

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## High Pressure Sodium and Pulse Start Metal Halide

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

### NEC/CEC:

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

### NEC/CEC:

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

## Applications

- Enclosed and gasketed fixtures suitable for use in:
  - Marine and wet locations
  - A wide range of industrial, chemical processing and other areas where flammable gases and vapors or combustible dusts are present under conditions defined by the National Electrical Code as Class I, Division 2; Class II, Division 1 and 2; and Class III
  - In applications involving medium and high mounting heights
  - In applications where energy efficient, high lumen output is required
  - The AEx nA nR Mercmaster III fixture is factory sealed and prevents vapors and gases from entering the globe chamber. There are no seals or putty required.
  - The AEx nR Mercmaster III fixture requires all wiring entries to be sealed.
  - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
  - Pulp and paper mills
  - Processing plants
  - Chemical plants
  - Oil refineries
  - Foundries
  - Manufacturing plants
  - Storage areas
  - Waste and sewage treatment
  - Other areas where dust, water, dirt and rough usage are a problem

## Features

- Superior corrosion resistance.
- Choice of light sources: high pressure sodium, and pulse start metal halide.
- Six mounting arrangements to suit any lighting layout: pendant, ceiling, wall bracket, 25° (angle) stanchion, 90° (straight) stanchion and cone.
- 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.
- Choice of optical assemblies: prismatic globe; enclosed reflector with sealed lens; or Type V or Type II closed prismatic glass refractor, with or without guards.
- Wide choice of photometric distributions.
- All fixtures designed to perform in a 40 °C (104 °F) ambient temperature. Selected fixtures are suitable for ambient temperatures up to 65 °C (149 °F) .
- Mogul base porcelain lamp holder with nickel-plated contacts has 200 °C (392 °F) rated welded leads, pre-wired to the ballast. Assures trouble-free operation in installations where high ambient temperatures are encountered.
- For electrical protection, a ground wire is provided on each Mercmaster to bond hood and ballast housing.
- Terminal blocks are provided for Zone 2 fixtures to facilitate wiring.
- Standard dome of 30° angle reflectors made of fiberglass reinforced white polyester. Highly resistant to corrosive atmospheres.
- A wide range of voltages available (120 to 600 Volt) and ballast types (CWA and Super CWA).
- One-piece ballast housing for each component provides even



Enclosed Reflector

Prismatic Glass Globe

12" Glass Refractor

- heat dissipation for cooler operation and longer ballast life.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kit listings).

## Standard Materials

- Mounting hoods and ballast bodies: cast copperfree (less than 4/10 of 1% copper) aluminum
- Reflectors: Fiberglass reinforced white polyester
- Guards, hardware and catch assemblies: stainless steel
- Globe: heat- and impact-resistant internally fluted glass
- Refractors: prismatic glass
- Enclosed reflector: etched Alzak aluminum with sealed, tempered heat- and impact-resistant lens
- Body and globe gaskets: high-temperature silicone rubber

## Standard Finishes

- Mounting hoods and guards: epoxy powder coat, electrostatically applied for complete and uniform protection

## Options

- AEx nA nR fixtures are available with a Class I, Zone 2 rating. Add suffix **-Z2**.
- AEx nR fixtures are available with a Class I, Zone 2 rating. Add suffix **-ZB**.
- Quartz Auxiliary comes to full brightness immediately and remains lit until the HID lamp attains 60-70% of full illumination. Quartz Auxiliary supplied with relay switch and socket to accept 120 V quartz double-contact bayonet base lamp (not included). (Not suitable for hazardous locations.) Add suffix **-E**.
- Factory sealed photocontrol available. See PCD2 Series.
- 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**.

## NEC/CEC Certifications and Compliances

- cULus Listed: E10444
- UL Standard: ANSI/UL 844, 1598, 60079-0, 60079-15, Marine Type Electric Fixtures Outside Type (Salt Water)
- CSA Certified: 025428
- CSA Standard: CSA C22.2 No. 9, C22.2 No. 137; CAN/CSA E60079-0, E60079-15
- 250 W PSMH not available in MT ballast. See Mercmaster III, 50-250 Luminaires.

