

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium, Pulse Start Metal Halide and Metal Halide

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

CEC:

Class I, Division 2, Groups A, B, C, D
Class I, Zone 2 Ex nR IIC (Z)
Class II, Division 1 and 2, Groups E, F, G
Class III

CEC:

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 Ex 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, CWI and Super CWA).
- Medium base lamp type and watts:
 - HPS 50 W-150 W
 - PSMH 50 W-175 W ③
- 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 Ex 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.



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.
- 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**.
- Ex nR fixtures, add suffix **-Z**.
- Reflectors are available as standard dome and 30° angle polyester. Order separately.

CEC Certifications and Compliances ②

- 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 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.

③ Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

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Illustrated Features



High Temperature Sockets

Medium base high-temperature porcelain sockets.

Aluminum Inner Reflector

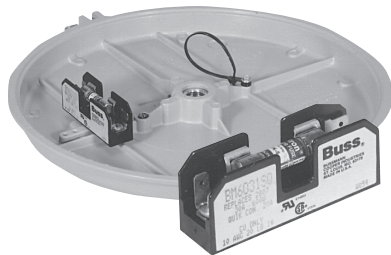
Solid aluminum inner reflector (for refractor ballast housings only) improves photometric efficiency.

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.

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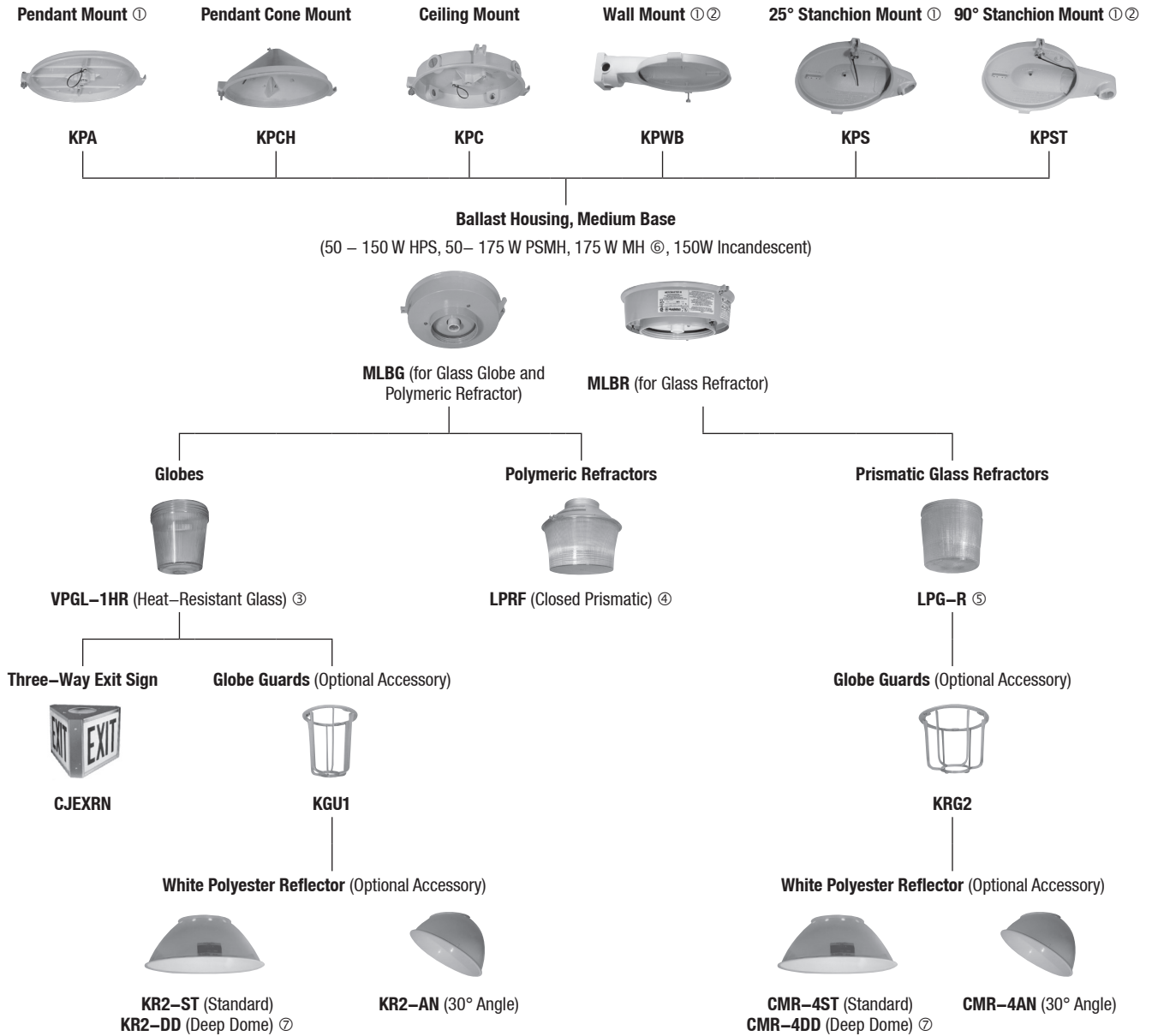
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Mercmaster III Low Profile Family Tree



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 clear, amber, blue, green and red.

④ 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 PSMH Max.).

⑤ Available in NEMA Type I, III and V.

⑥ Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

⑦ Fixtures when used with Deep Dome Refletors are NOT UL Listed.

