

LED lighting for hazardous areas
Zone 1, 2, 21 and 22

CROUSE-HINDS
SERIES

VLL LED

Zone 1 GRP linear fixtures



Safe. Reliable. Efficient.

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 50,000 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

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Features & specifications

The Zone 1 VLL product Series LED Luminaires with high-quality international brand LED chips, have extremely long lifespan. Multiple versions of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent fixtures.

Model	Nominal* lumens	Wattage	Efficacy	Equivalent fluorescent
VLL-3L	3200	<25W	>130lm/W	2x18W
VLL-5L	6000	<50W	>130lm/W	2X36W
VLL-7L	7300	<60W	>130lm/W	2X54W

*Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.

*Tolerance+/-10%

Application

- Locations where require 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
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; Offshore platforms, FPSO; loading docks; tunnels



Benefits:

EFFICIENCY

- Industry leading lumen efficacy up to 130+ lm/w. Reduces energy consumption and delivers cost savings.
- Three lumen packages available from 3000 to 7300 lumens providing a versatile solution for different illumination applications.

SAFETY AND RELIABILITY

- Rugged design for extremely harsh environments, IP66 even under vibration.
- Optional self-contained battery for emergency lighting applications delivers 25% of standard lumen **fixed** output for 1.5-hours or 3-hours.

EASY INSTALLATION AND MAINTENANCE

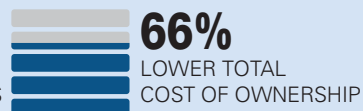
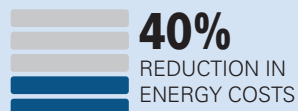
- Retrofit- friendly with optional sliding rail mounting system, allowing brackets to be easily adjusted to existing mounting holes.
- Self-monitoring status battery indicator makes easy for maintenance check.
- Inhibit switch comes as standard for our emergency fitting which is suitable for offshore unmanned platform application.

LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

VLL-5L vs. x 36W Fluorescent



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Standard materials

- Enclosure-Glass Fiber Reinforced Plastic (GRP)
- Diffuser-Polycarbonate (PC)
- Gaskets-Silicone
- Fasteners-All external fasteners stainless steel

LED system:

- Cold white 5700K, CRI70& warm white 3000K CRI80 as standard
- Optional 4000k, 5000K
- LED modules are design for site replaceable as a standard feature
- Fog diffuser comes as a safety standard to prevent disability glare

Certifications and compliances

- Marking accd.to IECEx
Ex db eb mb IIC Gb/Ex db eb ib mb IIC Gb(EM)
Ex eb mb IIC Gb/Ex eb ib mb IIC Gb(EM)
Ex tb IIIC T80°C Db
- Marking accd.to ATEX
II2 G Ex db eb mb IIC T5/T6 Gb
II2 G Ex db eb ib mb IIC T5/T6 Gb(EM)
II2 G Ex eb mb IIC T5/T6 Gb
II2 G Ex eb ib mb IIC T5/T6 Gb(EM)
II2 D Ex tb IIIC T80°C Db



Fixture life:

Fixture life and years of maintenance-free operation

Ambient temperature	No. of years at 24 hours usage	No. of years at 12 hours usage
25°C	10	20
30°C	10	20
35°C	10	20
40°C	10	20
45°C	10	20
50°C	7	14
55°C	5	10