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## 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

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



### 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.



### Ballast Assembly

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

### Mounting Hood and Globe Gaskets

Silicone rubber 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.



### "Safety" High Hinge

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

### 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.



### Cooler Operating Cone Hood

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

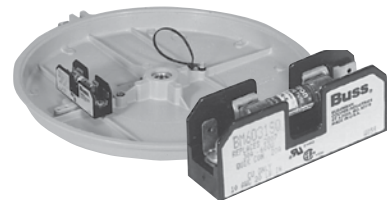


### Stainless Steel Latch Assembly

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

### Prismatic Glass Globes, Reflectors and Enclosed Reflector

Heat-resistant globes, reflectors and enclosed reflector thread into ballast housing and seal against a high temperature silicone rubber gasket.



### Fuses

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

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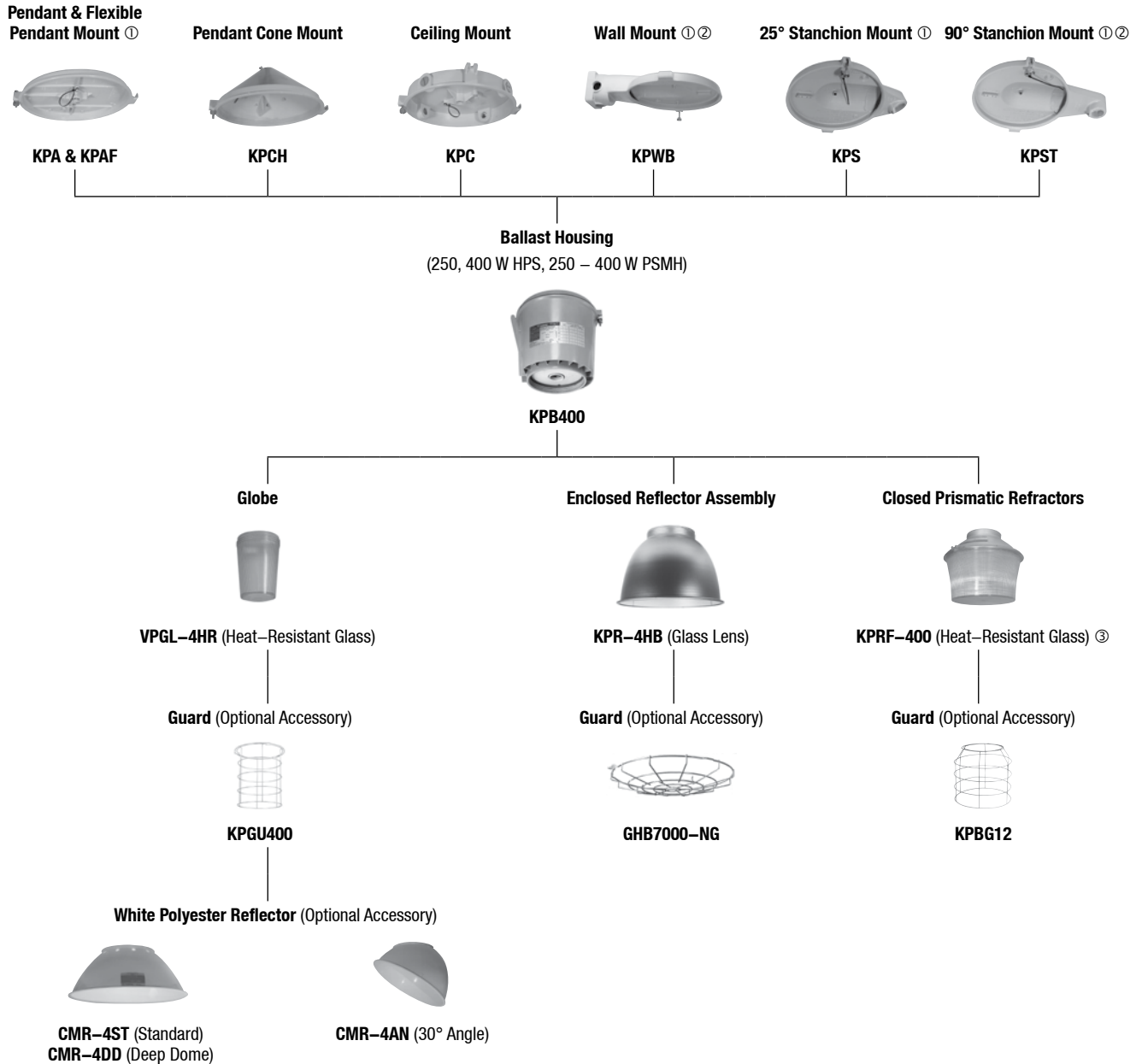
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 Class I, Zone 2, AEx nR IIC (ZB)  
 Class II, Division 1 and 2, Groups E, F, G  
 Class III

