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.

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

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

Applications

- Enclosed and gasketed fixtures suitable for use in:
  - — Marine and wet locations
  - — A wide range of industrial, chemical processing and other areas where flammable gases and vapors or combustible dusts are present under conditions defined by the National Electrical Code as Class I, Division 2; Class II, Division 1 and 2; and Class III
  - — For Zone 2, the method of protection is AEx nA nR – Restricted Breathing/Nonsparking or AEx/Ex 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 +65 °C (+149 °F) depending on fixture component combinations
  - — Ambient temperature range:
    - – HPS: -40˚C to +65˚C (-40˚F to +149˚F)
    - – PSHM: -30˚C to +65˚C (-22˚F to +149˚F)
- 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 175W-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® ① 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

Pendant Cone

Ceiling

Wall

25° Stanchion

90° Stanchion

- 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.
- Mogul base porcelain socket with nickel-plated contacts has 200 °C (392 °F) 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 and 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.

① *Tuff-skin is a registered trademark of Thomas Manufacturing Corp., Parkton, Maryland.*

Mercmaster™ III HID 50–250 Watt Luminaires

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Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
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Class III

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Simultaneous Exposure (Class I, Division 2/ Class II, Division 1)
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Type 4X
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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

- The AEx nA nR factory sealed Mercmaster III prevents vapors and gases from entering the globe chamber. There are no seals or putty required which will reduce installation time and installation errors.
- The AEx/Ex 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**. Only available for certain ballast types.
- AEx/Ex nR fixtures are available with a Class I, Zone 2 rating. Add suffix -**ZB**.
- 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 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 25-50% 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. ①

NEC/CEC Certifications and Compliances

- cULus Listed: E10444
- UL Standard: ANSI/UL 844, 1598, 60079-0, 60079-15, 1598A
- CSA Standard: CSA C22.2 No. 250.0, C22.2 No. 137; CAN/CSA E60079-0, E60079-15
- PSMH 250W MT (120/208/240/277, 60 Hz) Fixtures are not UL Listed

Related Products

- Classified area photo controls are also available.

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

EMERSON

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- ***Class I, Zone 2, AEx nA nR IIC (Z2)***
- ***Class I, Zone 2, AEx/Ex nR IIC (ZB)***
- ***Class II, Division 1 and 2, Groups E, F, G***
- ***Class III***

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

Illustrated Features

High Temperature Sockets
Mogul base high-temperature porcelain sockets.

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

Globe Chamber (Zone 2)
Completely sealed from the ballast housing and outside vapors/air (nA nR).

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

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

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

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.

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.

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.

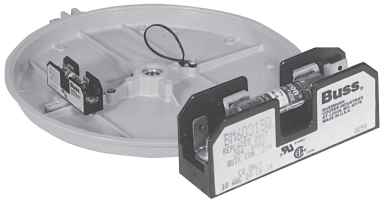
Heat-Resistant Globes and Refractors
Prismatic glass globes and refractors are heat-resistant. They thread directly into the ballast housing and seal against a high-temperature silicone rubber gasket.

Ballast Assembly (Zone 2)
Utilizing non-sparking components avoiding the ignition of gases or vapors that may be present (nA).

Mounting Hood and Globe Gaskets
Silicone rubber gasket seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.

Electrical Protection
Ground wire provided to bond mounting hood to ballast housing.

Cooler Operating Cone Hood
Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.



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

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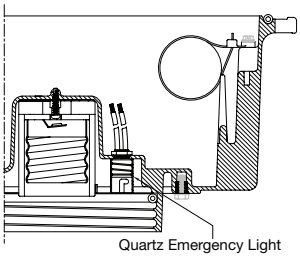
Type 4X
IP66

Quartz Emergency Light for Pulse Start Metal Halide or High Pressure Sodium Fixtures ①



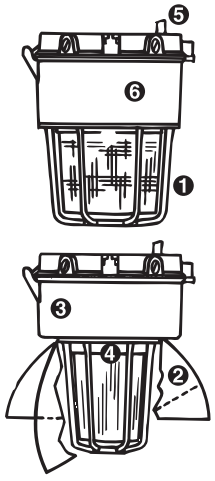
Quartz Emergency Light for PSMH or HPS Fixtures

Mercmaster fixtures for or metal halide and high pressure sodium lamps can be supplied with a socket to accept a 150 W or 250 W, 120 V quartz lamp. This D.C. bayonet base socket is in addition to the standard lamp socket. In the event of a momentary power interruption, the quartz lamp is automatically switched on. The single ended quartz lamp remains energized until the HID restrikes and reaches about 60% output.

The quartz emergency lamp socket is wired to a 120 V tap on the ballast and is therefore independent of the lighting fixture voltage. No special field wiring is necessary.

Description	Catalog Suffix
For fixture volts of 120, 208, 240 or 277	**-MTE**
For fixture volts of 480	**-48E**

Accessory Options



① **Guards:** Guards are die-cast copperfree aluminum with baked epoxy finish to match fixtures. Fixture supplied with stainless steel mounting screws which thread into stainless steel inserts on fixture housing to attach guard. To order fixture with guard, add suffix **-G** to catalog number before adding voltage suffix.

② **Reflectors:** Standard dome and 30° angle polyester reflectors are shown elsewhere in this catalog section.

③ **Hot Restrike:** Instantly restrikes a hot HPS lamp when power is restored after a momentary outage. Available factory-installed only. To order, add suffix -**R** to catalog number.

④ **Quartz Emergency Light:** When ordered, HPS fixtures will be supplied with a prewired special DC bayonet base socket to accept a 150W, 120 V quartz lamp (not furnished) that automatically switches on when a power outage occurs. Fixtures ordered with this quartz emergency lamp feature do NOT comply with requirements for classified areas and should be used only in non-classified locations. To order, add suffix -**E** to catalog number and specify if a relay switch is desired.

⑤ **Photocell and Fuses:** Photocontrols are available.

⑥ **Smart Starter:** Performs as a conventional starter in lamp start-up. Removes itself from circuit at end of lamp life or if lamp is out of socket. Add suffix -**S** to catalog number.

① NOTE: Fixtures equipped with quartz emergency light do not comply with UL requirements and are not suitable for use in classified locations.

EMERSON

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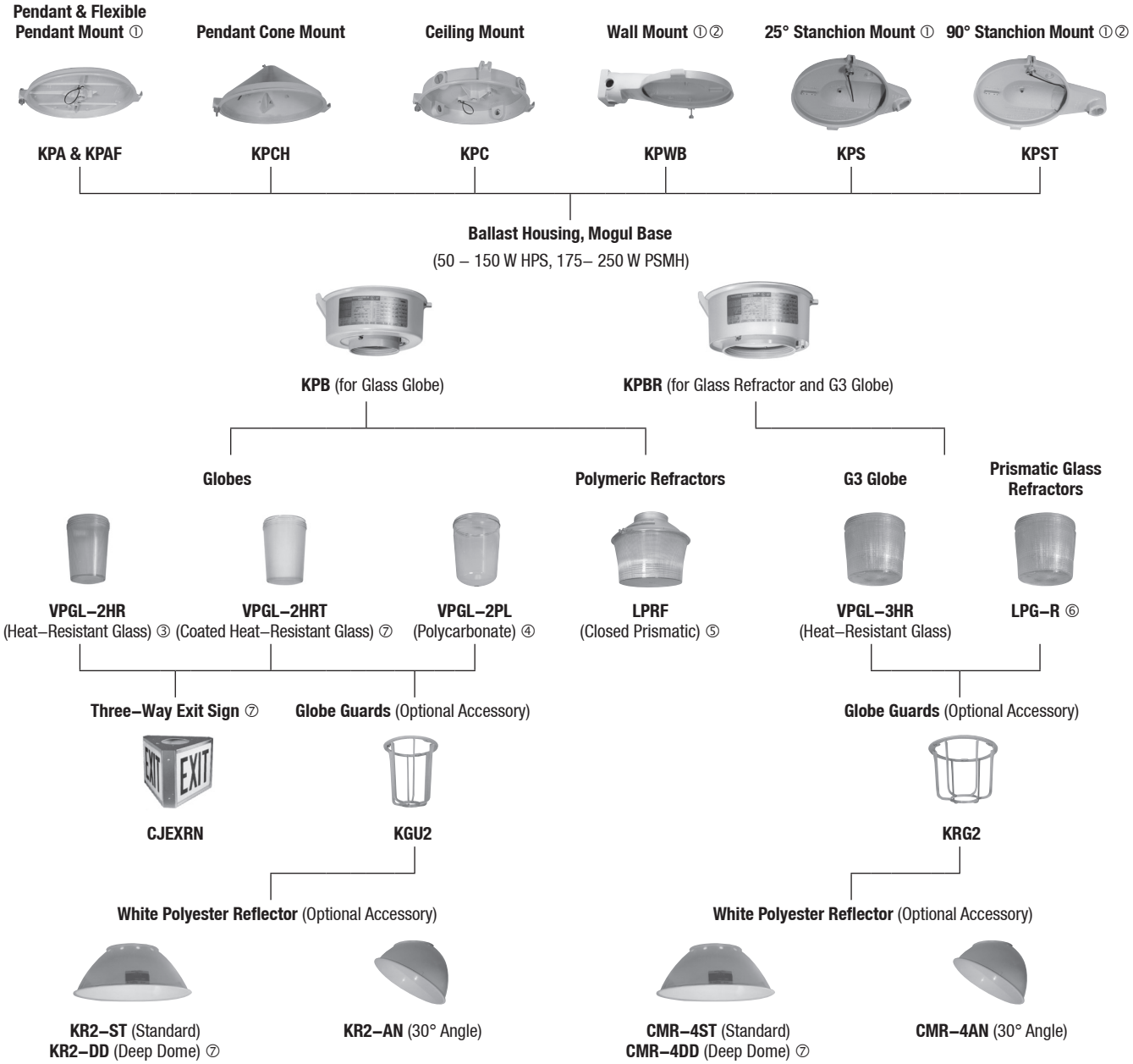
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

Mercmaster III 50-250 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. Colors not UL Listed.*
④ *Available in clear, amber, green and red. Not UL Listed.*
⑤ *Available in NEMA Type II, III, IV and V. Polymeric Refractor suitable for Class II, Groups F and G, NEMA 4X and Marine Type Electric Fixtures Outside Type (Salt Water) only (100 W HPS Max.).*
⑥ *Available in NEMA Type I, III and V.*
⑦ *Not UL Listed.*

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Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

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

Catalog Numbering Guide

KP | **A** | **L** | **70** | **10** | **J5** | **G** | **MT** | **R** | **Z2**

KP — Series: KP - Mercmaster III 250

A — Mounting:
A - Pendant (rigid mounting)
C - Ceiling
CH - Pendant Cone Hood
F - Pendant (flexible mounting)
ST - 90° Stanchion
S - 25° Stanchion
WB - Wall

L — Lamp Type:
L - High Pressure Sodium
P - Pulse Start Metal Halide

70 — Wattage:
10 - 100 W HPS
15 - 150 W HPS
17 - 175 W PSMH
25 - 250 W PSMH ③
50 - 50 W HPS (MT - Voltage Only)
70 - 70 W HPS

10 — Hub Size:
75 - 3/4" NPT
10 - 1" NPT
125 - 1-1/4" NPT stanchion
150 - 1-1/2" NPT stanchion

J5 — Optical Assembly:
Blank - Glass Globe
J1 - NEMA I Glass Refractor
J3 - NEMA III Glass Refractor
J5 - NEMA V Glass Refractor
G3 - Large Glass Globe

G — Guard Options:
G - Guard
Blank - No Guard

MT — Voltage: ①
MT - 120/208/240/277, 60 Hz
48 - 480, 60 Hz
125 - 120, 50 Hz
225 - 220, 50 Hz
226 - 220, 60 Hz
235 - 230, 50 Hz
236 - 230, 60 Hz
245 - 240, 50 Hz
246 - 240, 60 Hz
GP - 120/220-240, 50 Hz
GK - 220/240, 50 Hz
GC - 230, 50 Hz

