

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

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 or combustible dusts are present under conditions defined by the National Electrical Code as Class I, Division 2; Class II, Division 1 and 2; and Class III
 - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
 - For Zone 2, the method of protection is AEx nA nR – Restricted Breathing/Nonsparking or AEx nR – Restricted Breathing
 - 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 in conjunction with lower wattage fixtures.
- Modular design allows scores of fixture component combinations to meet installation and lighting needs. Uses same mounting hoods and optical accessories as Mercmaster III.
- A choice of heat-resistant prismatic glass refractors (NEMA I, III or V) or heat-resistant globes which thread directly into ballast housing. Photometrics available upon request – contact your local sales representative.
- Standard dome or 30° angle reflectors made of fiberglass reinforced white polyester. Highly resistant to corrosive atmospheres.
- Accommodates medium base lamps.
- A wide range of voltages available (120 to 600 Volt) and ballast types (Reactor, CWA and Super CWA).
- Medium base lamp type and watts:
 - HPS 50 W-150 W
 - PSMH 175 W
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All Mercmaster III mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kits).
- Fixtures are for use in Class I, Zone 2 hazardous locations.
- The AEx nA nR factory sealed Mercmaster III prevents vapors and gases from entering the globe chamber. There are no seals or putty required which will reduce installation time and installation errors.



Low Profile Mercmaster III with Prismatic Globe and Guard

Standard Materials

- Mounting hoods, bodies and guard: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Reflectors: Fiberglass reinforced white polyester
- Globes and Refractors: heat-resistant prismatic glass

Standard Finishes

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

Options

- Quartz Auxiliary comes to full brightness immediately and remains lit until the HID lamp attains 60-70% of full illumination. Quartz Auxiliary supplied with relay switch and socket to accept 120 V quartz double-contact bayonet base lamp (not included). Add suffix **-E** ①.
- Guards with gray epoxy painted to match fixtures, supplied with stainless steel screws. Add suffix **-G** before voltage suffix.
- Hot Restrike to restrike HPS lamp immediately when power is restored after a momentary power interruption. Add suffix **-R**.
- Smart Starter incorporates a 1-1/2 minute timer and performs as a conventional starter to normally start lamp. Removes itself from circuit if lamp burns out or is removed from socket. Eliminates starter failures caused by prolonged operation with cycling or failing lamps and simplifies finding their location, reducing maintenance and repair costs. Available for all fixtures. Add suffix **-S**.
- AEx nA nR fixtures, add suffix **-Z2**.
- AEx nR fixtures, add suffix **-ZB**.
- Reflectors are available as standard dome and 30° angle polyester. Order separately.

NEC/CEC Certifications and Compliances ②

- cULus Listed: E10444
- UL Standard: ANSI/UL 844, 1598, 60079-0, 60079-15, Marine Type Electric Fixtures Outside Type (Salt Water)
- CSA Certified: 025428
- CSA Standard: CSA C22.2 No. 9, C22.2 No. 137; CAN/CSA E60079-0, E60079-15

Related Products

- Photocells for classified use are available, see *PCD2 Series*.

① Fixtures equipped with quartz auxiliary lamp do not comply with NEC/CEC requirements and are not suitable for use in classified locations.

② Compliance data varies for specific fixtures. Consult Appleton regarding suitability of specific fixtures for a particular application.

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Illustrated Features



High Temperature Sockets

Medium base high-temperature porcelain sockets.

Aluminum Inner Reflector

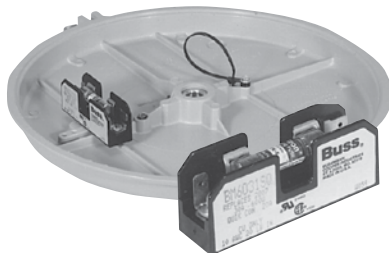
Solid aluminum inner reflector (for refractor ballast housings only) improves photometric efficiency.

Globe Chamber

Completely sealed from the ballast housing and outside vapors/air (nR).

Electrical Protection

Ground wire provided to bond mounting hood to ballast housing.



Fuses

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

Photocell

Available for all fixtures except cone and ceiling mount. Installs through knock-out in mounting hood. Provides continuous ON-OFF dusk-to-dawn control.



Vented Reflectors

Reflectors are thick, tough fiberglass-reinforced white polyester, vented for cooler operation. Quickly attach with furnished stainless steel screws.

Stainless Steel Inserts

Ballast bodies have stainless steel threaded inserts to receive stainless steel screws for reflectors and guard. Prevents "freezing", allowing guards and reflectors to be easily removed and replaced at any time, without damage to the housing.

Epoxy Finish

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

Prismatic Glass Globes and Refractors

Heat-resistant globes and refractors thread directly into ballast housing and seal against a high-temperature silicone rubber gasket.



"Safety" High Hinge

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



Ballast Assembly

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

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.

Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from #8 to #24 AWG.



Cooler Operating Cone Hood

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



Stainless Steel Latch Assembly

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

Appleton®

HID/AREA: NEC/CEC ENCLOSED AND GASKETED

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

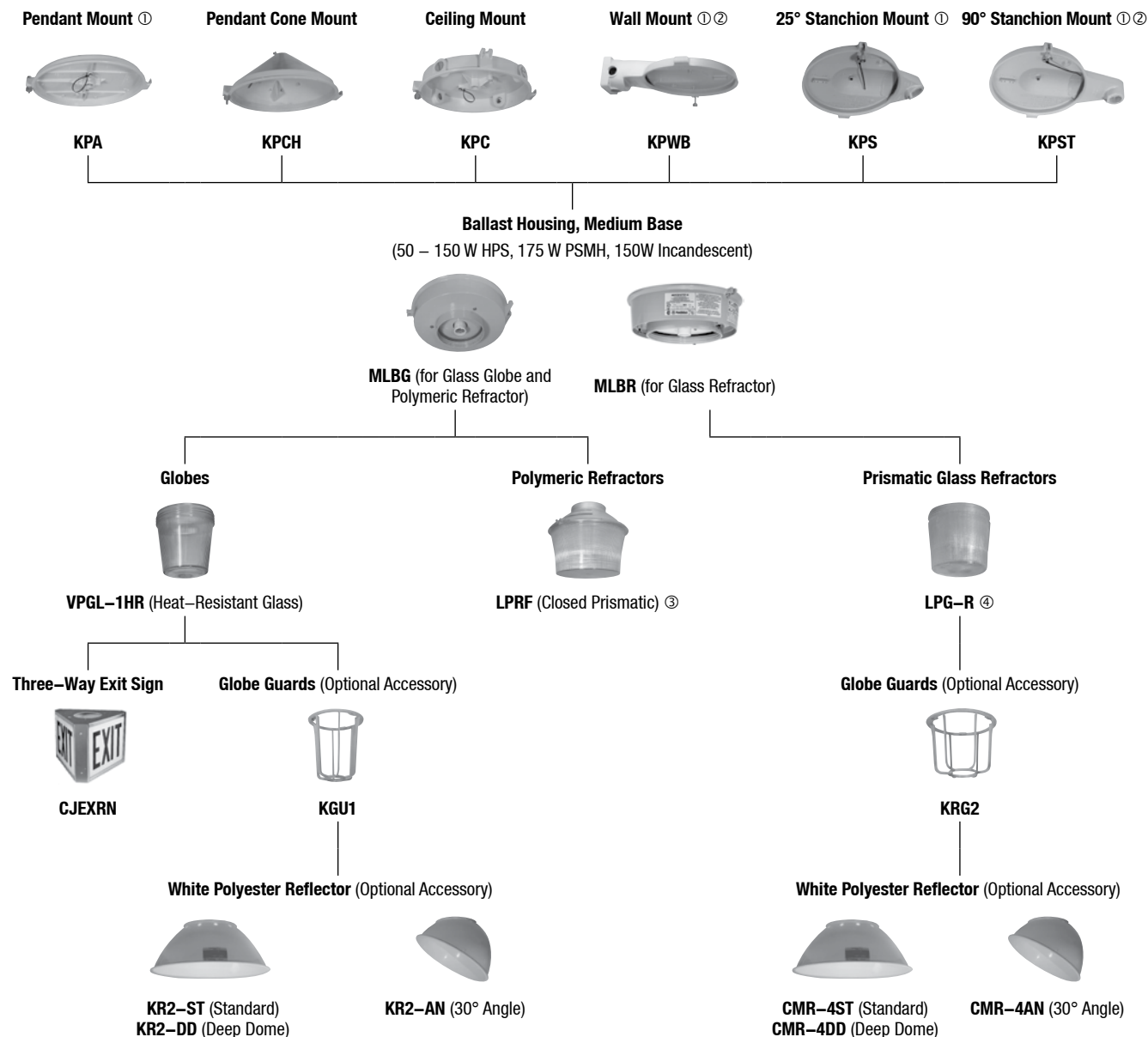
NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Mercmaster III Low Profile Family Tree



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

② Standard and deep dome reflectors may interfere with bottom conduit entry if used with KPST and KPWB mounting hoods..

