

Mercmaster™ III HID 50–250 Watt 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
 - 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. 18% cooler operation allows use in ambient temperatures up to 149°F/65°C depending on fixture component combinations
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Marine applications
- Fixtures have NEMA 4X listing.
- Suitability includes listing for use where there may be simultaneous exposure to combustible dusts and flammable gases and vapors. See listing pages for compliance data on specific fixture component combinations.

Features

- Modular design allows scores of fixture component combinations to meet installation and lighting needs. Many most-used combinations are offered prewired and assembled, complete with lamp, packaged in a single carton and ready to install.
- Mogul lamp types and wattages:
 - HPS 50W-150W
 - PSMH 70W-250W
- Choice of heat-resistant prismatic glass refractors (NEMA distributions I, III and V), or heat-resistant prismatic glass globes for hazardous area fixtures. Colored and clear polycarbonate globes and Tuff-skin®† coated glass globes are available but are NOT approved for use in classified areas. Fixtures with these globes do NOT comply with code requirements, and should be used in non-classified areas only. Globes and refractors thread directly into ballast housing.
- Mounting hoods include cone-shaped pendant hood, standard pendant, flexible pendant, ceiling and wall pendants (tapped for 3/4" or 1" NPT), 25° angle stanchion, and 90° (straight) stanchion (both tapped for 1-1/4" or 1-1/2" NPT).
- Cone hood fixtures for pendant mounting shed dust, dirt and combustible fibers. Cone hood inhibits build-up that "insulates" fixture and slows heat transfer, and provides increased surface area for more effective heat dissipation.



**Pendant Mount Fixture
with Prismatic Glass Refractor**



**Straight Stanchion-Mount Fixture
with Prismatic Glass Refractor
and Guard**



**Pendant Cone Fixture with
Prismatic Glass Globe and Guard**



**Ceiling Mount Fixture
with Prismatic Glass Globe, Guard
and Polyester 30° Angle Reflector**

- Reflector choice includes standard dome and 30° angle types, both made of Fiberglass reinforced white polyester. Highly resistant to unusually corrosive applications. Reflectors are vented for cooler, dirt-free operation and maintained lumen output. They secure to ballast housing with stainless steel screws threading into stainless steel inserts.
- For high corrosion resistance, fixture housing, mounting hoods and guards are copperfree cast aluminum with baked epoxy finish, electrostatically applied for uniformity. All exposed hardware is stainless steel.
- 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.
- Body gaskets and globe gaskets are high-temperature silicone rubber.
- Capacitors are non-PCB type, thermally isolated from ballast.

† Tuff-skin is a registered trademark of Thomas Manufacturing Corp., Parkton, Maryland.

‡ CSA Certification Only.

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Class I, Zone 2, Ex nR IIC (Z) [†]
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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
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Lighting

LIGHTING: ENCLOSED AND GASKETED – AREA – HID

- Mogul base porcelain socket with nickel-plated contacts has 392 °C/ 200 °C welded leads, prewired to the ballast. Assures trouble-free operation in installations where high ambient temperatures are encountered.
- HPS ballasts are High Power Factor (min. P.F. 90%).
- A wide range of voltages available (120 to 600 Volt) and ballast types (Reactor, CWA, CWI and Super CWA).
- All Mercmaster III mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kit listings in this catalog section).
- For electrical protection, a ground wire is provided on each Mercmaster to bond hood and ballast housing.
- 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.
- The AEx nR Mercmaster III fixture requires all wiring entries to be sealed.

Standard Materials

- Mounting hoods, ballast bodies and guards: copperfree cast aluminum (less than 4/10 of 1%)
- Exposed hardware: stainless steel; latch assemblies have stainless steel bolt and captive nut; reflectors and guards attach with stainless steel screws threading into stainless steel inserts.
- Reflectors: Fiberglass reinforced white polyester
- Globes: heat-resistant prismatic glass
- Refractors: heat-resistant prismatic glass

Standard Finishes

- Mounting hoods, ballast bodies, guards: epoxy powder coat finish, electrostatically applied for complete, uniform surface protection
- Reflectors: white polyester finish

Options

- AEx nA nR fixtures are available with a Class I, Zone 2 rating. Add suffix **-Z2**.
- AEx nR fixtures are available with a Class I, Zone 2 rating. Add suffix **-ZB**.
- Ex nR fixtures, add suffix **-Z** [†].
- Fuses can be field-installed on Mercmaster III fixtures. Kits include fuse block, wire connectors and screws for attaching to mounting hood. Fixtures with fuses do not comply with Marine Type Electric Fixtures Outside Type (Salt Water) requirements for marine listing. For fuse kits, see *Electrical Specifications and Fuse Kits* page.