R — Options:
E - Emergency Quartz
F - Fuse Kit (Specify Voltage)
R - Hot Restrike (50-150 W HPS only)
S - Smart Starter
K - Kynar Coating
H1 - Photocontrol 120 V
H2 - Photocontrol 208 V
H3 - Photocontrol 240 V
H4 - Photocontrol 277 V
C - Safety Cable Adapted
E40 - Export Socket
T - Terminal Blocks

Optional Fusing ②
FN - 120 V
FP - 208 V
FS - 240 V
FT - 277 V
FF - 480 V

Z2 — Suffix:
Z2 - Zone 2 suffix (required for AEx nA nR rating) ④
ZB - Zone 2 suffix (required for AEx/EX nR rating)

Lamp Type	*Lamp Watts*	*Voltage Suffixes*											
		MT	***48***	***125***	***225***	***226***	***235***	***236***	***245***	***246***	***GP***	***GK***	***GC***
HPS	*50*	*X*	*—*	*—*	*X*	*X*	*—*	*—*	*X*	*—*	*—*	*X*	*—*
HPS	*70*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*—*	*X*
HPS	*100*	*X*	*X*	*X*	*X*	*X*	*—*	*X*	*X*	*X*	*X*	*—*	*—*
HPS	*150*	*X*	*X*	*X*	*X*	*X*	*—*	*X*	*X*	*X*	*X*	*—*	*—*
PSMH	*175*	*X*	*X*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*
PSMH	*250*	*X*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*	*—*

Voltages:
MT *- 120/208/240/277 V 60 Hz*
48 *- 480 V 60 Hz*
125 *- 120 V 50 Hz*
225 *- 225 V 50 Hz*
226 *- 220 V 60 Hz*
235 *- 230 V 50 Hz*
236 *- 230 V 60 Hz*
245 *- 240 V 50 Hz*
246 *- 240 V 60 Hz*
GP *- 120/220-240 V 50 Hz*
GK *- 120/220-240 V 50 Hz*
GC *- 230-240 V 50 Hz*

Reflectors are ordered separately – see Accessories page.
① Voltages shown are limited to specific combinations. Please contact factory for other available voltage options.
② Optional fusing is available for use with MT, 5MT and 48 voltage suffixes ONLY.
③ PSMH 250 W, MT fixtures are not UL Listed.
④ The ***-Z2*** *suffix (AEx nA nR) is available for use with MT, 48 and 246 voltage suffixes ONLY.*

EMERSON

Mercmaster™ III HID 50–250 Watt Luminaires

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

Temperature Identification Numbers of Mercmaster III fixtures.

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

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

Mercmaster III 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		Supply Wire Temp.	Ambient Temp.	Class I, Division 2				Class II, Division 1 Groups E, F and G ①				Simultaneous Exposure Class I, Division2 / Class II, Division 1			
Watts	Type	°C (°F)	°C (°F)	Globe	Globe & Reflector	G3 Globe	8" Refractor	Globe	Globe & Reflector	G3 Globe	8" Refractor	Globe	Globe & Reflector	G3 Globe	8" Refractor
50	HPS	90 °C (194 °F)	40 °C (104 °F)	T3C	T3B	—	T3C	T4A	T4	—	T6	T3A	T3	—	T3C
		90 °C (194 °F)	55 °C (131 °F)	T3A	T3A	—	T3A	T4	T3B	—	T5	T3	T3	—	T3A
		90 °C (194 °F)	65 °C (149 °F)	T3A	T3	—	T3A	T3C	T3C	—	T4A	T2D	T2D	—	T3
70	HPS	90 °C (194 °F)	40 °C (104 °F)	T3B	T3A	—	T3C	T4	T3C	—	T6	T3	T3	—	T3A
		90 °C (194 °F)	55 °C (131 °F)	T3A	T3A	—	T3B	T3C	T3C	—	T5	T2D	T2D	—	T3
		90 °C (194 °F)	65 °C (149 °F)	T3	T3A	—	T3A	T3C	T3B	—	T4A	T2C	T2C	—	T3
100	HPS	90 °C (194 °F)	40 °C (104 °F)	T2D	T2D	T3	T3	—	T3A (EF)	—	—	T2B (EF)	T2B (EF)	—	—
		90 °C (194 °F)	40 °C (104 °F)	—	—	—	—	T3B	—	T4	T4	T2B	—	T2C	T2C
		90 °C (194 °F)	55 °C (131 °F)	T2D	T2D	T2D	T2D	—	—	T4	T4	—	—	T2B	T2B
		90 °C (194 °F)	65 °C (149 °F)	T2D	T2D	T2D	T2D	—	—	—	—	—	—	—	—
150	HPS	90 °C (194 °F)	40 °C (104 °F)	T2B	T2B	—	T2C	—	—	—	T3C	T2	—	—	T2B
		90 °C (194 °F)	40 °C (104 °F)	—	—	—	—	T3 (EF)	—	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T2B	T2A	—	T2B	—	—	—	—	—	—	—	—
175	PSMH	90 °C (194 °F)	40 °C (104 °F)	T2B	T2B	—	T2B	—	—	—	T3C	—	—	—	T2B
		90 °C (194 °F)	55 °C (131 °F)	T2A	T2A	—	T2B	—	—	—	T3C	—	—	—	T2A
		125 °C (257 °F)	65 °C (149 °F)	T2A	T2	—	T2B	—	—	—	—	—	—	—	—
250	PSMH ②	90 °C (194 °F)	40 °C (104 °F)	T2	T2	—	T2	—	—	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T2	T2	—	T2	—	—	—	—	—	—	—	—

"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 (°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 All Class II T Numbers are E, F, G unless otherwise indicated.
② 250 Watt PSHM fixture is not UL/CSA certified, Appleton Grp, LLC self certifies this product.

Mercmaster™ III HID 50–250 Watt Luminaires

Class I, Zone 2, AEx nA nR IIC; Class 1 Zone 2, AEx/Ex nR IIC; IP66; and NEMA 4X

Temperature Identification Numbers of Mercmaster III Fixtures.

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

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

Operating Temperatures: "T" Numbers for nAnR Zone 2 Mercmaster III Fixtures

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.

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

"T" Numbers Represent the Maximum Surface Temperature for Luminaires with AEx nA nR or AEx/Ex nR rating

"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

① 250 Watt PSHM fixture is not UL/CSA certified, Appleton Grp, LLC self certifies this product.

Mercmaster™ III HID 50–250 Watt Luminaires

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

Maximum Temperatures in °C (°F) Obtained from Tests in a 40 °C (104 °F) Ambient, Vertical Position, Lamp Base Up, as per NEC.

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

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

Fixture Selection Guide Indicates atmosphere for which fixture is suitable.

① Denotes fixture with Globe Only. ② Denotes fixture with Globe and Reflector. ③ Denotes fixture with 8" Refractor / G3 Globe

Class I, Division 2 Chemical	Ignition °C (°F) ④	Minimum Fixture "T" Number for Chemical	HPS (Watts) 50	70	100	150	PSMH (Watts) 175	250
Group A Atmospheres								
acetylene	305 °C (581 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
Group B Atmospheres								
acrolein (inhibited)	220 °C (428 °F)	T2D	①②③	①②③	①②③			①②
arsine	NA ⑤							
butadiene	420 °C (788 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
ethylene oxide	429 °C (804 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
hydrogen	500 °C (932 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
propylene oxide	449 °C (840 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
propylnitrate	175 °C (347 °F)	T3B	①②③	①②③				
Group C Atmospheres								
acetaldehyde	175 °C (347 °F)	T3B	①②③	① ③				
allyl alcohol	378 °C (712 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
n-butyraldehyde	218 °C (424°F)	T2D	①②③	①②③	①②③			①②
carbon monoxide	609 °C (1128 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
crotonaldehyde	232 °C (450 °F)	T2C	①②③	①②③	①②③	③		①②
cyclopropane	498 °C (928 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
diethyl ether (ethyl ether)	160 °C (320 °F)	T3C	① ③	③				
diethylamine	312 °C (594 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
ethylene	450 °C (842 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
ethylenimine	320 °C (608 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
ethly mercaptan	300 °C (572 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
ethyl sulfide	NA ⑤							
hydrogen cyanide	538 °C (1000 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
hydrogen sulfide	260 °C (500 °F)	T2B	①②③	①②③	①②③	①②③	①②③	①②
morpholine	310 °C (590 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
2-nitropropane	428 °C (802 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
tetrahydrofuran	321 °C (610 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
unsymmetrical dimethyl hydrazine	249 °C (480 °F)	T2C	①②③	①②③	①②③	③		①②
Group D Atmospheres								
acetic acid (glacial)	464 °C (867 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
acetone	465 °C (869 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
acrylonitrile	481 °C (898 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
ammonia	651 °C (1204 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
benzene	498 °C (928 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
butane	287 °C (549 °F)	T2A	①②③	①②③	①②③	①②③	①②③	①②
1-butanol (butyl alcohol)	343 °C (649 °F)	325	①②③	①②③	①②③	①②③	①②③	①②

This classified area suitability chart is based on NEC requirements and Appleton and UL testing. However, the ultimate decision on suitability of these fixtures for classified areas depends solely on the judgement of the owner, insurance company, inspector and/or authority having jurisdiction.

④ Ignition temperatures shown should be regarded as approximations only. Per NFPA Bulletin 325M, ignition temperatures may vary according to such factors as vapor/air mixture, size and space where ignition may occur, rate and duration of heating, oxygen concentration and other materials present.

⑤ Not Available.

Mercmaster™ III HID 50–250 Watt Luminaires

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

Maximum Temperatures in °C (°F) Obtained from Tests in a 40 °C (104 °F) Ambient, Vertical Position, Lamp Base Up, as per NEC.

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

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

Fixture Selection Guide Indicates atmosphere for which fixture is suitable.

① Denotes fixture with Globe Only. ② Denotes fixture with Globe and Reflector. ③ Denotes fixture with 8" Refractor / G3 Globe

Class I, Division 2 Chemical	Ignition °C (°F) ④	Minimum Fixture "T" Number for Chemical	HPS (Watts) 50	70	100	150	PSMH (Watts) 175	250
Group D Atmospheres								
2-butanol (secondary butyl alcohol)	405 °C (761 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
n-butyl acetate	425 °C (797 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
isobutyl acetate	421 °C (790 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
sec-butyl alcohol	343 °C (649 °F)	325	①②③	①②③	①②③	①②③	①②③	①②
di-isobutylene	391 °C (736 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
ethane	472 °C (882 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
ethanol (ethyl alcohol)	363 °C (685 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
ethyl acetate	426 °C (799 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
ethylene diamine (anhydrous)	385 °C (725 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
ethylene dichloride	413 °C (775 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
gasoline (56-60 octane)	280 °C (536 °F)	T2A	①②③	①②③	①②③	①②③	①②③	①②
heptanes	204 °C (399 °F)	T3	①②③	①②③	①②③			
hexanes	223 °C (433 °F)	T2D	①②③	①②③	①②③			
isoprene	395 °C (743 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
isopropyl ether	443 °C (829 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
mesityl oxide	344 °C (651 °F)	325	①②③	①②③	①②③	①②③	①②③	①②
methane (natural gas)	537 °C (999 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
methanol (methyl alcohol)	385 °C (725 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
3-methyl-l-butanol (isoamyl alcohol)	350 °C (662 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
methyl ethyl ketone	404 °C (759 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
methyl isobutyl ketone	448 °C (838 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
2-methyl-1-propanol (isobutyl alcohol)	415 °C (779 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
2-methyl-1-propanol (tertiary butyl alcohol)	478 °C (892 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
petroleum naphtha ⑥	288 °C (550 °F)	T2A	①②③	①②③	①②③	①②③	①②③	①②
pyridine	482 °C (900 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
octanes	206 °C (403 °F)	T3	①②③	①②③	①②③			
pentanes	260 °C (500 °F)	T2B	①②③	①②③	①②③	①②③	①②③	①②
1-pentanol (amyl alcohol)	300 °C (572 °F)	T2	①②③	①②③	①②③	①②③	①②③	①②
propane	432 °C (810 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
1-propanol (propyl alcohol)	412 °C (774 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
2-propanol (isopropyl alcohol)	399 °C (750 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
propylene	455 °C (851 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
styrene	490 °C (914 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
toluene	480 °C (896 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
vinyl acetate	402 °C (756 °F)	350	①②③	①②③	①②③	①②③	①②③	①②
vinyl chloride	472 °C (882 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②
xylenes (o-xylene)	463 °C (865 °F)	T1	①②③	①②③	①②③	①②③	①②③	①②

This classified area suitability chart is based on NEC requirements and Appleton and UL testing. However, the ultimate decision on suitability of these fixtures for classified areas depends solely on the judgement of the owner, insurance company, inspector and/or authority having jurisdiction.

