	85	150W-175W	
EVLL9L	10,313	115	175W-250W	
EVLL11L	10,997	112	250W-320W	
EVLL13L	13,583	149	320W-400W	

\* UNV1 at 120 VAC.

### Applications:

- For areas with mounting heights of up to 30 feet
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- NEMA 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations

### Hazard•Gard EVLL LED benefits:

#### Industry best ease of installation

- Quick-connect design – install and wire the mounting module, then simply screw in the luminaire
- Factory sealed – no external sealing fittings required in Groups B, C and D
- Adapter available for connection to existing Hazard•Gard EVI, EVLP and EVM modules

#### Reduce operation and maintenance costs

- Energy-efficient – up to 62% reduction in energy used versus equivalent HID fixtures
- 60,000 hours rated life – eliminates need for frequent lamp replacement

#### Reliable performance in any environment

- Shock- and vibration-resistant solid-state luminaires have no filaments or glass components that could break – greatly reduces the risk of premature failure
- T5 temperature rating

#### Operating ambient temperature:

##### EVLL:

- -25°C to 65°C (EVLL5L - EVLL9L)
- -25°C to 55°C (EVLL11L & EVLL13L)

##### nEVLL:

- -20°C to 65°C (nEVLL5L - nEVLL9L)
- -20°C to 55°C (nEVLL11L & nEVLL13L)

#### Certifications and compliances:

##### EVLL models

###### NEC and CEC

- Class I, Division 1, Groups B, C, D
- Class II, Groups E, F, G
- Class III, Simultaneous Presence
- Wet Locations, NEMA 4X, IP66

##### UL Standards

- UL844; UL1598; UL1598A

##### CSA Standard

- CSA C22.2 No. 137

##### nEVLL models

###### IECEX/ATEX

- Ex II 2G Ex d IIC (Zone 1, 2)
- Ex II 2D Ex tD A21 IP66 (Zone 21, 22)

###### ATEX

- DEMKO 14 ATEX 1302151X
- CE

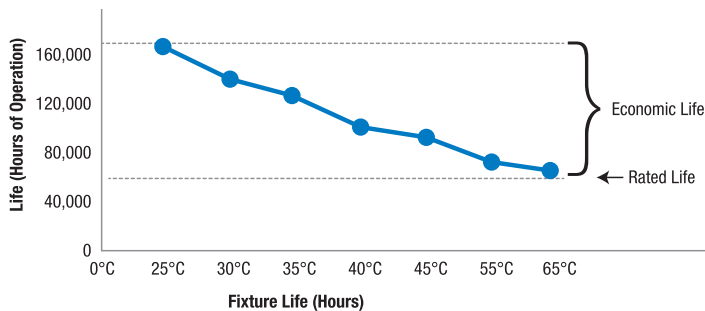
###### IECEX

- IECEX UL 14.0053X

###### EMC

- 2004/108/EC

### LED system lifetime rated versus economic life:



Economic life can range anywhere between 60,000 to 160,000 hours, or 8 to 20 years of maintenance-free operation.

#### Fixture life and years of maintenance-free operation

Ambient temperature	Fixture life (hours)	No. of years at 24 hours usage	No. of years at 12 hours usage
25°C	167,896	19	38
40°C	107,055	12	24
55°C	68,261	8	16
65°C	64,286	7	14

#### Fixture life:

- EVLL5L-EVLL9L: rated life of 60,000 hours @ 65°C operating ambient and 24/7 continuous operation for 365 days
- EVLL11L-EVLL13L: rated life of 60,000 hours @ 55°C operating ambient and 24/7 continuous operation for 365 days
- Economic life of >160,000 hours @ 25°C ambient
- L70 >150,000 hours @ 55°C

# Specifications

## Electrical ratings:

	EVLL5L	EVLL7L	EVLL9L	EVLL11L	EVLL13L
<b>Voltage range, VAC</b>	120-277	120-277	120-277	120-277	120-277
<b>Frequency</b>	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
<b>Input power (watts)</b>	56	85	115	112	149
<b>Input amps at 100-277 VAC</b>	0.47-0.21	0.72-0.32	0.96-0.42	0.94-0.41	1.25-0.54
<b>Voltage range, VDC</b>	108-250	108-250	108-250	108-250	108-250
<b>Input amps at 108-250 VDC</b>	0.53-0.23	0.81-0.35	1.08-0.46	1.07-0.45	1.43-0.60
<b>Power factor</b>	>0.95	>0.95	>0.95	>0.95	>0.95
<b>Maintained lumens</b>	5,734	8,293	10,313	10,997	13,583

## Standard materials:

- Body and mounting modules – copper-free aluminum with Corro-free™ epoxy powder coat
- Lens – shatter-resistant, explosionproof glass
- Gaskets – Buna and Viton
- Guard – stainless steel
- External hardware – stainless steel
- Factory sealed\*

\* Refer to Installation and Maintenance Sheet for external seal requirements.

