

# 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.

Class I, Division 2, Groups A, B, C, D  
Class I, Zone 2, AEx nA nR IIC (Z2)  
Class I, Zone 2, Ex nR IIC (Z) †  
Class I, Zone 2, AEx nR IIC (ZB)

Class II, Division 1 and 2, Groups E, F, G  
Class III  
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, CWI and Super CWA).
- Medium base lamp type and watts:
  - HPS 50 W-150 W
  - PSMH 50 W-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 / 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.



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** †.
- 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**.
- Smart Hot Restrike will immediately restrike HPS lamp when power is restored after a momentary power interruption. The smart function removes the hot restrike ignitor from the circuit if the lamp burns out or is removed from the socket. Eliminates starter failures caused by prolonged operation with cycling or failing lamps. Add suffix **-SR**.
- AEx nA nR fixtures, add suffix **-ZZ**.
- AEx nR fixtures, add suffix **-ZB**.
- Ex nR fixtures, add suffix **-Z** †.
- Reflectors are available as standard dome and 30° angle polyester. Order separately.

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

† CSA Certification Only.

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 Class I, Zone 2, Ex nR IIC (Z) <sup>1</sup>  
 Class I, Zone 2, AEx nR IIC (ZB)

Class II, Division 1 and 2, Groups E, F, G  
 Class III  
 Simultaneous Exposure (Class I, Division 2/  
 Class II, Division 1)

Fixtures Outside Type (Salt Water)  
 Type 4X  
 IP66

### Certifications and Compliances \*

- UL Listed: 60079-15
- UL Standard: 1598A, UL 844, Marine Type Electric Fixtures Outside Type (Salt Water)
- CSA Certified: LR25428

### Related Products

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

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 H or P - Pulse Start Metal Halide H - 175 W Metal Halide (available with TT voltage only) <sup>1</sup>		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 <sup>5</sup> F - Fuse Kit (Specify Voltage) <sup>6</sup> R - Hot Restrike <sup>3</sup> S - Smart Starter <sup>4</sup> SR - Smart Hot Restrike <sup>3</sup> H1 - Photocontrol 120 V H2 - Photocontrol 208 V H3 - Photocontrol 240 V H4 - Photocontrol 277 V C - Safety Cable Adapted <sup>1</sup> D - E-27 Export Socket T - Terminal Blocks <sup>1</sup> V - Anti-Vibration Modifications <sup>1</sup> X - Appledapter <sup>7</sup> Mounting Hood Adapter <sup>1</sup> <i>Optional Fusing</i> <sup>8</sup> 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, PSMH 15 - 150 W HPS, PSMH and 60-150 W max. Incandescent 17 - 175 W PSMH 17 - 175 W MH <sup>1</sup> 50 - 50 W HPS, PSMH 70 - 70 W HPS, PSMH		Optical Assembly: <sup>2</sup> G1 - Globe J1 - NEMA I Glass Reflector J3 - NEMA III Glass Reflector J5 - NEMA V Glass Reflector P2 - NEMA II Polymeric Reflector P3 - NEMA III Polymeric Reflector P4 - NEMA IV Polymeric Reflector P5 - NEMA V Polymeric Reflector		Voltage: <sup>1</sup> 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 245 - 240, 50 Hz C2 - 208, 60 Hz, CWI <sup>1</sup> C3 - 240, 60 Hz, CWI <sup>1</sup> C6 - 480, 60 Hz, CWI <sup>1</sup> C7 - 600, 60 Hz, CWI <sup>1</sup> TT - 120/277/347, 60 Hz, CWA <sup>1</sup>	Suffix: Z2 - Zone 2 suffix (required for AEx nA nR rating) ZB - Zone 2 suffix (required for AEx nR) Z - Zone 2 suffix (required for Ex nR) <sup>1</sup>		

\* Compliance data varies for specific fixtures. Consult Appleton regarding suitability of specific fixtures for a particular application.  
<sup>1</sup> Other voltages, frequencies available – contact your local sales representative. Voltages shown are limited to specific combinations; refer to following pages.  
<sup>2</sup> 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.). Reflectors ordered separately.  
<sup>3</sup> Available for 50-150 W HPS fixtures only.  
<sup>4</sup> Available for HPS or PSMH fixtures.  
<sup>5</sup> Not suitable for hazardous location per NEC/CEC <sup>1</sup>.  
<sup>6</sup> Canadian Electrical Code does NOT allow fusing in hazardous locations <sup>1</sup>.  
<sup>7</sup> Appledapter is available for use with the pendant, ceiling and angled stanchion mounting only.  
<sup>8</sup> Optional fusing is available for use with MT, 5MT and 48 voltage suffixes ONLY.  
<sup>1</sup> CSA Certification Only.