- Hot Restrike will restrike HPS lamp immediately when power is restored after a momentary power interruption. Add suffix **-R**.
- 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**.
- 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 HPS and PSMH fixtures. Add suffix **-S**.
- Optional photocell for all fixtures except cone and ceiling mount provides automatic "on-off" control.
- 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** to fixture catalog number. [‡]

Certifications and Compliances

- UL Standard: UL 1598, UL 1598A, UL 844, UL 60079-0, UL 60079-15
- UL Listed: E10444
- PSMH 250N, MT Fixtures are non UL.

Related Products

- Classified area photo controls are also available.

[‡] Fixtures equipped with a quartz auxiliary lamp do not comply with UL 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) ¹
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/
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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

KP	A	L	70	10	J5	G	MT	R	Z2
Series: KP - Mercmaster III 250		Lamp Type: L - High Pressure Sodium H or P - Pulse Start Metal Halide ❶		Hub Size: 75 - 3/4" NPT 10 - 1" NPT 125 - 1-1/4" NPT stanchion 150 - 1-1/2" NPT stanchion		Guard Options: G - Guard Blank - No Guard		Options: E - Emergency Quartz F - Fuse Kit (Specify Voltage) R - Hot Restrike (50-150 W HPS only) S - Smart Starter SR - Smart Hot Restrike K - Kynar Coating H1 - Photocontrol 120 V H2 - Photocontrol 208 V H3 - Photocontrol 240 V H4 - Photocontrol 277 V C - Safety Cable Adapted ❷❸ E40 - Export Socket D - E-40 Export Socket ❷❸ T - Terminal Blocks ❷❸ V - Anti-Vibration Modifications ❷❸ X - Appledapter ❹ Mounting Hood Adapter ❷❸ Optional Fusing ❺ FN - 120 V FP - 208 V FS - 240 V FT - 277 V FF - 480 V	
Mounting: A - Pendant (rigid mounting) C - Ceiling CH - Pendant Cone Hood F - Pendant (flexible mounting) ST - 90° Stanchion S - 25° Stanchion WB - Wall		Wattage: 10 - 100 W HPS, PSMH 15 - 150 W HPS, PSMH 17 - 175 W PSMH 20 - 200 W PSMH 25 - 250 W PSMH ❻ 50 - 50 W HPS (MT - Voltage Only) 70 - 70 W HPS, PSMH 17 - 175 W MH ❷❸ 25 - 250 W MH ❷❸		Optical Assembly: Blank - Glass Globe J1 - NEMA I Glass Refractor J3 - NEMA III Glass Refractor J5 - NEMA V Glass Refractor G3 - Large Glass Globe		Voltage: ❷ 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 235 - 230, 50 Hz 245 - 240, 50 Hz C2 - 208, 60 Hz, CWI ❷❸ C3 - 240, 60 Hz, CWI ❷❸ C6 - 480, 60 Hz, CWI ❷❸ C7 - 600, 60 Hz, CWI ❷❸ TT - 120/277/347, 60 Hz, CWA ❷❸	Suffix: Z2 - Zone 2 suffix (required for AEx nA nR rating) ZB - Zone 2 suffix (required for AEx nR rating) Z - Zone 2 suffix (required for Ex nR) ❷❸		

Reflectors are ordered separately – see Accessories page.

¹ H - Lamp type is for 70W and 100W fixtures only.

P - Lamp type is for 175W, 200W and 250W fixtures only.

² Voltages shown are limited to specific combinations.

³ Appledapter is available for use with the pendant, ceiling and angled stanchion mounting only.

⁴ Optional fusing is available for use with MT, 5MT and 48 voltage suffixes ONLY.

⁵ PSMH 250 W, MT Fixtures are non UL.

¹ CSA Certification Only.

Mercmaster™ III HID 50–250 Watt Luminaire Thermal Performance

Class I, Division 2; Class II, Division 1; Simultaneous Exposure to Hazardous Conditions of Both Classifications

Temperature Identification Numbers of Mercmaster III fixtures.

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

Mercmaster III fixtures are listed for “Simultaneous Exposure” to combinations of Class I, Division 2 and Class II, Division 1 hazardous conditions.