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

Catalog Numbering Guide

<p>ML</p> <p>Series: ML - Mercmaster III Low Profile</p>	<p>A</p> <p>Mounting: A - Pendant (rigid mounting) C - Ceiling D - Pendant Cone Hood F - Pendant (flexible mounting) R - 90° Stanchion S - 25° Stanchion W - Wall</p>	<p>L</p> <p>Lamp Type: I - Incandescent H - Metal Halide (70-175 W) L - High Pressure Sodium H - Pulse Start Metal Halide (175 W Only)</p>	<p>15</p> <p>Wattage ⑥: 10 - 100 W HPS/MH 15 - 150 W HPS/MH and 60-150 W max. Incandescent 17 - 175 W MH 70 - 70 W HPS/MH</p>	<p>2</p> <p>Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion</p>	<p>G1</p> <p>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</p>	<p>G</p> <p>Guard Options: G - Cast Guard N - No Guard</p>	<p>MT</p> <p>Voltage: ① LB - Incandescent, 120 V 60 Hz MT - 120/208/240/277 V 60 Hz TT - 120/277/347 V 60 Hz, CWA C7 - 600 V 60 Hz, CWI ⑤</p>	<p>R</p> <p>Options: E - Emergency Quartz ④ S - Smart Starter ③ H1 - Photocontrol 120 V H2 - Photocontrol 208 V H3 - Photocontrol 240 V H4 - Photocontrol 277 V C - Safety Cable Adapted D - E-27 Export Socket T - Terminal Blocks V - Anti-Vibration Modifications</p>	<p>Z2</p> <p>Suffix: Z - Zone 2 suffix (required for Ex nR)</p>
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Lamp Type	Lamp Watts	Voltage Suffixes			
		LB	MT	TT	C7
Inc.	150 Max.	X	—	—	—
HPS	70	—	X	X	X
HPS	100	—	X	X	X
HPS	150	—	X	X	X
PSMH	175	—	X	X	—
MH ⑥	70	—	X	X	—
MH ⑥	100	—	X	X	—
MH ⑥	150	—	X	X	—
MH ⑥	175	—	—	X	X

Voltages:

LB - Incandescent, 120 V 60 Hz

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

TT - 120/277/347 V 60 Hz, CWA

C7 - 600 V 60 Hz, CWI

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 and NEMA 4X only (100 W MH Max.). Reflectors ordered separately.

③ Available for HPS fixtures.

④ Fixtures equipped with quartz auxiliary lamp do not comply with CEC requirements and are not suitable for use in classified locations.

⑤ For 600 V applications, consult factory prior to ordering.

⑥ Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

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

CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

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Lamp Watts	Supply Wire Min. Temp. °C (°F)	Ambient Temp. °C (°F)	Class I, Division 2			Class II, Division 1 Groups E, F and G			Simultaneous Exposure Class I, Division 2 / Class II, Division 1			
			Globe	Globe & Reflector	Reflector	Globe	Globe & Reflector	Reflector	Globe	Globe & Reflector	Reflector	
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
70	MH ②	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	T3C	T3C	T4A	T2B	T2B	T2C
		90 °C (194 °F)	55 °C (131 °F)	T2D	T2D	T3	T3C	T3C	T4A	T2A	T2A	T2B
		110 °C (230 °F)	65 °C (149 °F)	—	—	T3	—	—	T4	—	—	T2B
100	MH ②	90 °C (194 °F)	40 °C (104 °F)	T2A	T2A	T2B	T3B	T3B	T4A	T2	T2	T2A
		90 °C (194 °F)	55 °C (131 °F)	T2A	T2A	T2B	T3A ①	T3A ①	T4	T1	T1	T2
150	MH ②	105 °C (221 °F)	40 °C (104 °F)	350	350	325	—	—	T3B	—	—	T1
175	MH ②	110 °C (230 °F)	40 °C (104 °F)	—	—	325	—	—	T3B	—	—	—
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.

② Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

Mercmaster™ III Low Profile Luminaires

Class I, Zone 2; Ex nR IIC; IP66; NEMA 4X

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

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Watts	Lamp Type	Supply Wire Temp. °C (°F)	Ambient Temp. °C (°F)	Class I, Zone 2 AEx nA nR IIC / Ex nR IIC		
				Globe	Globe w/Reflector	Refractor
70	HPS	90 °C (194 °F)	40 °C (104 °F)	T5	T5	T5
		90 °C (194 °F)	55 °C (131 °F)	T4	T4	T4
		90 °C (194 °F)	65 °C (149 °F)	—	—	T4
100	HPS	90 °C (194 °F)	40 °C (104 °F)	T4	T4	T4
		90 °C (194 °F)	55 °C (131 °F)	T4	T4	T4
150	HPS	90 °C (194 °F)	40 °C (104 °F)	T4	T4	T4
175	PSMH	105 °C (221 °F)	40 °C (104 °F)	T3	T3	T4
70	MH ①	90 °C (194 °F)	40 °C (104 °F)	T5	T5	T6
		90 °C (194 °F)	55 °C (131 °F)	T4	T4	T6
		110 °C (230 °F)	65 °C (149 °F)	—	—	T4
100	MH ①	90 °C (194 °F)	40 °C (104 °F)	T4	T4	T6
		90 °C (194 °F)	55 °C (131 °F)	T4	T4	T4
150	MH ①	105 °C (221 °F)	40 °C (104 °F)	T3	T3	T4
175	MH ①	110 °C (230 °F)	40 °C (104 °F)	—	—	T3

“T” Numbers represent the maximum surface temperature for luminaires with Ex 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

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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

