

Code•Master™ LED Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

NEC/CEC:

*Class I, Division 1 and 2, Groups B, C, D ★
Class I, Zone 1, Groups IIA, IIB, IIB + H₂
Class II, Division 1, Group E, F, G
Class II, Division 2, Group F, G*

NEC/CEC:

*Class III
Simultaneous Exposure
Type 3R, 4X
IP66/67*

NEC/CEC:

*Suitable for Use in Wet Locations
Marine Outside Type (Salt Water) ★*

Applications

- Explosionproof fixtures suitable for use in:
 - A wide range of hazardous areas where ignitable vapors, dust, moisture and corrosive elements are present
 - Areas where access to relamp is difficult, reliability is essential, and environment is costly to maintain. Consistent light levels maintained regardless of cold temperatures
 - Areas requiring frequent on-and-off of lights or power cycling- no warm up time required
 - Type 4X, marine, wet locations and hose-down environments
 - Areas with high energy costs- Code•Master LED consumes 50% or more less power than its HID equivalent
- Typical applications include:
 - Chemical
 - Oil, Gas, and Petrochemical
 - Pulp and Paper
 - Foundries
 - Manufacturing
 - Waste and sewage treatment
 - Pharmaceutical
 - Mining
 - Power Generation

Features

- Fixture operates safely in high ambient temperatures -40 °C up to +65 °C (-40 °F up to +149 °F)
- 60,000+ hours rated life eliminates the need for frequent relamping

Nominal Lumens	HID Equivalent	Model Number
2,400	70W	CMLED70
4,050	100W	CMLED10
5,200	150W	CMLED15
6,500	175W	CMLED17
9,350	250W	CMLED25
11,200	350W	CMLED35
13,600	400W	CMLED40
16,700	600W	CMLED75
19,300	750W	CMLED90

- Arrangement of heat-producing components results in more efficient heat dissipation for cooler fixture operation.
- All threaded joints are flame-tight.
- Fixture housing and mounting hoods are copperfree cast aluminum with baked epoxy finish. All exposed hardware is stainless steel.
- Aluminum body utilizes the same Code•Master HID mounting hoods, and is an easy retrofit for existing Code•Master HID installations; can be pendant, ceiling, wall, or stanchion mounted.
- Acme double-lead threads speed installation and fixture removal from mounting hood – only half as many turns are required as for single-lead threads. The threads do not stick or gall, eliminating the troublesome problems often encountered with single lead threads during fixture unit removal.
- Safe, easy servicing without disconnecting any wiring. “Wireless” fixture unit easily threads off mounting hood for convenient servicing or for immediate replacement with a “stand-by” unit.
- Factory sealed. External seals not required.
- Globe and driver are all field replaceable.



- LED arrays generate light outputs from 2,100 to 19,000+ lumens (an equivalent of 70 W HID to 750 W HID lamps) providing exceptional efficacy
- Choice of replaceable clear or diffused glass globe.
- Universal, high efficiency, drivers cover voltage requirements for 120-277 Vac 50/60 Hz, 125-300 Vdc and 347-480 Vac, 50/60 Hz, Volts +/- 10%.
- Standard surge suppression:
 - For CMLED7 – CMLED35
 - 3KV for 347-480 Vac input
 - 4KV for 120-277 Vac input
 - For CMLED40 – CMLED90
 - 6KV for 347-480 Vac and 120-277 Vac input
- Photometric data and electronic drawings available upon request.

Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware, catch assemblies and yoke bracket: stainless steel
- Gaskets: silicone
- Globe: explosionproof glass

Standard Finishes

- Mounting hoods, bodies, and guards: baked gray epoxy clad finish, electrostatically applied for complete uniform protection

Options

- Safety cable, add suffix **-C**.
- Lens guard, add suffix **-G**.
- Fusing, add suffix **-F★**.

NEC/CEC Certifications and Compliances

- UL Standard: UL 50, UL 50E, UL 844, UL 1598, UL 1598A, UL 8750
- CSA Standard: CAN/CSA-C22.2 No. 94.1-07 (R2012), CAN/CSA-C22.2 No. 94.2-07 (R2012), CAN/CSA-C22.2 No. 137-M1981 (R2009), CAN/CSA-C22.2 No. 250.0-08 (R2013), CAN/CSA-C22.2 No. 250.13, CAN/CSA-C22.2 No. 60529-05 (R2010)
- ANSI Standard: ANSI/IEC 60529
- cCSAus Certified: 70030675

★ Complete Code•Master LED luminaire consists of fixture unit and a mounting hood. For Group B applications a Group B rated mounting hood must be used.
★ Use of a fuse voids Marine Outside Type (Salt Water) rating.