④ Ignition temperatures shown should be regarded as approximations only. Per NFPA Bulletin 325M, ignition temperatures may vary according to such factors as vapor/air mixture, size and space where ignition may occur, rate and duration of heating, oxygen concentration and other materials present.

⑥ A saturated hydrocarbon mixture. Also known by synonyms benzine, ligroin, petroleum, ether and naptha.

EMERSON

Mercmaster™ III HID 50–250 Watt Luminaires

Class I, Zone 2, AEx nA nR IIC; Class 1 Zone 2, AEx nR IIC; IP66; and NEMA 4X

Maximum Temperatures in ºC (ºF) Obtained from Tests in a 40 ºC (104 ºF) Ambient, Vertical Position, Lamp Base Up.

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

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

Fixture Selection Guide Indicates atmosphere for which fixture is suitable.

② Denotes fixture with Globe and Reflector. ③ Denotes fixture with 8" Refractor.

			HPS (Watts)				PSMH (Watts)	
Class I, Division 2 Chemical	**Ignition °C (°F) ④**	**Minimum Fixture "T" Number for Chemical**	**50**	**70**	**100**	**150**	**175**	**250**
Group IIC								
acetylene	305 °C (581 °F)	T2	②③	②③	②③	②③	②③	②③
acetylene	300 °C (572 °F)	T2	②③	②③	②③	②③	②③	②③
hydrogen	500 °C (932 °F)	T1	②③	②③	②③	②③	②③	②③
Group IIB								
ethylene	490 °C (914 °F)	T1	②③	②③	②③	②③	②③	②③
butadiene 1.3	425 °C (797 °F)	T2	②③	②③	②③	②③	②③	②③
carbon monoxide coke oven gas	560 °C (1040 °F)	T1	②③	②③	②③	②③	②③	②③
diethyl ether (ethyl ether)	160 °C (320 °F)	T4	②③	②③	②③	②③		
ethylene	450 °C (842 °F)	T1	②③	②③	②③	②③	②③	②③
ethylenimine ethylene oxide	425 °C (797 °F)	T2	②③	②③	②③	②③	②③	②③
Group IIA								
acetone	465 °C (869 °F)	T1	②③	②③	②③	②③	②③	②③
amyl acetate	375 °C (707 °F)	T2	②③	②③	②③	②③	②③	②③
ammonia	651 °C (1204 °F)	T1	②③	②③	②③	②③	②③	②③
benzene	498 °C (928 °F)	T1	②③	②③	②③	②③	②③	②③
butane	287 °C (549 °F)	T3	②③	②③	②③	②③	②③	
1-butanol (butyl alcohol)	343 °C (649 °F)	T2	②③	②③	②③	②③	②③	②③
n-butyl acetate cyclohexane	260 °C (500 °F)	T3	②③	②③	②③	②③	②③	
ethyl methyl ketone	515 °C (959 °F)	T1	②③	②③	②③	②③	②③	②③
ethanol (ethyl alcohol)	363 °C (685 °F)	T2	②③	②③	②③	②③	②③	②③
ethyl acetate	426 °C (799 °F)	T1	②③	②③	②③	②③	②③	②③
heptanes	204 °C (399 °F)	T3	②③	②③	②③	②③	②③	
hexanes	223 °C (433 °F)	T3	②③	②③	②③	②③	②③	
isoprene isobutanol	430 °C (806 °F)	T2	②③	②③	②③	②③	②③	②③
mesityl oxide methyl acetate	500 °C (932 °F)	T1	②③	②③	②③	②③	②③	②③
methanol (methyl alcohol)	385 °C (725 °F)	T2	②③	②③	②③	②③	②③	②③
n-propyl acetate	500 °C (932 °F)	T1	②③	②③	②③	②③	②③	②③
n-butul acetate	420 °C (788 °F)	T2	②③	②③	②③	②③	②③	②③
pentanes	260 °C (500 °F)	T3	②③	②③	②③	②③	②③	
propane	432 °C (810 °F)	T2	②③	②③	②③	②③	②③	②③
xylenes (o-xylene)	463 °C (865 °F)	T1	②③	②③	②③	②③	②③	②③

This classified area suitability chart is based on NEC requirements and Appleton and UL testing. However, the ultimate decision on suitability of these fixtures for classified areas depends solely on the judgement of the owner, insurance company, inspector and/or authority having jurisdiction.

④ Ignition temperatures shown should be regarded as approximations only. Per NFPA Bulletin 325M, ignition temperatures may vary according to such factors as vapor/air mixture, size and space where ignition may occur, rate and duration of heating, oxygen concentration and other materials present.

Mercmaster™ III HID 50–250 Watt PRE–PAK™ Luminaires

Factory-Assembled Fixtures

For 70 W, 100 W or 150 W High Pressure Sodium Lamps, or 175 W Pulse Start Metal Halide Lamps. Mogul Base Lamps.

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

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

These pre-packaged fixture component combinations are delivered fully assembled and packed in a single carton. They are available with or without lamp, and with choice of globe or NEMA Type I, III or V refractors – all with or without guards. PRE-PAK units simplify ordering, stocking and shipping, and result in savings on job-site assembly and installation time and costs.

Catalog numbers do not include mounting hood or reflector, must be ordered separately. Hood and Reflector will be packaged separately.





PRE-PAK Fixtures ①

Lamp Type and Watts	Ballast Assembly with Globe Only	Ballast Assembly with Globe and Guard	Ballast Assembly with G3 Globe Only	Ballast Assembly with Refractor Only ②	Ballast Assembly with Refractor and Guard
175 W PSMH	**KPBU175P-MT**	**KPBU175PG-MT**	—	**KPBU175PJ5-MT**	**KPBU175PJ5G-MT**
70 W HPS	**KPBU70L-MT**	**KPBU70LG-MT**	—	**KPBU70LJ5-MT**	**KPBU70LJ5G-MT**
100 W HPS	**KPBU100L-MT**	**KPBU100LG-MT**	**KPBUG3100L-MT**	**KPBU100LJ5-MT**	**KPBU100LJ5G-MT**
150 W HPS	**KPBU150L-MT**	**KPBU150LG-MT**	—	**KPBU150LJ5-MT**	**KPBU150LJ5G-MT**

① *All catalog numbers above are fixtures without lamp. To order fixture complete with appropriate installed lamp, add suffix **L** to catalog number. All PRE-PAK fixtures include multi-tap ballast for operation on 120 V, 208 V, 240 V or 277 V lines. Fixture component combinations listed are furnished completely assembled in a single carton.*

② *Refractor catalog numbers listed are for NEMA Type V. To order fixture with Type III refractor, change **J5** in catalog number to **J3**; for Type I refractor, change **J5** to **J1**.*

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 ④⑥⑦				Voltage Suffixes										
Lamp Type	Lamp Watts	For Globe	For G3 Globe ③/Refractor	MT	48	125	225	226	236	245	246	GP	GK	GC
HPS	50 ⑤	**KPB50L**	**KPBR50L**	X	—	—	X	X	—	X	—	—	X	—
HPS	70 ⑤	**KPB70L**	**KPBR70L**	X	X	X	X	X	X	X	X	X	—	X
HPS	100 ⑤	**KPB100L**	**KPBR100L**	X	X	X	X	X	X	X	X	X	—	—
HPS	150 ⑤	**KPB150L**	**KPBR150L**	X	X	X	X	X	X	X	X	X	—	—
PSMH	175	**KPB175P**	**KPBR175P**	X	X	—	—	—	—	—	—	—	—	—
PSMH ⑧	250	**KPBG250P**	**KPBR250P**	X	—	—	—	—	—	—	—	—	—	—

Voltages:
MT - 120/208/240/277 V 60 Hz
5MT - 120/208/240/277/480 V 60 Hz
48 - 480 V 60 Hz
125 - *120 V 50 Hz*
225 - *225 V 50 Hz*
226 - *220 V 60 Hz*
235 - 230 V 50 Hz
236 - 230 V 60 Hz
245 - 240 V 50 Hz
246 - 240 V 60 Hz
GP - 120/200-240 V 50 Hz
GK - 220/240 V 50 Hz
GC - 230 V 50 Hz

③ *For HPS version fixtures only.*
④ *After voltage suffix add: -**S** for Smart Starter.*
⑤ *After voltage suffix add: -**R** for ballast body with Hot Restrike Ignitor.*
⑥ *Add -**E** after voltage suffix for ballast body with provision for Quartz Emergency Light. Not suitable for hazardous locations.*
⑦ *Add **-Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). The **-Z2** suffix (AEx nA nR) is available for use with MT, 48 and 246 voltage suffixes ONLY. Add **-ZB** suffix for restricted breathing protection (AEx/Ex nR).*
⑧ *MT ballast bodies are not UL Listed for 250W PSMH version fixtures only.*

EMERSON

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.

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

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

Mounting Hoods

	Description	Hub Size (Inches)	Catalog Number
Pendant 	One Hub, Rigid Mounting	3/4	**KPA-75**
		1	**KPA-100**
Pendant — Flexible 	One Hub, Flexible Mounting	3/4	**KPAF-75**
		1	**KPAF-100**
Pendant Cone 	One Hub, Rigid	3/4	**KPCH-75**
		1	**KPCH-100**
Ceiling 	Five Hubs, Four Close-Up Plugs	3/4	**KPC-75**
		1	**KPC-100**
Wall 	Five Hubs, Four Close-Up Plugs	3/4	**KPWB-75**
		1	**KPWB-100**
25° Stanchion 	One Hub	1-1/4	**KPS-125**
		1-1/2	**KPS-150**
90° Stanchion 	One Hub	1-1/4	**KPST-125**
		1-1/2	**KPST-150**

Mercmaster™ III HID 50–250 Watt Luminaires

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Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

	Description		Catalog Number
Prismatic Glass Globes — Heat-Resistant			
 **Glass Globe**	For use in areas where fixture is subject to extreme thermal shock Heat-Resistant	Clear	**VPGL-2HR**
		Amber	**VPGL-2AM**
		Blue	**VPGL-2BL**
		Green	**VPGL-2GR**
		Red	**VPGL-2RE**
 **G3 Glass Globe**		Clear	**VPGL3HR**
Tuff-Skin® Coated Prismatic Glass Globes — For Non-Classified Areas			
 **Tuff–Skin® Glass Globe**	For use in areas where fixture is subject to extreme thermal shock Heat-Resistant	Clear	**VPGL-2HRT**
Polycarbonate Globes — Impact-Resistant ①			
 **Polycarbonate Globe**	Use 100 watt lamp max. Do not use in ambients exceeding 25 ºC (77 ºF).	Clear	**VPGL-2PL**
		Amber	**VPGL-2AMPL**
		Green	**VPGL-2GRPL**
		Red	**VPGL-2REPL**