Technical data

IECEX-certification of conformity	IECEX CQM XXXXXX
Ex Marking	Ex e ib mb IIC T6 Gb or Ex d e ib mb IIC T6 Gb* Ex tb IIIC T80°C Db
IECEX COC	IECEX CQM XXXXXX
Ambient temp	-40°C to 55°C (Normal) -25°C to 55°C (Emergency)
Rated input volt	100-240VAC 50/60Hz, DC 105-250V
Power factor	>0.9
Color Temperature	5700K as standard, 3000K,4000K,5000K is available.
CRI	Cool white>70 as standard, CRI>80 is optional
System watt	VLL 3L series: <25W VLL 5L series: <50W VLL 7L series: <60W
Lumen output	VLL 3L series:3000Lm VLL 5L series:6000Lm VLL 7L series:7300Lm
Material	GRP and PC
Weight	VLL 3L series Normal and EM: 4.3Kg / 5.8Kg VLL 5L /7L series Normal and EM: 7.5Kg / 9.8Kg
Terminals	Max 6mm ²
Entry Size	M20 as standard, M25 is available.
Out line dimension	VLL 3L series: 732x178x125 VLL 5L /7L series:1333x178x125
Backup duration & Lumen percentage	Standard version EM1=1.5h,25% output. EM2=3h, 25% output is available.
IP(IEC60598)	IP66

*Isolation switch is available as optional

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Ordering Information:

Product Type	Colour Temp*	Terminals	Throughwiring		Cable gland/ Threaded	Threaded Plug	Blanking Plug	Part No.
			Single-ended	Twin-ended				
VLL 3L								
VLL-3L-57-1/6-120-N	5700K	1x6	x	-	2xM20	1	1	CCL2004126
VLL-3L-57-2/6-220-N		2x6	-	x	4xM20	2	2	CCL2004130
VLL 3L Emergency								
VLL-3L-57-EM1-1/6-120-N	5700K	1x6	x	-	2xM20	1	1	CCL2004134
VLL-3L-57-EM1-2/6-220-N		2x6	-	x	4xM20	2	2	CCL2004138
VLL 5L								
VLL-5L-57-1/6-120-N	5700K	1x6	x	-	2xM20	1	1	CCL2004174
VLL-5L-57-2/6-220-N		2x6	-	x	4xM20	2	2	CCL2004178
VLL 5L Emergency								
VLL-5L-57-EM1-1/6-120-N	5700K	1x6	x	-	2xM20	1	1	CCL2004182
VLL-5L-57-EM1-2/6-220-N		2x6	-	x	4xM20	2	2	CCL2004186
VLL 7L								
VLL-7L-57-1/6-120-N	5700K	1x6	x	-	2xM20	1	1	CCL2004222
VLL-7L-57-2/6-220-N		2x6	-	x	4xM20	2	2	CCL2004226
VLL 7L Emergency								
VLL-7L-57-EM1-1/6-120-N	5700K	1x6	x	-	2xM20	1	1	CCL2004230
VLL-7L-57-EM1-2/6-220-N		2x6	-	x	4xM20	2	2	CCL2004234