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Illustrated Features



Mounting Hood Compatibility

Code•Master LED is compatible with existing Code•Master mounting hoods. For easy installation, install and wire the mounting hood and simply thread in fixture. Double lead Acme threads are provided for ease of installation.



Rugged and Durable Housing

Mounting hoods and bodies are copper free aluminum with baked epoxy-clad finish, electrostatically applied for complete uniform protection.



Optional Safety Cable

Provides secondary retention for lighting fixtures.



Driver Assembly

Driver can be easily accessed and replaced.



Optional Fusing *

Fuse kit includes fuse, fuse holder and necessary hardware for field installation.



Optional Trunnion/Yoke Mount

Trunnion/yoke mount allows the fixture to be aimed in a desired position.



Replaceable Globe Assembly

The replaceable globe assembly is available with clear or diffuse glass.



Optional Wire Guard

Stainless steel wire guard can be used for additional protection.

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Visit our website at www.emerson.com or contact us at (800) 621-1506.

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Order using catalog numbering guides below or select catalog number from tables on following pages.

Catalog Numbering Guide

<u>CML</u> <u>ED</u>	<u>A</u>	<u>17</u>	<u>2</u>	<u>G</u>	<u>5</u>	<u>BU</u>	<u>C</u>
CML-ED - NEC/CEC Certified Code•Master LED Series		Lumen (Nominal) (with clear glass globe): 70 - 2400 10 - 4050 15 - 5200 17 - 6500 25 - 9350 35 - 11200 40 - 13600 75 - 16700 90 - 19300		Optical Assembly: G - Clear Glass Globe D - Diffused Glass Globe		Voltage: BU - Universal Voltages 120-277 Vac, 50/60 Hz, or 125-300 Vdc ① BH - 347-480 Vac, 50/60 Hz	
	Mounting: A - Pendant C - Ceiling S - 25° Stanchion W - Wall Blank - No Mounting Hood		Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion Blank - No hub size needed if no mounting hood		Light Distribution: 5 - NEMA Type V Symmetrical		Options: C- Safety Cable F - Fusing ★ G- Lens Guard Blank -No Options

① 125-300 Vdc only applies to 40, 75 and 90 lumen levels.

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Technical Data

Type	Ambient Temperature °C (°F)	Supply Wire Temperature °C (°F)	Class I, Division 1	Class I, Zone 1	Class II, Division 1 (excluding yoke mount)	Class II, Division 1 (yoke mount only)
CMLED70	40 (104)	75 (167)	T6	T6	T6	T3B
	55 (131)	75 (167)	T6	T6	T6	T3B
	65 (149)	75 (167)	T6	T6	T6	T3B
CMLED10	40 (104)	75 (167)	T6	T6	T6	T3B
	55 (131)	75 (167)	T6	T6	T6	T3B
	65 (149)	75 (167)	T6	T6	T6	T3B
CMLED15	40 (104)	75 (167)	T6	T6	T6	T3B
	55 (131)	75 (167)	T6	T6	T6	T3B
	65 (149)	75 (167)	T6	T6	T6	T3B
CMLED17	40 (104)	75 (167)	T6	T6	T6	T3B
	55 (131)	75 (167)	T6	T6	T6	T3B
	65 (149)	75 (167)	T6	T6	T6	T3B
CMLED25	40 (104)	75 (167)	T6	T6	T6	T3B
	50 (122)	75 (167)	T6	T6	T6	T3B
CMLED35	40 (104)	75 (167)	T6	T6	T6	T3B
	50 (122)	75 (167)	T6	T6	T6	T3B
CMLED40 ①	40 (104)	75 (167)	T6	T6	T6	T6
	55 (131)	75 (167)	T5	T5	T5	T5
	65 (149)	75 (167)	T4A	T4	T4A	T4A
CMLED75 ①	40 (104)	75 (167)	T6	T6	T6	T6
	55 (131)	75 (167)	T5	T5	T5	T5
	65 (149)	75 (167)	T4A	T4	T4A	T4A
CMLED90 ①	40 (104)	75 (167)	T5	T5	T5	T5
	55 (131)	75 (167)	T4A	T4	—	—

“T” Numbers Represent the Maximum Surface Temperature for Class I, Division 1 locations and Maximum Surface Temperature Under Dust Blanket for Class II, Division 1 Locations.