③ Available in NEMA Type II, III, IV and V. Polymeric Refractor suitable for Class II, Groups F and G, NEMA 4X and Marine Type Electric Fixtures Outside Type (Salt Water) only (100 W HPS Max.).

④ Available in NEMA Type I, III and V.

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

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

Catalog Numbering Guide

ML	A	L	15	2	G1	G	MT	R	Z2
Series: ML - Mercmaster III Low Profile		Lamp Type: I - Incandescent L - High Pressure Sodium P - Pulse Start Metal Halide		Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion		Guard Options: G - Cast Guard N - No Guard		Options: E - Emergency Quartz ⑤ F - Fuse Kit (Specify Voltage) R - Hot Restrike ③ S - Smart Starter ④ H1 - Photocontrol 120 V H2 - Photocontrol 208 V H3 - Photocontrol 240 V H4 - Photocontrol 277 V D - E-27 Export Socket <i>Optional Fusing</i> ⑥ FN - 120 V FP - 208 V FS - 240 V FT - 277 V FF - 480 V	
	Mounting: A - Pendant (rigid mounting) C - Ceiling D - Pendant Cone Hood F - Pendant (flexible mounting) R - 90° Stanchion S - 25° Stanchion W - Wall	Wattage: 10 - 100 W HPS 15 - 150 W HPS and 60-150 W max. Incandescent 17 - 175 W PSMH 50 - 50 W HPS 70 - 70 W HPS		Optical Assembly: ② G1 - Globe J1 - NEMA I Glass Refractor J3 - NEMA III Glass Refractor J5 - NEMA V Glass Refractor P2 - NEMA II Polymeric Refractor P3 - NEMA III Polymeric Refractor P4 - NEMA IV Polymeric Refractor P5 - NEMA V Polymeric Refractor		Voltage: ① LB - Incandescent, 120, 60 Hz MT - 120/208/240/277, 60 Hz 5MT - 120/208/240/ 277/480, 60 Hz 48 - 480, 60 Hz 125 - 120, 50 Hz 225 - 225, 50 Hz 226 - 220, 60 Hz 236 - 230, 60 Hz 245 - 240, 50 Hz 246 - 240, 60 Hz		Suffix: Z2 - Zone 2 suffix (required for AEx nA nR rating) ZB - Zone 2 suffix (required for AEx nR)	

① Other voltages, frequencies available – contact your local sales representative. Voltages shown are limited to specific combinations; refer to following pages.

② Polymeric Refractor suitable for Class II, Groups F and G, NEMA 4X and Marine Type Electric Fixtures Outside Type (Salt Water) only (100 W HPS Max.).
Reflectors ordered separately.

③ Available for 50-150 W HPS fixtures only.

④ Available for HPS or PSMH fixtures.

⑤ Fixtures equipped with quartz auxiliary lamp do not comply with NEC/CEC requirements and are not suitable for use in classified locations

⑥ Optional fusing is available for use with MT, 5MT and 48 voltage suffixes ONLY.

Mercmaster™ III Low Profile Luminaires

Class I, Division 2; Class II, Division 1; Simultaneous exposure to hazardous conditions in both classifications

Temperature identification numbers of Mercmaster III Low Profile High Pressure Sodium and Pulse Start Metal Halide

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Lamp		Supply Wire Min.	Ambient Temp.	Class I, Division 2			Class II, Division 1 Groups E, F and G			Simultaneous Exposure Class I, Division 2 / Class II, Division 1		
Watts	Type	Temp. °C (°F)	°C (°F)	Globe	Reflector	Refractor	Globe	Reflector	Refractor	Globe	Reflector	Refractor
50	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3B	T4A	T4A	T5	T3	T3	T3
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3A	T4A	T4A	T4A	T2D	T2D	T2D
		90 °C (194 °F)	65 °C (149 °F)	T3	T3	T3A	T4	T4	T4A	T2C	T2C	T2C
70	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	T4	T4	T5	T2B	T2B	T2D
		90 °C (194 °F)	55 °C (131 °F)	T2D	T2D	T3	T3C	T3C	T4A	T2B	T2B	T2C
		90 °C (194 °F)	65 °C (149 °F)	—	—	T3	—	—	T4	—	—	T2B
100	HPS	90 °C (194 °F)	40 °C (104 °F)	T2C	T2C	T2D	T4	T4	T4A	T2B	T2B	T2B
		90 °C (194 °F)	55 °C (131 °F)	T2B	T2B	T2C	T3C	T3C	T4	T2A	T2A	T2A
		90 °C (194 °F)	65 °C (149 °F)	—	—	—	—	—	—	—	—	—
150	HPS	90 °C (194 °F)	40 °C (104 °F)	T2A	T2A	T2B	T3A ①	—	T4	325	—	T2
175	PSMH	105 °C (221 °F)	40 °C (104 °F)	350	350	325	—	—	T3B	—	—	T1
60	Inc.	90 °C (194 °F)	40 °C (104 °F)	T3B	T3B	T3C	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T3A	T3A	T3C	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	T3A	T3A	T3C	—	—	—	—	—	—
100	Inc.	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	T2D	T2D	T3	—	—	—	—	—	—
150	Inc.	90 °C (194 °F)	40 °C (104 °F)	T2D	T2D	T3	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T2B	T2B	T2D	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	T2B	T2B	T2D	—	—	—	—	—	—

“T” Numbers Represent the Maximum Lamp Temperature for Class I, Division 2 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)	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
Temp. Range (°F)	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 are for Groups E and F only.

Mercmaster™ III Low Profile Luminaires

Class I, Zone 2, AEx nA nR IIC, AEx nR IIC IP66, NEMA 4X

Temperature identification numbers of Mercmaster III Zone 2 Low Profile High Pressure Sodium and Pulse Start Metal Halide.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Lamp				Class I, Zone 2 AEx nA nR IIC			Class I, Zone 2 AEx nR IIC		
Watts	Type	Supply Wire Temp. °C (°F)	Ambient Temp. °C (°F)	Globe	Globe w/ Reflector	Refractor	Globe	Globe w/ Reflector	Refractor
50	HPS	90 °C (194 °F)	40 °C (104 °F)	T6	T6	T6	T6	T6	T6
		90 °C (194 °F)	55 °C (131 °F)	T5	T5	T5	T5	T5	T5
		90 °C (194 °F)	65 °C (149 °F)	T4	T4	T5	T4	T4	T5
70	HPS	90 °C (194 °F)	40 °C (104 °F)	T5	T5	T5	T5	T5	T5
		90 °C (194 °F)	55 °C (131 °F)	T4	T4	T4	T4	T4	T4
		90 °C (194 °F)	65 °C (149 °F)	—	—	T4	—	—	T4
100	HPS	90 °C (194 °F)	40 °C (104 °F)	T4	T4	T4	T4	T4	T4
		90 °C (194 °F)	55 °C (131 °F)	T4	T4	T4	T4	T4	T4
150	HPS	90 °C (194 °F)	40 °C (104 °F)	T4	T4	T4	T4	T4	T4
175	PSMH	105 °C (221 °F)	40 °C (104 °F)	T3	T3	T4	T3	T3	T4

“T” Numbers represent the maximum surface temperature for luminaires with AEx nA nR and AEx nR rating:

The “T” number is established by separately determining the maximum temperature of the globe surface and ballast compartment. The hotter of the two is taken to determine the “T” number for the overall fixture.

“T” Number	T1	T2	T3	T4	T5	T6
Temp. Range (°C)	301-450	201-300	136-200	101-135	86-100	85
Temp. Range (°F)	547-842	394-572	277-392	214-275	187-212	185

Appleton®

HID/AREA: NEC/CEC ENCLOSED AND GASKETED

Mercmaster™ III Low Profile Luminaires

50 W – 150 W HPS

High Power Factor (min. P.F. 90%). Medium base lamps.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

			Hub Size (Inches)	Catalog Numbers ③④⑤	
Lamp Type			Lamp Watts	With Globe	With Type V 8" Refractor ②
Pendant — One Hub, Rigid Mounting ①					
	HPS	50	3/4 1	MLAL502G1N MLAL503G1N	MLAL502J5N MLAL503J5N
	HPS	70	3/4 1	MLAL702G1N MLAL703G1N	MLAL702J5N MLAL703J5N
	HPS	100	3/4 1	MLAL102G1N MLAL103G1N	MLAL102J5N MLAL103J5N
	Shown with Globe and Optional Guard	HPS	150	3/4 1	MLAL152G1N ⑥ MLAL153G1N ⑥
					MLAL152J5N ⑥ MLAL153J5N ⑥
Pendant Cone — One Hub, Rigid Mounting					
	HPS	50	3/4 1	MLDL502G1N MLDL503G1N	MLDL502J5N MLDL503J5N
	HPS	70	3/4 1	MLDL702G1N MLDL703G1N	MLDL702J5N MLDL703J5N
	HPS	100	3/4 1	MLDL102G1N MLDL103G1N	MLDL102J5N MLDL103J5N
	Shown with Refractor	HPS	150	3/4 1	MLDL152G1N ⑥ MLDL153G1N ⑥
					MLDL152J5N ⑥ MLDL153J5N ⑥
Ceiling — Five Hubs, Four Close-up Plugs					
	HPS	50	3/4 1	MLCL502G1N MLCL503G1N	MLCL502J5N MLCL503J5N
	HPS	70	3/4 1	MLCL702G1N MLCL703G1N	MLCL702J5N MLCL703J5N
	HPS	100	3/4 1	MLCL102G1N MLCL103G1N	MLCL102J5N MLCL103J5N
	Shown with Globe	HPS	150	3/4 1	MLCL152G1N ⑥ MLCL153G1N ⑥
					MLCL152J5N ⑥ MLCL153J5N ⑥

① For Flexible Pendant Mount, change **A** to **F** in catalog number (except 50 W HPS).

