

HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures

Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ‡†
ATEX/IECEx †: Zones 2 – 21 and 22

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - A wide range of industrial, chemical processing and other areas where flammable gases, vapors and combustible dusts are present including simultaneous exposure
 - Marine and wet locations
 - Wall mounted luminaire suitable for areas of low clearance, low ceiling heights or where fixture weights must be minimized.
- Typical applications include:
 - Walkways/catwalks/stairwells
 - Grain elevators
 - Tunnels
 - Pipe racks
 - Offshore rigs
 - Vessel lighting
 - Cooling towers
 - Processing areas
 - Hydrogen and Biofuels plants
 - LNG (Liquid Natural Gas) plants

Features

- Compact light weight design
- Choice of color temperature (CCT): 5000K cool white, 4000K neutral white, 3000K warm white, or 1800K high pressure sodium (70 CRI min), yellow amber.
- Customize to the application requirements with two different globe options: diffused polycarbonate, clear glass.
- Two light output levels for retrofit of HID fixtures up to 250W:

Nominal Lumens ①	HID Equivalent	Model
4200	70-100W	MLTCL3
6800	175-250W	MLTCL7

① Nominal Lumen value. Detailed lumen information is provided in tables.

- Hinge has high lip for added safety during installation and servicing.
- Hinge and bolt construction assures 360° compression at all points on fixture housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- Rugged housing with superior thermal design translates to long luminaire life.
- Reliable heat transfer via the cast, epoxy powder coat aluminum housing (heatsink). Provides maximum heat dissipation from the LED assembly to the outside environment.
- Mounting Hood and Globe Gaskets are silicone rubber to seal out moisture, dirt and dust; stays flexible and withstands extreme temperatures. Closure design assures uniform gasket compression.
- Standard 6 kV surge protection.
- Voltages:
 - DU: 100-277 Vac or 125-300 Vdc
 - D2: 24-48 Vdc
- Ambient Temperature:
 - Standard: -40 °C to +65 °C (-40 °F to +149 °F)
 - Cold temperature option: -50 °C to +65 °C (-58 °F to +149 °F)
- Heavy duty, high temperature silicone rubber gaskets.



Reported L70:

Temperature	Reported	Calculated
+25 °C (+77 °F)	> 60000	> 200000
+65 °C (+149 °F)	> 60000	> 200000

- Spring-loaded screw-type terminal block can accept 0.14 - 6 mm² (26 - 10 AWG) wire.
- Field replaceable lens, LED driver.
- Photometric data and electronic drawings available upon request.
- Photobiological Safety, per IEC standards.

Warranty [Ⓞ]

- 5 year standard warranty.

Controls

- Dimming:
 - HB LED Multilens Bulkhead offers a two-wire, 0-10V variable dimming input port for controlling the light output:
 - Standard operating temperature models: from 10% to 100% of the rated lumen output.
 - Cold temperature option models: from 0% to 100% of the rated lumen output.
 - 24-48 Vdc models: from 0 to 100% of the rated lumen output.
- Group Lighting Controls:
 - Simplify installation of energy saving lighting controls.
 - Control up to 10 luminaires over a distance of 60 meters (200 ft) with Mercmaster™ Connect LED integrated dimming controller.
 - Daisy chain the luminaires on the same circuit breaker by wiring the 0-10V dimming leads to the Connected luminaire. Enable the Mercmaster Connect's advanced capabilities to extend daylight harvesting (adjustable output), motion sensing (up to 12 meters [40 ft]) and scheduling features (up to 4 times period per day) with the group of lights.
 - Optionally commission and monitor the group of lights remotely via our Plantweb Insight™ Connected Lighting App.

Options

- Globe guard available, purchase separately.
- Safety cable available, purchase separately.
- M20 reducer available, purchase separately.

† May be subject to revision.

‡ Use of fuse voids Marine Outside Type (Salt Water) rating.

Ⓞ For warranty details go to www.appleton.emerson.com.

HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures

Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ⚡†
ATEX/IECEX †: Zones 2 – 21 and 22

Standard Materials

- Mounting hoods and driver housing: cast copperfree (4/10 of 1% max.) aluminum
- Globe: polycarbonate or glass
- Gaskets: silicone rubber
- All hardware and catch assemblies: stainless steel
- Globe guard: stainless steel wire

Standard Finishes

- Mounting hoods and driver housing: gray epoxy powder coat finish, electrostatically applied for complete uniform protection

NEC/CEC Certifications and Compliances

- UL Standard: UL 50E, Second Edition; UL 844; UL 1598, Fourth Edition; UL 1598A, First Edition; UL 8750; UL 60079-0; UL 924
- CSA Standard: C22.2 No. 0-10; C22.2 No. 94.2-15; C22.2 No. E60598-1:16; C22.2 No. 137-M1981; C22.2 No. 250.0-.08; C22.2 No. 250.13-14
- ANSI/IEC Standard: 60529, 60598
- Mercmaster LED LT Standard cCSAus Listed: 164460; Certificate Number: 70134063

ATEX/IECEX Certifications and Compliances †

- Certification Type: Mercmaster LED LT
 - Gas: Zones 2
 - Conforming to ATEX 2014/34/EU: Ⓢ II 3 G
 - Type of Protection: Ex ec IIC T* Gc
 - Temperature Class: T5 to T4
 - Dust: Zones 21 and 22
 - Conforming to ATEX 2014/34/EU: Ⓢ II 2 D
 - Type of Protection: Ex tb IIIC T**C Db, Ex tc IIIC T**C Dc
 - Surface Temperature: +66 °C to +88 °C (+151 °F to +190 °F)
- Ambient Temperature: -50 °C up to +58 °C (-58 °F up to 136 °F)
- ATEX Certificate, Zone 21: UL 22ATEX2672X
- ATEX Certificate, Zone 2, 22: UL 22ATEX2682X
- IECEX Certificate: IECEX UL 22.0003X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Photobiological Safety, IEC 62778 and IEC 62471

Related Products

- Industrial HB LED Multilens Bulkhead Luminaires
- Mercmaster Connect LED Luminaires
- Industrial Mercmaster Connect LED Luminaires

Illustrated Features



Mercmaster Connect LED

HB LED Multilens Bulkhead



Latch Assembly and Hinge:

Captive, stainless steel latch assembly (bolt and nut) closes securely while providing resistance to corrosive atmospheres. Swing-away design simplifies wiring and installation. Extra high hinge provides additional protection against accidental driver housing disengagement during installation or maintenance.



Field Replaceable Parts:

Replacement glass and polycarbonate globes and drivers available — allowing for easy maintenance.



Safety Cable (optional):

Safety cable is slipped around the housing through retention points that are casted in. Safety cable has built in loops combined with a locking carabiner to allow for a quick and secure installation.

† May be subject to revision.

⚡ Use of fuse voids Marine Outside Type (Salt Water) rating.

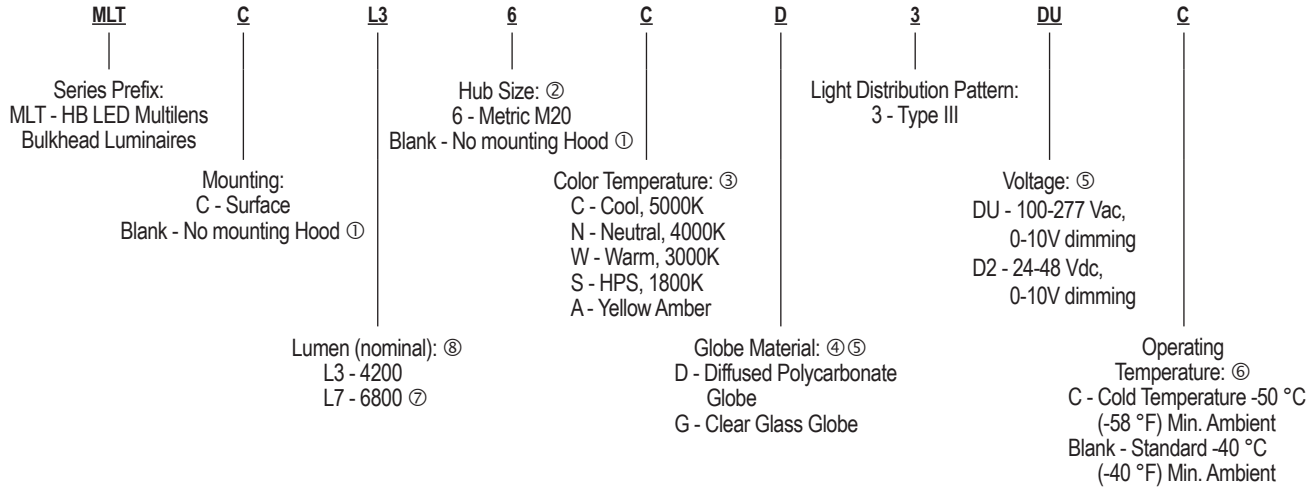
HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures

Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ‡†
ATEX/IECEX †: Zones 2 – 21 and 22

Order Using Catalog Numbering Guide — HB LED Multilens Bulkhead Luminaires



① Select this option if ordering mounting hood KPCM20MLT separately.

② The luminaire includes (5) 3/4"NPT hub and (1) M20 reducer. It ships with the driver housing and the bulkhead mount hood individually packaged.

③ Other CCT options available upon request. Contact your local sales representative for more information.

④ Guards for the globes are ordered separately. See the Accessories for more information.

⑤ Luminaires have 0-10V variable dimming input providing 10% to 100% dimming curve for DU voltage models at standard temperature and 0% to 100% dimming curve for D2 voltage or cold temperature models.

⑥ Cold temperature option is available for use with 120-277 Vac and clear glass globe only.

⑦ MLTCL7 120-277 Vac models go up to +60 °C (+140 °F) ambient. MLTCL7 24-48 Vdc models go up to +65 °C (+149 °F) ambient.

⑧ For lumen output information, see Lumen Output (Efficacy) Table.

† May be subject to revision.

‡ Use of fuse voids Marine Outside Type (Salt Water) rating.

HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures

Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ⚠ †
ATEX/IECEx †: Zones 2 – 21 and 22

Lumen Output (Efficacy) ①

Model	HID Equivalency	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)	CCT	CRI	Lumen Output	Efficacy (lm/W)	CCT	CRI	Lumen Output	Efficacy (lm/W)
Diffused Polycarbonate Globe														
MLTCL3	70-100W	Type III	3000K	80	3300	106	4000K	80	3500	113	5000K	70	3900	126
MLTCL7	175-250W	Type III	3000K	80	5600	110	4000K	80	5800	114	5000K	70	6300	124
MLTCL3	70-100W	Type III	1800K	70	2800	82	Amber	N/A	2500	74				
MLTCL7	175-250W	Type III	1800K	70	4900	98	Amber	N/A	4300	86				
Clear Glass Globe														
MLTCL3	70-100W	Type III	3000K	80	3500	113	4000K	80	3700	119	5000K	70	4200	135
MLTCL7	175-250W	Type III	3000K	80	6000	118	4000K	80	6200	122	5000K	70	6800	133
MLTCL3	70-100W	Type III	1800K	70	3000	88	Amber	N/A	2600	76				
MLTCL7	175-250W	Type III	1800K	70	5300	106	Amber	N/A	4700	94				

