

Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class I, Zone 2, AEx nA IIC | Class II, Division 1, Group E, F, G | Class II, Division 2, Group F, G | Class III | Type 3R, 4, 4X | IP66/67 | Simultaneous Exposure | Suitable for Use in Wet Locations | Marine Outside Type (Salt Water)

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - Marine and wet locations
 - A wide range of industrial, chemical processing and other areas where flammable gases and vapors are present
 - Areas of low clearance or low ceiling heights
 - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Compact light weight low profile design is suited for low mounting heights.
- Modular design allows scores of fixture component combinations to meet installation needs. Uses same mounting hoods as Mercmaster III.
- Fixture housing and mounting hoods are copperfree cast aluminum with baked epoxy finish. All exposed hardware is stainless steel.
- Accommodates a wide range of voltages.
- Ambient temperatures:
 - 150 W to 175 W equivalent: -40 °C to +55 °C (-40 °F to +131 °F)
 - 250 W equivalent: -40 °C to +50 °C (-40 °F to +122 °F)
 - 350 W equivalent: -40 °C to +50 °C (-40 °F to +122 °F)
 - 400 W equivalent: -40 °C to +55 °C (-40 °F to +131 °F)
- Electrical: 120-277 Vac, 50/60 Hz; 347-480 Vac, 50/60 Hz, Volts +/- 10%.
- Pole terminal block: 1 x 8-24 AWG; 1 x 0.75 to 6 mm² (0.0012 to 0.0093 in²).
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on driver housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see Fixture Unit — Electrical Specification).
- NPT and metric threads standard.
- NEMA Type V light distribution is standard.
 - Type V distribution is required in areas where sufficient, evenly distributed light is necessary. It produces a circular distribution that has the same intensity at all angles.
- NEMA Type I light distribution is available as an option for select NEC/CEC certified fixtures.
 - Type I distribution is the perfect lighting for walkways, Type I distribution is perfect for lighting walkways, catwalks or anyplace where a narrow beam of light is required.

Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate

Standard Finishes

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



NEC/CEC Certifications and Compliances

- UL Standard: UL 50; UL 844; UL 1598; UL 1598A; UL 8750
- CSA Standard: C22.2 No 0; C22.2 No. 0.4; C22.2 No. 0.5; C22.2 No. 94; C22.2 No. 60529; C22.2 No. 137; C22.2 No. 250.0; C22.2 No. 60079; E60079-15
- ANSI/UL Standards: 60079-0; 60079-15
- ANSI/IEC Standards: 60529
- cCSAus Certified: 2531848

DesignLights™ Consortium (for the following models)

- MLEDN15
- MLEDN17
- MLEDN25
- MLEDN35
- MLEDN40

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Illustrated Features



Heatsink

Reliable heat transfer via the cast, epoxy powder coat aluminum body. Provides maximum heat dissipation from the LED assembly to the outside environment.



Driver Assembly

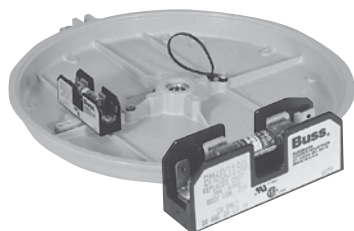
Utilizing non-sparking components avoiding the ignition of gases or vapors that may be present (nA).

Modular Plug between LED and driver.



LED Chamber

Protected by polycarbonate lens, allows for easy maintenance access.



Fuses ①

Two screws secure fuse kit to mounting boss in any Mercmaster mounting hood. Fuse included.

Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from #8 to #24AWG, 0.75 to 6 mm² (0.0012 to 0.0093 in²)

Epoxy Finish

Driver housing, hoods and guards are copperfree aluminum with epoxy powder coat finish.

Electrical Protection

Ground wire provided to bond mounting hood to driver housing.

Safety

Rounded heatsink edges prevent possible injury during installation.



Cooler Operating Cone Hood

Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.

Mounting Hood and Globe Gaskets

Silicone rubber gaskets seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.



"Safety" High Hinge

Extra-high hinge provides additional protection against accidental driver housing disengagement during installation or maintenance.

Stainless Steel Latch Assembly

Captive, stainless steel latch assembly bolt and nut closes securely, resists attack of corrosive atmospheres. Swing-away design simplifies servicing.