**NEC/CEC:**

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 Fixtures Outside Type (Salt Water)  
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 IP66

### Mercmaster III 400 Family Tree



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

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

③ Available in NEMA Type II and V.

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## 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)  
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 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

<p><b>KP</b></p> <p>Series:                  KP -                  Mercmaster III                  400</p>	<p><b>A</b></p> <p>Mounting:                  A - Pendant (rigid                  mounting)                  C - Ceiling                  CH - Pendant Cone Hood                  F - Pendant (flexible                  mounting)                  ST - 90° Stanchion                  S - 25° Stanchion                  WB - Wall</p>	<p><b>L</b></p> <p>Lamp Type:                  L - High Pressure                  Sodium                  P - Pulse Start                  Metal Halide</p>	<p><b>40</b></p> <p>Wattage:                  25 - 250 W HPS, PSMH ⑤                  32 - 320 W PSMH                  35 - 350 W PSMH                  40 - 400 W PSMH &amp; HPS</p>	<p><b>10</b></p> <p>Hub Size:                  75 - 3/4" NPT                  10 - 1" NPT                  125 - 1-1/4" NPT                  stanchion                  150 - 1-1/2" NPT                  stanchion</p>	<p><b>J5</b></p> <p>Optical Assembly: ①                  Blank - Glass Globe                  J2 - NEMA II Glass                  Refractor ④                  J5 - NEMA V Glass                  Refractor ④                  R - Enclosed Refractor                  with Sealed Lens</p>	<p><b>G</b></p> <p>Guard Options: ②                  G - Globe Guard                  BG - Refractor                  Guard                  Blank - No Guard</p>	<p><b>MT</b></p> <p>Voltage: ③                  MT - 120/208/240/277, 60                  Hz                  5MT - 120/208/240/                  277/480, 60 Hz                  48 - 480, 60 Hz                  125 - 120, 50Hz                  226 - 220, 60 Hz                  235 - 230, 50Hz                  245 - 240, 50 Hz</p>	<p><b>S</b></p> <p>Options:                  E - Emergency Quartz                  F - Fuse Kit (Specify                  Voltage)                  S - Smart Starter                  H1 - Photocontrol 120 V                  H2 - Photocontrol 208 V                  H3 - Photocontrol 240 V                  H4 - Photocontrol 277 V                  E40 - Export Socket</p> <p>Optional Fusing ⑥                  FN - 120 V                  FP - 208 V                  FS - 240 V                  FT - 277 V                  FF - 480 V</p>	<p><b>Z2</b></p> <p>Suffix:                  Z2 - Zone 2 suffix                  (required for                  AEx nA nR                  rating)                  ZB - Zone 2 suffix                  (required for                  AEx nR rating)</p>
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Refer to "Mounting Hoods and Ballast" page for available Voltage Configuration.

① NO DESIGNATION is required for fixtures with standard type globe.

② NO DESIGNATION is required for fixtures without guards.

③ Other voltages available. Contact your local sales representative.