“T” #	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range °C (°F)	351-450	326-350	301-325	281-300	261-280	231-260	216-230	201-215	181-200	166-180	161-165	136-160	121-135	101-120	86-100	85
	(664-842)	(619-662)	(574-617)	(538-572)	(502-536)	(448-500)	(421-446)	(394-419)	(358-392)	(331-356)	(322-329)	(277-320)	(250-275)	(214-248)	(187-212)	(185)

① T-Codes are using the “APMS” drivers.

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Lamp Comparison Chart

Model	Globe Options	Lumens ①	Efficacy (@120 Vac)	Color Temp (CCT)	CRI	Lamp Life (Hours)
CMLED70	Clear Glass Globe	2400	71	5650K	70	60,000+
	Diffused Glass Globe	2100	62			
CMLED10	Clear Glass Globe	4100	90	5650K	70	60,000+
	Diffused Glass Globe	3500	77			
CMLED15	Clear Glass Globe	5200	88	5650K	70	60,000+
	Diffused Glass Globe	4500	76			
CMLED17	Clear Glass Globe	6500	89	5650K	70	60,000+
	Diffused Glass Globe	5500	75			
CMLED25	Clear Glass Globe	9300	95	5650K	70	60,000+
	Diffused Glass Globe	8100	83			
CMLED35	Clear Glass Globe	11200	108	5650K	70	60,000+
	Diffused Glass Globe	9800	94			
CMLED40	Clear Glass Globe	13600	131	5000K	70	60,000+
	Diffused Glass Globe	11200	109			
CMLED75	Clear Glass Globe	16700	126	5000K	70	60,000+
	Diffused Glass Globe	13700	104			
CMLED90	Clear Glass Globe	19300	123	5000K	70	60,000+
	Diffused Glass Globe	15800	101			

① All lumen values are typical (tolerance +/- 10%).

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Electrical Ratings ①

Model Number	Voltage Suffix	Voltage	Input Power (Watts)	Input Current (Amp)	Power Factor (PF)	Total Harmonic Distortion (THD)
CMLED70	BU	120 Vac	34	0.30	>.9	<20%
		277 Vac	32	0.15	>.9	<20%
	BH	347 Vac	34	0.12	>.9	<20%
		480 Vac	35	0.09	>.9	<20%
CMLED10	BU	120 Vac	45	0.41	>.9	<20%
		277 Vac	44	0.19	>.9	<20%
	BH	347 Vac	45	0.15	>.9	<20%
		480 Vac	45	0.12	.9	<20%
CMLED15	BU	120 Vac	59	0.52	>.9	<20%
		277 Vac	57	0.24	>.9	<20%
	BH	347 Vac	58	0.19	>.9	<20%
		480 Vac	58	0.14	>.9	<20%
CMLED17	BU	120 Vac	73	0.64	>.9	<20%
		277 Vac	69	0.29	>.9	<20%
	BH	347 Vac	70	0.22	>.9	<20%
		480 Vac	70	0.17	>.9	<20%
CMLED25	BU	120 Vac	98	0.88	>.9	<20%
		277 Vac	93	0.38	>.9	<20%
	BH	347 Vac	95	0.30	>.9	<20%
		480 Vac	95	0.23	>.9	<20%
CMLED35	BH	347 Vac	104	0.34	>.9	<20%
		480 Vac	105	0.25	>.9	<20%

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Electrical Ratings ①

Model Number	Voltage Suffix	Voltage	Input Power (Watts)	Input Current (Amp)	Power Factor (PF)	Total Harmonic Distortion (THD)
CMLED40	BU	120 Vac	103	0.85	>.9	<20%
		277 Vac	98	0.39	>.9	<20%
		125 Vdc	101	0.81	N/A	<20%
		300 Vdc	98	0.33	N/A	<20%
	BH	347 Vac	102	0.30	>.9	<20%
		480 Vac	102	0.22	>.9	<20%
CMLED75	BU	120 Vac	132	1.10	>.9	<20%
		277 Vac	126	0.48	>.9	<20%
		125 Vdc	130	1.04	N/A	<20%
		300 Vdc	126	0.42	N/A	<20%
	BH	347 Vac	130	0.38	>.9	<20%
		480 Vac	130	0.28	>.9	<20%
CMLED90	BU	120 Vac	157	1.35	>.9	<20%
		277 Vac	155	0.58	>.9	<20%
		125 Vdc	161	1.29	N/A	<20%
		300 Vdc	156	0.52	N/A	<20%
	BH	347 Vac	159	0.46	>.9	<20%
		480 Vac	158	0.33	>.9	<20%