① *Polycarbonate globes are shatter-resistant – for use in processing plants, canneries, dairies, bakeries or anywhere broken glass would prove a hazard. Ideally suited for areas where vandalism, high replacement and high maintenance costs are a problem. Do not use in ambients exceeding +25 °C (+77 °F). For burning in vertical base-up positions only.*

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Mercmaster™ III HID 50–250 Watt Luminaires

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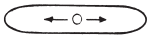
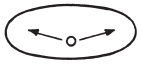
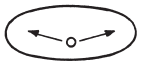
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

	Light Distribution	IES/NEMA Distribution Curves	Catalog Number
Closed Prismatic Glass Refractors — Heat-Resistant			
 **Glass Refractor**	NEMA Type I		**LPG-R1**
	NEMA Type III		**LPG-R3**
	NEMA Type V		**LPG-R5**
Closed Polymeric Refractors *For use with PSMH lamps, 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)*			
 **Polymeric Refractor**	NEMA Type II		**LPRF-2CP**
	NEMA Type III		**LPRF-3CP**
	NEMA Type IV		**LPRF-4CP**
	NEMA Type V		**LPRF-5CP**

Mercmaster™ III HID 50–250 Watt Luminaires

High Pressure Sodium and Pulse Start Metal Halide

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Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

Item		Description	Catalog Number
White Polyester Reflectors			
For Globe Fixtures		Standard Dome	**KR2-ST**
		Deep Dome	**KR2-DD** ①④
		30° Angle	**KR2-AN**
For Glass Refractor Fixtures ②		Standard Dome	**CMR-4ST**
		Deep Dome	**CMR-4DD** ①④
		30° Angle	**CMR-4AN**
Guards			
		Globe Guard	**KGU2**
		G3 Globe/ 30° Angle Refractor Guard	**KRG2**③
Replacement Globe Gaskets — Silicone Rubber			
		Globe Gasket	**VPGL-GK**
		G3 Globe/Refractor Gasket	**KRF-GK**
Retrofit Pendant Mounting Adapter			
Permits use of Mercmaster III pendant hood with 3/4" hub on existing V-51 mounting hood.			**LPAD-1**

Standard Dome

30° Angle

Globe Guard

Refractor Guard

Globe Gaskets

Mounting Adapter

① *Dark Skies Compliant.*
② *Fixtures with refractors are not UL Listed when used with reflectors.*
③ *Not for use with CMR-4ST or CMR-4DD, only CMR-4AN refractor.*
④ *Fixtures when used with Deep Dome Refletors are NOT UL Listed.*

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Mercmaster™ III HID 50–250 Watt Luminaires

High Pressure Sodium and Pulse Start Metal Halide

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

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

Ballast Housing Weights

Lamp Watts	HPS Wt. kg (lb) ①②	PSMH Wt. kg (lb) ①②
Globe Housing with Ballast		
50	5.7 (12.6)	—
70	6.8 (15.0)	—
100	7.3 (16.0)	—
175	—	7.8 (17.2)
250	—	8.4 (18.5)
Refractor Housing with Ballast		
70	7.0 (15.4)	—
100	7.5 (16.5)	—
150	7.9 (17.4)	—
175	—	8.1 (17.9)
250	—	8.4 (18.5)

Component and Accessory Weights

Item	Wt. kg (lb) ①
Mounting Hoods	
Pendant Cone	1.1 (2.43)
Ceiling	1.4 (3.09)
Wall	1.8 (3.97)
25° Stanchion	1.5 (3.31)
Straight Stanchion	1.7 (3.75)
8” Glass Refractor/G3 Globe	2.4 (5.29)
Glass Globe	1.7 (3.75)
Globe Guard	0.5 (1.10)
Refractor Guard	0.5 (1.10)
Reflectors	
30° Angle	1.1 (2.43)

Fuse Kits

Lamp Watts	Volts	Fuse Quantity Required	Fuse Kit Catalog Number HPS	Fuse Kit Catalog Number PSMH
50	120	1	**F5**	—
	208	2	**F3**	—
	240	2	**F3**	—
	277	1	**F2**	—
70	120	1	**F5**	—
	208	2	**F3**	—
	240	2	**F3**	—
	277	1	**F2**	—
	480	2	**F2**	—
100	120	1	**F8**	—
	208	2	**F5**	—
	240	2	**F5**	—
	277	1	**F3**	—
	480	2	**F3**	—
150	120	1	**F10**	—
	208	2	**F5**	—
	240	2	**F5**	—
	277	1	**F5**	—
	480	2	**F3**	—
175	120	1	—	**F5**
	208	2	—	**F3**
	240	2	—	**F3**
	277	1	—	**F2**
	480	2	—	**F3**
250	120	1	—	**F10**
	208	2	—	**F6**
	240	2	—	**F6**
	277	1	—	**F5**

① *Weights are approximate.*
② *Add 0.5 kg (1 lbs) for HPS fixtures with Hot Restrike. Add 0.1 kg (0.25 lbs) for Quartz Emergency Light.*

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.

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

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

Electrical Specifications

Line Voltage	Type of Ballast ①	StartingAmps	OperatingAmps	Total Watts
50 Watt High Pressure Sodium				
120	HX-HPF	0.65	0.61	66
208	HX-HPF	0.37	0.35	66
240	HX-HPF	0.32	0.31	66
277	HX-HPF	0.30	0.26	66
70 Watt High Pressure Sodium				
120	HX-HPF	0.90	0.82	94
208	HX-HPF	0.50	0.48	94
240	HX-HPF	0.44	0.41	94
277	HX-HPF	0.35	0.36	94
480	HX-HPF	0.21	0.21	94
100 Watt High Pressure Sodium				
120	HX-HPF	1.30	1.15	130
208	HX-HPF	0.76	0.67	130
240	HX-HPF	0.66	0.60	130
277	HX-HPF	0.60	0.52	130
480	HX-HPF	0.33	0.31	135
150 Watt High Pressure Sodium ②				
120	HX-HPF	2.00	1.70	188
208	HX-HPF	1.15	0.95	188
240	HX-HPF	1.00	0.85	188
277	HX-HPF	0.85	0.72	188
480	HX-HPF	0.50	0.47	189
175 Watt Pulse Start Metal Halide				
120	C.W.A.	0.80	1.80	198
208	C.W.A.	0.50	1.00	198
240	C.W.A.	0.40	0.90	198
277	C.W.A.	0.40	0.80	198
480	C.W.A.	0.15	0.45	196
250 Watt Pulse Start Metal Halide				
120	C.W.A.	2.00	2.30	278
208	C.W.A.	1.10	1.40	278
240	C.W.A.	1.00	1.20	278
277	C.W.A.	0.80	1.00	278

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

EMERSON

Mercmaster™ III HID 50–250 Watt Luminaires

High Pressure Sodium and Pulse Start Metal Halide

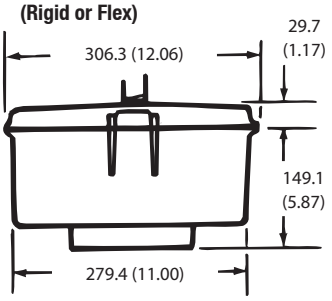
Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

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

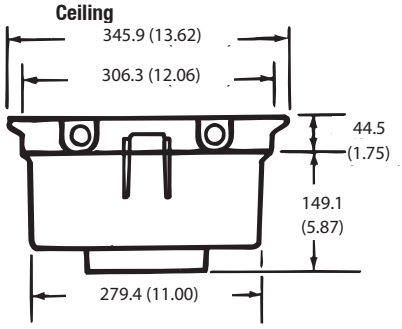
NEC/CEC:
Simultaneous Exposure (Class I, Division 2/ Class II, Division 1)
Fixtures Outside Type (Salt Water)
Type 4X
IP66

Dimensions in Millimeters (Inches)

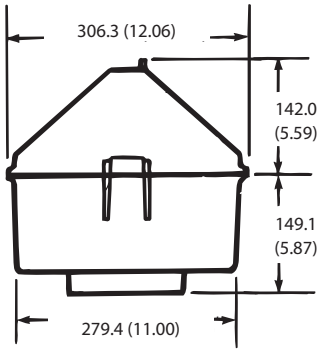
Pendant (Rigid or Flex)



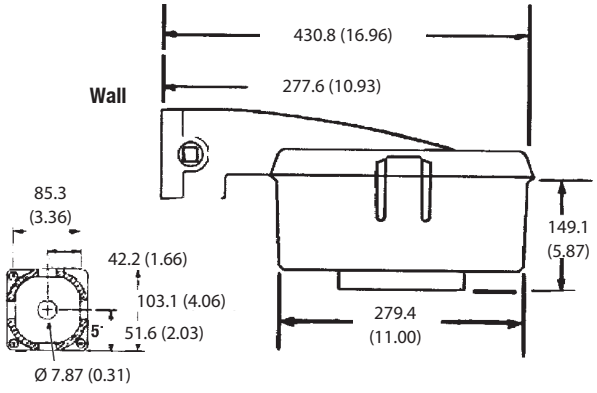
Ceiling



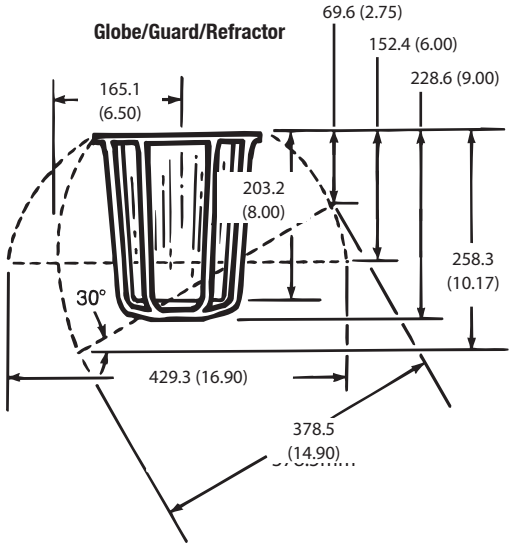
Cone



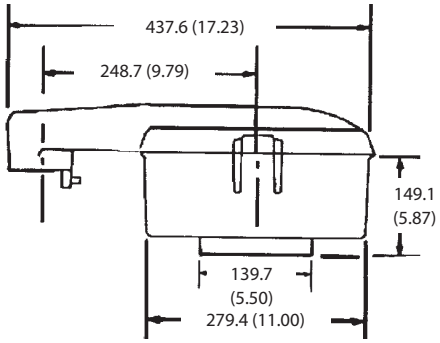
Wall



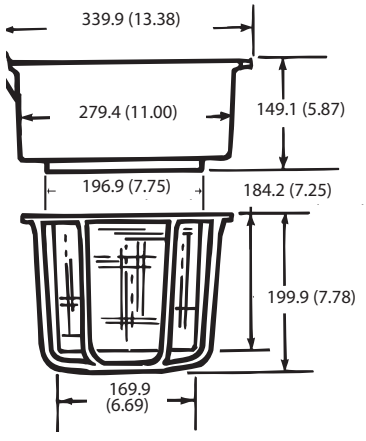
Globe/Guard/Refractor



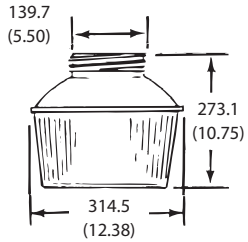
90º Straight Stanchion



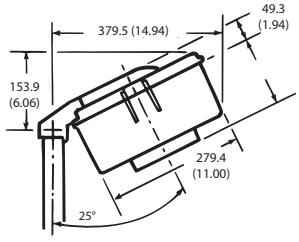
8" Globe/Refractor Body/Guard



Polymeric Refractor



25° Angle Stanchion



PCD2 Series Factory Sealed Hazardous Location Photocontrol

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

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

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

Applications

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

Features

- Factory sealed design eliminates the need for an explosionproof enclosure.
- Can be easily installed in the field.
- Solid state design for performance and reliability.
- Available for 120, 208, 240, or 277 volts.
- 50-400 W HID, incandescent or fluorescent, 50/60 Hz.
- 1000 V.A. Voltage/Ampere
- Minimum time delay: 15 seconds to eliminate nuisance tripping.
- Provided with (3) 18AWG stranded leads 152.4 mm (6 in) in length.
- Will fit through standard 1/2" knockout.
- Supplied with locknut and gasket.