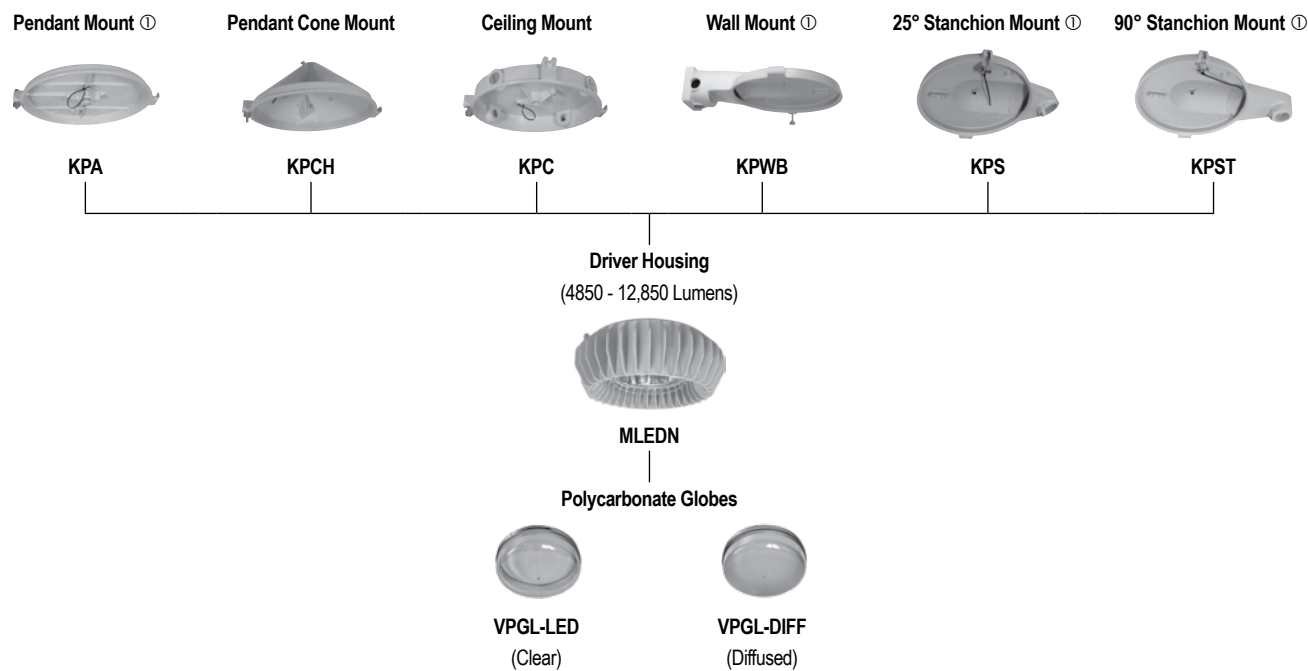
① Fuses are available on the NEC/CEC versions only.

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Family Tree — Mercmaster™ LED Luminaires



LED Luminaires | NEC/CEC Certified | Hazardous Location

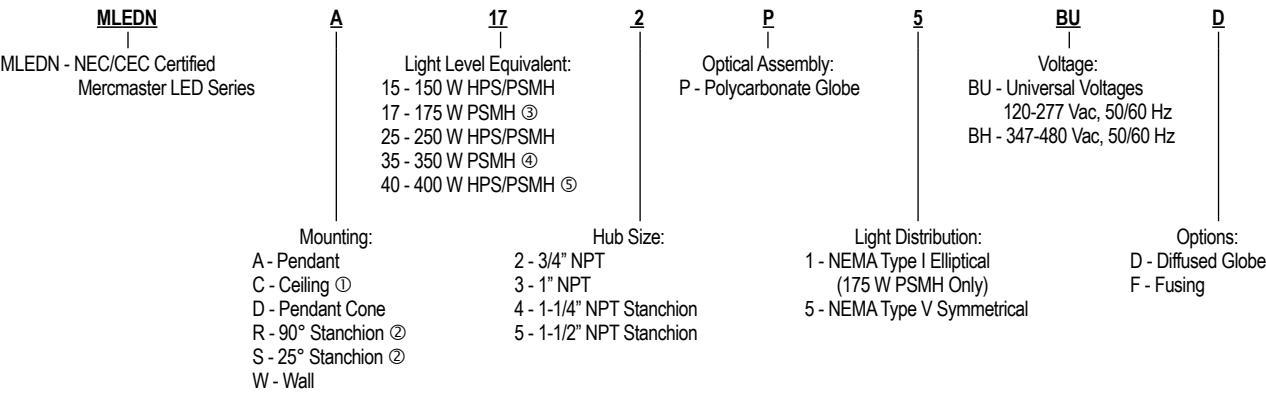
① Mounting hood with a 120 V or 208-277 V factory installed photocell is available.