② To order fixture with NEMA Type I or NEMA Type III refractor, change final digit **5** in catalog number to **1** or **3**.

③ For fixtures with guards, substitute a **G** for the **N** before adding voltage suffix. See following pages for accessory ordering information.

④ Add the following voltage and frequency designation before **Z2** suffix:

Voltage Suffixes												
Lamp Type	Lamp Watts	LB	MT	5MT	48	125	225	226	235	236	245	246
Inc.	150 Max.	X	—	—	—	—	—	—	—	—	—	—
HPS	50	—	X	—	—	—	X	X	—	—	X	—
HPS	70	—	X	—	X	X	X	X	—	X	X	X
HPS	100	—	X	—	X	X	X	X	—	X	X	X
HPS	150	—	X	—	X	X	X	X	—	X	X	X
PSMH	175	—	X	—	X	—	—	—	—	—	—	—
Voltages:												
LB - Incandescent, 120 V 60 Hz		48 - 480 V 60 Hz				226 - 220 V 60 Hz						
MT - 120/208/240/277 V 60 Hz		125 - 120 V 50 Hz				235 - 230 V 50 Hz				245 - 240 V 50 Hz		
5MT - 120/208/240/277/480 V 60 Hz		225 - 225 V 50 Hz				236 - 230 V 60 Hz				246 - 240 V 60 Hz		

⑤ Add **Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add **ZB** suffix for restricted breathing protection (AEx nR).

⑥ For 150 W HPS fixtures, use S-55 lamp type only.

Mercmaster™ III Low Profile Luminaires

50 W – 150 W HPS

High Power Factor (min. P.F. 90%). Medium base lamps.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

			Hub Size (Inches)	Catalog Numbers ③④⑤	
Lamp Type	Lamp Watts			With Globe	With Type V 8" Refractor ②
Wall — Five Hubs, Four Close-Up Plugs					
	HPS	50	3/4 1	MLWL502G1N MLWL503G1N	MLWL502J5N MLWL503J5N
	HPS	70	3/4 1	MLWL702G1N MLWL703G1N	MLWL702J5N MLWL703J5N
	HPS	100	3/4 1	MLWL102G1N MLWL103G1N	MLWL102J5N MLWL103J5N
	HPS	150	3/4 1	MLWL152G1N ⑥ MLWL153G1N ⑥	MLWL152J5N ⑥ MLWL153J5N ⑥
Shown with Refractor and Optional Guard					
25° Stanchion — One Hub					
	HPS	50	1-1/4 1-1/2	MLSL504G1N MLSL505G1N	MLSL504J5N MLSL505J5N
	HPS	70	1-1/4 1-1/2	MLSL704G1N MLSL705G1N	MLSL704J5N MLSL705J5N
	HPS	100	1-1/4 1-1/2	MLSL104G1N MLSL105G1N	MLSL104J5N MLSL105J5N
	HPS	150	1-1/4 1-1/2	MLSL154G1N ⑥ MLSL155G1N ⑥	MLSL154J5N ⑥ MLSL155J5N ⑥
Shown with Globe and Optional Guard					
90° Stanchion — One Hub					
	HPS	50	1-1/4 1-1/2	MLRL504G1N MLRL505G1N	MLRL504J5N MLRL505J5N
	HPS	70	1-1/4 1-1/2	MLRL704G1N MLRL705G1N	MLRL704J5N MLRL705J5N
	HPS	100	1-1/4 1-1/2	MLRL104G1N MLRL105G1N	MLRL104J5N MLRL105J5N
	HPS	150	1-1/4 1-1/2	MLRL154G1N ⑥ MLRL155G1N ⑥	MLRL154J5N ⑥ MLRL155J5N ⑥
Shown with Refractor and Optional Guard					

② To order fixture with NEMA Type I or NEMA Type III refractor, change final digit 5 in catalog number to 1 or 3.

③ For fixtures with guards, substitute a **G** for the **N** before adding voltage suffix. See following pages for accessory ordering information.

④ Add the following voltage and frequency designation before **Z2** suffix:

Lamp Type	Lamp Watts	LB	MT	5MT	48	125	Voltage Suffixes					
							225	226	235	236	245	246
Inc.	150 Max.	X	—	—	—	—	—	—	—	—	—	—
HPS	50	—	X	—	—	—	X	X	—	—	X	—
HPS	70	—	X	—	X	X	X	X	—	X	X	X
HPS	100	—	X	—	X	X	X	X	—	X	X	X
HPS	150	—	X	—	X	X	X	X	—	X	X	X
PSMH	175	—	X	—	X	—	—	—	—	—	—	—

Volages:

LB - Incandescent, 120 V 60 Hz

48 - 480 V 60 Hz

226 - 220 V 60 Hz

MT - 120/208/240/277 V 60 Hz

125 - 120 V 50 Hz

245 - 240 V 50 Hz

5MT - 120/208/240/277/480 V 60 Hz

225 - 225 V 50 Hz

236 - 230 V 60 Hz

246 - 240 V 60 Hz

⑤ Add **Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add **ZB** suffix for restricted breathing protection (AEx nR).

⑥ For 150 W HPS fixtures, use S-55 lamp type only.

Mercmaster™ III Low Profile Luminaires

175 W PSMH

High Power Factor (min. P.F. 90%). Medium base lamps.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Lamp Type		Lamp Watts	Hub Size (Inches)	Catalog Numbers ③④⑤	
				With Globe	With Type V 8" Refractor ②
Pendant — One Hub, Rigid Mounting ①					
	PSMH	175	3/4	MLAP172G1N	MLAP172J5N
			1	MLAP173G1N	MLAP173J5N
Shown with Globe and Optional Guard					
Pendant Cone — One Hub, Rigid Mounting					
	PSMH	175	3/4	MLDP172G1N	MLDP172J5N
			1	MLDP173G1N	MLDP173J5N
Shown with Refractor					
Ceiling — Five Hubs, Four Close-up Plugs					
	PSMH	175	3/4	MLCP172G1N	MLCP172J5N
			1	MLCP173G1N	MLCP173J5N
Shown with Globe					

① For Flexible Pendant Mount, change **A** to **F** in catalog number (except 50 W HPS).

② To order fixture with NEMA Type I or NEMA Type III refractor, change final digit **5** in catalog number to **1** or **3**.

③ For fixtures with guards, substitute a **G** for the **N** before adding voltage suffix. See following pages for accessory ordering information.

④ Add the following voltage and frequency designation before **Z2** suffix:

Lamp Type	Lamp Watts	LB	MT	5MT	48	125	225	226	235	236	245	246
Inc.	150 Max.	X	—	—	—	—	—	—	—	—	—	—
HPS	50	—	X	—	—	—	X	X	—	—	X	—
HPS	70	—	X	—	X	X	X	X	—	X	X	X
HPS	100	—	X	—	X	X	X	X	—	X	X	X
HPS	150	—	X	—	X	X	X	X	—	X	X	X
PSMH	175	—	X	—	X	—	—	—	—	—	—	—

Voltages:

LB - Incandescent, 120 V 60 Hz

MT - 120/208/240/277 V 60 Hz

5MT - 120/208/240/277/480 V 60 Hz

48 - 480 V 60 Hz

125 - 120 V 50 Hz

225 - 225 V 50 Hz

226 - 220 V 60 Hz

235 - 230 V 50 Hz

236 - 230 V 60 Hz

245 - 240 V 50 Hz

246 - 240 V 60 Hz

⑤ Add **Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add **ZB** suffix for restricted breathing protection (AEx nR).