④ J2 and J5 refractors are not available with Z2 or ZB suffix.

⑤ Available for 480 V, 50 Hz and 5MT ballast options. For MT and TT voltage suffix, see Mercmaster III 50-250 Luminaires.

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

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

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

Temperature identification numbers of Mercmaster III – 400 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 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

**“T” Numbers**

Lamp Watts	Supply Wire Temp. °C (°F) ①	Ambient Temp. °C (°F) ①	Class I, Division 2				Class II, Division 1 Groups E, F and G				Simultaneous Exposure Class I, Division 2 / Class II, Division 1				
			Globe	Globe & Reflector	Reflector	Enclosed Reflector	Globe	Globe & Reflector	Reflector	Enclosed Reflector	Globe	Globe & Reflector	Reflector	Enclosed Reflector	
250	HPS	125 °C (257 °F)	40 °C (104 °F)	T2	T2	T2	T2	T3B	T3B	T4	T4A	325	325	325	325
		125 °C (257 °F)	55 °C (131 °F)	325	325	T2	T2	—	—	T3B	T4A	—	—	T1	325
		125 °C (257 °F)	65 °C (149 °F)	—	—	T2	T2	—	—	T3B	T4	—	—	T1	350
400	HPS	90 °C (194 °F)	40 °C (104 °F)	350	T1	T1	350	T3 ②	T3 ②	T3C	T3C	T1	T1	T1	350
		90 °C (194 °F)	40 °C (104 °F)	T2A	T2A	T2B	T2C	T3 (EF)	T3 (EF)	T4	T4A	—	—	—	—
250	PSMH	90 °C (194 °F)	55 °C (131 °F)	T2A	T2A	T2B	T2C	—	—	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	—	—	—	T2C	—	—	—	—	—	—	—	—
		90 °C (194 °F)	40 °C (104 °F)	T2B	T2B	T2B	T2B	—	—	T3C	T3C	—	—	—	—
320	PSMH	90 °C (194 °F)	55 °C (131 °F)	T2A	T2A	T2A	T2B	—	—	—	—	—	—	—	—
		90 °C (194 °F)	40 °C (104 °F)	T2B	T2B	T2B	T2B	—	—	T3C	T3C	—	—	—	—
350	PSMH	90 °C (194 °F)	55 °C (131 °F)	T2A	T2A	T2A	T2B	—	—	—	—	—	—	—	—
		90 °C (194 °F)	40 °C (104 °F)	T2B	T2B	T2B	T2B	—	—	T3C	T3C	—	—	—	—
400	PSMH	90 °C (194 °F)	40 °C (104 °F)	T2A	T2A	T2B	T2B	—	—	T3C	T3C	—	—	—	—
		90 °C (194 °F)	40 °C (104 °F)	T2A	T2A	T2B	T2B	—	—	T3C	T3C	—	—	—	—

**“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 Use +90 °C (+194 °F) rated supply wire.  
 ② “T” numbers are for Groups E and F only.

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

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

Temperature identification numbers of Mercmaster III – 400 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 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

## “T” Numbers

Lamp Watts	Type	Supply Wire Temp. °C (°F) ①	Ambient Temp. °C (°F) ①	Class 1, Zone 2 AEx nA nR			Class 1, Zone 2 AEx nR		
				Globe	Globe & Reflector	Enclosed Reflector	Globe	Globe & Reflector	Enclosed Reflector
250	HPS	125 (257)	40 (104)	T4	T4	T5	T4	T4	T5
	HPS	125 (257)	55 (131)	T3	T3	T3	T3	T3	T3
	HPS	125 (257)	65 (149)	—	—	T3	—	—	T3
400	HPS	90 (194)	40 (104)	T4	T4	T5	T4	T4	T5
	PSMH	90 (194)	40 (104)	T3	T3	T3	—	—	—
	PSMH	90 (194)	55 (131)	T3	T3	T3	—	—	—
320	PSMH	90 (194)	40 (104)	T4	T4	T4	T4	T4	T4
	PSMH	90 (194)	55 (131)	T3	T3	T4	T3	T3	T4
	PSMH	90 (194)	40 (104)	T4	T4	T4	T4	T4	T4
350	PSMH	90 (194)	40 (104)	T4	T4	T4	T4	T4	T4
	PSMH	90 (194)	55 (131)	T3	T3	T4	T3	T3	T4
400	PSMH	75 (167)	40 (104)	T3	T3	T3	T3	T3	T3
400	MH	90 (194)	40 (104)	T3	T3	T3	—	—	—