Fuse Kits – Order one kit for CWA ballasts and two kits for CWI ballasts ①

Volts	60W		70W		75W		100W		150W		175W	
	CWA	CWI	CWA	CWI	CWA	CWI	CWA	CWI	CWA	CWI	CWA	CWI
High Pressure Sodium												
120	—	—	F3C	F3C	—	—	F4C	F4C	F6C	F6C	—	—
208	—	—	—	F2C	—	—	—	F2C	—	F3C	—	—
240	—	—	F2C	F2C	—	—	F2C	F2C	F3C	F3C	—	—
277	—	—	F2C	—	—	—	F2C	—	F3C	—	—	—
347	—	—	F1C	—	—	—	F1C	—	F2C	—	—	—
480	—	—	—	F1C	—	—	—	F1C	—	F2C	—	—
600	—	—	—	F1C	—	—	—	F1C	—	F2C	—	—
Pulse Start Metal Halide/Metal Halide												
120	—	—	F4C	—	—	—	F4C	—	—	—	F6C	F6C
208	—	—	—	—	—	—	—	—	—	—	—	F4C
240	—	—	F2C	—	—	—	F2C	—	—	—	F3C	F3C
277	—	—	F2C	—	—	—	F2C	—	—	—	F3C	—
347	—	—	F2C	—	—	—	F2C	—	—	—	F2C	—
480	—	—	—	—	—	—	—	—	—	—	—	F2C
600	—	—	—	—	—	—	—	—	—	—	—	F2C
Incandescent												
	F1C		—		—		F1C		F2C		—	

① Not for use in Hazardous Location applications, per the Canadian Electrical Code (CEC).

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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 ④⑥		Voltage Suffixes			
		For Globe	For Refractor	LB	MT	TT	C7
Inc.	150 Max.	MLBG15I	MLBR15I	X	—	—	—
HPS	70	MLBG70L ①②	MLBR70L ①②	—	X	X	X
HPS	100	MLBG10L ①②	MLBR10L ①②	—	X	X	X
HPS	150	MLBG15L ①②	MLBR15L ①②	—	X	X	X
PSMH	175	MLBG17P ②③	MLBR17P ②③	—	X	X	—
MH ⑤	70	MLBG70H ②	MLBR70H ②	—	X	X	—
MH ⑤	100	MLBG10H ②	MLBR10H ②	—	X	X	—
MH ⑤	150	MLBG15P ②	MLBR15P ②	—	X	X	—
MH ⑤	175	MLBG17H ②	MLBR17H ②	—	X	X	X

Voltages:

LB - Incandescent, 120 V 60 Hz
MT - 120/208/240/277 V 60 Hz
TT - 120/277/347 V 60 Hz, CWA
C7 - 600 V 60 Hz, CWI

- 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. Specify supply voltage.
- ③ After voltage suffix add: **-S** for Smart Starter.
- ④ Add **Z** for factory sealed restricted breathing protection (Ex nR).
- ⑤ Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.
- ⑥ Add **X** for Crouse-Hinds Champ® Series adapted fixture.

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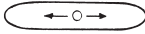



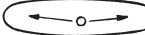








CEC:

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 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:

Type 4X
 IP66

Accessories and Replacement Parts

		Description	Catalog Number
Prismatic Glass Globes — Heat-Resistant			
 Glass Globe		Clear	VPGL-1HR
		Amber	VPGL-1AM
		Blue	VPGL-1BL
		Green	VPGL-1GR
		Red	VPGL-1RE
		Light Distribution	IES/NEMA Distribution Curves
Closed Prismatic Glass Refractors — All Heat-Resistant			
 Glass Refractor	NEMA Type I		LPG-R1
	NEMA Type III		LPG-R3
	NEMA Type V		LPG-R5
Closed Prismatic Polymeric Refractors — For Use with PSMH Lamps			
<i>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)</i>			
 Polymeric Refractor	NEMA Type II		LPRF-2CP
	NEMA Type III		LPRF-3CP
	NEMA Type IV		LPRF-4CP
	NEMA Type V		LPRF-5CP
		Description	Catalog Number
White Polyester Reflectors			
 Standard Dome	 30° Angle	For Globe Fixtures	Standard Dome KR2-ST
			Deep Dome KR2-DD ①④
		For Glass Refractor Fixtures	30° Angle KR2-AN
			Standard Dome CMR-4ST ②
			Deep Dome CMR-4DD ①④
			30° Angle CMR-4AN
Guards			
 Globe Guard	 Refractor Guard	Globe Guard	KGU1
		30° Angle Refractor Guard	KRG2 ③
Replacement Globe Gaskets — Silicone Rubber			
 Globe Gaskets		Globe Gasket	VPGL-GK
		Refractor Gasket	KRF-GK

① Dark Skies Compliant.

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

③ Not for use with CMR-4ST or CMR-400, only CMR-4AN refractor.

④ Fixtures when used with Deep Dome Refletors are NOT UL Listed.

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium, Pulse Start Metal Halide and Metal Halide

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

CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:
 Type 4X
 IP66

Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
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
347	HX-HPF	0.30	0.30	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
347	HX-HPF	0.45	0.39	130
600	C.W.I.	0.14	0.24	130
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
347	HX-HPF	0.52	0.56	188
600	C.W.I.	0.19	0.35	190
175 Watt Pulse Start Metal Halide				
120	Super C.W.A.	0.90	1.78	199
208	Super C.W.A.	0.50	1.08	199
240	Super C.W.A.	0.35	0.89	199
277	Super C.W.A.	0.30	0.76	199
347	Super C.W.A.	0.25	0.65	208

Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
70 Watt Metal Halide				
120	HX-HPF	0.80	0.85	95
208	HX-HPF	0.50	0.52	95
240	HX-HPF	0.43	0.44	95
277	HX-HPF	0.39	0.39	95
347	HX-HPF	0.20	0.28	88
100 Watt Metal Halide				
120	HX-HPF	1.20	1.15	130
208	HX-HPF	0.70	0.70	130
240	HX-HPF	0.61	0.58	130
277	HX-HPF	0.55	0.50	130
347	HX-HPF	0.40	0.40	129
150 Watt Metal Halide				
120	HX-HPF	1.75	1.60	188
208	HX-HPF	1.30	1.00	188
240	HX-HPF	0.85	0.80	188
277	HX-HPF	0.77	0.70	188
347	Super C.W.A.	0.65	0.55	185
175 Watt Metal Halide ③				
120	C.W.A.	1.30	1.80	210
208	C.W.A.	0.75	1.04	210
240	C.W.A.	0.65	0.90	210
277	C.W.A.	0.55	0.80	210
347	C.W.A.	0.50	0.65	210
600	C.W.I.	0.16	0.37	215

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.

③ Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

Mercmaster™ III Low Profile Luminaires

High Pressure Sodium, Pulse Start Metal Halide and Metal Halide

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

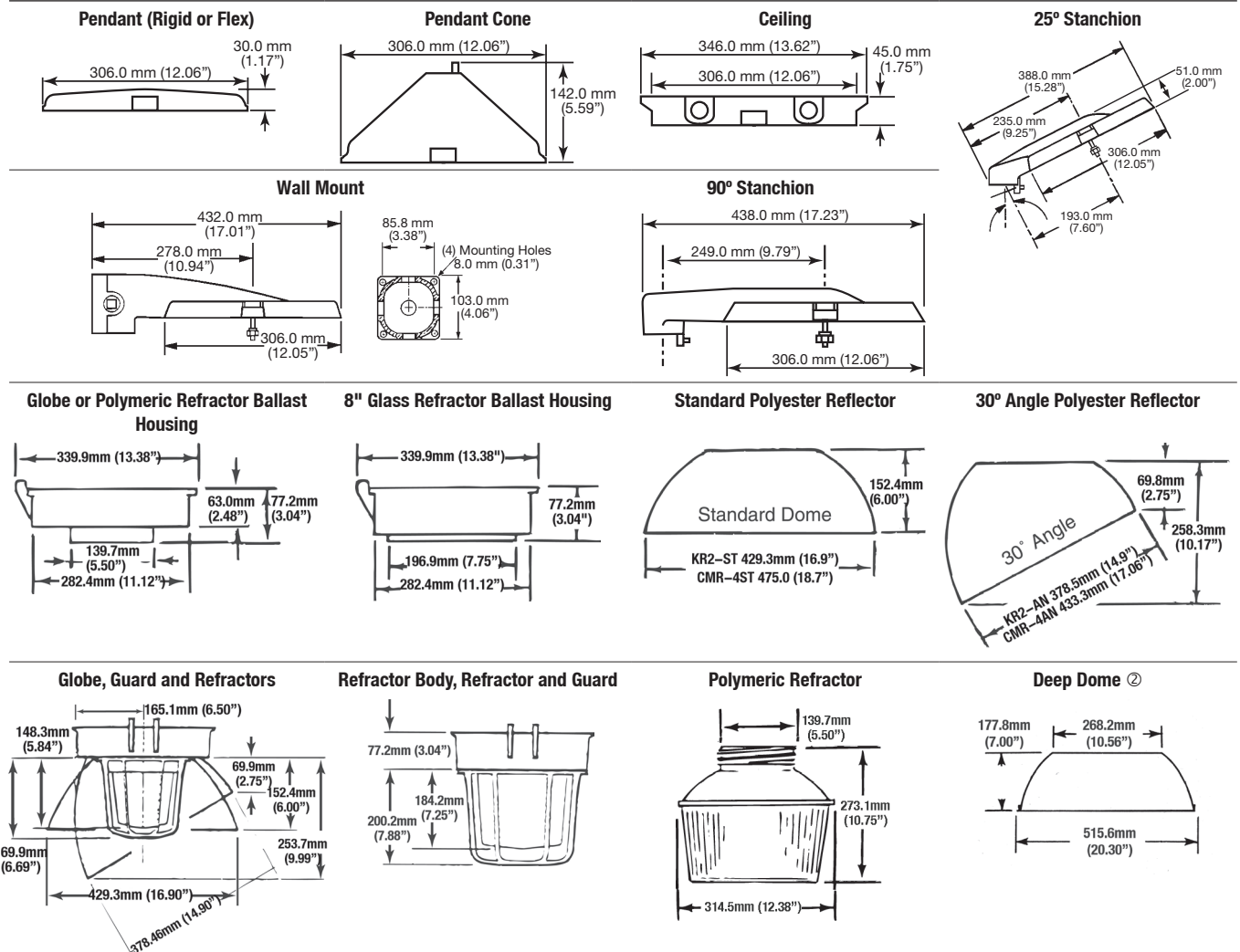
CEC:

Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:

Type 4X
 IP66

Dimensions in Millimeters (Inches)



Mercmaster III Low Profile Ballast and Accessory Weights ①

Watts	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)
	HPS	PSMH	HPS	PSMH				
50	3.3 (7.28)	3.2 (7.05)	3.5 (7.72)	3.4 (7.50)	Pendant	1.0 (2.20)	8" Glass Refractor	2.4 (5.29)
70	3.7 (8.16)	3.5 (7.72)	4.0 (8.82)	3.7 (8.16)	Pendant Cone	1.1 (2.43)	Glass Globe	1.7 (3.75)
100	4.4 (9.70)	4.2 (9.26)	4.6 (10.14)	4.4 (9.70)	Ceiling	1.4 (3.09)	Refractor Guard	0.5 (1.10)
150	4.9 (10.80)	4.9 (10.80)	5.1 (11.24)	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	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.
 ② Fixtures when used with Deep Dome Refletors are NOT UL Listed.