“T” Numbers for Mercmaster III Fixtures

Lamp Watts	Type	Supply Wire Temp. (°F/°C)	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	Reflector	G3	8” Refractor	Globe	Reflector	G3	8” Refractor	Globe	Reflector	G3	8” Refractor
50	HPS	194/90	104/40	T3C	T3B	—	T3C	T4A	T4	—	T6	T3A	T3	—	T3C
		194/90	131/55	T3A	T3A	—	T3A	T4	T3B	—	T5	T3	T3	—	T3A
		194/90	149/65	T3A	T3	—	T3A	T3C	T3C	—	T4A	T2D	T2D	—	T3
70	HPS	194/90	104/40	T3B	T3A	—	T3C	T4	T3C	—	T6	T3	T3	—	T3A
		194/90	131/55	T3A	T3A	—	T3B	T3C	T3C	—	T5	T2D	T2D	—	T3
		194/90	149/65	T3	T3A	—	T3A	T3C	T3B	—	T4A	T2C	T2C	—	T3
100	HPS	194/90	104/40	T2D	T2D	T3	T3	—	T3A (EF)	T3 (EF)	—	—	—	—	—
		194/90	104/40	—	—	—	—	T3B	—	T4A	T4A	T2B	T2B	T2C	T2C
		194/90	131/55	T2D	T2D	T3	T3	—	—	T4	T4	—	—	T2B	T2B
		194/90	149/65	T2D	T2D	T2D	T2D	—	—	—	—	—	—	—	—
150	HPS	194/90	104/40	T2B	T2B	—	T2C	—	—	—	T3C	T2	—	—	T2B
		194/90	104/40	—	—	—	—	T3 (EF)	—	—	—	—	—	—	—
		194/90	131/55	T2B	T2A	—	T2B	—	—	—	—	—	—	—	—
70	PSMH	194/90	104/40	T3A	T3A	—	T3A	—	—	—	T3C	—	—	—	—
		194/90	131/55	T3A	T3A	—	T3A	—	—	—	T3C	—	—	—	—
		194/90	149/65	T3	T2	—	T3	—	—	—	T3C	—	—	—	—
100	PSMH	194/90	104/40	T3	T3	—	T3	—	—	—	T3C	—	—	—	T2B
		194/90	131/55	T3	T3	—	T3	—	—	—	T3C	—	—	—	T2A
		194/90	149/65	T2D	T2D	—	T2D	—	—	—	T3C	—	—	—	—
150	PSMH	194/90	104/40	T2B	T2B	—	T2B	—	—	—	T3C	—	—	—	T2B
		194/90	131/55	T2A	T2A	—	T2B	—	—	—	T3C	—	—	—	T2A
		257/125	149/65	T2A	T2	—	T2B	—	—	—	T3C	—	—	—	—
175	PSMH	194/90	104/40	T2B	T2B	—	T2B	—	—	—	T3C	—	—	—	T2B
		194/90	131/55	T2A	T2A	—	T2B	—	—	—	T3C	—	—	—	T2A
		221/105	149/65	T2A	T2	—	T2B	—	—	—	—	—	—	—	—
200	PSMH	194/90	104/40	T2B	T2B	—	T2B	—	—	—	T3B	—	—	—	—
		194/90	131/55	T2B	T2B	—	T2B	—	—	—	—	—	—	—	—
250	PSMH	194/90	104/40	T2	T2	—	T2	—	—	—	—	—	—	—	—
		194/90	131/55	T2	T2	—	T2	—	—	—	—	—	—	—	—
175	MH ⚡	194/90	104/40	T2B	T2B	—	T2B	—	—	—	T3C	—	—	—	—
		194/90	131/55	T2A	T2A	—	T2B	—	—	—	T3C	—	—	—	—
250	MH ⚡	194/90	104/40	325	325	—	T2	—	—	—	T3B	—	—	—	—

“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” Number	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

⚡ All Class II T Numbers are E, F, G unless otherwise indicated.

⚡ CSA Certification Only.