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Order Using Catalog Numbering Guide — Mercmaster™ LED Hazardous Location Luminaires



① Ceiling mount luminaires are not designed to use the PCD2 photocontrol. Ceiling mounts Must use an FS/FD box with a photocontrol. Contact your local sales representative for more information
② 3/4" NPT and 1" NPT hub entries are not offered in this mounting option.
③ 175 W Pulse Start Metal Halide only. Does not have a High Pressure Sodium equivalent.
④ Available for use with the BH voltage only (347-480 Vac, 50/60 Hz).
⑤ Available for use with the BU voltage only (120-277 Vac, 50/60 Hz).

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Lumen Output					
Lamp Data	HID Equivalency	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output
MLEDN*15	150 W HPS/PSMH	Type V	5650	70	4850
MLEDN*17	175 W PSMH	Type I	5650	70	6200
		Type V	5650	70	6076
MLEDN*25	250 W HPS/PSMH	Type V	5650	70	9455
MLEDN*35	350 W PSMH	Type V	5650	70	11425
MLEDN*40	400 W HPS/PSMH	Type V	5650	70	12850

Electrical Specifications				
Lamp Data		Voltage	Input Power	Input Current (Amps)
MLEDN150	Type V	120 Vac	61	.53
		277 Vac	62	.25
		347 Vac	62	.29
		480 Vac	64	.14
MLEDN175	Type I	120 Vac	70	.61
		277 Vac	69	.28
		347 Vac	70	.24
		480 Vac	69	.16
	Type V	120 Vac	74	.63
		277 Vac	72	.28
		347 Vac	86	.25
		480 Vac	88	.16
MLEDN250	Type V	120 Vac	95.5	.83
		277 Vac	92	.36
		347 Vac	96	.45
		480 Vac	95	.31
MLEDN350	Type V	347 Vac	102	.30
		480 Vac	103	.23
MLEDN400	Type V	120 Vac	127	1.04
		277 Vac	128	.47

LED Luminaires | NEC/CEC Certified | Hazardous Location

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Temperature Codes

Lamp		Gas				Dust		Gas/Dust	
Light Level Equivalent to HID	Type	Ambient Temperature °C (°F)	Supply Wire Temperature °C (°F)	Class I, Division 2 ①	Groups	Class I, Zone 2, AEx nA IIC, Ex nA IIC	Class II, Division 1 and 2 ②	Groups	Simultaneous ① Class I, Division 2/ Class II, Division 1
150 Watt NEMA Type V	LED	40 (104)	60 (140)	T4A	A, B, C, D	T4	T6	E, F, G	T4
		55 (131)	75 (167)	T4	A, B, C, D	T4	T6	E, F, G	T4
175 Watt NEMA Type V	LED	40 (104)	60 (140)	T4A	A, B, C, D	T4	T6	E, F, G	T4
		55 (131)	75 (167)	T4	A, B, C, D	T4	T6	E, F, G	T4
175 Watt NEMA Type I ③	LED	40 (104)	60 (140)	T4	A, B, C, D	T4	T5	E, F, G	T4
		55 (131)	75 (167)	T3C	A, B, C, D	T3	T5	E, F, G	T3C
250 Watt NEMA Type V ③	LED	40 (104)	60 (140)	T4A	A, B, C, D	T4	T6	E, F, G	T4A
		50 (122)	75 (167)	T4	A, B, C, D	T4	T6	E, F, G	T4
350 Watt NEMA Type V ③	LED	40 (104)	75 (167)	T3A	A, B, C, D	T3	—	—	—
		50 (122)	75 (167)	T3	A, B, C, D	T3	—	—	—
400 Watt NEMA Type V ③	LED	40 (104)	75 (167)	T3A	A, B, C, D	T3	—	—	—
		55 (131)	75 (167)	T3	A, B, C, D	T3	—	—	—

“T” Numbers Represent the Maximum Internal Temperature ① or Maximum Surface Temperature ②

NEC/CEC “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 numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC.
② T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 1 and Class I, Zone 2 as designated by the NEC or Zone 2 (Gas) and 22 (Dust) locations as designated by the IEC.