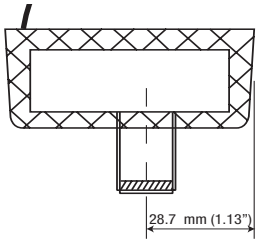
Materials

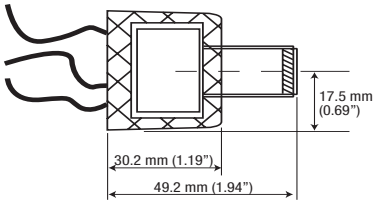
- Encapsulated with epoxy sealing compound
- FS: aluminum

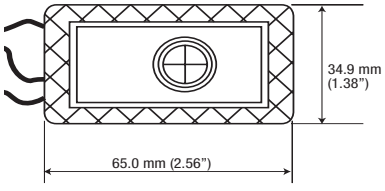
NEC/CEC Certifications and Compliances

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

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







EMERSON

Mercmaster™ III HID 50–250 Watt Luminaires

150 W HPS

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

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

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

Photometric Data

Zone	Lumens
0-10	50.74
10-20	164.55
20-30	310.47
30-40	611.05
40-50	961.13
50-60	1308.18
60-70	1542.35
70-80	1716.10
80-90	1799.18
90-100	1802.19
100-110	1676.86
110-120	1379.11
120-130	441.46
130-140	9.61
140-150	3.33
150-160	0.74
160-170	0.00
170-180	0.00

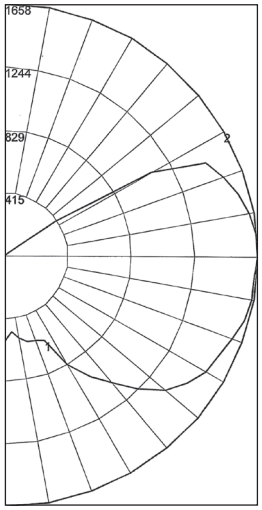
Total Luminaire Efficiency = 86.1%

CIE Type – Semi–Direct

Plane	Spacing Criteria
0-180	2.82
90-270	2.82
Diagonal	2.80

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	525.75	3.3	3.8
0-40	1136.81	7.1	8.3
0-60	3406.12	21.3	24.7
0-90	8463.75	52.9	61.4
90-120	4858.16	30.4	35.3
90-130	5299.62	33.1	38.5
90-150	5312.56	33.2	38.5
90-180	5313.30	33.2	38.6
180-0	13777.05	86.1	100.0



REPORT NUMBER: **KP15LG**

Lamps: 150 W High Pressure Sodium with Globe only *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50			30			10			0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
	0	95	95	95	95	89	89	89	89	77	77	77	67	67	67	57	57	57	53
	1	81	74	69	64	75	69	64	59	59	55	51	50	47	44	42	39	37	33
	2	71	62	54	47	65	57	50	44	49	43	38	41	36	32	33	30	27	23
	3	64	52	44	37	58	48	41	34	41	35	30	34	29	25	28	24	20	17
	4	57	45	36	30	53	42	34	28	35	29	24	29	24	20	24	19	16	13
	5	52	40	31	24	48	37	29	23	31	24	19	26	20	16	21	16	13	10
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	7	44	31	23	17	40	29	21	16	24	18	14	20	15	11	16	12	9	7
	8	40	28	20	15	37	26	19	14	22	16	12	18	13	10	15	11	8	6
	9	38	25	18	13	35	24	17	12	20	14	10	17	12	8	14	10	7	5
	10	35	23	16	11	32	22	15	11	18	13	9	15	11	7	13	9	6	4

Zone	Lumens
0-10	266.98
10-20	799.41
20-30	1337.05
30-40	1732.06
40-50	2067.60
50-60	2317.60
60-70	2210.81
70-80	866.77
80-90	145.09
90-100	14.46
100-110	8.75
110-120	7.93
120-130	4.51
130-140	2.16
140-150	0.48
150-160	0.00
160-170	0.00
170-180	0.00

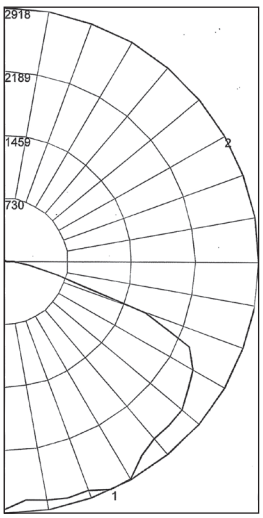
Total Luminaire Efficiency = 73.6%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.46
90-270	1.46
Diagonal	1.68

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	2403.44	15.0	20.4
0-40	4135.50	25.8	35.1
0-60	8520.70	53.3	72.3
0-90	11743.37	73.4	99.7
90-120	31.14	0.2	0.3
90-130	35.65	0.2	0.3
90-150	38.29	0.2	0.3
90-180	38.29	0.2	0.3
180-0	11781.65	73.6	100.0



REPORT NUMBER: **KP15LST**

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

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50			30			10			0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
	0	88	88	88	88	86	86	86	86	82	82	82	78	78	78	75	75	75	73
	1	79	76	72	69	77	74	71	68	71	68	66	68	66	64	65	64	62	60
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	6	49	38	31	26	47	38	31	26	36	30	26	35	30	25	34	29	25	24
	7	45	34	27	23	44	34	27	23	33	27	22	31	26	22	30	26	22	20
	8	42	31	24	20	40	31	24	20	30	24	20	29	23	19	28	23	19	18
	9	39	28	22	18	38	28	22	18	27	21	17	26	21	17	25	21	17	16
	10	36	26	20	16	35	26	20	16	25	19	16	24	19	16	23	19	15	14

Mercmaster™ III HID 50–250 Watt Luminaires

150 W HPS

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

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

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

Photometric Data

Zone	Lumens
0-10	222.62
10-20	664.6
20-30	1084.32
30-40	1536.55
40-50	1771.90
50-60	1771.51
60-70	1668.93
70-80	1422.36
80-90	994.54
90-100	432.23
100-110	104.58
110-120	20.99
120-130	1.21
130-140	0.04
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

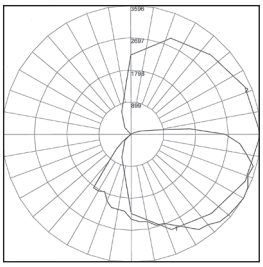
Total Luminaire Efficiency = 73.1%

CIE Type – Direct

Plane	Spacing Criteria
0-180	2.06
90-270	1.58
Diagonal	1.62

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	1971.54	12.3	16.9
0-40	3508.09	21.9	30.0
0-60	7051.50	44.1	60.3
0-90	11137.33	69.6	95.2
90-120	557.80	3.5	4.8
90-130	559.01	3.5	4.8
90-150	559.04	3.5	4.8
90-180	559.04	3.5	4.8
180-0	11696.38	73.1	100.0



REPORT NUMBER: **KP15LAN**
Lamps: 150 W High Pressure Sodium with 30° Angle Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50			30			10			0
% Walls Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	86	86	86	86	84	84	84	84	79	79	79	75	75	75	71	71	71	70
1	76	71	67	63	73	69	65	62	65	62	59	62	59	57	58	56	54	52
2	68	60	54	49	65	58	53	48	55	50	46	52	48	45	49	46	43	41
3	61	52	45	39	59	50	44	39	48	42	37	45	40	36	43	39	35	33
4	55	45	38	32	53	44	37	32	42	36	31	39	34	30	37	33	29	27
5	50	40	33	27	49	39	32	27	37	31	26	35	30	25	33	29	25	23
6	46	36	28	23	45	35	28	23	33	27	22	31	26	22	30	25	21	20
7	43	32	25	20	41	31	25	20	30	24	19	28	23	19	27	22	19	17
8	40	29	22	18	38	28	22	17	27	21	17	26	21	17	25	20	16	15
9	37	26	20	16	36	26	20	16	25	19	15	24	19	15	23	18	15	13
10	35	24	18	14	33	24	18	14	23	17	14	22	17	13	21	16	13	12

Zone	Lumens
0-10	72.83
10-20	222.26
20-30	380.73
30-40	621.11
40-50	852.53
50-60	1765.29
60-70	3192.58
70-80	2366.61
80-90	1230.65
90-100	450.14
100-110	712.41
110-120	499.15
120-130	323.44
130-140	185.00
140-150	81.31
150-160	21.08
160-170	2.81
170-180	0.00

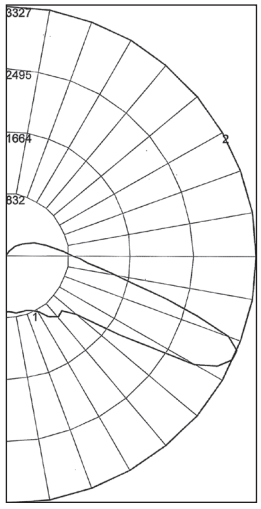
Total Luminaire Efficiency = 81.1%

CIE Type – Semi– Direct

Plane	Spacing Criteria
0-180	1.98
90-270	1.98
Diagonal	3.40

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	675.83	4.2	5.2
0-40	1296.93	8.1	10.0
0-60	3914.76	24.5	30.2
0-90	10704.60	66.9	82.5
90-120	1661.70	10.4	12.8
90-130	1985.14	12.4	15.3
90-150	2251.45	14.1	15.3
90-180	2275.34	14.2	17.5
180-0	12979.94	81.1	100.0



REPORT NUMBER: **KP15LJR5**
Lamps: 150 W High Pressure Sodium with 8" Prismatic Glass Refracter – 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	93	93	93	93	89	89	89	89	82	82	82	76	76	76	70	70	70	67
1	80	73	68	63	76	70	65	61	64	60	56	58	55	52	53	50	48	45
2	69	59	51	45	65	56	49	43	51	45	40	46	41	37	41	37	34	31
3	61	49	40	33	57	47	38	32	42	35	29	38	32	27	34	29	25	22
4	54	42	32	25	51	40	31	24	35	28	22	32	26	21	28	23	19	16
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9	35	23	15	10	33	22	15	10	20	13	9	18	12	8	16	11	7	5
10	33	21	14	9	31	20	13	9	18	12	8	16	11	7	15	10	6	5

EMERSON

Mercmaster™ III HID 50–250 Watt Luminaires

175 W PSMH

* Photometric data is based on fixtures with a 175–watt clear Pulse Start Metal Halide lamp (17,500 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 100 W (8,500 lumen) PSMH lamp – 0.49; for a 70 W (6,200 lumen) PSMH lamp – 0.36; for a 200 W (21,000 lumen) PSMH lamp – 1.2. For candlepower values of fixture with guard, multiply by 0.95.