Mercmaster™ III HID 50–250 Watt Luminaire Ballast Bodies

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Class I, Zone 2, Ex nR IIC (Z) ¹
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
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Ballast Bodies



Ballast Body for Glass Globe (shown)

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



Ballast Body for Glass Refractor or G3 Globe (shown)

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

Catalog Number 2456				Voltage Suffixes												
Lamp Type	Lamp Watts	For Globe	For G3 Globe 1/ Refractor	MT	5MT	48	125	225	226	235	245	C2 1	C3 1	C6 1	C7 1	TT 1
HPS	50 2	KPB50L	KPBR50L	X	—	—	—	X	X	—	X	—	—	—	—	X
HPS	70 2	KPB70L	KPBR70L	X	—	X	X	X	X	—	X	—	—	—	—	X
HPS	100 2	KPB100L	KPBR100L	X	—	X	X	X	X	—	X	—	—	X	X	X
HPS	150 2	KPB150L	KPBR150L	X	—	X	X	X	X	—	X	—	—	X	X	X
PSMH	70	KPB70H	KPBR70H	X	—	X	X	X	—	—	X	—	—	—	—	X
PSMH	100	KPB100H	KPBR100H	X	—	X	X	X	—	—	X	—	—	—	—	X
PSMH	150	KPB150P	KPBR150P	X	—	X	X	X	—	—	X	—	—	—	—	X
PSMH	175	KPB175P	KPBR175P	X	X	X	—	—	—	—	—	—	—	—	—	X
PSMH	200	KPB200P	KPBR200P	X	—	X	—	—	—	—	—	—	—	—	—	X
PSMH	250	KPBG250P	KPBR250P	X	—	—	—	—	—	—	—	—	—	—	—	X
MH 1	175	KPB175H	KPBR175H	X	—	—	X	X	—	—	X	X	X	X	X	X
MH 1	250	KPB250H	KPBR250H	X	—	—	X	X	—	—	X	X	X	X	X	X
Voltages:																
LB - Incandescent, 120 V 60 Hz			125 - 120 V 50 Hz				245 - 240 V 50 Hz									
MT - 120/208/240/277 V 60 Hz			225 - 225 V 50 Hz				C2 - 208 V 60 Hz, CWI 1									
5MT - 120/208/240/277/480 V 60 Hz			226 - 220 V 60 Hz				C3 - 240 V 60 Hz, CWI 1				C7 - 600 V 60 Hz, CWI 1,					
48 - 480 V 60 Hz			235 - 230 V 50 Hz				C6 - 480 V 60 Hz, CWI 1				TT - 120/277/347 V 60 Hz, CWA 1					

¹ For HPS version fixtures only.

² After voltage suffix add: **-S** for Smart Starter.

³ After voltage suffix add: **-SR** for Smart Hot Restrike, **-R** for ballast body with Hot Restrike Ignitor.

⁴ Add **-E** after voltage suffix for ballast body with provision for Quartz Emergency Light. Not suitable for hazardous locations.

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) ¹.

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Mercmaster™ III HID 50–250 Watt Luminaire Electrical Specifications

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Class I, Zone 2, Ex nR IIC (Z) ¹
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Class III
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Electrical Specifications

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
50 Watt High Pressure Sodium				
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 ¹	HX-HPF	0.26	0.21	68

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 ¹	HX-HPF	0.30	0.30	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
347 ¹	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

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 ¹	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

70 Watt Pulse Start 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 ¹	HX-HPF	0.20	0.28	88
480	HX-HPF	0.26	0.23	95

100 Watt Pulse Start 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 ¹	HX-HPF	0.40	0.40	129
480	HX-HPF	0.30	0.35	140

Line Voltage	Type of Ballast ①	Starting Amps	Operating Amps	Total Watts
150 Watt Pulse Start 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 ¹	Super C.W.A.	0.65	0.55	185
480	Super C.W.A.	0.45	0.42	185

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 ¹	Super C.W.A.	0.25	0.65	208
480	Super C.W.A.	0.25	0.50	213

175 Watt Metal Halide ¹				
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

175 Watt Metal Halide ¹				
120	Super C.W.A.	1.30	1.80	213
208	Super C.W.A.	0.75	1.10	213
240	Super C.W.A.	0.65	0.90	213
277	Super C.W.A.	0.55	0.80	213
480	Super C.W.A.	0.35	0.45	213

250 Watt Metal Halide ¹				
120	Super C.W.A.	1.20	2.60	298
208	Super C.W.A.	0.65	1.50	298
240	Super C.W.A.	0.60	1.30	298
277	Super C.W.A.	0.50	1.12	298
480	Super C.W.A.	0.30	0.65	298

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 volt lamps only.

¹ CSA Certification only.

Mercmaster™ III HID 50–250 Watt Luminaire Photometric Data

100 W HPS

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

* Photometric data is based on fixtures with a 100-watt clear High Pressure Sodium lamp (9,400 lumen).