APPLETON™
 HID/AREA: NEC/CEC ENCLOSED AND GASKETED

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.

- 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.

Features



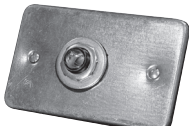
- Factory sealed design eliminates the need for an explosionproof enclosure.
- Can be easily installed in the field.
- Solid state design for performance and reliability.
- Available for 120, 208, 240, or 277 volts.

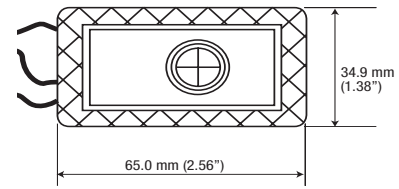
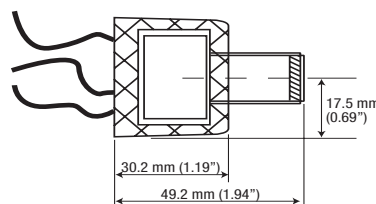
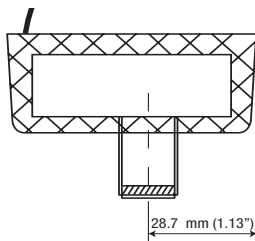
Materials

- 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>				
	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>Photocontrol assembly supplied with two stainless steel screws and one neoprene gasket.</i> <i>For additional neoprene gaskets, order catalog numbers 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	



APPLETON™

HID/AREA: NEC/CEC ENCLOSED AND GASKETED

Mercmaster™ III Low Profile Luminaires

150 W HPS

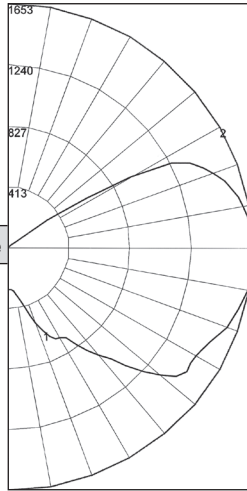
* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen). For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 100 W (9,500 lumen) HPS lamp – 0.594; for a 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen)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

CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:
 Type 4X
 IP66

Photometric Data

Zone	Lumens	Total Luminaire Efficiency = 83%											
0-10	28.58	CIE Type – Semi-Direct											
10-20	123.97	<table border="1"> <thead> <tr> <th>Plane</th> <th>Spacing Criteria</th> </tr> </thead> <tbody> <tr> <td>0-180</td> <td>3.9</td> </tr> <tr> <td>90-270</td> <td>3.9</td> </tr> <tr> <td>Diagonal</td> <td>3.7</td> </tr> </tbody> </table>				Plane	Spacing Criteria	0-180	3.9	90-270	3.9	Diagonal	3.7
Plane	Spacing Criteria												
0-180	3.9												
90-270	3.9												
Diagonal	3.7												
20-30	304.16												
30-40	513.64												
40-50	889.19												
50-60	1299.53												
60-70	1506.73												
70-80	1706.16	Zonal Lumen Summary											
80-90	1800.53	Zone	Lumens	% Lamp	% Fixture								
90-100	1791.58	0-30	4563.72	2.9	3.4								
100-110	1652.69	0-40	970.35	6.1	7.3								
110-120	1311.22	0-60	3159.07	19.7	23.8								
120-130	351.25	0-90	8172.49	51.1	61.5								
130-140	5.14	90-120	4755.49	29.7	35.8								
140-150	0.00	90-130	5106.74	31.9	38.4								
150-160	0.00	90-150	5111.87	31.9	38.4								
160-170	0.00	90-180	5111.87	31.9	38.5								
170-180	0.00	0-180	13284.37	83.0	100.0								



REPORT NUMBER: **ML15LG**

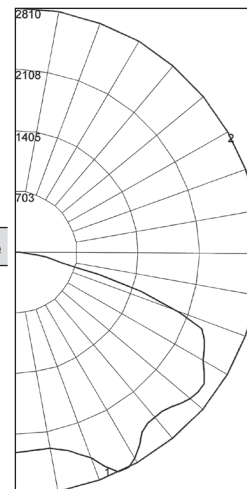
Lamps: 150 W High Pressure Sodium with Globe only *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

