

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Applications

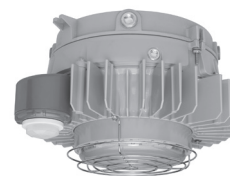
- Enclosed and gasketed fixtures suitable for use in:
 - A wide range of industrial, chemical processing and other areas where flammable gases and vapors or combustible dusts may be present
 - Marine and wet locations
 - Suitability includes use where there may be simultaneous exposure to flammable gases and vapors or combustible dusts
- Typical applications include:
 - Power plants
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Waste and sewage treatment
 - Hydrogen and Biofuels plants
 - LNG (Liquid Natural Gas) plants
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Integrated Hazardous Location Rated WirelessHART®¹ Sensor Module:
 - Passive Infrared Motion Sensing with field replaceable PIR Fresnel lens
 - Embedded illuminance sensor
 - Device health monitoring and alerts
 - Strengthens WirelessHART®¹ network with a line powered luminaire
- Adjustable LED Driver output:
 - User selectable maximum lumen output
 - Fully dimmable driver from 100% to 0%
- Integrated 0-10V Dimming Controller for group lighting control of up to 10 dimmable luminaires.
 - Dimming connection located inside top hat
- Commission within Emerson Plantweb Insight's Connected Lighting Application:
 - Asset Management
 - Map Based Commissioning
 - Programmable central or standalone control modes
- Field provisioning with either Emerson AMS Device Manager or Emerson AMS TREX handheld.
- Modular design provides thousands of combinations for maximum versatility.
- Design is suited for mounting heights ranging from 2 m up to 12 m (7 ft up to 40 ft).
- Three adjustable light outputs provide up to 17,500 lumens (5000K CCT, Type V light distribution, and clear glass globe).

Nominal Lumens ①	HID Equivalent	Model
Up to 5500	100-150W	MGCL5
Up to 9500	250-350W	MGCL9
Up to 17,500	400-600W	MGCH6

- Choice of optics for optimal light distribution in a variety of applications: Type I, Type III, Type V or Type V Wide.
- Choice of color temperature (CCT): 5000K cool white (70 CRI min), 4500K mid-neutral (80 CRI min), 4000K neutral white (80 CRI min), 3500K mid-warm (80 CRI min), or 3000K warm white (80 CRI min).



MGCL



MGCH

- Customize to the application requirements with three different globe options: clear and diffused polycarbonate or clear glass.
- Seven standard mounting hood designs allow for mounting in any location. Uses same mounting hoods as Mercmaster III.
- Retrofit adapters for Crouse-Hinds™², Mercmaster II³, and Killark⁴ hoods available. See *Mounting Hood Adapters table*.
- 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 installation.
- Rugged housing with superior thermal design translates to long luminaire life.
- Luminaire housing has wiring compartment with terminal block separate for easy wiring access.
- Spring-loaded screw-type terminal block can accept UL/CSA 14 to 6 mm² (26-10 AWG) wire.
- HART® Service Port connection inside top hat.
- Standard 6 kV surge protection.
- Heavy duty, high temperature silicone gaskets.
- Photometric data and electronic drawings available upon request.
- Ambient Temperature (standard product): -40 °C to +65 °C (-40 °F to +149 °F).
- Standard NPT threads with M20 option.
- LED L70 reported at 76,000 hours.
- Field replaceable globes, LED driver, and PIR Fresnel Lens.
- 5 year standard warranty. 10 year limited warranty for select part number configurations.

Options

- Globe available, purchase separately
- Safety cable available, purchase separately.
- All Mercmaster Connect luminaires have provision for fusing; add suffix -F at the end of the catalog number.
- Drain is available to divert water existing in the conduit system, purchase separately.

Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- Sensor housing: polycarbonate
- PIR Fresnel Lens: HDPE
- Gaskets: silicone
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate or glass
- Globe guard and safety cable: stainless steel wire

① Nominal lumen value for 5000K, clear glass globe, Type V Wide optic. Detailed lumen information is provided in the "Lumen Output (Efficacy)" tables.

⁴ Killark is a registered trademark of Hubbell Incorporated.

² Crouse-Hinds is a registered trademark of Cooper Industries, Inc., a wholly owned subsidiary of the Eaton Corporation plc.

³ HART and WirelessHART are registered trademarks of the FieldComm Group.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEx: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Standard Finishes

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

NEC/CEC Certifications and Compliances

- UL Standard: UL 844; UL 1598; UL 50E; UL 8750; UL 60079-0; UL 60079-7; UL 60079-31; UL 60079-11; UL 121201
- CSA Standard: C22.2 No. 0 - 10; C22.2 No. 94.2 - 15; C22.2 No. 137 18; C22.2 No. 213; C22.2 No. 250.0 - 18; C22.2 No. 250.13 -14; C22.2 No. 60529; C22.2 No. 60079-0:15; C22.2 No. 60079-7:2016; C22.2 No. 60079-31:2015; CAN/CSA C22.2 No. 60079-11-2014 (R2018); CSA E60598-1:16
- NEMA ANSI/IEC Standards: 60529
- cCSAus: 164460, Certificate Number: 80067296

ATEX/IECEx Certifications and Compliances (L9, H6)

- Certification Type: Mercmaster Connect LED
 - Gas: Zones 2
 - Conforming to ATEX 2014/34/EU: II 3 G
 - Type of Protection: Ex ec ia mb IIC T* Gc
 - Dust: Zones 21 and 22
 - Conforming to ATEX 2014/34/EU: II 2 D
 - Type of Protection: Ex ia tb IIIC T** Db; Ex ia tc IIIC T** Dc
- Ambient Temperature: -40 °C to +65 °C (-40 °F to +149 °F)
- ATEX Certificates: INERIS 22ATEX3007X, INERIS 22ATEX0020X
- IECEx Certificate: IECEx INE 22.0029X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Photobiological Safety, IEC 62778 ① and IEC 62471: RG0 for all models

ABS Certification

- 23-2359512-PDA

Design Lights™ Consortium

- Check DLC QPL for current list of products.