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

To comply with AEx nR Requirements, all wiring entries must be sealed.

“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 Use +90 °C (+194 °F) rated supply wire.

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## 250 W, 400 W HPS

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

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 Class I, Zone 2, AEx nR IIC (ZB)  
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 Class III

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 Class II, Division 1)  
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 Type 4X  
 IP66

Type Mounting	Lamp Type	Lamp Watts	Hub Size (Inches)	With Globe	Catalog Numbers ③④⑤	
					With Type V 12" Refractor ②	With Enclosed Reflector

**Pendant — One Hub, Rigid Mounting ①**



Shown with Globe

HPS	250	3/4	1	KPAL2575	KPAL2575J5	KPAL2575R
			1	KPAL2510	KPAL2510J5	KPAL2510R
HPS	400	3/4	1	KPAL4075	KPAL4075J5	KPAL4075R
			1	KPAL4010	KPAL4010J5	KPAL4010R

**Pendant Cone — One Hub, Rigid Mounting**



Shown with 12" Glass Refractor

HPS	250	3/4	1	KPCHL2575	KPCHL2575J5	KPCHL2575R
			1	KPCHL2510	KPCHL2510J5	KPCHL2510R
HPS	400	3/4	1	KPCHL4075	KPCHL4075J5	KPCHL4075R
			1	KPCHL4010	KPCHL4010J5	KPCHL4010R

**Ceiling — Five Hubs, Four Close-Up Plugs**



Shown with Enclosed Reflector

HPS	250	3/4	1	KPCL2575	KPCL2575J5	KPCL2575R
			1	KPCL2510	KPCL2510J5	KPCL2510R
HPS	400	3/4	1	KPCL4075	KPCL4075J5	KPCL4075R
			1	KPCL4010	KPCL4010J5	KPCL4010R

① For Flexible Pendant Mount, change **A** to **F** in catalog number.

② To order fixture with NEMA Type II refractor, change digits **J5** in catalog number to **J2**. Refractor not available for Z, Z2 or ZB suffix.

③ For fixtures with guards, add suffix **G** before adding voltage suffix. **BG** for refractor. **NG** for enclosed reflector.

④ Add the following voltage and frequency designations before Z2 or ZB suffix:

Lamp Type	Lamp Watts	Voltage Suffixes							
		MT	5MT	48	125	225	226	235	245
HPS	250	X	X	X	X	—	X	X	—
HPS	400	X	X	X	X	—	—	X	—
PSMH	250	—	X	X	X	—	—	X	—
PSMH	320	X	X	X	X	—	—	X	—
PSMH	350	X	X	X	X	—	—	X	—
PSMH	400	X	X	X	—	—	—	X	—
Voltages:		48 - 480 V 60 Hz			226 - 220 V 60 Hz				
<b>MT</b> - 120/208/240/277 V 60 Hz		125 - 120 V 50 Hz			<b>235</b> - 230 V 50 Hz				
<b>5MT</b> - 120/208/240/277/480 V 60 Hz		225 - 225 V 50 Hz			<b>245</b> - 240 V 50 Hz				

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



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## 250 W, 400 W HPS

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 Fixtures Outside Type (Salt Water)  
 Type 4X  
 IP66

Type Mounting	Lamp Type	Lamp Watts	Hub Size (Inches)	With Globe	Catalog Numbers ③④⑤		
					With Type V 12" Refractor ②	With Enclosed Reflector	