## LED system:

- Cool white (5000K), CRI 70
- Warm white (3000K), CRI 80
- Array complies with requirements of LM79 and LM80

## Temperature codes:

Model number	Max. ambient temp. °C	Class I, Div. 1	Class II, Div. 1 & 2	Class I, II simultaneous
EVLL5L	40°	T6	T5	T5
	55°	T6	T5	T5
	65°	T5	–	–
EVLL7L	40°	T6	T5	T5
	55°	T6	T5	T5
	65°	T5	–	–
EVLL9L	40°	T6	T5	T5
	55°	T6	T5	T5
	65°	T5	–	–
EVLL11L	40°	T6	T5	T5
	55°	T6	T5	T5
EVLL13L	40°	T6	T5	T5
	55°	T6	T5	T5

Model number	Max. ambient temp. °C	Zone 1	Zone 21
nEVLL 5L, 7L, 9L	65°	T6	95
nEVLL 11L, 13L	55°	T6	95



## Weights:

Model number	Lbs.	Kg.
EVLL5L	51.76	23.48
EVLL7L	51.81	23.50
EVLL9L	52.38	23.76
EVLL11L	53.00	24.04
EVLL13L	53.00	24.04

*Add additional weights for mounting module*

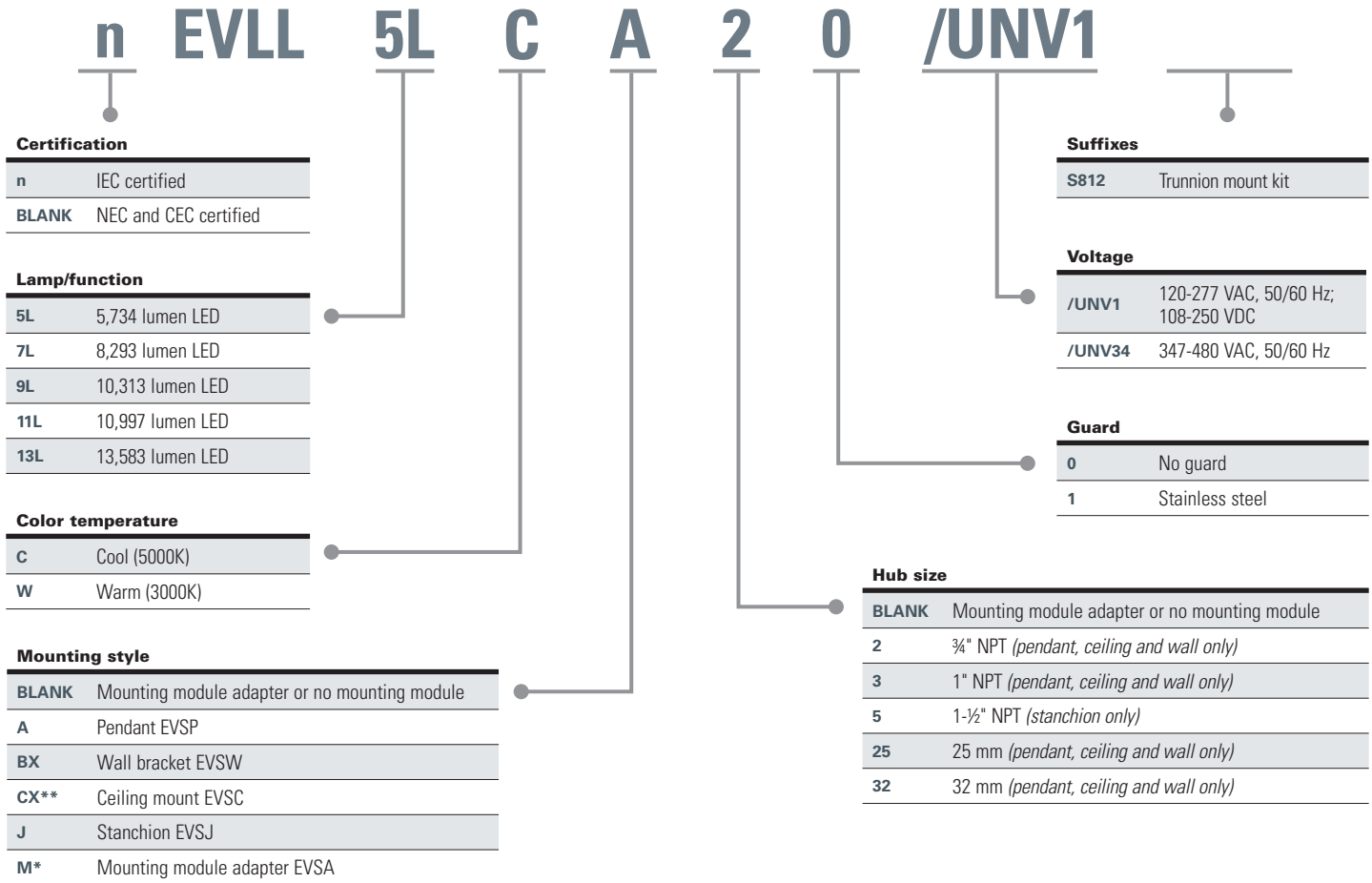
Pendant mount	2.00	0.90
Ceiling mount	3.50	1.59
Wall mount	3.00	1.36
Stanchion mount	5.50	2.49
Adapter	2.00	0.90