Mercmaster™ III Low Profile Luminaires

50 W - 175 W PSMH

High Power Factor (min. P.F. 90%). Medium base lamps.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Lamp Type	Lamp Watts	Hub Size (Inches)	Catalog Numbers ③④⑤	
			With Globe	With Type V 8" Refractor ②

Wall — Five Hubs, Four Close-Up Plugs



PSMH

175

3/4

MLWP172G1N

MLWP172J5N

1

MLWP173G1N

MLWP173J5N

Shown with Refractor and Optional Guard

25° Stanchion — One Hub



PSMH

175

1-1/4

MLSP174G1N

MLSP174J5N

1-1/2

MLSP175G1N

MLSP175J5N

Shown with Globe and Optional Guard

90° Stanchion — One Hub



PSMH

175

1-1/4

MLRP174G1N

MLRP174J5N

1-1/2

MLRP175G1N

MLRP175J5N

Shown with Refractor and Optional Guard

② To order fixture with NEMA Type I or NEMA Type III refractor, change final digit 5 in catalog number to 1 or 3.

③ For fixtures with guards, substitute a G for the N before adding voltage suffix. See following pages for accessory ordering information.

④ Add the following voltage and frequency designation before Z2 suffix:

Lamp Type	Lamp Watts	LB	MT	5MT	48	125	Voltage Suffixes					
							225	226	235	236	245	246
Inc.	150 Max.	X	—	—	—	—	—	—	—	—	—	—
HPS	50	—	X	—	—	—	X	X	—	—	X	—
HPS	70	—	X	—	X	X	X	X	—	X	X	X
HPS	100	—	X	—	X	X	X	X	—	X	X	X
HPS	150	—	X	—	X	X	X	X	—	X	X	X
PSMH	175	—	X	—	X	—	—	—	—	—	—	—

Voltages:

LB - Incandescent, 120 V 60 Hz

48 - 480 V 60 Hz

226 - 220 V 60 Hz

MT - 120/208/240/277 V 60 Hz

125 - 120 V 50 Hz

235 - 230 V 50 Hz

245 - 240 V 50 Hz

5MT - 120/208/240/277/480 V 60 Hz

225 - 225 V 50 Hz

236 - 230 V 60 Hz

246 - 240 V 60 Hz

⑤ Add Z2 suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add ZB suffix for restricted breathing protection (AEx nR).

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Mounting Hoods

Description		Hub Size (Inches)	Catalog Number
Pendant			
	One Hub, Rigid Mounting	3/4	KPA-75
		1	KPA-100
Pendant — Flexible			
	One Hub, Flexible Mounting	3/4	KPAF-75
		1	KPAF-100
Pendant Cone			
	One Hub, Rigid or Flexible 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

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Ballast Bodies



Ballast Body for Glass Refractor

High Pressure Sodium
High Power Factor (Min. P.F. 90%)



Ballast Body for Glass Globe or Polymeric Refractor

Pulse Start Metal Halide
Super Constant Wattage Autotransformer (Min. P.F. 90%)

Lamp Type	Lamp Watts	Catalog Number ④		Voltage Suffixes										
		For Globe	For Refractor	LB	MT	5MT	48	125	225	226	235	236	245	246
Inc.	150 Max.	MLBG15I	MLBR15I	X	—	—	—	—	—	—	—	—	—	—
HPS	50	MLBG50L ①②	MLBR50L ①②	—	X	—	—	—	X	X	—	—	X	—
HPS	70	MLBG70L ①②	MLBR70L ①②	—	X	—	X	X	X	X	—	X	X	X
HPS	100	MLBG10L ①②	MLBR10L ①②	—	X	—	X	X	X	X	—	X	X	X
HPS	150	MLBG15L ①②	MLBR15L ①②	—	X	—	X	X	X	X	—	X	X	X
PSMH	175	MLBG17P ②③	MLBR17P ②③	—	X	—	X	—	—	—	—	—	—	—

Voltages:

LB - Incandescent, 120 V 60 Hz

MT - 120/208/240/277 V 60 Hz

5MT - 120/208/240/277/480 V 60 Hz

48 - 480 V 60 Hz

125 - 120 V 50 Hz

225 - 225 V 50 Hz

226 - 220 V 60 Hz

235 - 230 V 50 Hz

236 - 230 V 60 Hz

245 - 240 V 50 Hz

246 - 240 V 60 Hz

① After voltage suffix add: **-S** for Smart Starter, **-R** for ballast body with Hot Restrike Ignitor.

② Add **-E** after voltage suffix for ballast body with provision for Quartz Emergency Light. Not suitable for hazardous locations.

③ After voltage suffix add: **-S** for Smart Starter.

④ Add **-Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add **-ZB** suffix for restricted breathing protection (AEx nR).

Mercmaster™ III Low Profile Luminaires

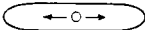
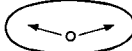
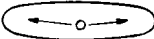
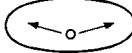
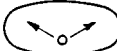
High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2, AEx nA nR IIC (Z2)
 Class I, Zone 2, AEx nR IIC (ZB)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

NEC/CEC:
 Simultaneous Exposure
 (Class I, Division 2/Class II, Division 1)
 Fixtures Outside Type (Salt Water)
 Type 4X
 IP66

Accessories and Replacement Parts

		Description	Catalog Number
Prismatic Glass Globes — Heat-Resistant			
		Clear	VPGL-1HR
Glass Globe			
Light Distribution		IES/NEMA Distribution Curves	Catalog Number
Closed Prismatic Glass Refractors — All Heat-Resistant			
	NEMA Type I		LPG-R1
	NEMA Type III		LPG-R3
	NEMA Type V		LPG-R5
Closed Prismatic Polymeric Refractors — For Use with PSMH Lamps Only			
100 W max. +40 °C (+104 °F) max. ambient temperature. Suitable for Class II, Division 1 and 2, Groups F, G; NEMA 4X, UL 1598A Marine Type Electric Fixtures Outside Type (Salt Water)			
	NEMA Type II		LPRF-2CP
	NEMA Type III		LPRF-3CP
	NEMA Type IV		LPRF-4CP
	NEMA Type V		LPRF-5CP
Polymeric Refractor			
		Description	Catalog Number
White Polyester Reflectors			
	For Globe Fixtures	Standard Dome	KR2-ST
		Deep Dome	KR2-DD ①
		30° Angle	KR2-AN
	For Glass Refractor Fixtures	Standard Dome	CMR-4ST ②
		Deep Dome	CMR-4DD ①
		30° Angle	CMR-4AN
Standard Dome			
30° Angle			
Guards			
		Globe Guard Refractor Guard	KGU1 KRG2
Globe Guard			
Refractor Guard			
Replacement Globe Gaskets — Silicone Rubber			
		Globe Gasket Refractor Gasket	VPGL-GK KRF-GK
Globe Gaskets			

① Dark Skies Compliant.

② Standard and deep dome reflectors may interfere with bottom conduit entry if used with KPST and KPWB mounting hoods.

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
50 Watt High Pressure Sodium				
120	HX-HPF	0.65	0.61	66
208	HX-HPF	0.37	0.35	66
240	HX-HPF	0.32	0.31	66
277	HX-HPF	0.30	0.26	66
70 Watt High Pressure Sodium				
120	HX-HPF	0.90	0.82	94
208	HX-HPF	0.50	0.48	94
240	HX-HPF	0.44	0.41	94
277	HX-HPF	0.35	0.36	94
480	HX-HPF	0.21	0.21	94
100 Watt High Pressure Sodium				
120	HX-HPF	1.30	1.15	130
208	HX-HPF	0.76	0.67	130
240	HX-HPF	0.66	0.60	130
277	HX-HPF	0.60	0.52	130
480	HX-HPF	0.33	0.31	135
150 Watt High Pressure Sodium ②				
120	HX-HPF	2.00	1.70	188
208	HX-HPF	1.15	0.95	188
240	HX-HPF	1.00	0.85	188
277	HX-HPF	0.85	0.72	188
480	HX-HPF	0.50	0.47	189

Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
175 Watt Pulse Start Metal Halide				
120	CWA	0.80	1.80	198
208	CWA	0.50	1.00	198
240	CWA	0.40	0.90	198
277	CWA	0.40	0.80	198
480	CWA	0.15	0.45	196

Fuse Kit for Field Installation

Lamp Watts	Volts	Fuse Quantity Required	Fuse Kit Catalog Number	
50W	120	1	F5	—
	208	2	F3	—
	240	2	F3	—
	277	1	F2	—
70W	120	1	F5	—
	208	2	F3	—
	240	2	F3	—
	277	1	F2	—
100W	480	2	F2	—
	120	1	F8	—
	208	2	F5	—
	240	2	F5	—
150W	277	1	F3	—
	480	2	F3	—
	120	1	F10	—
	208	2	F5	—
175W	240	2	F5	—
	277	1	F5	—
	480	2	F3	—
	120	1	—	F5
175W	208	2	—	F3
	240	2	—	F3
	277	1	—	F2
	480	2	—	F3

① C.W.A. – Constant Wattage Autotransformer. HX-HPF – High Reactance High Power Factor Autotransformer. Super C.W.A. – Super Constant Wattage Autotransformer.
② 150 W HPS units equipped with ballasts to operate 55 V lamps only.