Wireless Spectrum Approvals

- FCC ID: LW2-RM5801
- IC ID: 2731A-RM5801

Related Products

- Appleton Wireless Motion Sensor
- Industrial Mercmaster Connect LED Luminaires
- Emerson Plantweb Insight Connected Lighting Application
- Emerson 1410S WirelessHART Gateway
- Emerson 1410D WirelessHART Gateway

① Luminaire shall be positioned such that prolonged staring into luminaire at a distance closer than 5.5 m (18 ft) is not expected for RG0 and 3.73 m (12 ft) for RG1.

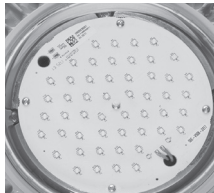
Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application
Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |
Suitable for Use in Wet Locations | Marine Outside Type (Salt Water)
ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08
IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08
Notable: American Bureau of Shipping (ABS) Certified

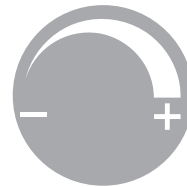
Illustrated Features

Programmable Lumen Output



Program the nominal lumen value based on the mounting height.
L5 – 3500 or 5500 lumens
L9 – 7500, or 9500 lumens
H6 – 11500, 13500, or 17500 lumens

Dimming



Mercmaster Connect's LED Driver fully dims the light output from 100% down to 0% based on the active operating mode.

Maintenance Alerts



Internal sensors monitor the health and reliability of the Mercmaster Connect electronics and provide status updates over WirelessHART®.

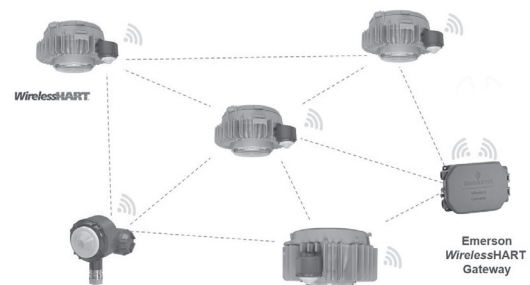
Standalone vs Central Controls



Standalone modes are available. Connected to a WirelessHART® network or when by itself in remote locations.

Standalone Control Modes:

1. Motion Sensing
2. Lux Sensing
3. Motion + Lux Sensing
4. Daylight Harvesting



Using Plantweb Insight, central control modes operate across an assigned group of luminaires.

Central Control Modes:

1. Group Sensing Control - Control a group of luminaires together based on the state of the illuminance and motion sensors
2. Time Based Schedule - Schedule up to four time periods per day to turn on groups of luminaires based on the current network time
3. Always On- Set a group of light fixtures to a common light dimming level from 0 to 100%.

Plantweb Insight Connected Lighting Application



Enables critical system monitoring without adding another lighting control system. Commission lighting controls, monitor lighting performance, and review historical energy analytics.

Integrated Motion Sensor



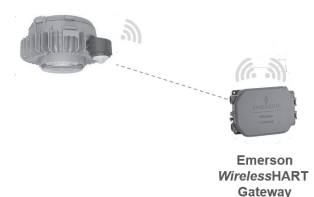
Utilizing passive infrared detection (PIR), Mercmaster Connect can detect human sized objects from up to 40 ft away. Mercmaster Connect offers two PIR Fresnel lens factory options based on the mounting height to optimize the detection performance.

Robust and Reliable WirelessHart Protocol



Emerson's WirelessHART® combines HART technology with wireless capabilities to create an adaptable wireless communications protocol for process automation applications. WirelessHART® offers simple installation and robust, layered security to ensure network protection.

Failsafe Operating Mode



If the rare case of communication loss from a WirelessHART® gateway, all Mercmaster Connect LED Luminaires on that gateway will revert to maximum brightness until communication is restored.

⌘ HART and WirelessHART are registered trademarks of the FieldComm Group.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application
Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

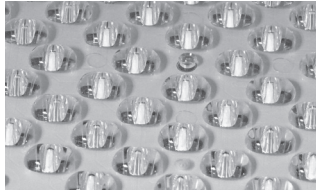
IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

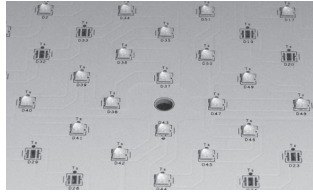
Illustrated Features



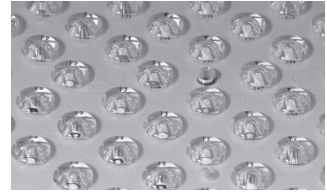
Type I - Long and narrow distribution pattern designed with walkways in mind.



Type III - Wall mounted distribution pattern designed where you need good forward light projection.



Type V - Symmetrical circle distribution pattern ideal when you need even coverage in all directions.



Type V Wide - Like the Type V distribution pattern with more vertical lumens designed to help spread the light quicker and more outwards.

Choose from **three color temperatures (CCT)**: 3000K, 4000K, and 5000K ±

Four light distribution patterns: Type I, Type III, Type V and Type V Wide for application flexibility.

Seven mounting hoods allow one fixture to be configured for ceiling, pendant, stanchion, or wall applications.

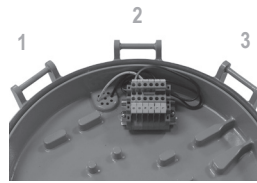
Four globes: clear and diffused polycarbonate, clear glass globe, and prismatic refractor provide just the right level of diffusion.

Safety Features

Type I and Type III Hinge System



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.



Type I and Type III light distribution patterns use a multiple hinged housing design which allows you to correctly line up the beam pattern in your desired direction. By using one of the three available hinges you can position the fixture for optimal light output.

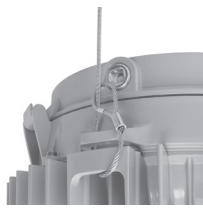


Designed for the Environment



Driver housing design incorporates separate sections for the terminal block and driver. The efficient thermal design ensures reliable heat transfer from the LED assembly out via the heatsink and the cast, epoxy powder coat, aluminum housing.

Safety Cable



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.

Watertight Pendant Hood



Watertight pendant hood provides protection against water ingress in the conduit utilizing an IP68 cord grip with 3 wire holes 4 mm (0.157") in diameter.