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

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

Photometric Data

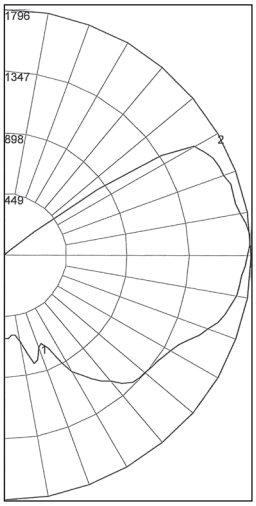
Zone	Lumens
0-10	57.98
10-20	217.30
20-30	372.71
30-40	696.29
40-50	1009.65
50-60	1226.57
60-70	1473.76
70-80	1757.30
80-90	1902.34
90-100	1946.09
100-110	1829.51
110-120	1657.20
120-130	750.27
130-140	14.15
140-150	4.47
150-160	0.52
160-170	1.35
170-180	0.18

Total Luminaire Efficiency = 75.4%

CIE Type – General Diffuse

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	647.99	3.7	4.3
0-40	1344.28	7.7	9.0
0-60	3580.49	20.5	24.0
0-90	8713.89	49.8	58.4
90-120	5432.80	31.0	36.4
90-130	6183.06	35.3	41.4
90-150	6201.69	35.4	41.6
90-180	6203.74	35.4	41.6
180-0	14917.63	85.2	100.0



REPORT NUMBER: **KP17PG**

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

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50			30			10			0
% Walls Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	93	93	93	93	87	87	87	87	75	75	75	64	64	64	54	54	54	50
1	79	73	68	63	73	68	63	59	58	54	50	48	45	43	40	37	35	31
2	70	61	54	47	65	57	50	44	48	42	38	39	35	32	32	29	26	22
3	63	52	44	37	58	48	41	35	40	34	29	33	28	24	27	23	20	16
4	57	45	37	30	52	42	34	28	35	29	24	29	24	20	23	19	16	12
5	52	40	31	25	47	37	29	23	31	24	20	25	20	16	20	16	13	10
6	47	35	27	21	43	32	25	19	27	21	17	22	17	14	18	14	11	8
7	44	31	23	18	40	29	22	17	24	18	14	20	15	12	16	12	9	7
8	40	28	21	15	37	26	19	14	22	16	12	18	14	10	15	11	8	6
9	37	26	18	13	34	24	17	13	20	15	11	17	12	9	13	10	7	5
10	35	23	16	12	32	22	15	11	18	13	9	15	11	8	12	9	6	4

Zone	Lumens
0-10	285.95
10-20	876.46
20-30	1472.88
30-40	1924.39
40-50	2213.42
50-60	2305.55
60-70	2256.32
70-80	1115.75
80-90	198.05
90-100	3.56
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

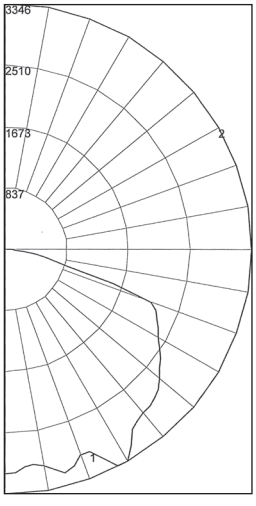
Total Luminaire Efficiency = 72.3%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.50
90-270	1.50
Diagonal	1.66

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	2635.28	15.1	20.8
0-40	4559.67	26.1	36.0
0-60	9078.64	51.9	71.8
0-90	12648.77	72.3	100.0
90-120	3.56	0.00	0.00
90-130	3.56	0.00	0.00
90-150	3.56	0.00	0.00
90-180	3.56	0.00	0.00
180-0	12652.33	72.3	100.0



REPORT NUMBER: **KP17PST**

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

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50			30			10			0
% Walls Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	86	86	86	86	84	84	84	84	80	80	80	77	77	77	74	74	74	72
1	78	74	71	68	76	72	69	67	69	67	65	67	64	63	64	62	61	59
2	70	63	58	54	68	62	57	53	59	55	52	57	54	50	55	52	49	48
3	63	55	48	43	61	54	48	43	51	46	42	49	45	41	47	44	41	39
4	57	48	41	36	56	47	40	35	45	39	35	43	38	34	42	37	34	32
5	52	42	35	30	51	41	35	30	40	34	30	38	33	29	37	32	29	27
6	48	38	31	26	47	37	30	26	36	30	25	34	29	25	33	29	25	23
7	44	34	27	22	43	33	27	22	32	26	22	31	26	22	30	25	22	20
8	41	31	24	20	40	30	24	20	29	24	19	28	23	19	27	23	19	18
9	38	28	22	18	37	28	22	17	27	21	17	26	21	17	25	21	17	16
10	36	26	20	16	35	25	20	16	25	19	16	24	19	15	23	19	15	14

Mercmaster™ III HID 50–250 Watt Luminaires

175 W PSMH

* Photometric data is based on fixtures with a 175–watt clear Pulse Start Metal Halide lamp (17,500 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 100 W (8,500 lumen) PSMH lamp – 0.49; for 70 W (6,200 lumen) PSMH lamp – 0.36; for a 200 W (21,000 lumen) PSMH lamp – 1.2. For candlepower values of fixture with guard, multiply by 0.95.

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

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

Photometric Data

Zone	Lumens
0-10	240.21
10-20	750.99
20-30	1195.39
30-40	1662.85
40-50	1830.67
50-60	1740.13
60-70	1571.75
70-80	1324.18
80-90	900.65
90-100	367.96
100-110	107.38
110-120	27.79
120-130	5.54
130-140	4.20
140-150	4.42
150-160	2.00
160-170	1.70
170-180	0.33

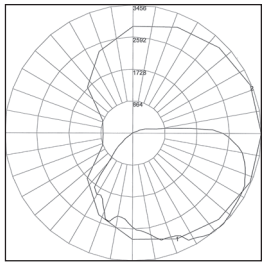
Total Luminaire Efficiency = 67.1%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.96
90-270	1.70
Diagonal	1.56

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	2186.59	12.5	18.6
0-40	3849.44	22.0	32.8
0-60	7420.24	42.4	63.2
0-90	11216.82	64.1	95.6
90-120	503.12	2.9	4.3
90-130	508.66	2.9	4.3
90-150	517.28	3.0	4.4
90-180	521.31	3.0	4.4
180-0	11738.13	67.1	100.0



REPORT NUMBER: **KP17PAN**
Lamps: 175 W Pulse Start Metal Halide with 30° Angle Dome Reflector *

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50			30			10			0
% Walls Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	79	79	79	79	77	77	77	77	73	73	73	69	69	69	66	66	66	64
1	70	66	62	59	68	64	61	58	60	58	55	57	55	53	54	52	51	49
2	63	56	51	46	61	55	49	45	52	47	44	49	45	42	46	43	41	39
3	57	48	42	37	55	47	41	37	45	40	36	42	38	35	40	37	34	32
4	51	42	36	31	50	41	35	30	39	34	30	37	33	29	35	31	28	26
5	47	38	31	26	45	37	30	26	35	29	25	33	28	25	32	27	24	22
6	43	34	27	22	42	33	27	22	31	26	22	30	25	21	28	24	21	19
7	40	30	24	20	39	30	24	19	28	23	19	27	22	19	26	22	18	17
8	37	27	21	17	36	27	21	17	26	20	17	25	20	16	24	19	16	15
9	35	25	19	15	33	25	19	15	24	18	15	23	18	15	22	18	14	13
10	32	23	17	14	31	23	17	14	22	17	13	21	16	13	20	16	13	12

Zone	Lumens
0-10	22.77
10-20	171.20
20-30	325.41
30-40	531.35
40-50	1173.62
50-60	1165.11
60-70	3171.29
70-80	3719.35
80-90	1751.05
90-100	523.23
100-110	716.53
110-120	431.18
120-130	265.20
130-140	142.69
140-150	57.09
150-160	13.48
160-170	2.44
170-180	0.88

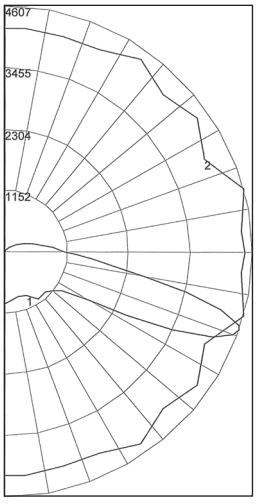
Total Luminaire Efficiency = 81.1%

CIE Type – Semi–Direct

Plane	Spacing Criteria
0-180	1.66
90-270	1.64
Diagonal	1.92

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	519.38	3.0	3.7
0-40	1050.73	6.0	7.4
0-60	3389.46	19.4	23.9
0-90	12031.16	68.7	84.8
90-120	1670.94	9.5	11.8
90-130	1936.15	11.1	13.7
90-150	2135.93	12.2	15.1
90-180	2152.72	12.3	15.2
180-0	14183.88	81.1	100.0



REPORT NUMBER: **KP17PJR5**
Lamps: 175 W Pulse Start Metal Halide with 8" Prismatic Glass Refracter – 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	94	94	94	94	90	90	90	90	83	83	83	77	77	77	71	71	71	69
1	78	71	65	60	74	68	62	57	62	57	53	57	53	49	51	48	46	43
2	67	57	48	41	63	54	46	39	49	42	36	44	38	33	39	35	31	28
3	59	46	37	29	55	44	35	28	40	32	26	35	29	24	32	26	22	19
4	52	39	30	22	49	37	28	21	33	26	20	30	23	18	26	21	16	14
5	47	34	24	17	45	32	23	17	29	21	15	26	19	14	23	17	13	10
6	43	30	21	14	41	28	20	14	25	18	12	23	16	11	20	15	10	8
7	40	27	18	12	37	23	17	11	23	16	10	20	14	9	18	13	8	6
8	37	24	16	10	35	23	15	10	20	14	9	18	12	8	16	11	7	5
9	34	22	14	9	32	21	13	8	19	12	8	17	11	7	15	10	6	4
10	32	20	12	8	30	19	12	7	17	11	7	16	10	6	14	9	5	4

EMERSON

Mercmaster™ III HID 50–250 Watt Luminaires

175 W PSMH

* Photometric data is based on fixtures with a 175–watt clear Pulse Start Metal Halide lamp (17,500 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 100 W (8,500 lumen) PSMH lamp – 0.49; for a 70 W (6,200 lumen) PSMH lamp – 0.36; for a 200 W (21,000 lumen) PSMH lamp – 1.2. For candlepower values of fixture with guard, multiply by 0.95.

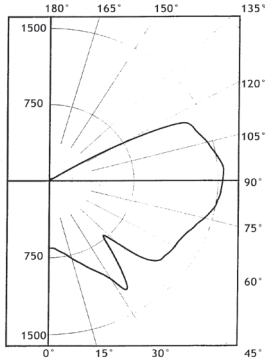
NEC/CEC:
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

Photometric Data

Degree	Candela	Lumens
0	657	
5	668	65
15	784	224
25	966	451
35	1194	705
45	871	711
55	1267	1142
65	1309	1303
75	1430	1509
85	1528	1661
90	1537	
95	1552	1680
105	1452	1532
115	1339	1232
125	68	143
135	19	16
145	13	11
155	7	3
165	1	1
175	2	0
180	7	

TOTAL LUMINAIRE EFFICIENCY = 70.8%
CIE Type – Semi–Direct
Spacing Criteria: 1.7



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	740	4.2	6.0
0-40	1445	8.3	11.7
0-60	3297	18.8	26.6
0-90	7770	44.4	62.7
90-120	4444	25.4	35.9
90-130	4586	26.2	37.0
90-150	4613	26.4	37.2
90-180	4617	26.4	37.3
0-180	12387	70.8	100.0

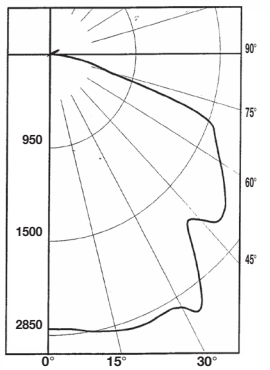
REPORT NUMBER: **KPB175PG3**
Lamps**:** 175 W Pulse Start Metal Halide ED28 Mogul Base with G3 Globe only

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
0	78	78	78	78	73	73	73	73	64	64	64	56	56	56	48	48	48	44
1	67	61	57	53	62	57	53	49	49	46	43	42	39	37	35	33	31	28
2	59	51	45	40	54	48	42	37	41	36	32	34	31	27	28	26	23	20
3	53	44	37	31	49	40	34	29	34	29	25	29	25	21	24	21	18	15
4	48	38	31	25	44	35	29	24	30	25	20	25	21	17	21	17	14	12
5	43	33	26	21	40	31	24	20	26	21	17	22	18	14	18	15	12	9
6	40	29	23	18	37	27	21	16	23	18	14	20	15	12	16	13	10	8
7	37	26	20	15	34	25	18	14	21	16	12	18	13	10	15	11	9	7
8	34	24	17	13	31	22	16	12	19	14	11	16	12	9	13	10	7	6
9	32	22	16	11	29	20	15	11	17	13	9	15	11	8	12	9	7	5
10	29	20	14	10	27	18	13	9	16	11	8	14	10	7	11	8	6	4