# Mercmaster™ III Low Profile Luminaire Thermal Performance

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

Class I, Division 2, Groups A, B, C, D  
Class I, Zone 2, AEx nA nR IIC (Z2)  
Class I, Zone 2, Ex nR IIC (Z) <sup>1</sup>  
Class I, Zone 2, AEx nR IIC (ZB)

Class II, Division 1 and 2, Groups E, F, G  
Class III  
Simultaneous Exposure (Class I, Division 2/  
Class II, Division 1)

Fixtures Outside Type (Salt Water)  
Type 4X  
IP66

Lamp Watts	Type	Supply Wire Min. Temp.	Ambient Temp. (°F/°C)	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
50	HPS	194/90	104/40	T3	T3	T3B	T4A	T4A	T5	T3	T3	T3
		194/90	131/55	T3	T3	T3A	T4A	T4A	T4A	T2D	T2D	T2D
		194/90	149/65	T3	T3	T3A	T4	T4	T4A	T2C	T2C	T2C
70	HPS	194/90	104/40	T3	T3	T3	T4	T4	T5	T2B	T2B	T2D
		194/90	131/55	T2D	T2D	T3	T3C	T3C	T4A	T2B	T2B	T2C
		194/90	149/65	—	—	T3	—	—	T4	—	—	T2B
100	HPS	194/90	104/40	T2C	T2C	T2D	T4	T4	T4A	T2B	T2B	T2B
		194/90	131/55	T2B	T2B	T2C	T3C	T3C	T4	T2A	T2A	T2A
		194/90	149/65	—	—	—	—	—	—	—	—	—
150	HPS	194/90	104/40	T2A	T2A	T2B	T3A *	—	T4	325	—	T2
50	PSMH	194/90	104/40	T3	T3	T3A	T4A	T4A	T6	T2D	T2D	T3
		194/90	131/55	T3	T3	T3	T4	T4	T5	T2C	T2C	T2D
		194/90	149/65	T3	T3	T3	T4	T4	T4A	T2B	T2B	T2D
70	PSMH	194/90	104/40	T3	T3	T3	T3C	T3C	T4A	T2B	T2B	T2C
		194/90	131/55	T2D	T2D	T3	T3C	T3C	T4A	T2A	T2A	T2B
		230/110	149/65	—	—	T3	—	—	T4	—	—	T2B
100	PSMH	194/90	104/40	T2A	T2A	T2B	T3B	T3B	T4A	T2	T2	T2A
		194/90	131/55	T2A	T2A	T2B	T3A *	T3A *	T4	T1	T1	T2
150	PSMH	230/105	104/40	350	350	325	—	—	T3B	—	—	T1
175	PSMH	230/105	104/40	350	350	325	—	—	T3B	—	—	T1
175	MH <sup>1</sup>	230/110	104/40	—	—	325	—	—	T3B	—	—	—
60	Inc.	194/90	104/40	T3B	T3B	T3C	—	—	—	—	—	—
		194/90	131/55	T3A	T3A	T3C	—	—	—	—	—	—
		194/90	149/65	T3A	T3A	T3C	—	—	—	—	—	—
100	Inc.	194/90	104/40	T3	T3	T3	—	—	—	—	—	—
		194/90	131/55	T3	T3	T3	—	—	—	—	—	—
		194/90	149/65	T2D	T2D	T3	—	—	—	—	—	—
150	Inc.	194/90	104/40	T2D	T2D	T3	—	—	—	—	—	—
		194/90	131/55	T2B	T2B	T2D	—	—	—	—	—	—
		194/90	149/65	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 (°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
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

\* "T" numbers are for Groups E and F only.

<sup>1</sup> CSA Certification only.

# Mercmaster™ III Low Profile Luminaires




## 50 W – 150 W HPS

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

Class I, Division 2, Groups A, B, C, D  
Class I, Zone 2, AEx nA nR IIC (Z2)  
Class I, Zone 2, Ex nR IIC (Z) <sup>1</sup>  
Class I, Zone 2, AEx nR IIC (ZB)

Class II, Division 1 and 2, Groups E, F, G  
Class III  
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Fixtures Outside Type (Salt Water)  
Type 4X  
IP66