Integrated 0-10V Dimming Controller for Group Lighting Control



Mercmaster Connect



Mercmaster LED Low Profile with Dimming Option

Mercmaster Connect can control the lighting intensity of a group of dimmable wired LED luminaires with its integrated 0-10V dimming controller. Mercmaster Connect's dimming output voltage matches its internal lighting level to raise and lower the lighting level of daisy chained dimmable wired LED luminaires. On a single electrical circuit, wire up to 10 standard dimmable luminaires over an up to 60 m (200 ft) total cable run. Compatible with 0-10V and 1-10V dimmable LED luminaires.

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

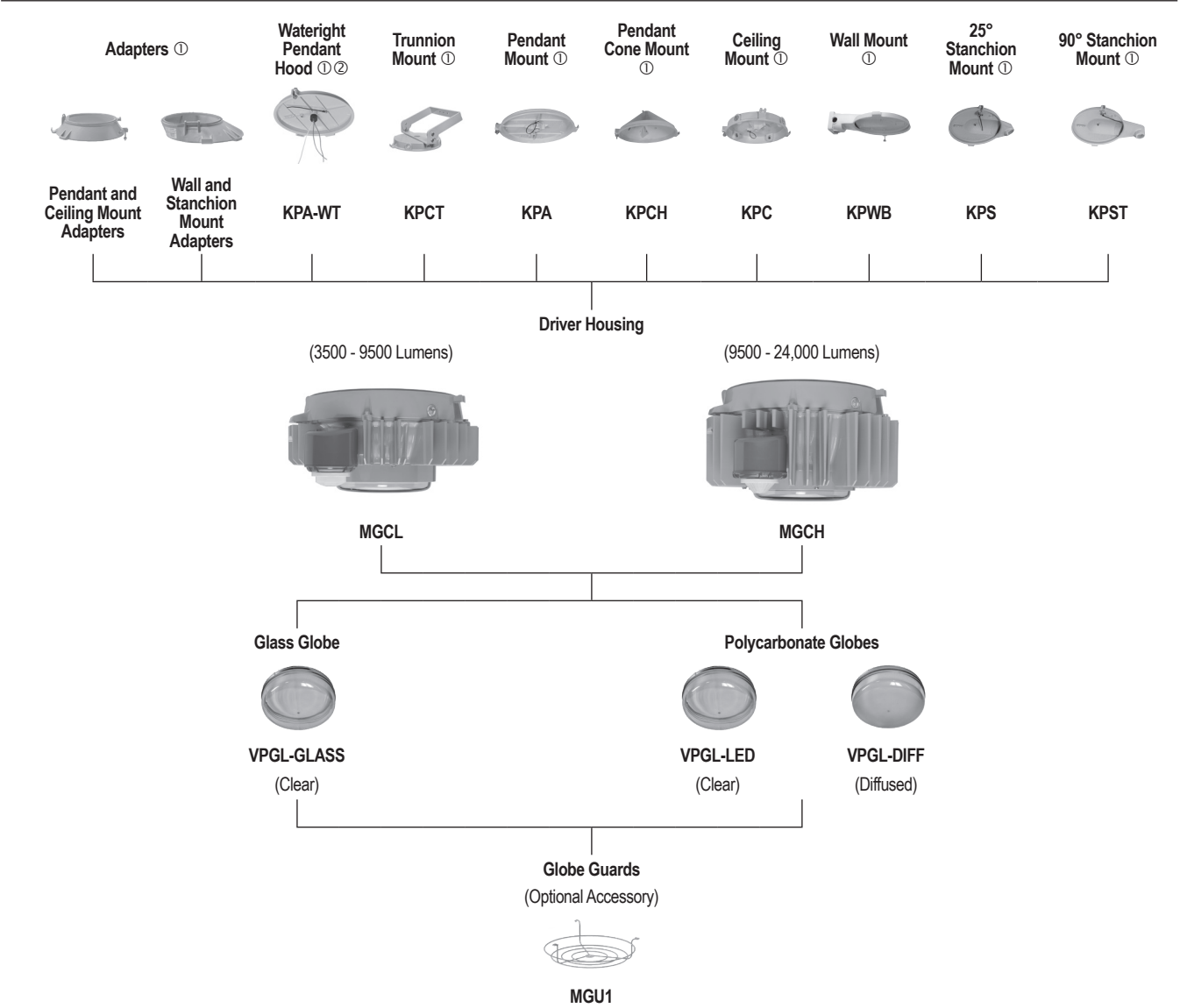
Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure | Suitable for Use in Wet Locations | Marine Outside Type (Salt Water)
 ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08
 IECEx: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08
 Notable: American Bureau of Shipping (ABS) Certified

Family Tree — Mercmaster™ Connect LED Luminaires



① See Mounting Hood Adapters table for part numbers.
 ② Certified for cCSAus only.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

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

MGC	A	L5	2	N	D	5	BU	F	Z	N
Series Prefix: MGC - Mercmaster Connect LED Class 1, Division 2 and Zone 2	Mounting: A - Pendant B - Watertight Pendant ▲ C - Ceiling ② D - Pendant Cone ② R - 90° Stanchion ① S - 25° Stanchion ① T - Trunnion K - Killark™ ✦ Adapter Universal ▲ U - Mercmaster II Adapter, Ceiling or Pendant ▲ V - Mercmaster II Adapter, Stanchion or Wall ▲ W - Wall X - Crouse Hinds™ ✧ Adapter, Ceiling or Pendant ▲ Y - Crouse Hinds™ Adapter, Stanchion or Wall ▲ Blank - No mounting hood	Lumen (nominal): L5 - Up to 5,500 L9 - Up to 9,500 H6 - Up to 17,500	Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion 6 - Metric M20 Blank - If using adapter or no hood	Color Temperature: ‡ C - Cool, 5000K N - Neutral, 4000K M - Mid Neutral, 4500K W - Warm, 3000K R - Mid-Warm, 3500K (retail)	Globe Material: P - Clear Polycarbonate Globe D - Diffused Polycarbonate Globe G - Clear Glass Globe	Light Distribution Pattern: 1 - Type I 3 - Type III 5 - Type V W - Type V Wide	Voltage: BU - 120-277 Vac, 50/60 Hz; 125-300 Vdc	Options: ☼ F - Fusing Blank - No fusing	Control Options: 7 - Motion and Illuminance Sensor, WirelessHart™ ✧ Interface	PIR Fresnel Lens: N - Between 20 to 40 ft mounting height P - Below 20 ft mounting height

① 3/4" NPT, 1" NPT and Metric M20 hub entries are not offered in this mounting option.