Degree	Candela	Lumens
0	2785	
5	2797	269
15	2902	823
25	2931	1358
35	2979	1821
45	2388	1874
55	2393	2145
65	2044	2034
75	664	856
85	150	183
90	24	
95	5	11
105	16	17
115	91	73
125	5	9
135	7	3
145	8	2
155	2	2
165	2	0
175	2	1
180	11	

TOTAL LUMINAIRE EFFICIENCY = 65.6%
CIE Type – Direct
Spacing Criteria: 1.5



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	2450	14.0	21.3
0-40	4271	24.4	37.2
0-60	8290	47.4	72.2
0-90	11363	64.9	99.0
90-120	101	0.6	0.9
90-130	110	0.6	1.0
90-150	115	0.7	1.0
90-180	118	0.7	1.0
0-180	11481	65.6	100.0

REPORT NUMBER: **KPB175PG3_ST**
Lamps**:** 175 W Pulse Start Metal Halide ED28 Mogul Base with G3 Globe and Standard Dome Reflector

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

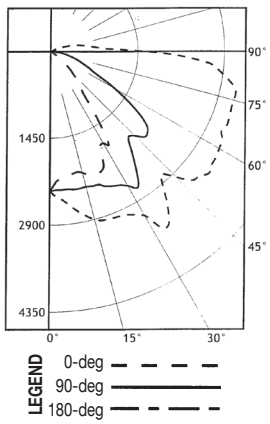
RC	80				70				50			30			10		0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	78	78	78	78	76	76	76	76	73	73	73	69	69	69	66	66	66	65
1	71	67	64	62	69	66	63	61	63	61	59	60	58	57	58	56	55	53
2	64	58	53	49	62	57	52	48	54	50	47	52	49	46	50	47	45	43
3	58	50	44	40	56	49	44	39	47	42	39	45	41	38	43	40	37	35
4	52	44	38	33	51	43	37	33	41	36	32	39	35	32	38	34	31	29
5	48	39	32	28	46	38	32	28	36	31	27	35	30	27	34	30	26	25
6	44	35	28	24	42	34	28	24	33	27	23	31	27	23	30	26	23	21
7	40	31	25	21	39	30	25	21	29	24	20	28	24	20	27	23	20	19
8	37	28	22	18	36	28	22	18	27	22	18	26	21	18	25	21	18	16
9	35	26	20	16	34	25	20	16	24	19	16	24	19	16	23	19	16	15
10	33	24	18	15	32	23	18	15	23	18	14	22	17	14	21	17	14	13

Candela Distribution

	0.0	45.0	90.0	135.0	180.0	Flux
0	2333	2333	2333	2333	2333	
5	2491	2467	2321	2205	2141	223
15	2904	2753	2337	2160	2099	692
25	3010	2891	2480	2242	2120	1170
35	3471	3100	2544	2027	1367	1512
45	2978	2719	1993	832	546	1427
55	3296	2939	1791	421	154	1533
65	3153	2801	776	74	0	1349
75	3175	2621	392	3	0	1140
85	2729	967	117	5	0	709
90	1601	662	11	5	5	
95	790	461	3	11	16	247
105	413	175	11	19	21	109
115	117	8	8	29	90	56
125	5	11	13	13	11	2
135	0	3	3	3	0	1
145	5	5	11	5	0	4
155	0	3	5	5	0	2
165	5	3	8	5	0	1
175	0	5	3	3	0	0
180	6	6	6	6	6	

TOTAL LUMINAIRE EFFICIENCY = 58.2%
CIE Type – Direct

Plane	Spacing Criteria
0°	1.8
90°	1.5
180°	1.1



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	2085	11.9	20.5
0-40	3597	20.6	35.3
0-60	6557	37.5	64.4
0-90	9755	55.7	95.8
90-120	412	2.4	4.1
90-130	415	2.4	4.1
90-150	420	2.4	4.1
90-180	423	2.4	4.2
0-180	10178	58.2	100.0

REPORT NUMBER: **KPB175PG3_AN**
Lamps: 175 W Pulse Start Metal Halide ED28 Mogul Base with G3 Globe and 30° Angle 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
0	69	69	69	69	67	67	67	67	63	63	63	60	60	60	57	57	57	56
1	61	57	54	51	59	56	53	50	53	50	48	50	48	46	48	46	45	43
2	55	49	44	40	53	48	43	40	45	42	38	43	40	37	41	38	36	34
3	49	42	37	33	48	41	36	32	39	35	31	37	34	31	35	32	30	28
4	45	37	32	27	43	36	31	27	34	30	26	33	29	26	31	28	25	24
5	41	33	27	23	40	32	27	23	31	26	22	29	25	22	28	24	21	20
6	38	30	24	20	37	29	24	20	28	23	19	26	22	19	25	22	19	17
7	35	27	21	18	34	26	21	17	25	20	17	24	20	17	23	19	16	15
8	33	24	19	16	32	24	19	15	23	18	15	22	18	15	21	17	15	13
9	30	22	17	14	29	22	17	14	21	17	14	20	16	13	19	16	13	12
10	28	20	16	12	28	20	15	12	19	15	12	19	15	12	18	14	12	11

Mercmaster™ III HID 50–250 Watt Luminaires

100 W HPS

* 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.

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

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

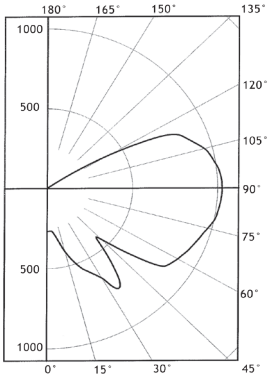
Photometric Data

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

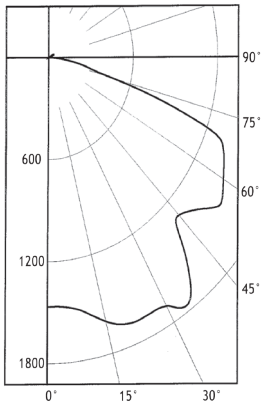
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
0	93	93	93	93	87	87	87	87	76	76	76		66	66	66		57	57	57	53
1	79	72	67	62	73	67	62	58	58	54	50		49	46	43		41	39	36	32
2	69	60	52	46	64	56	49	43	48	42	37		40	36	32		33	30	26	23
3	62	51	43	36	57	47	40	34	40	34	29		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
0	87	87	87	87	85	85	85	85	81	81	81		77	77	77		74	74	74	72
1	78	74	71	68	76	73	70	67	70	67	65		67	64	62		64	62	60	59
2	70	64	58	53	68	62	57	53	59	55	51		57	53	50		54	52	49	47
3	63	55	48	43	61	54	47	43	51	46	42		49	45	41		47	43	40	38
4	57	48	41	35	55	47	40	35	45	39	34		43	38	34		41	37	33	32
5	52	42	35	30	51	41	34	29	39	34	29		38	33	29		36	32	28	26
6	48	37	30	25	46	37	30	25	35	29	25		34	29	25		33	28	24	23
7	44	34	27	22	43	33	26	22	32	26	22		31	25	21		29	25	21	20
8	41	30	24	19	40	30	24	19	29	23	19		28	23	19		27	22	19	17
9	38	23	21	17	37	27	21	17	26	21	17		25	20	17		25	20	17	15
10	36	25	19	15	35	25	19	15	24	19	15		23	19	15		23	18	15	14

Candela Distribution

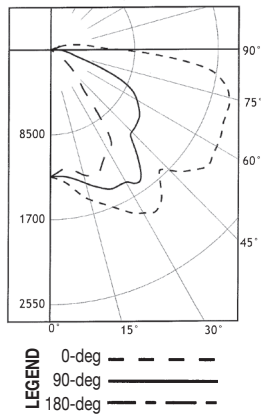
	0.0	45.0	90.0	135.0	180.0	Flux
0	1270	1270	1270	1270	1270	
5	1317	1302	1271	1227	1211	122
15	1554	1471	1384	1341	1298	398
25	1779	1680	1528	1353	1246	694
35	1923	1830	1593	1256	1020	917
45	1715	1564	1163	599	361	848
55	1981	1862	1100	287	122	953
65	1923	1751	869	104	0	869
75	1879	1272	298	9	0	711
85	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

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

Mercmaster™ III HID 50–250 Watt Luminaires

150 W HPS

* Photometric data is based on fixtures 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 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen) HPS lamp – 0.25. For candlepower values of fixture with guard, multiply by 0.95.

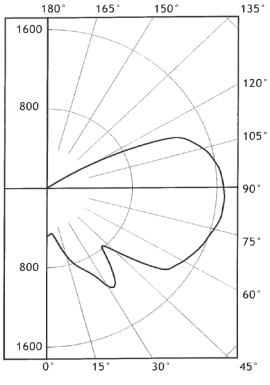
NEC/CEC:
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2, AEx nA nR IIC (Z2)
Class I, Zone 2, AEx/Ex nR IIC (ZB)
Class II, Division 1 and 2, Groups E, F, G
Class III

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

Photometric Data

Degree	Candela	Lumens
0	488	
5	459	46
15	703	202
25	938	442
35	1107	672
45	892	710
55	1420	1253
65	1542	1529
75	1629	1723
85	1675	1824
90	1665	
95	1643	1788
105	1515	1599
115	1072	1042
125	51	115
135	20	16
145	19	12
155	6	4
165	1	0
175	0	0
180	2	

TOTAL LUMINAIRE EFFICIENCY = 81.1%
CIE Type – Semi–Direct
Spacing Criteria: 3.0



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	689	4.3	5.3
0-40	1361	8.5	10.5
0-60	3324	20.8	25.6
0-90	8400	52.5	64.7
90-120	4429	27.7	34.1
90-130	4544	28.4	35.0
90-150	4572	28.6	35.2
90-180	4576	28.6	35.3
0-180	12976	81.1	100.0

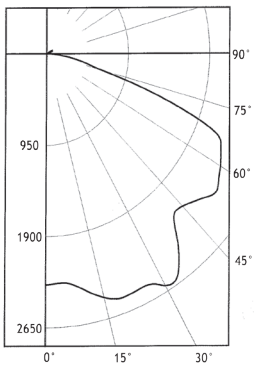
REPORT NUMBER: **KPB150LG3**
Lamps: 150 W High Pressure Sodium C100S54 ED23 – 1/2 Mogul Base with G3 Globe only

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
0	90	90	90	90	84	84	84	84	74	74	74	65	65	65	56	56	56	53
1	76	70	65	60	71	65	60	56	56	53	49	48	45	42	41	38	36	32
2	67	58	51	44	62	54	47	42	46	41	36	39	35	31	33	29	26	23
3	60	49	41	34	55	46	38	32	39	33	28	33	28	24	27	23	20	17
4	54	43	34	29	50	40	32	26	34	27	22	28	23	19	23	19	16	13
5	49	37	29	23	45	35	27	21	30	23	18	25	20	16	21	16	13	10
6	45	33	25	19	42	31	23	18	26	20	15	22	17	13	18	14	11	8
7	41	30	22	16	38	27	20	15	24	18	13	20	15	11	16	12	9	7
8	38	27	19	14	35	25	18	13	21	16	11	18	13	10	15	11	8	6
9	36	24	17	12	33	23	16	12	19	14	10	17	12	8	14	10	7	5
10	33	22	15	11	31	21	14	10	18	12	9	15	11	7	13	9	6	4