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

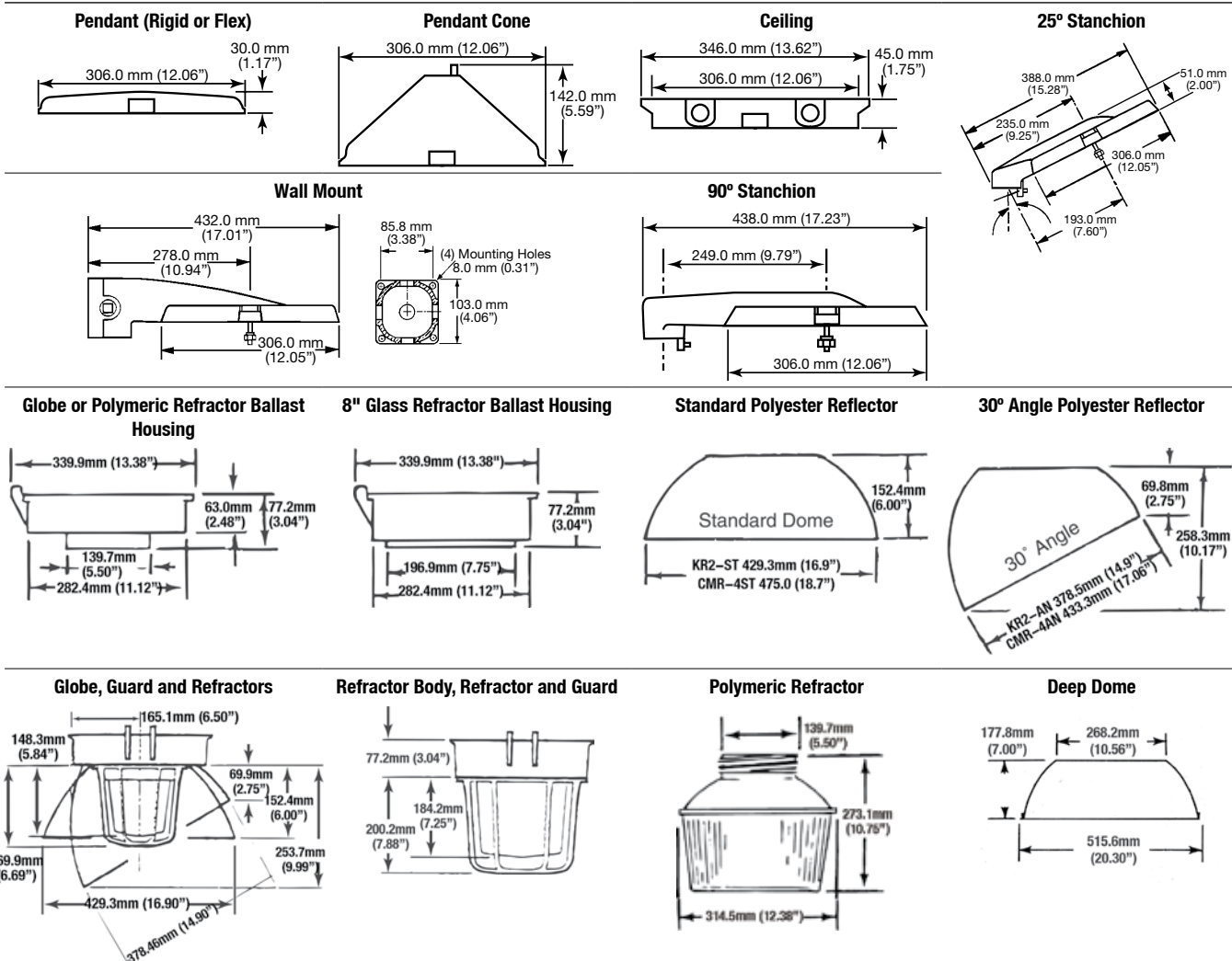
NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Dimensions in Millimeters (Inches)



Mercmaster III Low Profile Ballast and Accessory Weights ①

Globe Housing Ballast Wt. kg (lb)			Refractor Housing Ballast Wt. kg (lb)		Mounting Hoods	Wt. Kg (Lb)	Refractors, Globes, Guards and Reflectors	Wt. Kg (Lb)
Watts	HPS	PSMH	HPS	PSMH				
50	3.3 (7.28)	—	3.5 (7.72)	—	Pendant	1.0 (2.20)	8" Glass Refractor	2.4 (5.29)
70	3.7 (8.16)	—	4.0 (8.82)	—	Pendant Cone	1.1 (2.43)	Glass Globe	1.7 (3.75)
100	4.4 (9.70)	—	4.6 (10.14)	—	Ceiling	1.4 (3.09)	Refractor Guard	0.5 (1.10)
150	4.9 (10.80)	—	5.1 (11.24)	—	Wall	1.8 (3.97)	Globe Guard	0.5 (1.10)
175	—	5.0 (11.02)	—	5.2 (11.46)	25° Stanchion	1.5 (3.31)	Standard Dome	1.1 (2.43)
					90° Stanchion	1.7 (3.75)	Deep Dome	2.3 (5.07)
							30° Angle	1.1 (2.43)
							Polymeric Refractor	1.1 (2.43)

① Weights are approximate. Add 0.1 kg (0.25 lbs) for Quartz option.

PCD2 Series Factory Sealed Hazardous Location Photocontrol

For use in Class I, Division 2, Groups A, B, C, D locations

Maintains Class I, Division 2 rating for Mercmaster III – Low Profile, Mercmaster III, and Mercmaster III – 400 Series Luminaires, Mercmaster LED

NEC/CEC:
Class I, Division 2, Groups A, B, C, D
NEMA 4X

Applications

- Encapsulated photocontrol provides automatic dusk-to-dawn lighting control in Class I, Division 2 locations.
- Typical applications include walkways, security areas and any other outdoor lighting application.
- For use with Mercmaster III – Low Profile, Mercmaster III, and Mercmaster III – 400 Series Luminaires.
- For remote mounting in FS Boxes.

Features

- Factory sealed design eliminates the need for an explosionproof enclosure.
- Can be easily installed in the field.
- Solid state design for performance and reliability.
- Available for 120, 208, 240, or 277 volts.

- 50-400 W HID, incandescent or fluorescent, 50/60 Hz.
- 1000 V.A. Voltage/Ampere
- Minimum time delay: 15 seconds to eliminate nuisance tripping.
- Provided with (3) 18 AWG stranded leads 152.4 mm (6.00 in) in length.
- Will fit through standard 1/2" knockout.
- Supplied with locknut and gasket.

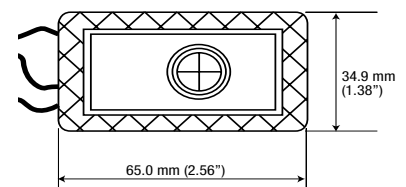
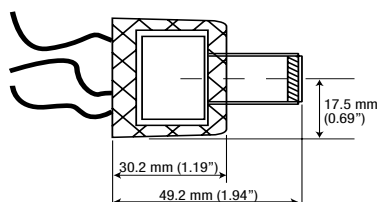
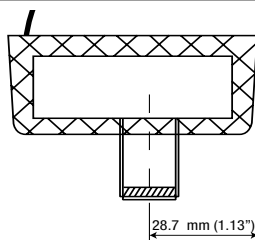
Materials

- Encapsulated with epoxy sealing compound
- FS: aluminum

NEC/CEC Certifications and Compliances

- UL Standard: 1604 – Hazardous (Classified) Locations
- cULus Recognized

	Voltage Range	Max VA	Max Current Amps	Suffix Designation Catalog Number
Factory-Installed Photocontrol - Not for ceiling or pendant cone. <i>Add to fixture catalog after voltage; i.e.: KPWBL1075MTH1.</i>				
 Mercmaster III wall mounting hood with photocontrol installed shown	120 V, 50/60 Hz	1000	—	H1
	208 V, 50/60 Hz	1000	—	H2
	240 V, 50/60 Hz	1000	—	H3
	277 V, 50/60 Hz	1000	—	H4
Photocontrol for Field Installation				
	120 V, 50/60 Hz	1000	8.3 Amp	PC120D2
	208 V, 50/60 Hz	1000	4.8 Amp	PC247D2
	240 V, 50/60 Hz	1000	4.2 Amp	
	277 V, 50/60 Hz	1000	3.6 Amp	
Photocontrol in FS Cover for Use with FS/FD Box <i>Supplied with two stainless steel screws. For neoprene gasket, order catalog number FS-GKR-1N.</i>				
	120 V, 50/60 Hz	1000	8.3 Amp	FSKA-PC120D2
	208, 50/60 Hz	1000	4.8 Amp	FSKA-PC247D2
	240 V, 50/60 Hz	1000	4.2 Amp	
	277 V, 50/60 Hz	1000	3.6 Amp	



Mercmaster™ III Low Profile Luminaires

150 W HPS

* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen). For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 100 W (9,500 lumen) HPS lamp – 0.594; for a 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen) HPS lamp – 0.25. For candlepower values of fixture with guard, multiply by – 0.95.