② Only allowed for Type V and Type V Wide light distribution.

☼ Fusing only permitted for NEC/CEC rating. Factory installed. Use of fuse voids Marine Outside Type (Salt Water) rating. Fusing is mounted in the driver housing.

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

▲ Adapters, watertight pendant hood and BH Voltage only certified for NEC/CEC.

✦ Killark is a registered trademark of Hubbell Incorporated.

✧ Crouse-Hinds is a registered trademark of Cooper Industries, Inc., a wholly owned subsidiary of the Eaton Corporation plc.

✧ HART and WirelessHART are registered trademarks of the FieldComm Group.

Note: For other lighting combinations, please contact your local Appleton representative for more information.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Lumen Output (Efficacy) ①②

Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Efficacy Output (lm/W)		CCT	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)		
Clear Polycarbonate Globe — Model MGCL5 — 100-150W HID Equivalency																				
Type-I	3000K	80	4400	92	3500K	80	4500	93	4000K	80	4580	95	4500K	80	4750	99	5000K	70	4900	102
Type-III	3000K	80	4620	96	3500K	80	4700	98	4000K	80	4800	100	4500K	80	4990	104	5000K	70	5140	107
Type-V	3000K	80	4770	99	3500K	80	4860	101	4000K	80	4960	103	4500K	80	5150	107	5000K	70	5300	110
Type-V Wide	3000K	80	4520	94	3500K	80	4600	96	4000K	80	4700	98	4500K	80	4870	101	5000K	70	5020	105
Clear Polycarbonate Globe — Model MGCL9 — 250-350W HID Equivalency																				
Type-I	3000K	80	7860	100	3500K	80	8060	103	4000K	80	8170	104	4500K	80	8400	107	5000K	70	9300	119
Type-III	3000K	80	8250	105	3500K	80	8460	108	4000K	80	8570	109	4500K	80	8800	112	5000K	70	9750	125
Type-V	3000K	80	8430	108	3500K	80	8650	111	4000K	80	8770	112	4500K	80	9010	115	5000K	70	9970	127
Type-V Wide	3000K	80	8120	104	3500K	80	8330	106	4000K	80	8450	108	4500K	80	8670	111	5000K	70	9600	123
Clear Polycarbonate Globe — Model MGCH6 — 400-600W HID Equivalency																				
Type-I	3000K	80	13600	93	3500K	80	13900	95	4000K	80	14100	97	4500K	80	14470	99	5000K	70	16100	110
Type-III	3000K	80	14200	97	3500K	80	14500	100	4000K	80	14700	101	4500K	80	15100	104	5000K	70	16800	115
Type-V	3000K	80	15200	104	3500K	80	15600	107	4000K	80	15800	108	4500K	80	16200	111	5000K	70	18000	124
Type-V Wide	3000K	80	13940	95	3500K	80	14270	98	4000K	80	14450	99	4500K	80	14850	102	5000K	70	16500	113
Diffused Polycarbonate Globe — Model MGCL5 — 100-150W HID Equivalency																				
Type-I	3000K	80	4180	87	3500K	80	4260	88	4000K	80	4350	90	4500K	80	4510	94	5000K	70	4650	97
Type-III	3000K	80	4400	91	3500K	80	4480	93	4000K	80	4570	95	4500K	80	4740	98	5000K	70	4890	102
Type-V	3000K	80	4660	97	3500K	80	4750	99	4000K	80	4850	101	4500K	80	5030	105	5000K	70	5180	108
Type-V Wide	3000K	80	4310	90	3500K	80	4390	91	4000K	80	4480	93	4500K	80	4650	97	5000K	70	4790	100
Diffused Polycarbonate Globe — Model MGCL9 — 250-350W HID Equivalency																				
Type-I	3000K	80	7470	96	3500K	80	7660	98	4000K	80	7770	99	4500K	80	7980	102	5000K	70	8830	113
Type-III	3000K	80	7820	100	3500K	80	8030	102	4000K	80	8140	104	4500K	80	8360	107	5000K	70	9250	118
Type-V	3000K	80	8200	105	3500K	80	8400	107	4000K	80	8520	109	4500K	80	8750	112	5000K	70	9680	124
Type-V Wide	3000K	80	7740	99	3500K	80	7940	101	4000K	80	8050	103	4500K	80	8270	106	5000K	70	9140	117
Diffused Polycarbonate Globe — Model MGCH6 — 400-600W HID Equivalency																				
Type-I	3000K	80	12870	88	3500K	80	13170	90	4000K	80	13340	92	4500K	80	13700	94	5000K	70	15230	105
Type-III	3000K	80	13430	92	3500K	80	13740	94	4000K	80	13900	96	4500K	80	14300	98	5000K	70	15900	109
Type-V	3000K	80	14670	100	3500K	80	15010	103	4000K	80	15200	104	4500K	80	15620	107	5000K	70	17360	119
Type-V Wide	3000K	80	13220	91	3500K	80	13530	93	4000K	80	13700	94	4500K	80	14100	97	5000K	70	15640	107

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

② Diffused polycarbonate globe can be used with Type I, III and V wide. Refer to photometric files for lumen output information.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Lumen Output (Efficacy) ①②

Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)		CCT	CRI	Lumen Efficacy Output (lm/W)	
Clear Glass Globe — Model MGCL5 — 100-150W HID Equivalency																				
Type-I	3000K	80	4610	96	3500K	80	4700	98	4000K	80	4800	100	4500K	80	4980	103	5000K	70	5130	107
Type-III	3000K	80	4850	101	3500K	80	4940	103	4000K	80	5040	105	4500K	80	5230	109	5000K	70	5400	112
Type-V	3000K	80	4970	104	3500K	80	5060	106	4000K	80	5170	108	4500K	80	5360	112	5000K	70	5530	115
Type-V Wide	3000K	80	4730	98	3500K	80	4820	100	4000K	80	4920	102	4500K	80	5100	106	5000K	70	5260	109
Clear Glass Globe — Model MGCL9 — 250-350W HID Equivalency																				
Type-I	3000K	80	8220	105	3500K	80	8430	108	4000K	80	8550	109	4500K	80	8780	112	5000K	70	9710	124
Type-III	3000K	80	8630	110	3500K	80	8850	113	4000K	80	8980	115	4500K	80	9220	118	5000K	70	10200	131
Type-V	3000K	80	8800	112	3500K	80	9030	116	4000K	80	9150	117	4500K	80	9400	120	5000K	70	10400	133
Type-V Wide	3000K	80	8480	108	3500K	80	8700	111	4000K	80	8820	113	4500K	80	9060	116	5000K	70	10020	128
Clear Glass Globe — Model MGCH6 — 400-600W HID Equivalency																				
Type-I	3000K	80	14230	98	3500K	80	14570	100	4000K	80	14750	101	4500K	80	15160	104	5000K	70	16800	115
Type-III	3000K	80	14900	102	3500K	80	15250	105	4000K	80	15450	106	4500K	80	15870	109	5000K	70	17640	121
Type-V	3000K	80	15940	109	3500K	80	16320	112	4000K	80	16530	113	4500K	80	16980	116	5000K	70	18870	129
Type-V Wide	3000K	80	14600	100	3500K	80	14950	102	4000K	80	15150	104	4500K	80	15560	107	5000K	70	17300	118

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

② Diffused polycarbonate globe can be used with Type I, III and V wide. Refer to photometric files for lumen output information.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Electrical Specifications ①

Model	Voltage	Input Power	Input Current (Amp)	Power Factor	Total Harmonic Distortion (THD)
MGCL5	120 Vac	46	0.39	>0.9	< 20%
	277 Vac	46	0.17		
	170 Vdc	46	0.27	N/A	N/A
MGCL9	120 Vac	75	0.64	>0.9	< 20%
	277 Vac	75	0.29		
	170 Vdc	75	0.45	N/A	N/A
MGCH6	120 Vac	145	1.24	>0.9	< 20%
	277 Vac	145	0.54		
	170 Vdc	145	0.86	N/A	N/A

NEC/CEC Temperature Codes ②

Model ②	Ambient Temperature °C (°F)	Supply wire Temperature °C (°F)	Class I, Division 2 Groups A, B, C, D	Class II, Division 2 Groups F, G	Class I, Division 2 and Class II, Division 2
MGCL5	40 (104)	90 (194)	T5	T6	T5
	55 (131)		T4	T5	T4
	65 (149)		T4	T5	T4
MGCL9	40 (104)	90 (194)	T5	T6	T5
	55 (131)		T4	T5	T4
	65 (149)		T4	T5	T4
MGCH6	40 (104)	90 (194)	T4	T6	T4
	55 (131)		T3C	T5	T3C
	65 (149)		T3C	T5	T3C

NEC/CEC — “T” Numbers Represent the Maximum Internal Temperature or Maximum Surface Temperature ③④

“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)

① All values are typical (tolerance +/-10%). Rated Input current corresponds to light intensity set at 100% brightness.

② Ambient Temperature Range: -40 °C to +65 °C (-40 °F to +149 °F).

③ T numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC.

④ 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.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |









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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Mounting Hoods

	Hub Size	Weight in kg (lbs)	Catalog Number
Pendant — One Hub, Rigid Mounting			
	3/4" NPT		KPA-75
	1" NPT	1.0 (2.3)	KPA-100
	M20		KPA-M20
Watertight Pendant Hood — One Hub, Rigid Mounting			
	3/4" NPT		KPA-75-WT
	1" NPT	1.1 (2.4)	KPA-100-WT
	M20		KPA-WT-M20
Pendant Cone — One Hub, Rigid Mounting			
	3/4" NPT		KPCH-75
	1" NPT	1.1 (2.5)	KPCH-100
	M20		KPCH-M20
Trunnion — Five Hubs, Four Close-Up Plugs			
	3/4" NPT		KPCT-75
	1" NPT	6.1 (13.4)	KPCT-100
	M20		KPCT-M20
Ceiling — Five Hubs, Four Close-Up Plugs			
	3/4" NPT		KPC-75
	1" NPT	1.4 (3.0)	KPC-100
	M20		KPC-M20
Wall — Five Hubs, Four Close-Up Plugs			
	3/4" NPT		KPWB-75
	1" NPT	1.8 (4.0)	KPWB-100
	M20		KPWB-M20
25° Stanchion — One Hub			
	1-1/4" NPT	1.5 (3.3)	KPS-125
	1-1/2" NPT		KPS-150
90° Stanchion — One Hub			
	1-1/4" NPT	1.7 (3.8)	KPST-125
	1-1/2" NPT		KPST-150



Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |







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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08




IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

Accessories and Replacement Parts

	Description	Weight in kg (lbs)	Catalog Number
Globes			
	Clear Globe — Polycarbonate	0.2 (0.5)	VPGL-LED
	Diffused Globe — Polycarbonate	0.2 (0.5)	VPGL-DIFF
	Clear Globe — Glass	0.8 (1.7)	VPGL-GLASS
Guard			
	Globe Guard	0.2 (0.4)	MGU1
Safety Cable			
	Stainless steel	0.2 (0.4)	LEDSC
Drain Plug			
	76 mm (3") long, 1/2" NPT trade size drain assembly used to divert water existing in the conduit system	0.4 (0.9)	LEDDR3

Mounting Hood Adapters ①

	Manufacturer	Installed Mounting Hood	Weight in kg (lbs)	Appleton Adapter Catalog Number
	Crouse-Hinds™ Champ® +	Pendant: APM2/3 Ceiling: CM2/3 Flexible Pendant: HPM2	0.9 (2.00)	MMADCHVS
	Appleton™ Mercmaster™ II	Pendant: LPA75/100 Ceiling: LPC75/100	0.9 (2.00)	MMADIIS
	Crouse-Hinds™ Champ® +	Wall: TWM2/3 25° Angle Stanchion: JM5 90° Straight Stanchion: PM5	0.9 (2.00)	MMADCHVA
	Appleton™ Mercmaster™ II	Wall: LPWB75, LPWB100 25° Angle Stanchion: LPS125, LPS150	0.9 (2.00)	MMADIIA
	Killark™ ✧	Ceiling: VMX2B, VMX3B, VMX6B, VMX7B, VMX9B Pendant: VMA2B, VMA3B Stanchion: VMD4B, VMD5B, VMS4B, VMS5B Wall: VMB2B, VMB3B Pendant Cone: VMC2B, VMC3B	1.0 (2.3)	MMADKVA

Luminaire Specifications

Model	Lumen Outputs	Weight in kg (lbs)
MGCL5	5500	11.1 (24.4)
MGCL9	9500	11.1 (24.4)
MGCH6	17,500	13.6 (29.9)

① Adapters are cCSAus rated only.