For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 70 W (6,400 lumen) HPS lamp – 0.68; for 50 W (4,000 lumen) HPS lamp – 0.43; for candlepower values of fixture with guard, multiply by 0.95.

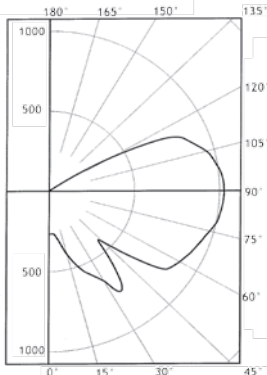
Lighting

LIGHTING: ENCLOSED AND GASKETED – AREA – HID

Degree	Candela	Lumens
0	269	
5	267	27
15	407	117
25	571	267
35	748	442
45	451	380
55	848	735
65	915	908
75	976	1033
85	1021	1113
90	1027	
95	1019	1109
105	953	1002
115	791	734
125	54	103
135	13	9
145	13	8
155	4	2
165	0	0
175	0	0
180	1	

TOTAL LUMINAIRE EFFICIENCY = 84.1%
CIE Type – Semi-Direct
Spacing Criteria: 3.1

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT.
0-30	410	4.3	5.1
0-40	852	9.0	10.7
0-60	1967	20.7	24.6
0-90	5021	52.9	62.9
90-120	2845	29.9	35.6
90-130	2948	31.0	36.9
90-150	2965	31.2	37.1
90-180	2967	31.2	37.1
0-180	7988	84.1	100.0



REPORT NUMBER: KPB100LG3

Lamps: 100 W High Pressure Sodium C100S54 ED23 – 1/2 Mogul Base with G3 Globe only

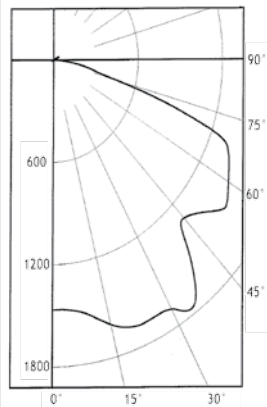
COEFFICIENTS OF UTILIZATION – ZONAL CAVITY METHOD
EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50				30				10				0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10			
0	93	93	93	93	87	87	87	87	76	76	76	66	66	66	57	57	57	53			
1	79	72	67	62	73	67	62	58	58	54	50	49	46	43	41	39	36	32			
2	69	60	52	46	64	56	49	43	48	42	37	40	36	32	33	30	26	23			
3	62	51	43	36	57	47	40	34	40	34	29	34	29	24	28	24	20	17			
4	56	44	36	29	51	41	33	27	35	28	23	29	24	20	24	19	16	13			
5	51	39	30	24	47	36	28	22	30	24	19	25	20	16	21	17	13	10			
6	47	34	26	20	43	32	24	19	27	21	16	23	17	13	19	14	11	8			
7	43	31	23	17	40	28	21	16	24	18	14	20	15	13	17	13	9	7			
8	40	28	20	15	37	26	19	14	22	16	12	19	14	10	15	11	8	6			
9	37	25	18	13	34	23	17	12	20	14	10	17	12	9	14	10	7	5			
10	34	23	16	11	32	21	15	11	18	13	9	16	11	8	13	9	6	5			

Degree	Candela	Lumens
0	1466	
5	1473	142
15	1607	456
25	1675	775
35	1757	1071
45	1316	1047
55	1502	1316
65	1377	1362
75	465	589
85	92	111
90	16	
95	3	5
105	6	6
115	40	33
125	5	8
135	3	2
145	3	1
155	2	1
165	0	1
175	1	0
180	1	

TOTAL LUMINAIRE EFFICIENCY = 72.9%
CIE Type – Direct
Spacing Criteria: 1.6

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT.
0-30	1373	14.5	19.8
0-40	2445	25.7	35.3
0-60	4807	50.6	69.4
0-90	6869	72.3	99.2
90-120	45	0.5	0.6
90-130	53	0.6	0.8
90-150	56	0.6	0.8
90-180	58	0.6	0.8
0-180	6927	72.9	100.0



REPORT NUMBER: KPB100LG3_ST

Lamps: 100 W High Pressure Sodium C100S54 ED23 – 1/2 Mogul Base with G3 Globe and Standard Dome Reflector