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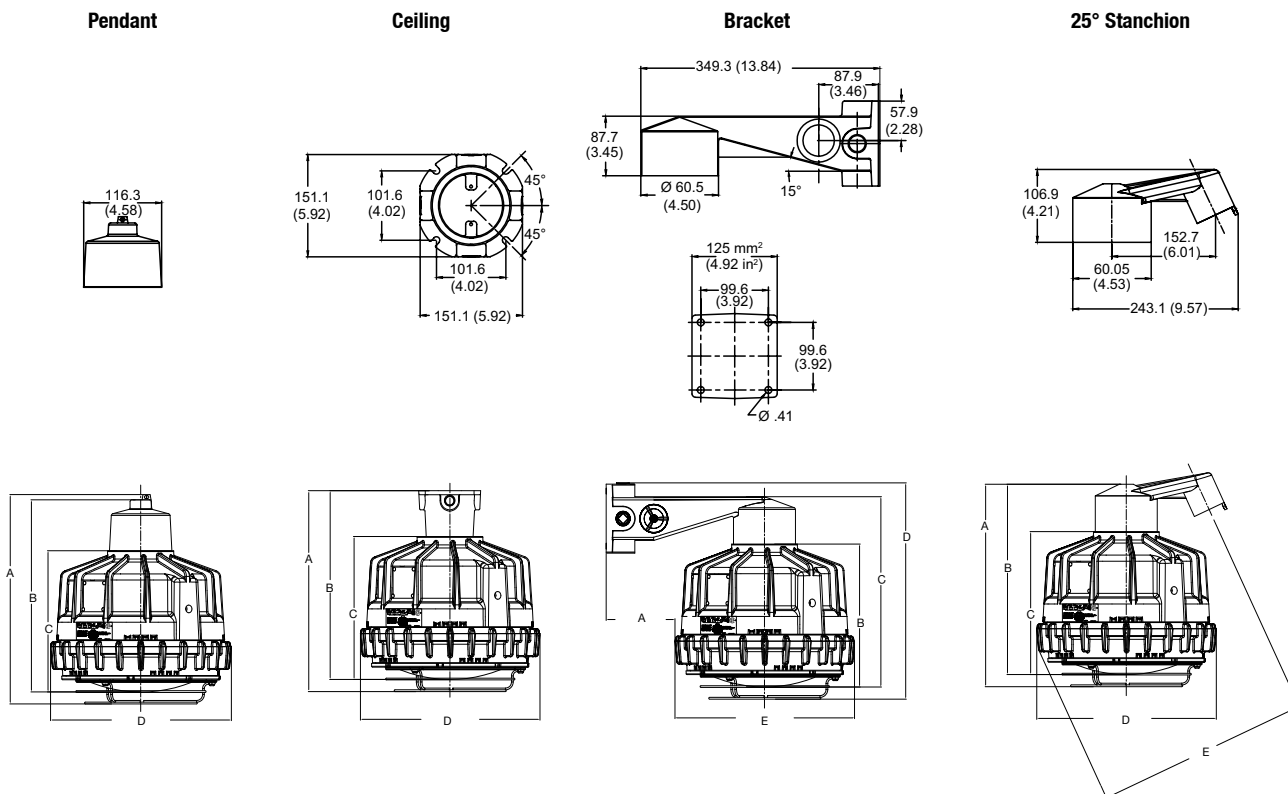
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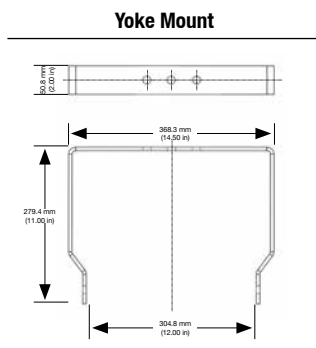
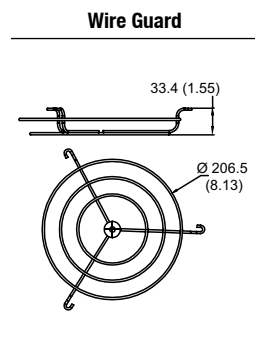
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Dimensions in Millimeters (Inches)