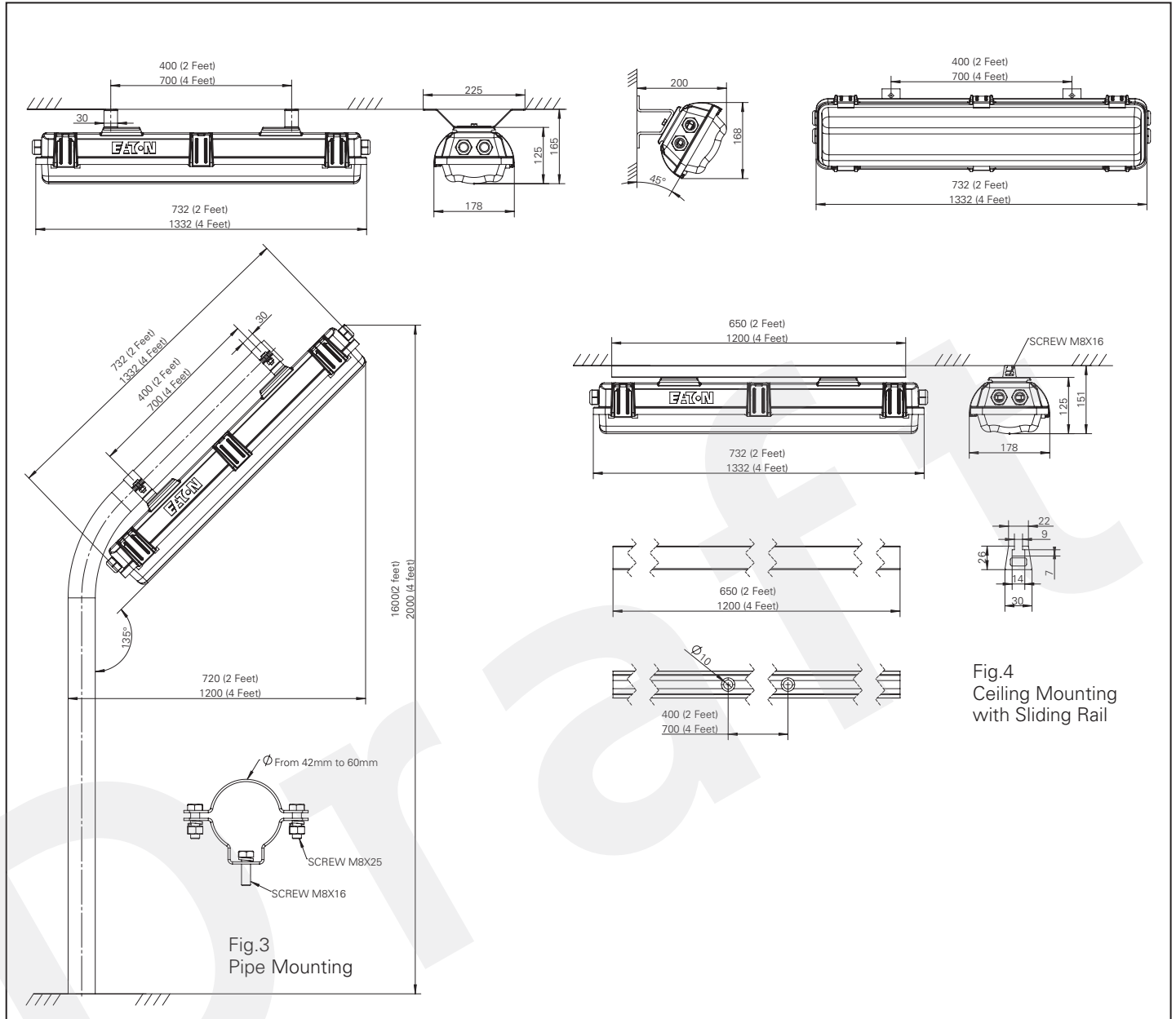
*Tolerance +/- 10%

* Contact your local sales representative for special requirements

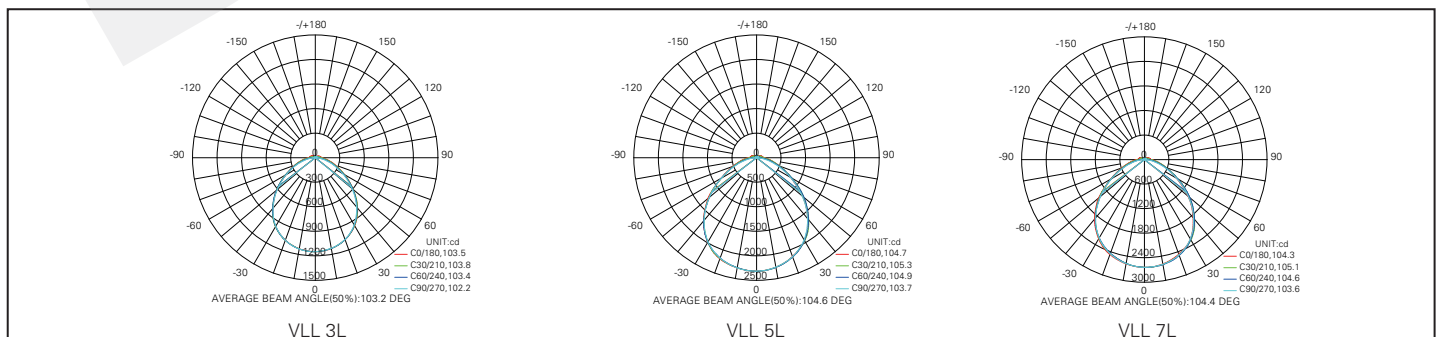


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Dimension

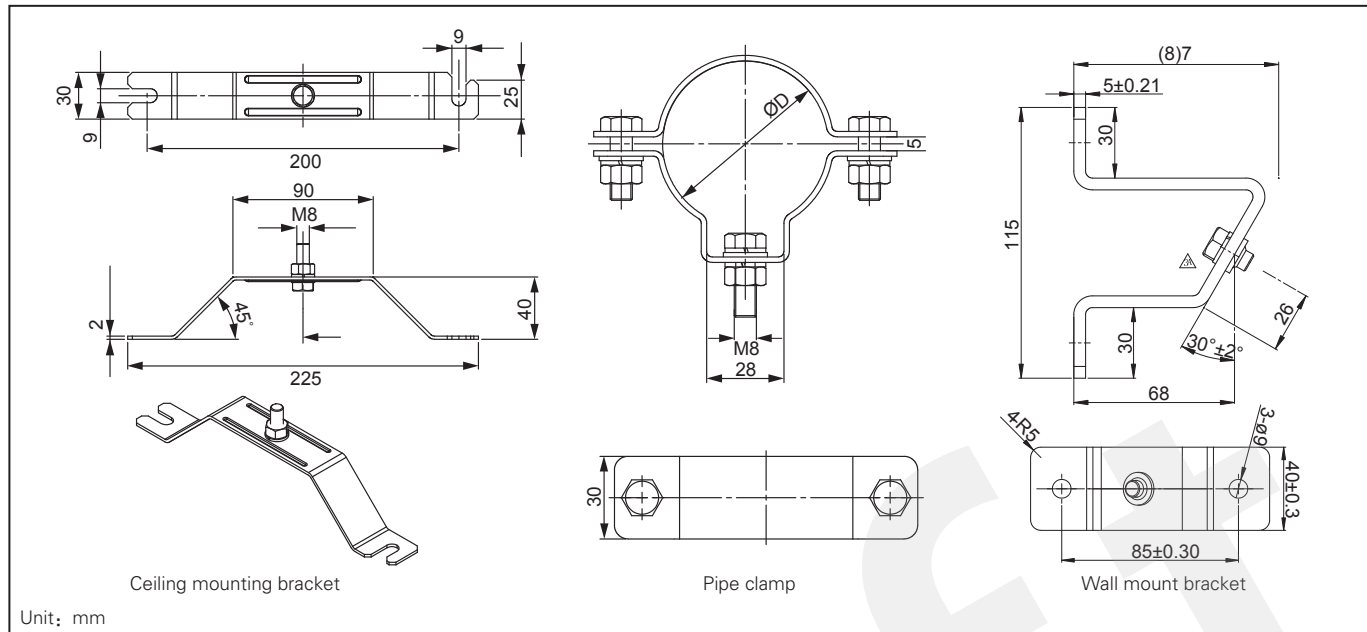


Polar curve



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Mounting accessories (To be ordered separately)



Pipe mounting

Part No	Description	Qty
CHR11076	Pipe clamp assy D42 316S/S	2
CHR11078	Pipe clamp assy D42 plating	2
CHR11079	Pipe clamp assy D51 316S/S	2
CHR11081	Pipe clamp assy D51 plating	2

Wall mounting

Part No	Description	Qty
CHR11073	Wall suspension 316S/S	2
CHR11075	Wall suspension plating	2

Ceiling mounting

Part No	Description	Qty
CHR11099	Ceiling mounting BKT 316S/S	2
CHR11101	Ceiling mounting BKT plating	2