# Ordering information

## Part number example

**EVLL5LCA20/UNV1**

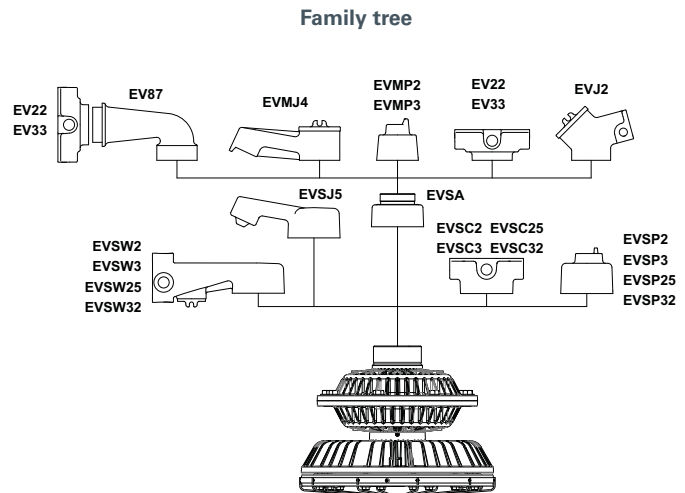
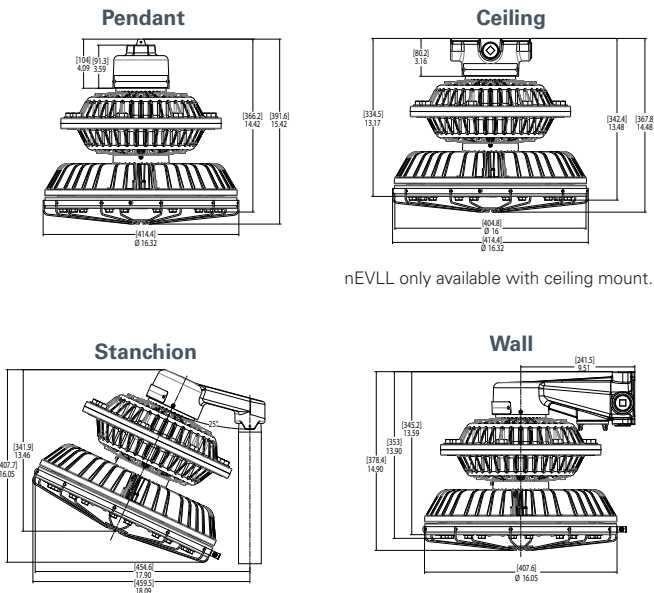
Hazard-Gard EVLL, NEC and CEC certified 5,734 lumen, cool white, pendant mount, 3/4" NPT hubs, UNV1 driver



\* EVSA adapter for use with existing Crouse-Hinds EVI, EVLP and EVM mounting modules.