COEFFICIENTS OF UTILIZATION – ZONAL CAVITY METHOD
EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50				30				10				0
	RW	70	50	30	10	70	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	77	77	77	74	74	74	72		
1	78	74	71	68	68	76	73	70	67	70	67	65	67	64	62	64	62	60	59		
2	70	64	58	53	53	68	62	57	53	59	55	51	57	53	50	54	52	49	47		
3	63	55	48	43	43	61	54	47	43	51	46	42	49	45	41	47	43	40	38		
4	57	48	41	35	35	55	47	40	35	45	39	34	43	38	34	41	37	33	32		
5	52	42	35	30	30	51	41	34	29	39	34	29	38	33	29	36	32	28	26		
6	48	37	30	25	25	46	37	30	25	35	29	25	34	29	25	33	28	24	23		
7	44	34	27	22	22	43	33	26	22	32	26	22	31	25	21	29	25	21	20		
8	41	30	24	19	19	40	30	24	19	29	23	19	28	23	19	27	22	19	17		
9	38	23	21	17	17	37	27	21	17	26	21	17	25	20	17	25	20	17	15		
10	36	25	19	15	15	35	25	19	15	24	19	15	23	19	15	23	18	15	14		

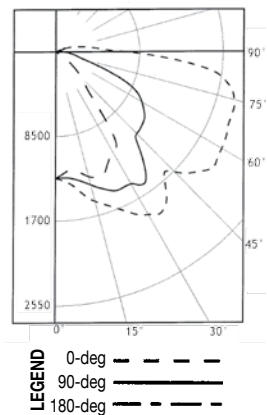
Candela Distribution

	0.0	45.0	90.0	135.0	180.0	Flux
0	1270	1270	1270	1270	1270	1270
5	1317	1302	1271	1227	1211	122
15	1554	1471	1384	1341	1298	398
25	1779	1680	1528	1353	1246	694
35	1923	1830	1593	1256	1020	917
45	1715	1564	1163	599	361	848
55	1981	1862	1100	287	122	953
65	1923	1751	869	104	0	869
75	1879	1272	298	9	0	711
85	1371	828	140	1	0	424
90	680	422	89	2	1	
95	416	259	47	4	4	144
105	191	93	4	7	6	59
115	40	18	51	54	92	31
125	1	3	3	3	1	2
135	1	2	3	2	1	1
145	0	1	2	0	0	1
155	0	1	2	1	0	1
165	0	1	1	1	0	0
175	2	2	2	1	0	0
180	2	2	2	2	2	

TOTAL LUMINAIRE EFFICIENCY = 65.0%

CIE Type – Direct	
Plane	Spacing Criteria
0°	1.9
90°	1.7
180°	1.3

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT.
0-30	1213	12.8	19.7
0-40	2131	22.4	34.5
0-60	3932	41.4	63.7
0-90	5936	62.5	96.1
90-120	234	2.5	3.8
90-130	236	2.5	3.8
90-150	238	2.5	3.9
90-180	239	2.5	3.9
0-180	6175	65.0	100.0



REPORT NUMBER: KPB100LG3_AN

Lamps: 100 W High Pressure Sodium C100S54 ED23 – 1/2 Mogul Base with G3 Globe and 30° Angle Reflector

COEFFICIENTS OF UTILIZATION – ZONAL CAVITY METHOD
EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

EFFECTIVE PEGG SAWYER RELOCATIONS																										
RC	80					70					50					30					10					0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10		10	0		
0	77	77	77	77		75	75	75	75		71	71	71		67	67	67		64	64	64		62	62		
1	68	64	61	57		66	62	59	56		59	56	54		56	54	52		53	51	50		48	48		
2	61	55	49	45		59	53	48	44		50	46	43		48	44	41		45	42	40		38	38		
3	55	47	41	36		53	46	40	36		44	39	35		41	37	34		39	36	33		31	31		
4	50	41	35	30		48	40	34	30		38	33	29		36	32	28		35	31	28		26	26		
5	46	37	30	25		44	36	30	25		34	29	25		32	28	24		31	27	24		22	22		
6	42	33	26	22		41	32	26	22		30	25	21		29	24	21		28	24	20		19	19		
7	39	30	23	19		38	29	23	19		28	22	19		26	22	18		25	21	18		17	17		
8	36	27	21	17		35	26	21	17		25	20	16		24	20	16		23	19	16		15	15		
9	34	25	19	15		33	24	19	15		23	18	15		22	18	14		21	17	14		13	13		
10	32	23	17	14		31	22	17	13		21	17	13		20	16	13		20	16	13		12	12		