NEC/CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

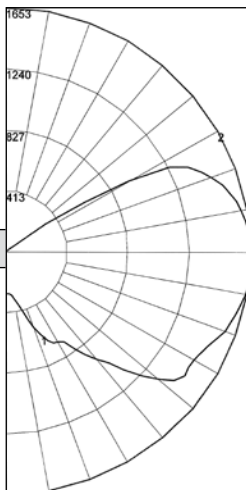
Photometric Data

Zone Lumens Total Luminaire Efficiency = 83%

0-10 28.58 CIE Type – Semi-Direct

Plane	Spacing Criteria
0-180	3.9
90-270	3.9
Diagonal	3.7

Zonal Lumen Summary				
Zone	Lumens	% Lamp	% Fixture	
0-30	4563.72	2.9	3.4	
0-40	970.35	6.1	7.3	
0-60	3159.07	19.7	23.8	
0-90	8172.49	51.1	61.5	
90-120	4755.49	29.7	35.8	
90-130	5106.74	31.9	38.4	
90-150	5111.87	31.9	38.4	
90-180	5111.87	31.9	38.5	
0-180	13284.37	83.0	100.0	



REPORT NUMBER: **ML15LG**

Lamps: 150 W High Pressure Sodium with Globe only *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

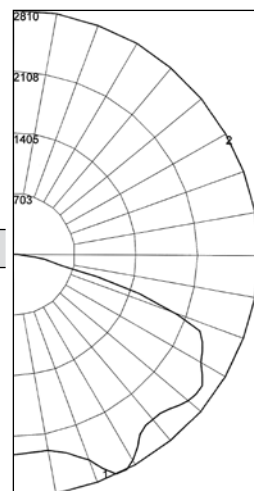
% Ceiling Rcc		80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
	0	91	91	91	91	85	85	85	85	75	75	75	65	65	65	55	55	55	55	55	55	51
	1	77	71	66	61	72	66	61	57	57	53	49	48	45	42	40	37	35	31	31	31	31
	2	68	59	51	45	63	55	48	42	46	41	36	39	34	31	32	28	25	21	21	21	21
	3	61	50	42	35	56	46	39	33	39	33	28	32	27	23	26	22	19	16	16	16	16
	4	55	43	35	28	50	40	32	26	34	27	22	28	23	18	22	18	15	12	12	12	12
	5	50	38	29	23	46	35	27	21	29	23	18	24	19	15	19	15	12	9	9	9	9
	6	46	33	25	19	42	31	23	18	26	20	15	21	16	12	17	13	10	7	7	7	7
	7	42	30	22	16	38	27	20	15	23	17	13	19	14	10	15	11	8	6	6	6	6
	8	39	27	19	14	36	25	18	13	21	15	11	17	12	9	14	10	7	5	5	5	5
	9	36	24	17	12	33	22	16	11	19	13	9	16	11	8	13	9	6	4	4	4	4
	10	33	22	15	11	31	20	14	10	17	12	8	15	10	7	12	8	5	4	4	4	4

Zone Lumens Total Luminaire Efficiency = 73.2%

0-10 219.96 CIE Type – Direct

Plane	Spacing Criteria
0-180	1.64
90-270	1.64
Diagonal	1.88

Zonal Lumen Summary				
Zone	Lumens	% Lamp	% Fixture	
0-30	2171.29	13.6	18.5	
0-40	3784.97	23.7	32.3	
0-60	8086.62	50.5	69.1	
0-90	11708.37	73.2	100.0	
90-120	1.23	0.0	0.0	
90-130	1.23	0.0	0.0	
90-150	1.23	0.0	0.0	
90-180	1.23	0.0	0.0	
0-180	11709.6	73.2	100.0	



REPORT NUMBER: **ML15LST**

Lamps: 150 W High Pressure Sodium with Standard Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc		80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
	0	87	87	87	87	85	85	85	85	81	81	81	78	78	78	75	75	75	73	73	73	73
	1	79	75	71	68	77	73	70	67	70	67	65	67	65	63	64	62	61	59	59	59	59
	2	70	63	58	53	68	62	57	52	59	55	51	57	53	50	55	52	49	47	47	47	47
	3	63	54	48	42	61	53	47	42	51	46	41	49	44	40	47	43	40	38	38	38	38
	4	57	47	40	35	55	46	39	34	44	38	34	42	37	33	41	36	33	31	31	31	31
	5	52	41	34	29	50	41	34	29	39	33	28	37	32	28	36	31	28	26	26	26	26
	6	48	37	30	24	46	36	29	24	35	29	24	33	28	24	32	27	24	22	22	22	22
	7	44	33	26	21	42	32	26	21	31	25	21	30	25	21	29	24	20	19	19	19	19
	8	41	30	23	18	39	29	23	18	28	22	18	27	22	18	26	22	18	16	16	16	16
	9	38	27	21	16	37	27	20	16	26	20	16	25	20	16	24	19	16	14	14	14	14
	10	35	25	19	15	34	24	18	14	24	18	14	23	18	14	22	18	14	13	13	13	13

Mercmaster™ III Low Profile Luminaires

150 W HPS

* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen). For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 100 W (9,500 lumen) HPS lamp – 0.594; for a 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen) HPS lamp – 0.25. For candlepower values of fixture with guard, multiply by – 0.95.

NEC/CEC:

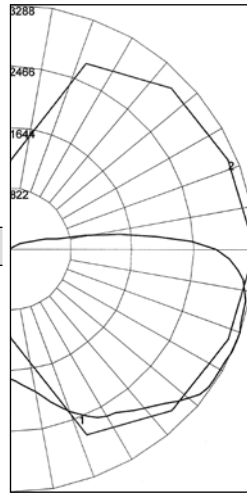
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:

Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Photometric Data

Zone	Lumens	Total Luminaire Efficiency = 68.4%											
0-10	168.01	CIE Type – Direct											
10-20	536.92	<table><tr><th>Plane</th><th>Spacing Criteria</th></tr><tr><td>0-180</td><td>2.3</td></tr><tr><td>90-270</td><td>2.0</td></tr><tr><td>Diagonal</td><td>1.8</td></tr></table>				Plane	Spacing Criteria	0-180	2.3	90-270	2.0	Diagonal	1.8
Plane	Spacing Criteria												
0-180	2.3												
90-270	2.0												
Diagonal	1.8												
20-30	972.38												
30-40	1342.99	0-180	2.3										
40-50	1625.08	90-270	2.0										
50-60	1721.88	Diagonal	1.8										
60-70	1586.98												
70-80	1369.71	Zonal Lumen Summary											
80-90	995.76	Zone	Lumens	% Lamp	% Fixture								
90-100	461.94	0-30	1677.30	10.5	15.3								
100-110	127.24	0-40	3020.29	18.9	27.6								
110-120	27.54	0-60	6367.25	39.8	58.2								
120-130	4.31	0-90	10319.70	64.5	94.3								
130-140	2.68	90-120	616.71	3.9	5.6								
140-150	0.00	90-130	621.02	3.9	5.7								
150-160	0.00	90-150	623.70	3.9	5.7								
160-170	0.00	90-180	623.70	3.9	5.7								
170-180	0.00	0-180	10943.41	68.4	100.0								



REPORT NUMBER: **ML15LAN**

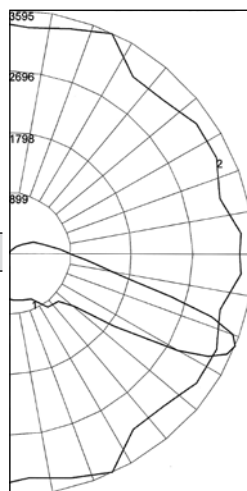
Lamps: 150 W High Pressure Sodium with
30° Angle Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc		80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
	0	80	80	80	80	78	78	78	78	74	74	74	70	70	70	66	66	66	64			
	1	70	66	62	58	68	64	60	57	60	57	54	57	54	52	54	52	50	48			
	2	63	56	50	45	60	54	49	44	51	46	42	48	44	41	45	42	39	37			
	3	56	48	41	36	54	46	40	35	44	38	34	41	37	33	39	35	32	30			
	4	51	42	35	29	49	40	34	29	38	32	28	36	31	27	34	30	26	24			
	5	47	37	30	24	45	36	29	24	34	28	23	32	27	23	30	26	22	20			
	6	43	33	26	21	41	32	25	20	30	24	20	28	23	19	27	22	19	17			
	7	39	29	23	18	38	28	22	18	27	21	17	26	21	17	24	20	16	15			
	8	37	26	20	16	35	26	20	15	24	19	15	23	18	15	22	18	14	13			
	9	34	24	18	14	33	23	18	14	22	17	13	21	17	13	20	16	13	11			
	10	32	22	16	12	31	22	16	12	21	15	12	20	15	12	19	15	11	10			