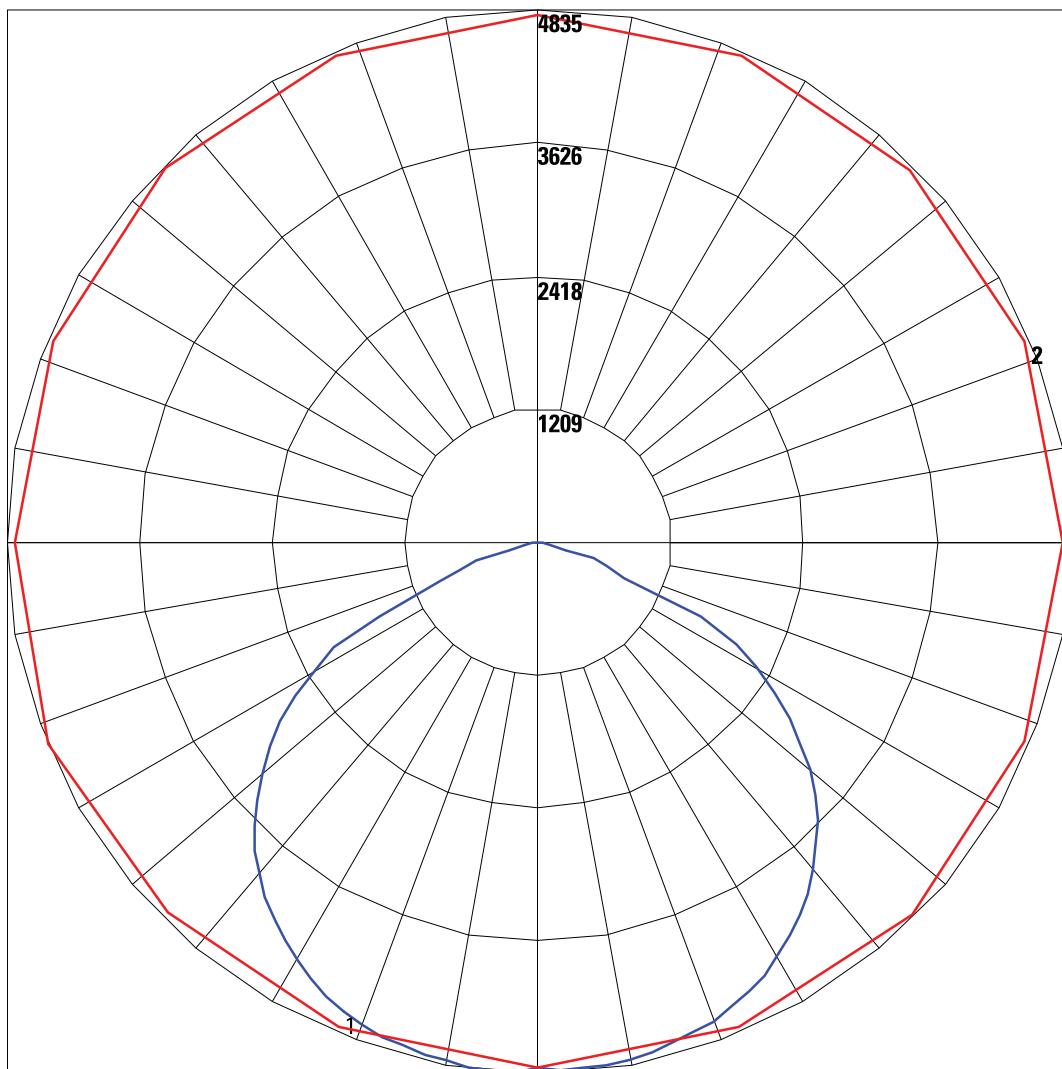
\*\* nEVLL only available with ceiling mount or trunnion with ceiling mount.

## Mounting options and dimensions:



# Photometric data

## Polar plot candela



### EVLL13 LED (175 Watt)

Zone	% of luminaire
0-30	28.5%
0-40	47.7%
0-60	86.4%
0-90	100.0%
90-180	0.00%
0-180	100.0%

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