Lamp Type	Lamp Watts	Hub Size (Inches)	Catalog Numbers ④⑤⑥			
			With Globe	With Type V 8" Refractor ②		
<b>Pendant — One Hub, Rigid Mounting ④</b>						
	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 ⑦	MLAL152J5N ⑦
					MLAL153G1N ⑦	MLAL153J5N ⑦
<b>Pendant Cone — One Hub, Rigid Mounting</b>						
	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 ⑦	MLDL152J5N ⑦
					MLDL153G1N ⑦	MLDL153J5N ⑦
<b>Ceiling — Five Hubs, Four Close-up Plugs</b>						
	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 ⑦	MLCL152J5N ⑦
					MLCL153G1N ⑦	MLCL153J5N ⑦

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	245	C2 <sup>1</sup>	C3 <sup>1</sup>	C6 <sup>1</sup>	C7 <sup>1</sup>	TT <sup>1</sup>
Inc.	150 Max.	X	—	—	—	—	—	—	—	—	—	—	—	—	—
HPS	50	—	X	—	—	—	X	X	—	X	—	—	—	—	X
HPS	70	—	X	—	X	X	X	X	—	X	—	—	—	—	X
HPS	100	—	X	—	X	X	X	X	—	X	—	—	—	—	X
HPS	150	—	X	—	X	X	X	X	—	X	X	X	X	X	X
PSMH	50	—	X	—	X	—	—	—	—	—	—	—	—	—	X
PSMH	70	—	X	—	X	X	X	—	—	X	—	—	—	—	X
PSMH	100	—	X	—	X	X	X	—	—	X	—	—	—	—	X
PSMH	150	—	X	—	X	—	—	—	—	X	—	—	—	—	X
PSMH	175	—	X	X	X	—	—	—	—	X	—	—	—	—	X
MH <sup>1</sup>	175	—	X	—	—	—	—	—	—	—	X	X	X	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

245 - 240 V 50 Hz

C2 - 208 V 60 Hz, CWI <sup>1</sup>

C3 - 240 V 60 Hz, CWI <sup>1</sup>

C6 - 480 V 60 Hz, CWI <sup>1</sup>

C7 - 600 V 60 Hz, CWI <sup>1</sup>

TT - 120/277/347 V 60 Hz, CWA <sup>1</sup>

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 Add **Z** for factory sealed restricted breathing protection (Ex nR) <sup>1</sup>.

⑦ For 150 W HPS fixtures, use S-55 lamp type only.

<sup>1</sup> CSA Certification Only.

# Mercmaster™ III Low Profile Luminaire Electrical Specifications and Fuse Kits

## High Pressure Sodium and Pulse Start Metal Halide

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Class I, Zone 2, Ex nR IIC (Z) <sup>1</sup>  
Class I, Zone 2, AEx nR IIC (ZB)

Class II, Division 1 and 2, Groups E, F, G  
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Class II, Division 1)

Fixtures Outside Type (Salt Water)  
Type 4X  
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Lighting

LIGHTING: ENCLOSED AND GASKETED – AREA – HID

### Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
<b>50 Watt High Pressure Sodium</b>				
120	HX-HPF	0.58	0.58	64
208	HX-HPF	0.35	0.33	64
240	HX-HPF	0.31	0.29	64
277	HX-HPF	0.25	0.25	64
347 <sup>1</sup>	HX-HPF	0.26	0.21	68
<b>70 Watt High Pressure Sodium</b>				
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 <sup>1</sup>	HX-HPF	0.30	0.30	94
480	HX-HPF	0.21	0.21	94
<b>100 Watt High Pressure Sodium</b>				
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 <sup>1</sup>	HX-HPF	0.45	0.39	130
480	HX-HPF	0.33	0.31	135
480	C.W.I.	0.17	0.30	130
600	C.W.I.	0.14	0.24	130
<b>150 Watt High Pressure Sodium ②</b>				
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 <sup>1</sup>	HX-HPF	0.52	0.56	188
480	HX-HPF	0.50	0.47	189
480	C.W.I.	0.25	0.42	190
600	C.W.I.	0.19	0.35	190
<b>50 Watt Pulse Start Metal Halide</b>				
120	HX-HPF	0.87	0.62	67
208	HX-HPF	0.51	0.40	67
240	HX-HPF	0.47	0.35	67
277	HX-HPF	0.32	0.32	67
347 <sup>1</sup>	HX-HPF	0.15	0.20	67
<b>70 Watt Pulse Start Metal Halide</b>				
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 <sup>1</sup>	HX-HPF	0.20	0.28	88
480	HX-HPF	0.26	0.23	95
<b>100 Watt Pulse Start Metal Halide</b>				
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 <sup>1</sup>	HX-HPF	0.40	0.40	129
480	HX-HPF	0.30	0.35	140

### Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
<b>150 Watt Pulse Start Metal Halide</b>				
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 <sup>1</sup>	Super C.W.A.	0.65	0.55	185
480	Super C.W.A.	0.45	0.42	185
<b>175 Watt Pulse Start Metal Halide</b>				
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 <sup>1</sup>	Super C.W.A.	0.25	0.65	208
480	Super C.W.A.	0.25	0.50	213
<b>175 Watt Metal Halide <sup>1</sup></b>				
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
480	C.W.I.	0.20	0.45	215
600	C.W.I.	0.16	0.37	215
<b>Fuse Kit for Field Installation</b>				
Lamp Watts	Volts	Fuse Quantity Required	Fuse Kit HPS	Fuse Kit Catalog Number PSMH
50W	120	1	F5	F3
	208	2	F3	F3
	240	2	F3	F2
	277	1	F2	F2
	347 <sup>1</sup>	1	F1	F1
70W	120	1	F5	F4
	208	2	F3	F3
	240	2	F3	F3
	277	1	F2	F2
	347 <sup>1</sup>	1	F1	F2
100W	480	2	F2	F1
	120	1	F8	F6
	208	2	F5	F4
	240	2	F5	F3
	277	1	F3	F3
150W	347 <sup>1</sup>	1	F1	F2
	480	2	F3	F2
	120	1	F10	F10
	208	2	F5	F5
	240	2	F5	F5
175W	277	1	F5	F4
	347 <sup>1</sup>	1	F2	F2
	480	2	F3	F3
	120	1	—	F5
	208	2	—	F3
175W	240	2	—	F3
	277	1	—	F2
	347 <sup>1</sup>	1	F2	F2
	480	2	—	F2

① C.W.A. – Constant Wattage Autotransformer. HX-HPF – High Reactance High Power Factor Autotransformer. Super C.W.A. – Super Constant Wattage Autotransformer.

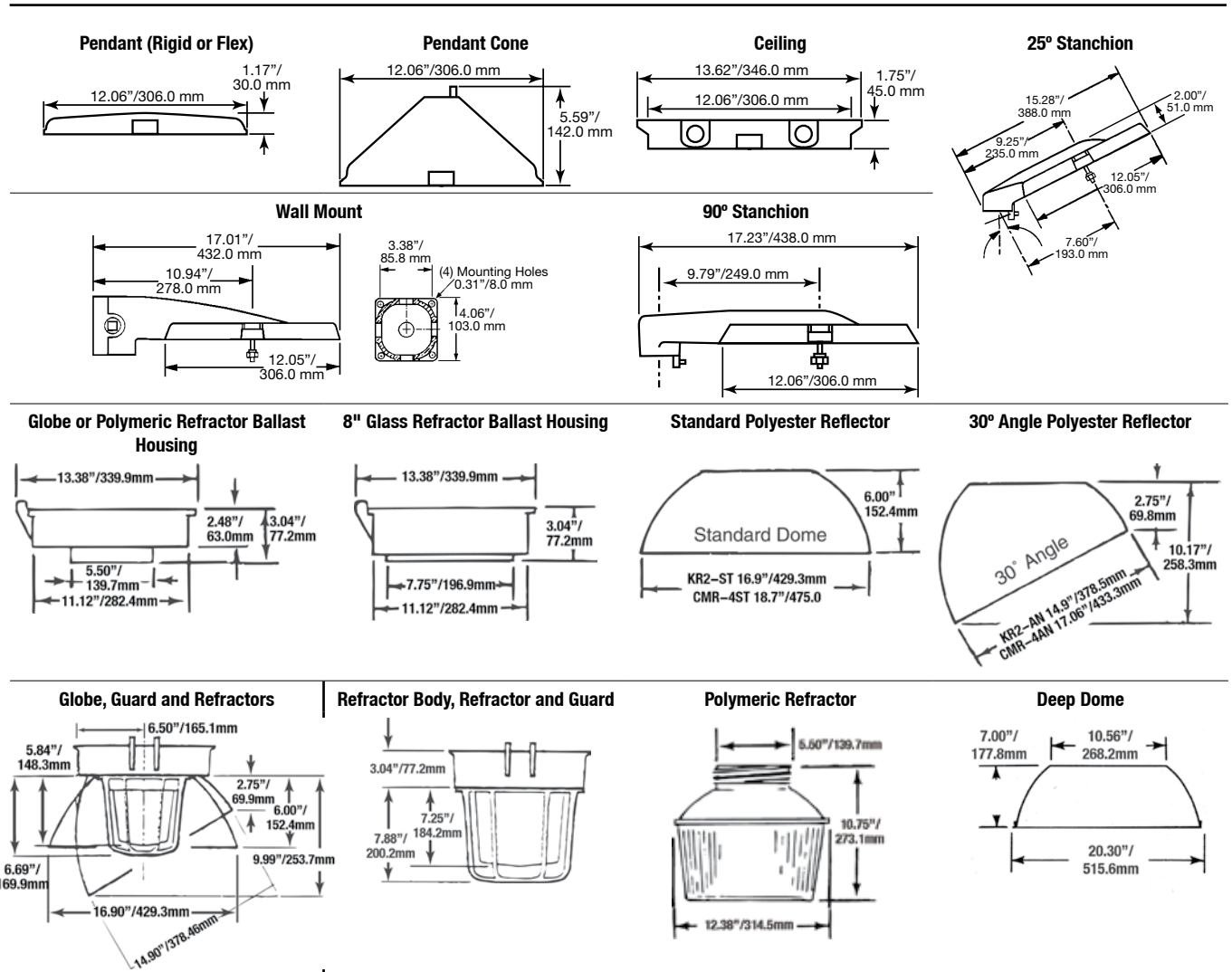
② 150 W HPS units equipped with ballasts to operate 55 V lamps only.