✧ Killark is a registered trademark of Hubbell Incorporated.

+ Crouse-Hinds and Champ are registered trademarks of Cooper Industries, Inc., a wholly owned subsidiary of the Eaton Corporation plc.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

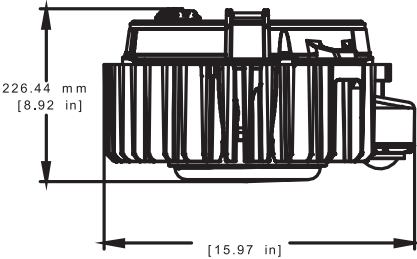
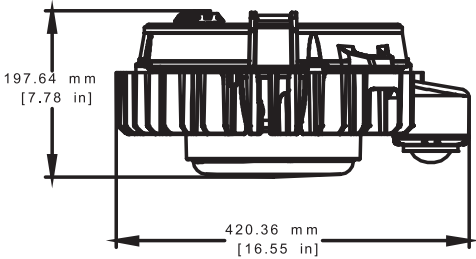
Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure | Suitable for Use in Wet Locations | Marine Outside Type (Salt Water)
ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08
IECEx: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIC | Ex ia tc IIC | IP66 | IK08
Notable: American Bureau of Shipping (ABS) Certified

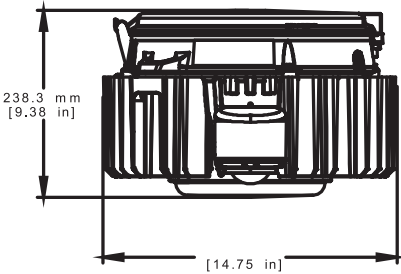
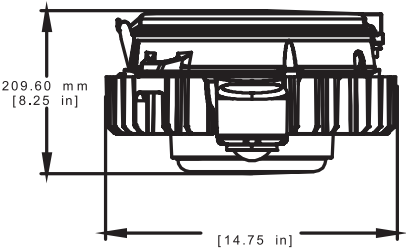
Dimensional Drawings — Driver Housing with Globe

MGCL	MGCH
------	------

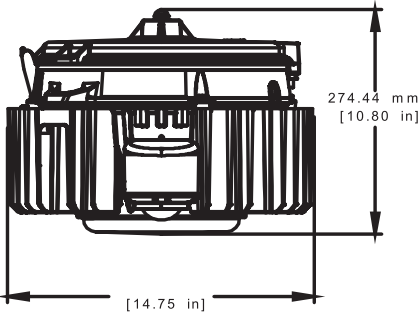
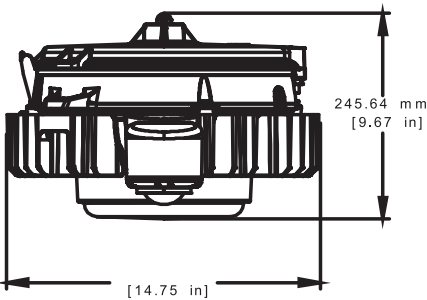
Driver Housing



Pendant



Watertight Pendant



Note: For other lighting combinations, please contact your local Appleton representative for more information.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

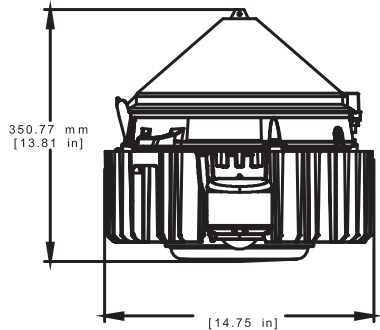
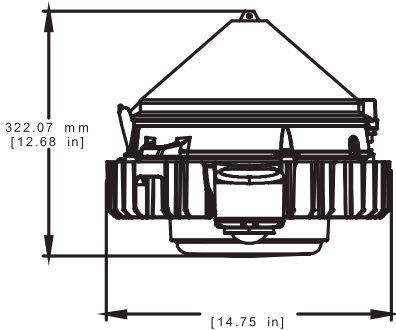
Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure | Suitable for Use in Wet Locations | Marine Outside Type (Salt Water)
 ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08
 IECEx: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08
 Notable: American Bureau of Shipping (ABS) Certified

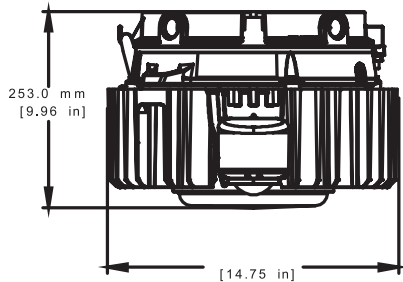
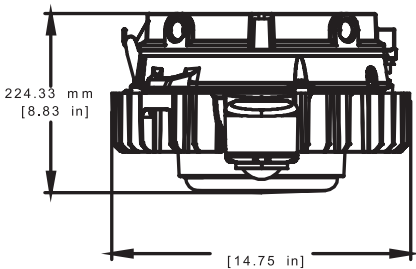
Dimensional Drawings — Driver Housing with Globe