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Fixture Unit — Driver Housing

	Lumen Level	LED Wattage	Light Level Equivalent	NEMA Type	Voltage	Catalog Number	Fuse Kit Suffix
	5650	61/64 W	150 W HPS	Type V	120-277 Vac, 50/60 Hz	MLEDN15P5BU	F3
	5650	74/88 W	175 W PSMH	Type V	120-277 Vac, 50/60 Hz	MLEDN17P5BU	F3
	5650	70/69 W	175 W PSMH	Type I	120-277 Vac, 50/60 Hz	MLEDN17P1BU	F3
	5650	92/96 W	250 W HPS/PSMH	Type V	120-277 Vac, 50/60 Hz	MLEDN25P5BU	F3
	5650	102/103 W	350 W PSMH	Type V	347-480 Vac, 50/60 Hz	MLEDN35P5BH	F3
	5650	127/128 W	400 W HPS/PSMH	Type V	120-277 Vac, 50/60 Hz	MLEDN40P5BU	F3

Mounting Hoods

	Description	Hub Size	Catalog Number
Pendant 	One Hub, Rigid Mounting	3/4	KPA-75
		1	KPA-100
Pendant Cone 	One Hub, Rigid Mounting	3/4	KPCH-75
		1	KPCH-100
Ceiling 	Five Hubs, Four Close-Up Plugs	3/4	KPC-75
		1	KPC-100
Wall 	Five Hubs, Four Close-Up Plugs	3/4	KPWB-75
		1	KPWB-100
25° Stanchion 	One Hub	1-1/4	KPS-125
		1-1/2	KPS-150
90° Stanchion 	One Hub	1-1/4	KPST-125
		1-1/2	KPST-150

LED Luminaires | NEC/CEC Certified | Hazardous Location

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Accessories and Replacement Parts

Description		Catalog Number
Globes and Gaskets		
	Clear Globe	VPGL-LED
	Diffused Globe	VPGL-DIFF
	Globe Gasket — Silicone Rubber	KRF-GK
LED Array		
	150 Watt LED Array Assembly, Type V, White LED's	MLEDN15A5W
	175 Watt LED Array Assembly, Type I, White LED's	MLEDN17A1W
	175 Watt LED Array Assembly, Type V, White LED's	MLEDN17A5W
	250 Watt LED Array Assembly, Type V, White LED's	MLEDN25A5W
	350 Watt LED Array Assembly, Type V, White LED's	MLEDN35A5W
	400 Watt LED Array Assembly, Type V, White LED's	MLEDN40A5W
Drivers		
	120-277 V Driver (up to 250 W only)	MLEDNDBU
	347-480 V Driver (up to 350 W only)	MLEDNDBH
	120-277 V Driver (400 W only)	MLEDNDBU40

Luminaire Weights

Description	Weight kg (lb)
Fixture Unit (Driver Housing)	8.8 (19.4)
Pendant Mounting Hood	1.0 (2.25)
Pendant Cone Mounting Hood	1.1 (2.50)
Ceiling Mounting Hood	1.4 (3.00)
Wall Mounting Hood	1.8 (4.00)
25° Stanchion Mounting Hood	1.5 (3.25)
90° Stanchion Mounting Hood	1.7 (3.75)

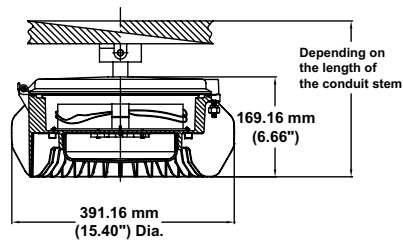
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Enclosed and Gasketed Fixtures

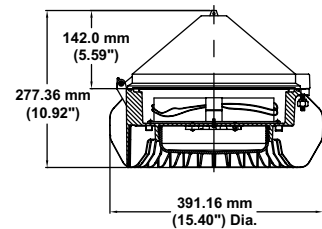
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Dimensions in Millimeters (Inches)