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

Zone	Lumens	Total Luminaire Efficiency = 73.2%											
0-10	219.96	CIE Type – Direct											
10-20	683.41	<table border="1"> <thead> <tr> <th>Plane</th> <th>Spacing Criteria</th> </tr> </thead> <tbody> <tr> <td>0-180</td> <td>1.64</td> </tr> <tr> <td>90-270</td> <td>1.64</td> </tr> <tr> <td>Diagonal</td> <td>1.88</td> </tr> </tbody> </table>				Plane	Spacing Criteria	0-180	1.64	90-270	1.64	Diagonal	1.88
Plane	Spacing Criteria												
0-180	1.64												
90-270	1.64												
Diagonal	1.88												
20-30	1267.92												
30-40	1613.68												
40-50	1967.79												
50-60	2333.86												
60-70	2328.33												
70-80	1118.52	Zonal Lumen Summary											
80-90	174.91	Zone	Lumens	% Lamp	% Fixture								
90-100	1.23	0-30	2171.29	13.6	18.5								
100-110	0.00	0-40	3784.97	23.7	32.3								
110-120	0.00	0-60	8086.62	50.5	69.1								
120-130	0.00	0-90	11708.37	73.2	100.0								
130-140	0.00	90-120	1.23	0.0	0.0								
140-150	0.00	90-130	1.23	0.0	0.0								
150-160	0.00	90-150	1.23	0.0	0.0								
160-170	0.00	90-180	1.23	0.0	0.0								
170-180	0.00	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	Rw	80				70				50				30				10				0			
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10				
0	87	87	87	87	87	85	85	85	85	81	81	81	81	78	78	78	75	75	75	75	73	73	73	73	73
1	79	75	71	68	68	77	73	70	67	70	67	65	65	67	65	63	64	62	61	59	59	59	59	59	59
2	70	63	58	53	53	68	62	57	52	59	55	51	51	57	53	50	55	52	49	47	47	47	47	47	47
3	63	54	48	42	42	61	53	47	42	51	46	41	41	49	44	40	47	43	40	38	38	38	38	38	38
4	57	47	40	35	35	55	46	39	34	44	38	34	34	42	37	33	41	36	33	31	31	31	31	31	31
5	52	41	34	29	29	50	41	34	29	39	33	28	28	37	32	28	36	31	28	26	26	26	26	26	26
6	48	37	30	24	24	46	36	29	24	35	29	24	24	33	28	24	32	27	24	22	22	22	22	22	22
7	44	33	26	21	21	42	32	26	21	31	25	21	21	30	25	21	29	24	20	19	19	19	19	19	19
8	41	30	23	18	18	39	29	23	18	28	22	18	18	27	22	18	26	22	18	16	16	16	16	16	16
9	38	27	21	16	16	37	27	20	16	26	20	16	16	25	20	16	24	19	16	14	14	14	14	14	14
10	35	25	19	15	15	34	24	18	14	24	18	14	14	23	18	14	22	18	14	13	13	13	13	13	13

Mercmaster™ III Low Profile Luminaires

150 W HPS

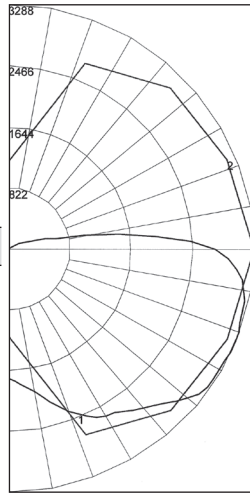
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CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:
 Type 4X
 IP66

Photometric Data

Zone	Lumens	Total Luminaire Efficiency = 68.4%			
0-10	168.01	CIE Type – Direct			
10-20	536.92	Plane	Spacing Criteria		
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**

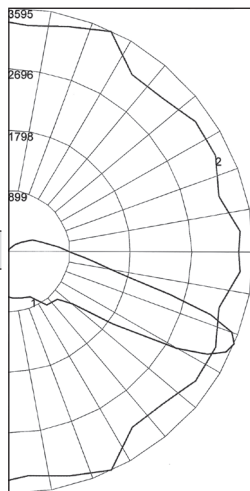
Lamps: 150 W High Pressure Sodium with 30° Angle Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80	70			50			30			10			0				
		70	50	30	10	70	50	30	10	50	30	10						
% Walls	Rw	70	50	30	10	70	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	Plane	Spacing Criteria		
20-30	274.24				
30-40	463.44	0-180	2.22		
40-50	1125.38	90-270	2.20		
50-60	1688.89	Diagonal	3.50		
60-70	3137.76				
70-80	2421.27	Zonal Lumen Summary			
80-90	1145.98	Zone	Lumens	% Lamp	% Fixture
90-100	411.16	0-30	425.77	2.7	3.4
100-110	632.32	0-40	889.22	5.6	7.2
110-120	448.30	0-60	3703.50	23.1	29.8
120-130	293.08	0-90	10408.50	65.1	83.8
130-140	154.61	90-120	1491.78	9.3	12.0
140-150	59.30	90-130	1784.86	11.2	14.4
150-160	9.99	90-150	1998.77	12.5	14.4
160-170	0.49	90-180	2009.26	12.6	16.2
170-180	0.00	0-180	12417.76	77.6	100.0



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				
		70	50	30	10	70	50	30	10	50	30	10						
% Walls	Rw	70	50	30	10	70	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

100 W PSMH

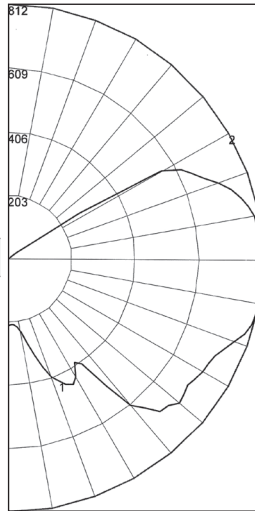
* Photometric data is based on a fixture with a 100-watt clear Pulse Start Metal Halide lamp (8,500 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 50 W (3400 lumen) PSMH lamp – 0.40; for a 70 W (5600 lumen) PSMH lamp – 0.66; for a 150 W (10,500 lumen) PSMH lamp – 1.24; for a 175 W (17,500 lumen) PSMH lamp – 2.06. For candlepower values of fixture with guard, multiply by – 0.95.

CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:
 Type 4X
 IP66

Photometric Data

Zone	Lumens	Total Luminaire Efficiency = 85.7%			
0-10	21.19	CIE Type – Semi-Direct			
10-20	93.55	Plane	Spacing Criteria		
20-30	201.68				
30-40	291.92	0-180	3.20		
40-50	523.42	90-270	3.20		
50-60	637.38	Diagonal	3.08		
60-70	732.34				
70-80	845.58	Zonal Lumen Summary			
80-90	874.42	Zone	Lumens	% Lamp	% Fixture
90-100	870.80	0-30	316.42	4.1	4.7
100-110	809.33	0-40	608.33	7.8	9.1
110-120	643.44	0-60	1769.13	22.7	26.5
120-130	139.00	0-90	4221.46	54.1	63.2
130-140	0.71	90-120	2323.56	29.8	34.8
140-150	0.00	90-130	2462.56	31.6	36.8
150-160	0.00	90-150	2463.27	31.6	36.8
160-170	0.00	90-180	2463.27	31.6	36.8
170-180	0.00	0-180	6684.73	85.7	100.0



REPORT NUMBER: **ML10HG**

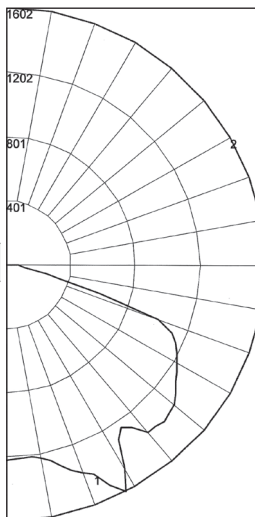
Lamps: 100 W Pulse Start Metal Halide with Globe only *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	% Walls	Rw	80				70				50				30				10				0			
			70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	95	95	95	95	95	89	89	89	89	78	78	78	68	68	68	58	58	58	54	54	54	54				
1	81	74	69	64	60	75	69	64	60	60	56	52	51	48	45	43	40	38	34	34	34	34				
2	71	62	54	48	45	66	57	50	45	49	43	39	41	37	33	34	31	28	24	24	24	24				
3	64	52	44	37	35	59	49	41	35	41	35	30	35	30	26	29	25	21	18	18	18	18				
4	57	45	37	30	30	53	42	34	28	36	29	24	30	25	20	25	20	17	14	14	14	14				
5	52	40	31	25	25	48	37	29	23	31	25	20	26	21	17	21	17	14	11	11	11	11				
6	48	35	27	21	21	44	33	25	19	28	21	17	23	18	14	19	15	11	9	9	9	9				
7	44	31	23	17	17	40	29	22	16	25	19	14	21	16	12	17	13	10	7	7	7	7				
8	41	28	20	15	15	37	26	19	14	22	16	12	19	14	10	16	11	8	6	6	6	6				
9	38	26	18	13	13	35	24	17	12	20	15	11	17	12	9	14	10	7	5	5	5	5				
10	35	23	16	12	12	32	22	15	11	19	13	9	16	11	8	13	9	6	5	5	5	5				

Zone	Lumens	Total Luminaire Efficiency = 75.8%			
0-10	116.29	CIE Type – Direct			
10-20	371.61	Plane	Spacing Criteria		
20-30	692.88				
30-40	821.73	0-180	1.70		
40-50	1064.03	90-270	1.70		
50-60	1154.58	Diagonal	1.84		
60-70	1134.19				
70-80	470.22	Zonal Lumen Summary			
80-90	83.66	Zone	Lumens	% Lamp	% Fixture
90-100	0.82	0-30	1180.78	15.1	20.0
100-110	0.00	0-40	2002.50	25.7	33.9
110-120	0.00	0-60	4221.11	54.1	71.4
120-130	0.00	0-90	5909.17	75.8	100.0
130-140	0.00	90-120	0.82	0.0	0.0
140-150	0.00	90-130	0.82	0.0	0.0
150-160	0.00	90-150	0.82	0.0	0.0
160-170	0.00	90-180	0.82	0.0	0.0
170-180	0.00	0-180	5910.00	75.8	100.0



REPORT NUMBER: **ML10HST**

Lamps: 100 W Pulse Start Metal Halide with Standard Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	% Walls	Rw	80				70				50				30				10				0			
			70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	90	90	90	90	90	88	88	88	88	84	84	84	81	81	81	77	77	77	76	76	76	76				
1	82	78	74	71	71	80	76	73	70	73	70	68	70	68	66	67	65	64	62	62	62	62				
2	73	66	61	56	56	71	65	60	55	62	58	54	60	56	53	57	54	51	50	50	50	50				
3	66	57	50	45	45	64	56	50	45	54	48	44	51	47	43	49	46	42	40	40	40	40				
4	60	50	43	37	37	58	49	42	37	47	41	36	45	40	36	43	39	35	33	33	33	33				
5	54	44	36	31	31	53	43	36	31	41	35	30	40	34	30	38	33	30	28	28	28	28				
6	50	39	32	26	26	48	38	31	26	37	31	26	35	30	26	34	29	25	24	24	24	24				
7	46	35	28	23	23	45	34	27	23	33	27	22	32	26	22	31	26	22	20	20	20	20				
8	43	32	25	20	20	41	31	24	20	30	24	20	29	24	20	28	23	19	18	18	18	18				
9	40	29	22	18	18	38	28	22	18	27	22	17	27	21	17	26	21	17	16	16	16	16				
10	37	26	20	16	16	36	26	20	16	25	20	16	24	19	16	24	19	15	14	14	14	14				

Mercmaster™ III Low Profile Luminaires

100 W PSMH

* Photometric data is based on a fixture with a 100-watt clear Pulse Start Metal Halide lamp (8,500 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 50 W (3400 lumen) PSMH lamp – 0.40; for a 70 W (5600 lumen) PSMH lamp – 0.66; for a 150 W (10,500 lumen) PSMH lamp – 1.24; for a 175 W (17,500 lumen) PSMH lamp – 2.06. For candlepower values of fixture with guard, multiply by – 0.95.