MGCL	MGCH
------	------

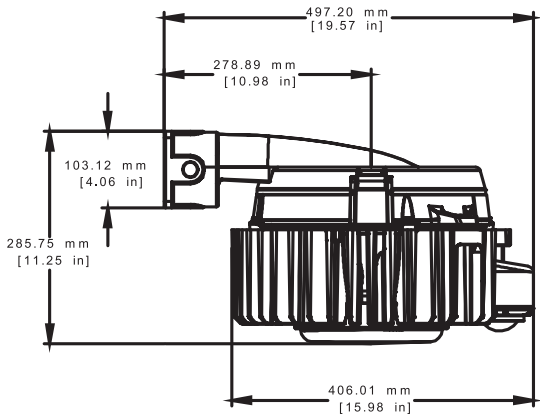
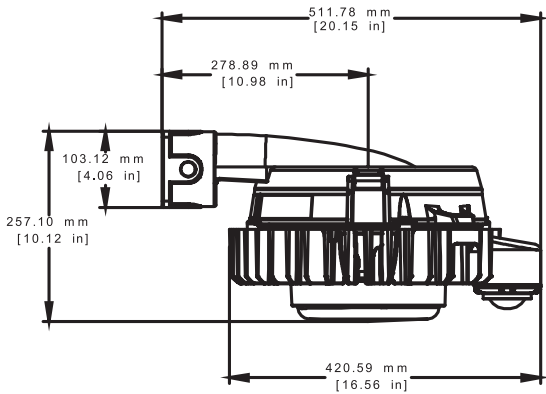
Pendant Cone



Ceiling



Wall Mount



Note: For other lighting combinations, please contact your local Appleton representative for more information.

Mercmaster™ Connect LED Luminares

Plantweb Insight™ Connected Lighting Application
Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIC | Ex ia tc IIC | IP66 | IK08

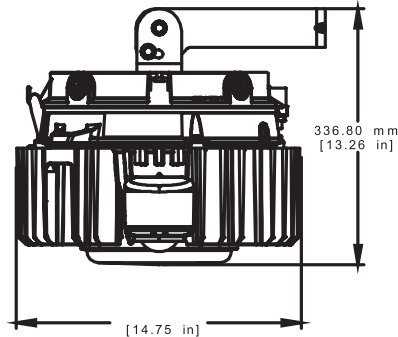
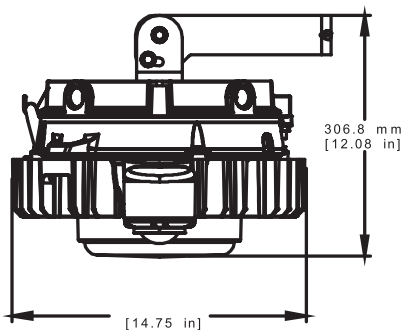
Notable: American Bureau of Shipping (ABS) Certified

Dimensional Drawings — Driver Housing with Globe

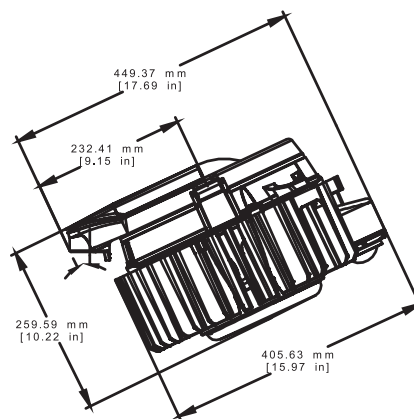
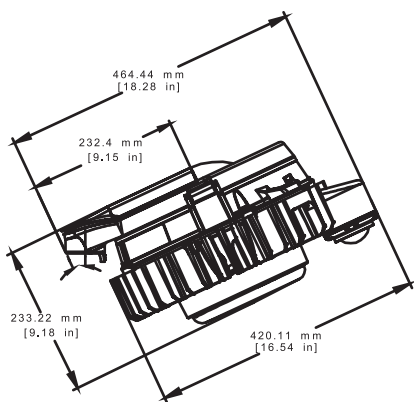
MGCL

MGCH

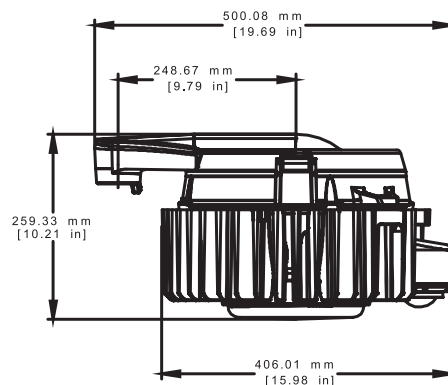
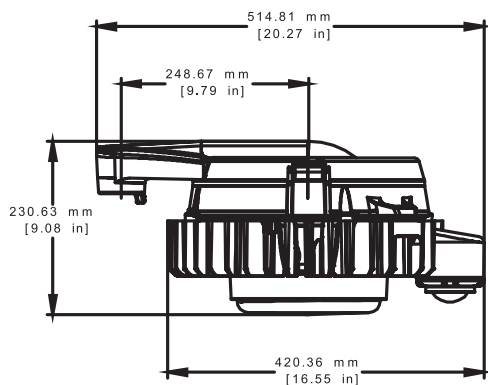
Trunnion Mount



25° Stanchion Mount



90° Stanchion Mount



Note: For other lighting combinations, please contact your local Appleton representative for more information.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIIC | Ex ia tc IIIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

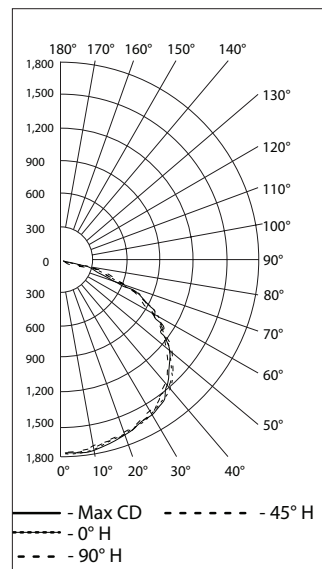
Photometric Data — DATA SHOWN IS ABSOLUTE

Type V, Clear Polycarbonate 5000K CCT

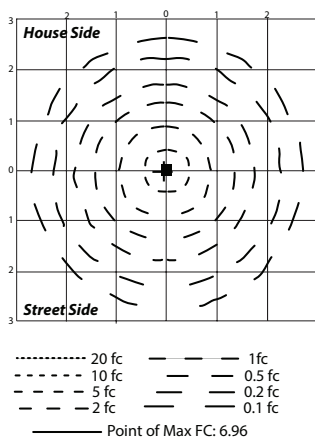
REPORT NUMBER: MGCL5CP5

Luminaire Lumens 5,660

POLAR CANDELA DISTRIBUTION



ISOFOOT CANDLE PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1,410.3	24.9%
0-40	2,381.3	42.1%
0-60	4,457.9	78.8%
60-90	1,179.2	20.8%
70-100	406.4	7.2%
90-120	20.7	0.4%
0-90	5,637.2	99.6%
90-180	22.7	0.4%
0-180	5,659.8	100%