Pendant				Ceiling				Bracket					25° Stanchion				
A	B	C	D	A	B	C	D	A	B	C	D	E	A	B	C	D	E
384.0	352.0	259.0	331.0	364.0	342.0	259.0	331.0	127.0	259.0	344.0	391.0	331.0	366.0	344.0	259.0	331.0	392.0
(15.1)	(13.9)	(10.2)	(13.0)	(14.3)	(13.5)	(10.2)	(13.0)	(5.0)	(10.2)	(13.6)	(15.4)	(13.0)	(14.4)	(13.6)	(10.2)	(13.0)	(15.4)



Weights

Description	Weight kg (lb)
Fixture Unit (Ballast Housing)	17.2 (38)
Pendant Mounting Hood	0.9 (2)
Ceiling Mounting Hood	1.8 (4)
Wall Mounting Hood	2.7 (6)
25° Stanchion Mounting Hood	0.9 (2)
Wire Guard	0.45 (1)

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Photometric Data — DATA SHOWN IS ABSOLUTE

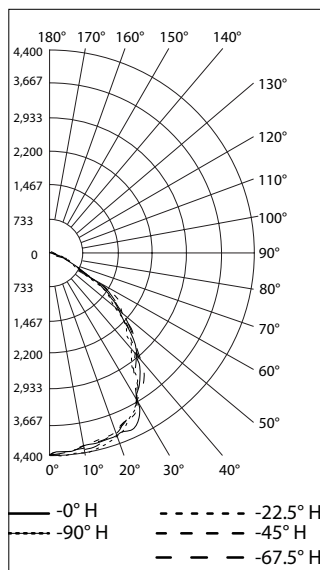
Type V, Clear Glass, 5650K CCT

Report Number: CMLED25G5BU

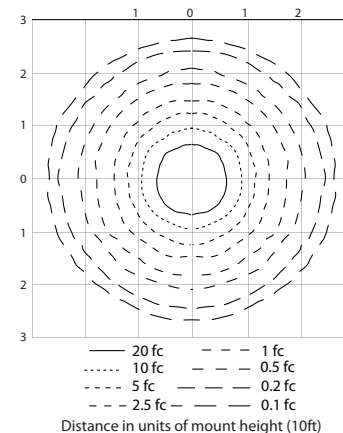
Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire	Zone	Lumens	% Luminaire
0-30	3,416.8	36.6	0-10	409.2	4.4
0-40	5,464.9	58.5	10-20	1,186.5	12.7
0-60	8,717.4	93.3	20-30	1,821.1	19.5
60-90	630.4	6.7	30-40	2,048.1	21.9
70-100	70.0	0.7	40-50	1,885.6	20.2
90-120	0.0	0.0	50-60	1,367.0	14.6
0-90	9,347.9	100.0	60-70	560.4	6.0
90-180	0.0	0.0	70-80	65.2	0.7
0-180	9,347.9	100.0	80-90	4.8	0.1

Polar Candela Distribution



Isoillumination Plot



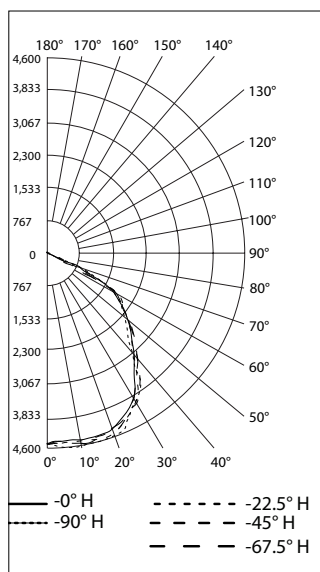
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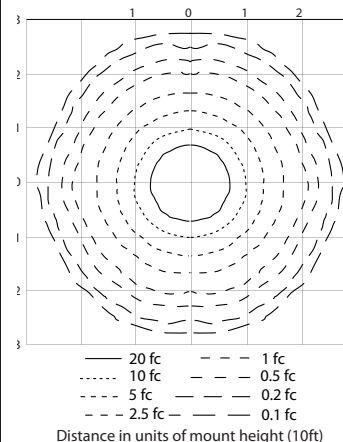
Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire	Zone	Lumens	% Luminaire
0-30	3,665.9	32.7	0-10	423.4	3.8
0-40	5,963.9	53.1	10-20	1,263.4	11.3
0-60	10,090.2	89.9	20-30	1,979.2	17.6
60-90	1,113.3	9.9	30-40	2,298.0	20.5
70-100	105.2	0.9	40-50	2,188.1	19.5
90-120	6.5	0.1	50-60	1,938.2	17.3
0-90	11,203.5	99.8	60-70	1,011.3	9.0
90-180	20.1	0.2	70-80	85.8	0.8
0-180	11,223.5	100	80-90	16.1	0.1

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