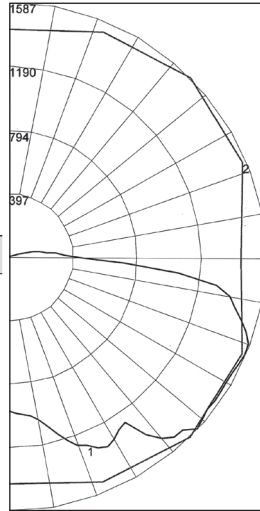
CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2 Ex nR IIC (Z)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

CEC:
 Type 4X
 IP66

Photometric Data

Zone Lumens Total Luminaire Efficiency = 71.3%

Zone	Lumens	CIE Type – Direct	
		Plane	Spacing Criteria
0-10	91.83		
10-20	301.65		
20-30	543.23		
30-40	703.02	0-180	2.08
40-50	877.11	90-270	2.06
50-60	850.33	Diagonal	1.76
60-70	7753.51		
70-80	667.27	Zonal Lumen Summary	
Zone	Lumens	% Lamp	% Fixture
80-90	471.44		
90-100	200.90	0-30	936.72 12.0 16.8
100-110	62.89	0-40	1639.74 21.0 29.5
110-120	14.42	0-60	3367.18 43.2 60.6
120-130	1.07	0-90	5281.39 67.7 95.0
130-140	0.00	90-120	278.21 3.6 5.0
140-150	0.00	90-130	279.28 3.6 5.0
150-160	0.00	90-150	279.28 3.6 5.0
160-170	0.00	90-180	279.28 3.6 5.0
170-180	0.00	0-180	5560.68 71.3 100.0



REPORT NUMBER: **ML10HAN**

Lamps: 100 W Pulse Start Metal Halide with 30° Angle Dome Reflector *

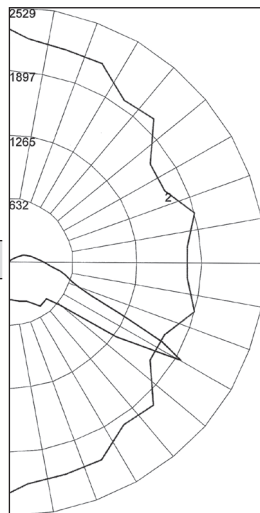
Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50				30				10				0			
	% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0				
0	84	84	84	84	84	84	82	82	82	82	77	77	77	73	73	73	69	69	69	68				
1	74	69	65	62	71	67	64	60	63	60	58	60	57	55	55	57	55	53	51	51				
2	66	59	53	48	64	57	51	47	54	49	45	51	47	43	48	45	42	40	40	40				
3	59	51	44	38	57	49	43	38	46	41	36	44	39	35	41	37	34	32	32	32				
4	54	44	37	31	52	43	36	31	40	35	30	38	33	29	36	32	28	27	27	27				
5	49	39	32	26	47	38	31	26	36	30	25	34	29	25	32	28	24	22	22	22				
6	45	35	28	23	43	34	27	22	32	26	22	30	25	21	29	24	21	19	19	19				
7	42	31	24	20	40	30	24	19	29	23	19	27	22	18	26	22	18	16	16	16				
8	39	28	22	17	37	28	21	17	26	21	17	25	20	16	24	19	16	14	14	14				
9	36	26	19	15	35	25	19	15	24	19	15	23	18	14	22	17	14	13	13	13				
10	34	24	18	14	32	23	17	13	22	17	13	21	16	13	20	16	13	11	11	11				

Zone Lumens Total Luminaire Efficiency = 76.6%

Zone	Lumens	CIE Type – Semi-Direct	
		Plane	Spacing Criteria
0-10	9.17		
10-20	75.43		
20-30	154.76		
30-40	266.34	0-180	2.06
40-50	632.54	90-270	2.20
50-60	1155.59	Diagonal	3.26
60-70	1665.76		
70-80	693.73	Zonal Lumen Summary	
Zone	Lumens	% Lamp	% Fixture
80-90	449.28		
90-100	177.44	0-30	239.35 3.1 4.0
100-110	288.25	0-40	505.69 6.5 8.5
110-120	208.52	0-60	2293.81 29.4 38.4
120-130	128.19	0-90	5102.58 65.4 85.4
130-140	56.80	90-120	674.20 8.6 11.3
140-150	14.94	90-130	802.38 10.3 13.4
150-160	0.10	90-150	874.12 11.2 13.4
160-170	0.00	90-180	874.22 11.2 14.6
170-180	0.00	0-180	5976.80 76.6 100.0



REPORT NUMBER: **ML10HJ5**

Lamps: 100 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				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	85	85	85	85	79	79	79	73	73	73	68	68	68	65	65	65				
1	77	71	67	62	73	68	64	60	63	59	56	58	55	52	53	51	49	46	46	46				
2	67	58	51	45	64	56	49	44	51	46	41	47	42	38	43	39	36	33	33	33				
3	59	48	40	34	56	46	39	32	42	36	30	38	33	28	34	30	26	24	24	24				
4	52	41	32	26	49	39	31	25	35	28	23	32	26	21	29	24	20	18	18	18				
5	47	35	26	20	44	33	25	19	30	23	18	27	21	17	25	20	15	13	13	13				
6	43	30	22	16	40	29	21	15	26	19	14	24	18	13	21	16	12	10	10	10				
7	39	27	19	13	37	25	18	13	23	16	12	21	15	11	19	14	10	8	8	8				
8	36	24	16	11	34	23	15	10	21	14	10	19	13	9	17	12	8	6	6	6				
9	33	21	14	9	31	20	14	9	19	12	8	17	11	8	15	10	7	5	5	5				
10	31	19	12	8	29	19	12	8	17	11	7	15	10	6	14	9	6	4	4	4				