Degree	Candela	Lumens
0	2403	
5	2391	230
15	2624	744
25	2678	1247
35	2705	1673
45	2250	1754
55	2444	2161
65	2246	2192
75	655	851
85	147	174
90	26	
95	6	8
105	11	13
115	73	71
125	7	12
135	6	3
145	4	2
155	4	2
165	2	1
175	2	0
180	1	

TOTAL LUMINAIRE EFFICIENCY = 69.6%
CIE Type – Direct
Spacing Criteria: 1.6



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	2221	13.9	19.9
0-40	3895	24.3	35.0
0-60	7809	48.8	70.1
0-90	11027	68.9	99.0
90-120	92	0.6	0.8
90-130	104	0.6	0.9
90-150	109	0.7	1.0
90-180	112	0.7	1.0
0-180	11139	69.6	100.0

REPORT NUMBER: **KPB150LG3_ST**
Lamps: 150 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

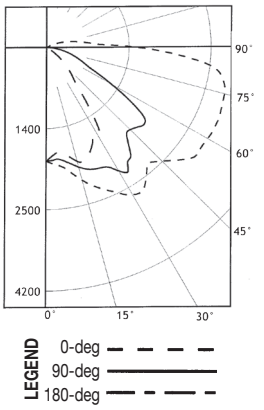
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	83	83	83	83	81	81	81	81	77	77	77	74	74	74	70	70	70	69
1	75	71	68	65	73	70	67	64	66	64	62	64	62	60	61	59	58	56
2	67	61	56	51	65	60	55	51	57	53	49	54	51	48	52	49	47	45
3	61	52	46	41	59	51	46	41	49	44	40	47	43	39	45	41	38	37
4	55	46	39	34	53	45	38	34	43	37	33	41	36	33	39	35	32	30
5	50	40	33	28	48	39	33	28	38	32	28	36	31	27	35	31	27	25
6	46	36	29	24	44	35	29	24	34	28	24	32	27	24	31	27	23	22
7	42	32	26	21	41	32	25	21	30	25	21	29	24	20	28	24	20	19
8	39	29	23	18	38	29	23	18	28	22	18	27	22	18	26	22	18	16
9	36	27	20	16	35	26	20	16	25	20	16	24	20	16	24	19	16	15
10	34	24	19	15	33	24	18	15	23	18	14	22	18	14	22	17	14	13

Candela Distribution

	0.0	45.0	90.0	135.0	180.0	Flux
0	1964	1964	1964	1964	1964	
5	2035	2007	1941	1871	1838	187
15	2375	2307	2140	2047	2037	619
25	2755	2587	2288	2095	1853	1081
35	2924	2763	2415	1885	1276	1416
45	2790	2552	2015	780	518	1368
55	3166	2937	1945	410	157	1520
65	3188	2913	777	77	0	1380
75	3145	2547	408	1	2	1118
85	2533	927	117	0	2	663
90	1490	640	14	5	9	
95	765	449	5	8	11	239
105	380	163	6	11	15	106
115	114	4	6	18	63	44
125	2	5	7	8	7	5
135	2	6	7	8	6	4
145	0	2	6	4	2	3
155	2	4	6	6	4	2
165	4	3	5	4	2	1
175	0	2	3	3	2	0
180	2	2	2	2	2	

TOTAL LUMINAIRE EFFICIENCY = 61.0%
CIE Type – Direct

Plane	Spacing Criteria
0°	2.0
90°	1.7
180°	1.3



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	1886	11.8	19.3
0-40	3302	20.6	33.8
0-60	6190	38.7	63.5
0-90	9351	58.4	95.9
90-120	389	2.4	4.0
90-130	395	2.5	4.0
90-150	401	2.5	4.1
90-180	404	2.5	4.1
0-180	9754	61.0	100.0

REPORT NUMBER: **KPB150LG3_AN**
Lamps: 150 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

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
0	72	72	72	72	70	70	70	70	66	66	66	63	63	63	60	60	60	58
1	64	60	57	54	62	58	55	53	55	53	50	52	50	48	50	48	47	45
2	57	51	46	42	55	50	45	41	47	43	40	45	41	39	42	40	37	36
3	52	44	38	34	50	43	38	33	41	36	33	39	35	32	37	33	31	29
4	47	39	33	28	45	38	32	28	36	31	27	34	30	26	32	29	26	24
5	43	34	28	24	41	33	28	24	32	27	23	30	26	22	29	25	22	21
6	39	31	25	20	38	30	24	20	28	24	20	27	23	19	26	22	19	18
7	36	28	22	18	35	27	22	18	26	21	17	25	20	17	24	20	17	15
8	34	25	20	16	33	24	19	16	23	19	15	22	18	15	22	18	15	14
9	32	23	18	14	30	22	17	14	21	17	14	21	16	13	20	16	13	12
10	30	21	16	13	29	21	16	12	20	15	12	19	15	12	18	15	12	11

Mercmaster™ III HID 50–250 Watt Luminaires

250 W PSMH

* Photometric data is based on fixtures with a 250–watt clear Pulse Start Metal Halide lamp (23,000 lumen). For candlepower values of fixtures with other PSMH lamps, (21,000 lumen) PSMH lamp – 0.913. For candlepower values of fixture with guard, multiply by 0.95.

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

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

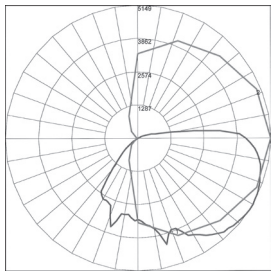
Photometric Data

Zone	Lumens
0-10	307.05
10-20	986.27
20-30	1556.63
30-40	2215.28
40-50	2539.71
50-60	2525.66
60-70	2313.2
70-80	1992.57
80-90	1470.76
90-100	689.06
100-110	177.72
110-120	46
120-130	10.39
130-140	6.24
140-150	5.71
150-160	3.95
160-170	2.26
170-180	.8

TOTAL LUMINAIRE EFFICIENCY = 67.4%
CIE Type – Direct
Spacing Criteria: 2.16

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	2849.95	11.4	16.9
0-40	5065.22	20.3	30.1
0-60	10130.59	40.5	60.1
0-90	15907	63.6	94.4
90-120	912.78	3.7	5.4
90-130	923.17	3.7	5.5
90-150	935.11	3.7	5.5
90-180	942.12	3.8	5.6
0-180	16849.24	67.4	100.0



REPORT NUMBER: **KPBG250PAN**
Lamps: 250 W Metal Halide Pulse Start
Mogul Base

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

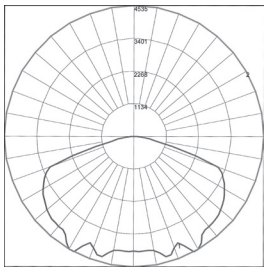
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	79	79	79	79	77	77	77	77	73	73	73	69	69	69	65	65	65	64
1	70	65	62	58	67	63	60	57	60	57	54	56	54	52	53	51	50	48
2	62	55	50	45	60	54	49	44	51	46	43	48	44	41	45	42	39	38
3	56	48	41	36	54	46	40	36	44	39	34	41	37	33	39	35	32	30
4	51	42	35	30	49	41	34	29	38	33	29	36	31	28	34	30	27	25
5	47	37	30	25	45	36	30	25	34	28	24	32	27	23	30	26	23	21
6	43	33	26	21	41	32	26	21	30	25	21	29	24	20	27	23	20	18
7	40	30	23	19	38	29	23	18	27	22	18	26	21	18	25	20	17	16
8	37	27	21	16	35	26	20	16	25	20	16	24	19	16	23	18	15	14
9	34	24	19	15	33	24	18	14	23	18	14	22	17	14	21	17	14	12
10	32	22	17	13	31	22	17	13	21	16	13	20	16	12	19	15	12	11

Zone	Lumens
0-10	382.83
10-20	1200.76
20-30	1987.77
30-40	2662.58
40-50	3136.15
50-60	3436.26
60-70	3412.32
70-80	1660.08
80-90	278.17
90-100	3.43
100-110	0
110-120	0
120-130	0
130-140	0
140-150	0
150-160	0
160-170	0
170-180	0

TOTAL LUMINAIRE EFFICIENCY = 72.6%
CIE Type – Direct
Spacing Criteria: 1.58

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	3571.36	14.3	19.7
0-40	6233.94	24.9	34.3
0-60	12806.35	51.2	70.5
0-90	18156.91	72.6	100
90-120	3.43	0	0
90-130	3.43	0	0
90-150	3.43	0	0
90-180	3.43	0	0
0-180	18160.34.	72.6	100.0



REPORT NUMBER: **KPBG250PST**
Lamps: 250 W Metal Halide Pulse Start
Mogul Base

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
0	86	86	86	86	84	84	84	84	81	81	81	77	77	77	74	74	74	73
1	78	74	71	68	76	73	70	67	70	67	65	67	65	63	64	62	61	59
2	70	63	58	53	68	62	57	53	59	55	51	57	53	50	55	52	49	47
3	63	55	48	43	61	53	47	42	51	46	42	49	45	41	47	43	40	38
4	57	48	41	35	55	47	40	35	45	39	34	43	38	34	41	37	33	32
5	52	42	35	30	50	41	34	29	39	34	29	38	33	29	37	32	28	27
6	48	37	30	25	46	37	30	25	35	29	25	34	29	25	33	28	24	23
7	44	33	27	22	43	33	26	22	32	26	22	31	25	21	30	25	21	20
8	41	30	24	19	40	30	23	19	29	23	19	28	23	19	27	22	19	17
9	38	28	21	17	37	27	21	17	26	21	17	25	20	17	25	20	17	15
10	35	25	19	15	35	25	19	15	24	19	15	23	18	15	23	18	15	14

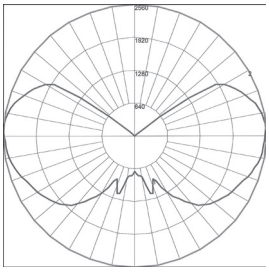
Candela Distribution

Zone	
0-10	74.54
10-20	304.58
20-30	486.47
30-40	948.61
40-50	1471.61
50-60	1887.31
60-70	2239.17
70-80	2561.7
80-90	2747.67
90-100	2779.02
100-110	2564.95
110-120	2148.15
120-130	1109.49
130-140	37.55
140-150	3.93
150-160	.76
160-170	.09
170-180	.03

TOTAL LUMINAIRE EFFICIENCY = 85.5%
CIE Type – General Diffuse

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT.
0-30	865.59	3.5	4.1
0-40	1814.2	7.3	8.5
0-60	5173.13	20.7	24.2
0-90	12721.67	50.9	59.5
90-120	7492.124	30	35.1
90-130	8601.61	34.4	40.3
90-150	8643.09	34.6	40.5
90-180	8643.97	34.6	40.5
0-180	21365.63	85.5	100.0



REPORT NUMBER: **KPBG250PG**
Lamps: 250 W Metal Halide Pulse Start
Mogul Base

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
0	94	94	94	94	87	87	87	87	76	76	76	65	65	65	55	55	55	51
1	80	74	68	63	74	68	63	59	58	54	51	49	46	43	40	38	36	31
2	71	61	54	47	65	57	50	44	48	42	38	40	36	32	32	29	26	22
3	63	52	44	37	58	48	41	34	41	34	29	33	29	25	27	23	20	16
4	57	45	36	30	52	42	34	28	35	29	24	29	24	20	23	19	16	13
5	52	40	31	25	47	36	29	23	31	24	19	25	20	16	20	16	13	10
6	47	35	27	21	43	32	25	19	27	21	16	22	17	13	18	14	11	8
7	44	31	23	18	40	29	22	16	24	18	14	20	15	11	16	12	9	7
8	40	28	20	15	37	26	19	14	22	16	12	18	13	10	15	11	8	6
9	37	25	18	13	34	24	17	12	20	14	10	17	12	9	13	10	7	5
10	35	23	16	12	32	22	15	11	18	13	9	15	11	8	12	9	6	4

EMERSON