Zone	Lumens	Total Luminaire Efficiency = 77.6%																																											
0-10	16.51	CIE Type – Semi-Direct																																											
10-20	135.03	<table><tr><th>Plane</th><th>Spacing Criteria</th></tr><tr><td>0-180</td><td>2.22</td></tr><tr><td>90-270</td><td>2.20</td></tr><tr><td>Diagonal</td><td>3.50</td></tr></table>				Plane	Spacing Criteria	0-180	2.22	90-270	2.20	Diagonal	3.50																																
Plane	Spacing Criteria																																												
0-180	2.22																																												
90-270	2.20																																												
Diagonal	3.50																																												
20-30	274.24																																												
30-40	463.44																																												
40-50	1125.38																																												
50-60	1688.89																																												
60-70	3137.76																																												
70-80	2421.27	Zonal Lumen Summary																																											
80-90	1145.98	<table><tr><th>Zone</th><th>Lumens</th><th>% Lamp</th><th>% Fixture</th></tr><tr><td>0-30</td><td>425.77</td><td>2.7</td><td>3.4</td></tr><tr><td>0-40</td><td>889.22</td><td>5.6</td><td>7.2</td></tr><tr><td>0-60</td><td>3703.50</td><td>23.1</td><td>29.8</td></tr><tr><td>0-90</td><td>10408.50</td><td>65.1</td><td>83.8</td></tr><tr><td>90-120</td><td>1491.78</td><td>9.3</td><td>12.0</td></tr><tr><td>90-130</td><td>1784.86</td><td>11.2</td><td>14.4</td></tr><tr><td>90-150</td><td>1998.77</td><td>12.5</td><td>14.4</td></tr><tr><td>90-180</td><td>2009.26</td><td>12.6</td><td>16.2</td></tr><tr><td>0-180</td><td>12417.76</td><td>77.6</td><td>100.0</td></tr></table>	Zone	Lumens	% Lamp	% Fixture	0-30	425.77	2.7	3.4	0-40	889.22	5.6	7.2	0-60	3703.50	23.1	29.8	0-90	10408.50	65.1	83.8	90-120	1491.78	9.3	12.0	90-130	1784.86	11.2	14.4	90-150	1998.77	12.5	14.4	90-180	2009.26	12.6	16.2	0-180	12417.76	77.6	100.0			
Zone	Lumens	% Lamp	% Fixture																																										
0-30	425.77	2.7	3.4																																										
0-40	889.22	5.6	7.2																																										
0-60	3703.50	23.1	29.8																																										
0-90	10408.50	65.1	83.8																																										
90-120	1491.78	9.3	12.0																																										
90-130	1784.86	11.2	14.4																																										
90-150	1998.77	12.5	14.4																																										
90-180	2009.26	12.6	16.2																																										
0-180	12417.76	77.6	100.0																																										
90-100	411.16																																												
100-110	632.32																																												
110-120	448.30																																												
120-130	293.08																																												
130-140	154.61																																												
140-150	59.30																																												
150-160	9.99																																												
160-170	0.49																																												
170-180	0.00																																												



REPORT NUMBER: **ML15LJ5**

Lamps: 150 W High Pressure Sodium with
8" Prismatic Glass Refractor – NEMA Type V *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc		80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
	0	89	89	89	89	86	86	86	86	79	79	79	73	73	73	68	68	68	65			
	1	76	70	65	60	72	67	62	58	61	57	54	56	53	50	51	48	46	43			
	2	66	56	49	42	62	54	47	41	49	43	38	44	39	35	40	36	32	29			
	3	58	46	38	31	54	44	36	30	40	33	27	36	30	25	32	27	23	21			
	4	51	39	30	23	48	37	29	22	33	26	21	30	24	19	27	22	17	15			
	5	46	34	25	18	43	32	24	18	29	22	16	26	20	15	23	18	13	11			
	6	42	29	21	15	40	28	20	14	25	18	13	22	16	12	20	15	11	8			
	7	39	26	18	12	36	25	17	12	22	15	11	20	14	10	18	13	9	7			
	8	36	23	15	10	33	22	15	10	20	13	9	18	12	8	16	11	7	5			
	9	33	21	14	9	31	20	13	8	18	12	8	16	11	7	15	10	6	4			
	10	31	19	12	8	29	18	12	7	17	11	7	15	10	6	13	9	5	4			

Mercmaster™ III Low Profile Luminaires

175 W PSMH

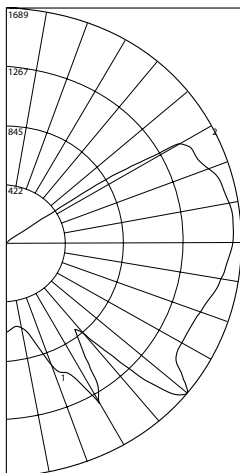
NEC/CEC:
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

NEC/CEC:
Simultaneous Exposure
(Class I, Division 2/Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Photometric Data

Total Luminaire Efficiency = 80.00%

Zonal Lumen Summary				
Zone	Lumens	Zone	Lumens	% Lamp % Fixture
0-10	58.11	0-20	273.15	1.60 2.00
10-20	215.04	0-30	778.21	4.40 5.60
20-30	505.06	0-40	1403.32	8.00 10.10
30-40	625.11	0-60	3819.52	21.80 27.40
40-50	1058.31	0-80	6857.15	39.20 49.10
50-60	1357.89	0-90	8591.61	49.10 61.50
60-70	1439.44	10-90	8533.5	48.80 61.10
70-80	1598.2	20-40	1130.17	6.50 8.10
80-90	1734.46	20-50	2188.48	12.50 15.70
90-100	1770.13	40-70	3855.64	17.40 21.80
100-110	1678.73	60-80	3037.64	17.40 21.80
110-120	1474.6	70-80	1598.2	9.10 11.40
120-130	436.54	80-90	1734.46	9.90 12.40
130-140	6.39	90-110	3448.86	19.70 24.70
140-150	1.68	90-120	4923.47	28.10 35.30
150-160	0.74	90-130	5360.01	30.60 38.40
160-170	0.16	90-150	5368.08	30.70 38.50
170-180	0.15	90-180	5369.13	30.70 38.50
		110-180	1920.27	11.00 13.80
		0-180	13960.74	79.80 100.00



REPORT NUMBER: **ML17PG**

Lamps: 175 W Pulse Start Metal Halide with Globe only *

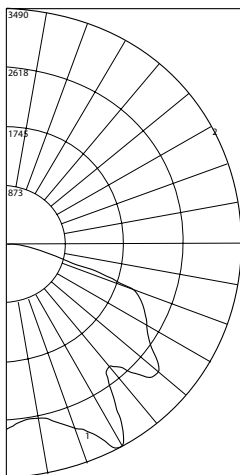
Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc		80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	88	88	88	88	88	82	82	82	82	72	72	72	62	62	62	53	53	53	49	49	49	49
1	75	69	64	60	60	70	65	60	56	55	52	49	47	44	42	39	37	25	31	31	31	31
2	66	58	51	45	45	61	54	48	42	46	41	37	39	35	31	32	29	26	22	22	22	22
3	60	49	42	35	35	55	46	39	33	39	33	29	33	28	24	27	23	20	17	17	17	17
4	54	43	35	29	29	49	40	32	27	34	28	23	28	23	20	23	19	16	13	13	13	13
5	49	38	30	24	24	45	35	28	22	30	24	19	25	20	16	20	16	13	11	11	11	11
6	45	33	26	20	20	41	31	24	19	26	20	16	22	17	14	18	14	11	9	9	9	9
7	41	30	22	17	17	38	28	21	16	24	18	14	20	15	12	16	12	9	7	7	7	7
8	38	27	20	15	15	35	25	18	14	21	16	12	18	13	10	15	11	8	6	6	6	6
9	35	24	17	13	13	33	23	16	12	19	14	10	16	12	9	13	10	7	5	5	5	5
10	33	22	16	11	11	30	21	15	11	18	13	9	15	11	8	12	9	6	5	5	5	5