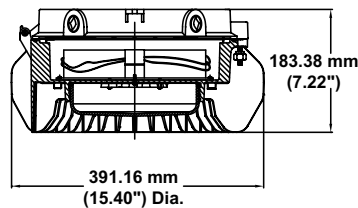
Pendant Mount



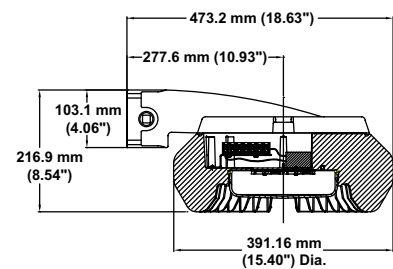
Pendant Cone Mount



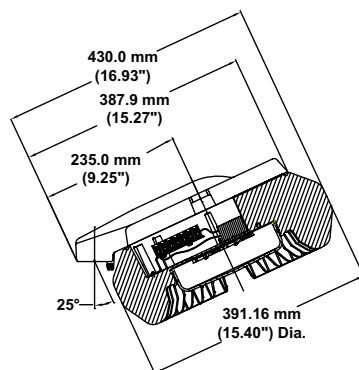
Ceiling Mount



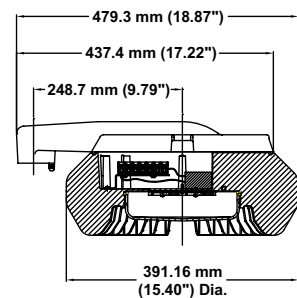
Wall Mount



25° Stanchion Mount



90° Stanchion Mount



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Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN15P5BU**

Lamps: Mercmaster LED, Class I, Division 2, Polycarbonate Optic

Candela Distribution

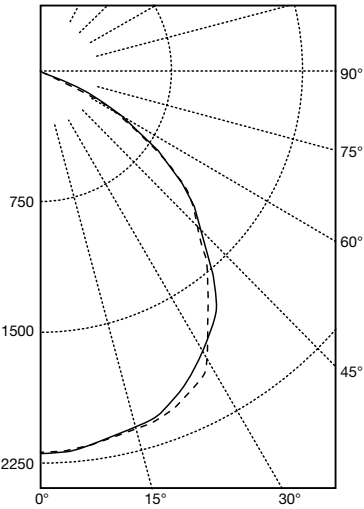
	0.0	22.5	45.0	67.5	90.0	Flux
0	2208	2208	2208	2208	2208	
5	2202	2195	2197	2195	2202	209
15	2137	2131	2127	2131	2137	603
25	2045	2003	1977	2003	2045	926
35	1669	1658	1735	1658	1669	1051
45	1252	1282	1297	1282	1252	988
55	836	850	838	850	834	746
65	276	307	333	307	276	298
75	16	12	11	12	16	22
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1738	35.8
0-40	2789	57.5
0-60	4523	93.3
0-90	4844	99.9

CIE Type - Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



REPORT NUMBER: **MLEDN17P5BU**

Lamps: Mercmaster LED, Class I, Division 2, Polycarbonate Optic

Candela Distribution

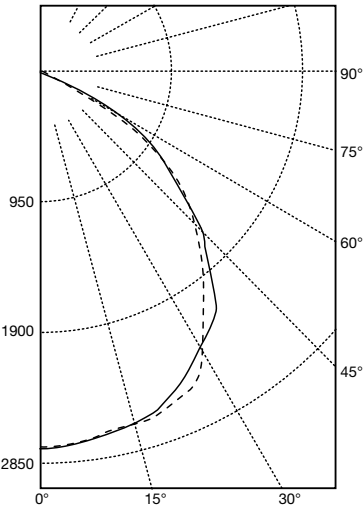
	0.0	22.5	45.0	67.5	90.0	Flux
0	2739	2739	2739	2739	2739	
5	2724	2724	2725	2724	2724	259
15	2660	2658	2655	2658	2660	752
25	2553	2508	2462	2508	2553	1156
35	2069	2062	2201	2062	2069	1312
45	1580	1614	1655	1614	1580	1243
55	1047	1093	1046	1093	1047	943
65	353	380	391	380	353	378
75	19	15	16	15	19	28
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	2167	35.7
0-40	3478	57.2
0-60	5664	93.2
0-90	6072	99.9

CIE Type - Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



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Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN17P1BU (NEMA Type I)**

Lamps: Mercmaster LED, Class I, Division 2, Polycarbonate Optic

Candela Distribution

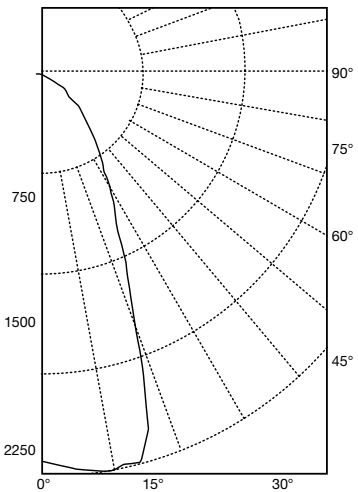
Zone	Lumen
0-10	546.35
10-20	1546.51
20-30	1410.19
30-40	1071.42
40-50	791.23
50-60	524.94
60-70	261.82
70-80	44.42
80-90	3.81