Electrical Specifications ①

Model	Operating Temperature	Voltage	Max. Input Power (Watts)	Max. Input Current (Amps)	Power Factor (PF)	Total Harmonic Distortion (THD)	
MLTCL3		100 Vac	32	0.32	>0.9	< 20%	
		277 Vac	32	0.12			
	-40 °C to +65 °C (-40 °F to +149 °F)	125 Vdc	32	0.25	N/A	N/A	
		300 Vdc	32	0.10			
		24 Vdc	27	1.20	N/A	N/A	
		48 Vdc	27	0.60			
	-50 °C to +65 °C (-58 °F to +149 °F)	24 Vdc	27	1.20	N/A	N/A	
		48 Vdc	27	0.60			
			120 Vac	32	0.32	>0.9	< 20%
			277 Vac	32	0.12		
MLTCL7	-40 °C to +60 °C (-40 °F to +140 °F)	100 Vac	53	0.52	>0.9	< 20%	
		277 Vac	53	0.19			
		125 Vdc	53	0.41	N/A	N/A	
		300 Vdc	53	0.17			
	-40 °C to +65 °C (-40 °F to +149 °F)	24 Vdc	46	1.87	N/A	N/A	
		48 Vdc	46	0.92			
	-50 °C to +60 °C (-58 °F to +140 °F)	24 Vdc	46	1.87	N/A	N/A	
		48 Vdc	46	0.92			
	-50 °C to +65 °C (-58 °F to +149 °F)	120 Vac	53	0.52	>0.9	< 20%	
		277 Vac	53	0.19			

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

† May be subject to revision.

⚠ Use of fuse voids Marine Outside Type (Salt Water) rating.

HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures

Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ‡†
ATEX/IECEx †: Zones 2 – 21 and 22

NEC/CEC Temperature Codes — Standard Model ①

Model	Ambient Temperature °C (°F)	Supply wire Temperature °C (°F)	Class I, Division 2 Groups A, B, C, D	Class I, Zone 2 Group IIC	Class II, Division 1 Groups E, F, G	Zone 20, Group IIIC	Class I, Division 2 and Class II, Division 1
MLTCL3	40 (104)	90 (194)	T4A	T4A	T6	T6	T4A
	55 (131)	90 (194)	T4A	T4A	T6	T6	T4A
	60 (140)	90 (194)	T4A	T4A	T5	T5	T4A
	65 (149)	90 (194)	T4A	T4A	T5	T5	T4A
MLTCL7	40 (104)	90 (194)	T4A	T4	T6	T6	T4A
	55 (131)	90 (194)	T4A	T4	T6	T6	T4A
	60 (140) ③	90 (194)	T4A	T4	T5	T5	T4A
	65 (149) ③	90 (194)	T4A	T4	T5	T5	T4A

ATEX/IECEx Temperature Codes — Standard Model ①

Model	Gas — T Rating				Dust — Surface Temperature			
	Ta= +40 °C (+104 °F)	Ta= +55 °C (+131 °F)	Ta= +60 °C (+140 °F)	Ta= +65 °C (+149 °F)	Ta= +40 °C (+104 °F)	Ta= +55 °C (+131 °F)	Ta= +60 °C (+140 °F)	Ta= +65 °C (+149 °F)
MLTCL3	T4	T4	T4	T4	T82°C	T82°C	T82°C	T82°C
MLTCL7	T4	T4	T4 ③	T4 ③	T82°C	T82°C	T82°C ③	T88°C ③

NEC/CEC — “T” Numbers Represent the Maximum Internal Temperature or Maximum Surface Temperature ① ②

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

ATEX/IECEx — “T” Numbers Represent the Maximum Internal Temperature or Maximum Surface Temperature

“T” #	T1	T2	T3	T4	T5	T6
Temp. Range °C (°F)	+301 to +450 (+547 to +842)	+201 to +300 (+394 to +572)	+136 to +200 (+277 to +392)	+101 to +135 (+214 to +275)	+86 to +100 (+187 to +212)	+85 (+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.

③ MLTCL7 120-277 Vac models go up to +60 °C (+140 °F) ambient. MLTCL7 24-48 Vdc models go up to +65 °C (+149 °F) ambient

† May be subject to revision.

‡ Use of fuse voids Marine Outside Type (Salt Water) rating.


HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures






Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ‡†
ATEX/IECEX †: Zones 2 – 21 and 22



Effective Projected Area Calculations for Outdoor Luminaires

Luminaire	Effective Projected Area (EPA) = FPA*DC ft²
MLTC 	0.91

Accessories and Replacement Parts

Description	Weight in kg (lbs)	Catalog Number
Surface — Five Hubs, Four Close-Up Plugs		
 M20	1.4 (3.0)	KPC-M20-MLT
Globes		
 Diffused Globe — Polycarbonate	0.2 (0.5)	VPGL-DIFF
Clear Globe — Glass	0.8 (1.7)	VPGL-GLASS
Adapter		
 3/4" NPT to M20 Reducer	0.09 (0.2)	737DT2M25
Guard		
 Globe Guard — Stainless Steel	0.2 (0.4)	MGU1
Safety Cable		
 Safety Cable — Stainless Steel	0.2 (0.4)	LEDSC

Replacement Drivers

Model	Ambient Temperature	Voltage	Driver Wattage	CCT (Correlated Color Temperature)	Constant Current Settings	Catalog Number
 MLTCL3	-40 °C to +65 °C (-40 °F to +149 °F)	DU	50 Watt	ALL	500mA	APMS050C135UD50
		D2				APMZ050C130DC50
	-50 °C to +65 °C (-58 °F to +149 °F)	DU	50 Watt	ALL	500mA	APMZ050L135UD50
		D2				APMZ050C130DC50
MLTCL7 	-40 °C to +60 °C (-40 °F to +140 °F)	DU	50 Watt	ALL	825mA	APMS050C135UD82
		D2				APMZ050C130DC82
	-40 °C to +65 °C (-40 °F to +149 °F)	DU	50 Watt	ALL	825mA	APMZ050L135UD82
		D2				APMZ050C130DC82
-50 °C to +60 °C (-58 °F to +140 °F)	DU	50 Watt	ALL	825mA	APMZ050L135UD82	
	D2				APMZ050C130DC82	

† May be subject to revision.

‡ Use of fuse voids Marine Outside Type (Salt Water) rating.

HB LED Multilens Bulkhead Luminaires

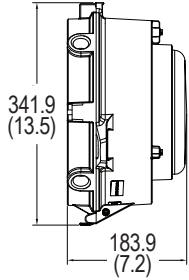
Enclosed and Gasketed Fixtures

Hazardous Locations

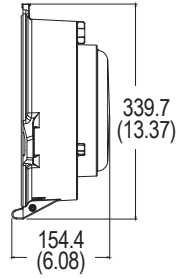
NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ⚠†
ATEX/IECEx †: Zones 2 – 21 and 22

Dimensions in Millimeters (Inches)

Bulkhead Mount



Driver Housing



Luminaire Weights

Description	Weight in kg (lbs)
Driver Housing	4.6 (10.10)
Bulkhead	6.0 (13.23)

† May be subject to revision.

⚠ Use of fuse voids Marine Outside Type (Salt Water) rating.

HB LED Multilens Bulkhead Luminaires

Enclosed and Gasketed Fixtures

Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, AEx ec IIC †; Zone 21, AEx tb IIIC †; Class I, Zone 2 Ex ec IIC †; Class II, Division 1, Groups E, F, G; Zone 20, Group IIIC; Class II, Division 2, Groups F, G; Class III; Type 3R, 4, 4X; IP66 | IP67; Simultaneous Exposure; Suitable for Use in Wet Locations; Marine Outside Type (Salt Water) ⚠ †
ATEX/IECEX †: Zones 2 - 21 and 22

Photometric Data — DATA SHOWN IS ABSOLUTE

Type III, Clear Glass, 5000K CCT, 3500 Lumens

REPORT NUMBER: MLTL3CG3DU

Luminaire Lumens 4431

Type III, Diffused Polycarbonate, 5000K CCT, 3500 Lumens

REPORT NUMBER: MLTL3CD3DU

Luminaire Lumens 4078

POLAR CANDELA DISTRIBUTION



Maximum Candela = 3116.4 Located At Horizontal Angle = 52.5, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (52.5 - 232.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)

POLAR CANDELA DISTRIBUTION



Maximum Candela = 2411.15 Located At Horizontal Angle = 52.5, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (52.5 - 232.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)

† May be subject to revision.

⚠ Use of fuse voids Marine Outside Type (Salt Water) rating.