LUMENS PER ZONE

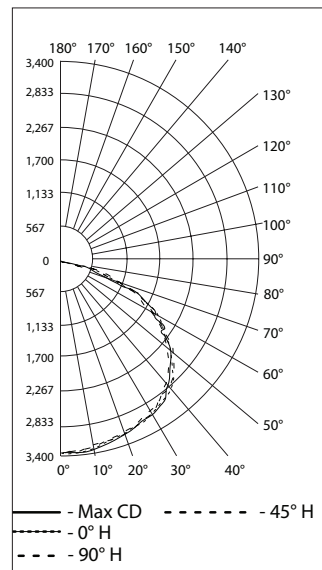
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	166.5	2.9%	90-100	8.8	0.2%
10-20	483.1	8.5%	100-110	7.1	0.1%
20-30	760.6	13.4%	110-120	4.8	0.1%
30-40	971.0	17.2%	120-130	1.2	0%
40-50	1,0667.7	18.8%	130-140	0.1	0%
50-60	1,010.0	17.8%	140-150	0.2	0%
60-70	781.6	13.8%	150-160	0.2	0%
70-80	331.7	5.9%	160-170	0.2	0%
80-90	65.9	1.2%	170-180	0.1	0%

Type V, Clear Polycarbonate 5000K CCT

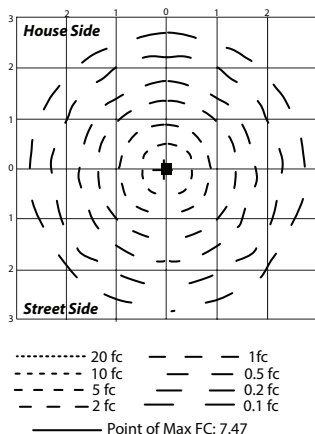
REPORT NUMBER: MGCL9CP5

Luminaire Lumens 10,845

POLAR CANDELA DISTRIBUTION



ISOFOOT CANDLE PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	2,709.1	25%
0-40	4,571.0	42.1%
0-60	8,535.2	78.7%
60-90	2,272.7	21%
70-100	806.0	7.4%
90-120	33.3	0.3%
0-90	10,808.0	99.7%
90-180	37.2	0.3%
0-180	10,845.2	100%

LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	319.9	2.9%	90-100	17.5	0.2%
10-20	928.5	8.6%	100-110	9.9	0.1%
20-30	1,460.7	13.5%	110-120	5.9	0.1%
30-40	1,861.9	17.2%	120-130	1.6	0%
40-50	2,042.3	18.8%	130-140	0.7	0%
50-60	1,922.0	17.7%	140-150	0.6	0%
60-70	1,484.2	13.7%	150-160	0.5	0%
70-80	649.2	6.0%	160-170	0.3	0%
80-90	139.3	1.3%	170-180	0.1	0%

Note: For other lighting combinations, please contact your local Appleton representative for more information.

Mercmaster™ Connect LED Luminaires

Plantweb Insight™ Connected Lighting Application

Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class II, Division 1, Groups E, F, G | Class III | Class I, Zone 2 IIC | Class II Zone 20 | Type 3R, 4, 4X | IP66 | Simultaneous Exposure |

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

ATEX: Zone 2 and 21/22 | II 3 GD | II 2 D | IP66 | IK08

IECEX: Zone 2 and 21/22 | Ex ec ia mb IIC | Ex ia tb IIC | Ex ia tc IIC | IP66 | IK08

Notable: American Bureau of Shipping (ABS) Certified

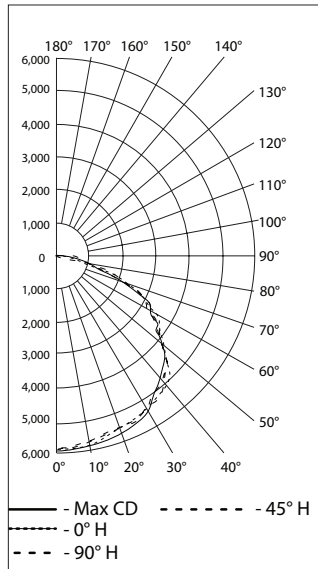
Photometric Data — DATA SHOWN IS ABSOLUTE

Type V, Clear Polycarbonate 5000K CCT

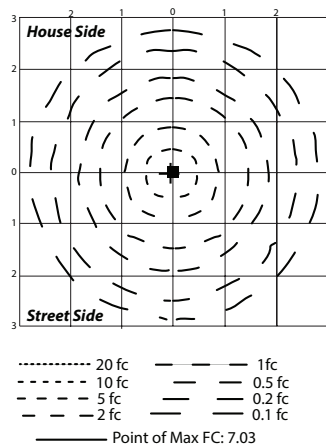
REPORT NUMBER: MGCH6CP5

Luminaire Lumens 19,107

POLAR CANDELA DISTRIBUTION



ISOFOOT CANDLE PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	4,772.9	25%
0-40	8,053.1	42.1%
0-60	15,037.2	78.7%
60-90	4,004.0	21%
70-100	1,420.0	7.4%
90-120	58.7	0.3%
0-90	19,041.2	99.7%
90-180	65.7	0.3%
0-180	19,107.0	100%

LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	563.6	2.9%	90-100	30.8	0.2%
10-20	1,635.8	8.6%	100-110	17.4	0.1%
20-30	2,573.5	13.5%	110-120	10.5	0.1%
30-40	3,280.3	17.2%	120-130	2.9	0%
40-50	3,598.0	18.8%	130-140	1.3	0%
50-60	3,386.1	17.7%	140-150	1.2	0%
60-70	2,614.9	13.7%	150-160	0.9	0%
70-80	1,143.7	6.0%	160-170	0.6	0%
80-90	245.5	1.3%	170-180	0.2	0%

Note: For other lighting combinations, please contact your local Appleton representative for more information.