<sup>1</sup> CSA Certification Only.

# Mercmaster™ III Low Profile Luminaire Dimensions and Weights

## High Pressure Sodium and Pulse Start Metal Halide

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



### Mercmaster III Low Profile Ballast and Accessory Weights

Watts	Globe Housing Ballast (Wt. Lbs/Kg)		Refractor Housing Ballast (Wt. Lbs/Kg)		Mounting Hoods	Wt. Lbs/Kg	Refractors, Globes, Guards and Reflectors	Wt. Lbs/Kg
	HPS	PSMH	HPS	PSMH				
50	7.25/3.3	7.00/3.2	7.75/3.5	7.50/3.4	Pendant	2.25/1.0	8" Glass Refractor	5.25/2.4
70	8.25/3.7	7.75/3.5	8.75/4.0	8.25/3.7	Pendant Cone	2.50/1.1	Glass Globe	3.75/1.7
100	9.75/4.4	9.25/4.2	10.25/4.6	9.75/4.4	Ceiling	3.00/1.4	Refractor Guard	1.00/0.5
150	10.75/4.9	10.75/4.9	11.25/5.1	11.25/5.1	Wall	4.00/1.8	Globe Guard	1.00/0.5
175	—	11.00/5.0	—	11.50/5.2	25° Stanchion	3.25/1.5	Standard Dome	2.50/1.1
					90° Stanchion	3.75/1.7	Deep Dome	5.00/2.3
							30° Angle	2.50/1.1
							Polymeric Refractor	2.43/1.1

Weights are approximate. Add 0.25 lbs/0.1 kg for Quartz option.

# Mercmaster™ III Low Profile Luminaire Photometric Data

## 150 W HPS

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

\* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen).

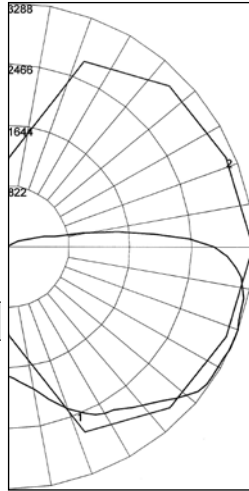
For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 100 W (9,500 lumen) HPS lamp – 0.594; for a 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen) HPS lamp – 0.25. For candlepower values of fixture with guard, multiply by – 0.95.

Lighting

LIGHTING: ENCLOSED AND GASKETED – AREA – HID

**Zone Lumens Total Luminaire Efficiency = 68.4%**

Zone	Lumens	CIE Type – Direct			
		Plane	Spacing Criteria		
0-10	168.01				
10-20	536.92				
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	<b>Zonal Lumen Summary</b>			
Zone	Lumens	% Lamp	% Fixture		
80-90	995.76				
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 \*

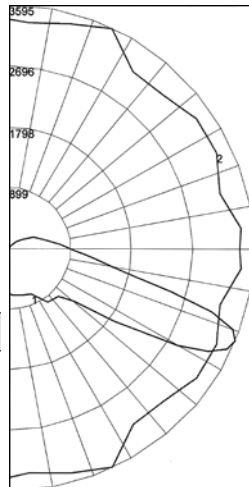
Coefficients of Utilization – Zonal Cavity Method

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	50	30	10				
% 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%**

Zone	Lumens	CIE Type – Semi-Direct			
		Plane	Spacing Criteria		
0-10	16.51				
10-20	135.03				
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	<b>Zonal Lumen Summary</b>			
Zone	Lumens	% Lamp	% Fixture		
80-90	1145.98				
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	50	30	10				
% 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	