Total Luminaire Efficiency = 69.00%

Zonal Lumen Summary				
Zone	Lumens	Zone	Lumens	% Lamp % Fixture
0-10	252.99	0-20	1034.2	5.90 8.60
10-20	781.21	0-30	2520.47	14.40 20.90
20-30	1486.27	0-40	4264.36	24.40 35.30
30-40	1743.89	0-60	8714.99	49.80 72.10
40-50	2109.55	0-80	11917.14	68.10 98.60
50-60	2341.08	0-90	12081.71	69.00 100.00
60-70	2194.91	10-90	11828.72	67.60 97.90
70-80	1007.24	20-40	3230.16	18.50 26.70
80-90	164.57	20-50	5339.71	30.50 44.20
90-100	0.82	40-70	6645.54	38.00 55.00
100-110	0.00	60-80	3202.15	18.30 26.50
110-120	0.00	70-80	1007.24	5.80 8.30
120-130	0.00	80-90	164.57	0.90 1.40
130-140	0.00	90-110	0.82	0.00 0.00
140-150	0.00	90-120	0.82	0.00 0.00
150-160	0.00	90-130	0.82	0.00 0.00
160-170	0.00	90-150	0.82	0.00 0.00
170-180	0.00	90-180	0.82	0.00 0.00
		110-180	0.00	0.00 0.00
		0-180	12082.53	69.00 100.00



REPORT NUMBER: **ML17PST**

Lamps: 175 W Pulse Start Metal Halide with
Standard Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc		80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	82	82	82	82	82	80	80	80	80	77	77	77	73	73	73	70	70	70	69	69	69	69
1	74	71	68	65	65	73	69	66	64	66	64	62	64	62	60	61	60	58	57	57	57	57
2	67	61	56	51	51	65	59	55	51	57	53	49	55	51	48	52	50	47	46	46	46	46
3	60	52	46	41	41	59	51	46	41	49	44	40	47	43	39	45	42	39	37	37	37	37
4	55	46	39	34	34	53	45	39	34	43	38	33	41	37	33	40	36	32	31	31	31	31
5	50	40	34	29	29	48	39	33	28	38	32	28	36	32	28	35	31	27	26	26	26	26
6	46	36	29	24	24	44	35	29	24	34	28	24	33	28	24	31	27	24	22	22	22	22
7	42	32	26	21	21	41	32	25	21	30	25	21	29	24	21	28	24	21	19	19	19	19
8	39	29	23	19	19	38	29	23	19	28	22	18	27	22	18	26	21	18	17	17	17	17
9	36	27	21	16	16	35	26	20	16	25	20	16	25	20	16	24	19	16	15	15	15	15
10	34	24	19	15	15	33	24	18	15	23	18	15	23	18	15	22	18	14	13	13	13	13

Mercmaster™ III Low Profile Luminaires

175 W PSMH

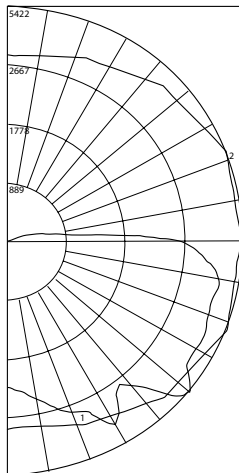
NEC/CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2, AEx nA nR IIC (Z2)
 Class I, Zone 2, AEx nR IIC (ZB)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

NEC/CEC:
 Simultaneous Exposure
 (Class I, Division 2/Class II, Division 1)
 Fixtures Outside Type (Salt Water)
 Type 4X
 IP66

Photometric Data

Total Luminaire Efficiency = 66.00%

Zonal Lumen Summary				
Zone	Lumens	Zone	Lumens	% Lamp % Fixture
0-10	205.50	0-20	855.80	4.90 7.50
10-20	650.30	0-30	2059.99	11.80 17.90
20-30	1204.19	0-40	3553.44	20.30 31.00
30-40	1493.45	0-60	7023.13	40.10 61.20
40-50	1718.01	0-80	9901.48	56.60 86.30
50-60	1751.68	0-90	10878.35	62.20 94.80
60-70	1549.56	10-90	10672.86	61.00 93.00
70-80	1328.79	20-40	2697.64	15.40 23.50
80-90	976.87	20-50	4415.65	25.20 38.50
90-100	426.94	40-70	5019.25	28.70 43.70
100-110	125.06	60-80	2878.35	16.40 25.10
110-120	26.96	70-80	1328.79	7.60 11.60
120-130	4.22	80-90	976.87	5.60 8.50
130-140	5.33	90-110	551.99	3.20 4.80
140-150	4.48	90-120	578.96	3.30 5.00
150-160	2.90	90-130	583.18	3.30 5.10
160-170	1.65	90-150	592.99	3.40 5.20
170-180	0.54	90-180	598.09	3.40 5.20
		110-180	46.09	0.30 0.40
		0-180	11476.44	65.60 100.00



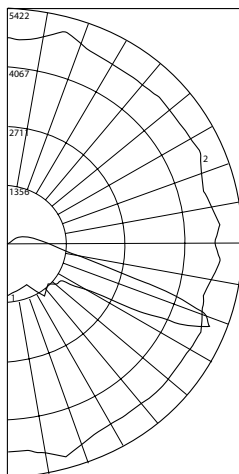
REPORT NUMBER: **ML17PAN**

Lamps: 175 W Pulse Start Metal Halide with
 30° Angle Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method																
Effective Floor Cavity Reflectance 0.20																
% Ceiling Rcc	80				70				50				30			
% Walls R _w	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	77	77	77	77	75	75	75	75	71	71	71	67	67	67	64	64
1	68	64	60	57	66	62	59	55	58	56	53	55	53	51	52	50
2	61	54	49	44	59	53	48	43	50	45	42	47	43	40	44	41
3	55	47	40	36	53	45	40	35	43	38	34	41	36	33	38	35
4	50	41	34	29	48	40	34	29	38	32	28	36	31	27	34	30
5	46	36	30	25	44	35	29	24	33	28	24	32	27	23	30	26
6	42	32	26	21	40	31	25	21	30	24	20	28	24	20	27	23
7	39	29	23	18	37	28	22	18	27	22	18	26	21	17	24	20
8	36	26	20	16	35	26	20	16	24	19	16	23	19	15	22	18
9	33	24	18	14	32	23	18	14	22	17	14	21	17	14	21	16
10	31	22	17	13	30	22	16	13	21	16	13	20	15	12	19	15

Total Luminaire Efficiency = 84.00%

Zonal Lumen Summary				
Zone	Lumens	Zone	Lumens	% Lamp % Fixture
0-10	27.52	0-20	232.24	1.30 1.60
10-20	204.72	0-30	617.91	3.50 4.20
20-30	385.68	0-40	1249.7	7.10 8.50
30-40	631.79	0-60	4191.82	24.00 28.60
40-50	1402.70	0-80	11131.69	63.60 76.00
50-60	1539.42	0-90	12403.45	70.90 84.70
60-70	4097.48	10-90	12375.93	70.70 84.50
70-80	2842.39	20-40	1017.46	5.80 6.90
80-90	1271.76	20-50	2420.16	13.80 16.50
90-100	465.21	40-70	7039.6	40.20 48.10
100-110	720.39	60-80	6939.87	39.70 47.40
110-120	495.54	70-80	2842.38	16.20 19.40
120-130	313.01	80-90	1271.76	7.30 8.70
130-140	163.78	90-110	1185.6	6.80 8.10
140-150	68.20	90-120	1681.15	9.60 11.50
150-160	17.98	90-130	1994.16	11.40 13.60
160-170	2.35	90-150	2226.14	12.70 15.20
170-180	0.14	90-180	2246.61	12.80 15.30
		110-180	1061.00	6.10 7.20
		0-180	14650.06	83.70 100.00



REPORT NUMBER: **ML17PJ5**

Lamps: 175 W Pulse Start Metal Halide with
 8" Prismatic Glass Refractor – NEMA Type V *

Coefficients of Utilization – Zonal Cavity Method																
Effective Floor Cavity Reflectance 0.20																
% Ceiling Rcc	80				70				50				30			
% Walls R _w	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	97	97	97	97	93	93	93	93	86	86	86	79	79	79	74	74
1	82	76	70	65	78	73	68	63	67	62	58	61	57	54	56	53
2	71	61	53	46	67	58	51	44	53	47	41	48	43	38	43	39
3	63	50	41	33	59	48	39	32	43	36	30	39	33	28	35	30
4	56	42	3	25	52	40	31	25	36	29	23	33	26	21	29	24
5	50	37	27	20	47	35	26	19	31	24	18	28	22	16	25	19
6	46	32	23	16	43	30	22	16	27	20	14	25	18	13	22	16
7	42	28	20	13	39	27	19	13	24	17	12	22	16	11	20	14
8	39	25	17	11	36	24	16	11	22	15	10	20	14	9	18	12
9	36	23	15	10	34	22	14	9	20	13	9	18	12	8	16	11
10	33	21	13	8	32	20	13	8	18	12	7	17	11	7	15	10