CIE Type - Direct

Plane	Spacing Criteria
0-Deg	90-Deg
0.84	0.84

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-20	2092.86	33.70
0-30	3503.05	56.50
0-40	4574.48	73.70
0-60	5890.65	94.90
0-80	6196.88	99.90
0-90	6200.69	99.90



LED Luminaires | NEC/CEC Certified | Hazardous Location

REPORT NUMBER: **MLEDN250P5BU ①**

Lamps: Mercmaster LED, Class I, Division 2, Polycarbonate Optic

Candela Distribution

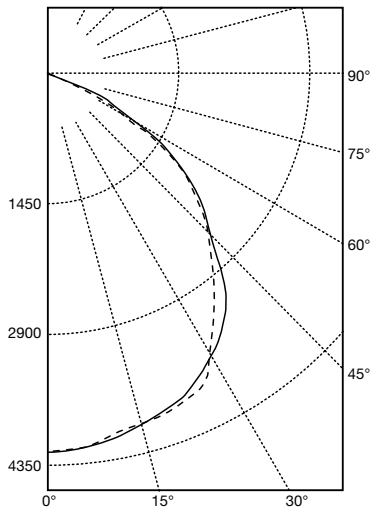
	0.0	22.5	45.0	67.5	90.0	Flux
0	4206	4206	4206	4206	4206	
5	4170	4182	4177	4182	4170	397
15	4035	4046	4038	4046	4035	1145
25	3913	3888	3829	3888	3913	1784
35	3211	3233	3380	3233	3211	2046
45	2484	2524	2532	2524	2484	1942
55	1710	1763	1708	1763	1710	1530
65	682	564	606	564	682	568
75	20	18	17	18	20	31
85	2	1	1	1	2	2
90	1	1	0	1	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	3326	35.2
0-40	5372	56.8
0-60	8844	93.5
0-90	9445	99.9

CIE Type - Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



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Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: MLEDN35P5BH ①

Lamps: Mercmaster LED, Class I, Division 2, Polycarbonate Optic

Candela Distribution

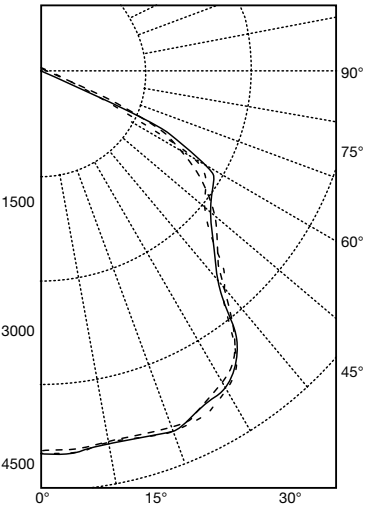
Table with 7 columns: Beam Angle, 0.0, 22.5, 45.0, 67.5, 90.0, Flux. Rows show beam angle increments from 0 to 90 degrees.

Zonal Lumen Summary

Table with 3 columns: Zone, Lumens, % Fixture. Rows show zones 0-30, 0-40, 0-60, and 0-90.

CIE Type - Direct

Table with 2 columns: Plane, Spacing Criteria. Rows show 0-Deg and 90-Deg spacing criteria.



REPORT NUMBER: MLEDN40P5BU

Lamps: Mercmaster LED, Class I, Division 2, Polycarbonate Optic

Candela Distribution

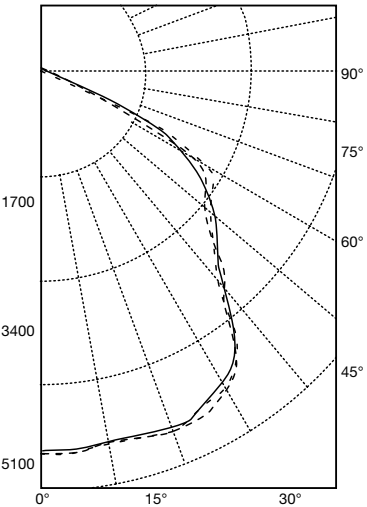
Table with 7 columns: Beam Angle, 0.0, 22.5, 45.0, 67.5, 90.0, Flux. Rows show beam angle increments from 0 to 90 degrees.

Zonal Lumen Summary

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Table with 2 columns: Plane, Spacing Criteria. Rows show 0-Deg and 90-Deg spacing criteria.



① Lamp type is not certified for use in ATEX/IEC governed locations.