### Wall Five Hubs, Four Close-Up Plugs



HPS	250	3/4	KPWBL2575	KPWBL2575J5	KPWBL2575R
		1	KPWBL2510	KPWBL2510J5	KPWBL2510R
HPS	400	3/4	KPWBL4075	KPWBL4075J5	KPWBL4075R
		1	KPWBL4010	KPWBL4010J5	KPWBL4010R

Shown with 12" Glass Refractor

### 25° Stanchion One Hub



HPS	250	1-1/4	KPSL25125	KPSL25125J5	KPSL25125R
		1-1/2	KPSL25150	KPSL25150J5	KPSL25150R
HPS	400	1-1/4	KPSL40125	KPSL40125J5	KPSL40125R
		1-1/2	KPSL40150	KPSL40150J5	KPSL40150R

Shown with Prismatic Glass Globe and Optional Guard

### 90° Stanchion One Hub



HPS	250	1-1/4	KPSTL25125	KPSTL25125J5	KPSTL25125R
		1-1/2	KPSTL25150	KPSTL25150J5	KPSTL25150R
HPS	400	1-1/4	KPSTL40125	KPSTL40125J5	KPSTL40125R
		1-1/2	KPSTL40150	KPSTL40150J5	KPSTL40150R

Shown with Prismatic Glass Globe and Optional Guard

② To order fixture with NEMA Type II refractor, change digits **J5** in catalog number to **J2**. Refractor not available for Z, Z2 or ZB suffix.

③ For fixtures with guards, add suffix **G** before adding voltage suffix. **BG** for refractor. **NG** for enclosed reflector.

④ Add the following voltage and frequency designations before Z2 or ZB suffix:

Lamp Type	Lamp Watts	Voltage Suffixes							
		MT	5MT	48	125	225	226	235	245
HPS	250	X	X	X	X	—	X	X	—
HPS	400	X	X	X	X	—	—	X	—
PSMH	250	—	X	X	X	—	—	X	—
PSMH	320	X	X	X	X	—	—	X	—
PSMH	350	X	X	X	X	—	—	X	—
PSMH	400	X	X	X	—	—	—	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  
**245** - 240 V 50 Hz

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






# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## 250 W, 320 W, 350 W, 400 W PSMH

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

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

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

Type Mounting	Lamp Type	Lamp Watts	Hub Size (Inches)	Catalog Numbers ③④⑤		
				With Globe	With Type V 12" Refractor ②	With Enclosed Reflector
<b>Pendant One Hub, Rigid Mounting ①</b>						
	PSMH	250 ⑥	3/4	KPAP2575	KPAP2575J5	KPAP2575R
			1	KPAP2510	KPAP2510J5	KPAP2510R
	PSMH	320	3/4	KPAP3275	KPAP3275J5	KPAP3275R
			1	KPAP3210	KPAP3210J5	KPAP3210R
	PSMH	350	3/4	KPAP3575	KPAP3575J5	KPAP3575R
			1	KPAP3510	KPAP3510J5	KPAP3510R
	PSMH	400	3/4	KPAP4075	KPAP4075J5	KPAP4075R
			1	KPAP4010	KPAP4010J5	KPAP4010R
<b>Pendant Cone One Hub, Rigid Mounting</b>						
	PSMH	250 ⑥	3/4	KPCHP2575	KPCHP2575J5	KPCHP2575R
			1	KPCHP2510	KPCHP2510J5	KPCHP2510R
	PSMH	320	3/4	KPCHP3275	KPCHP3275J5	KPCHP3275R
			1	KPCHP3210	KPCHP3210J5	KPCHP3210R
	PSMH	350	3/4	KPCHP3575	KPCHP3575J5	KPCHP3575R
			1	KPCHP3510	KPCHP3510J5	KPCHP3510R
	PSMH	400	3/4	KPCHP4075	KPCHP4075J5	KPCHP4075R
			1	KPCHP4010	KPCHP4010J5	KPCHP4010R
<b>Ceiling Five Hubs, Four Close-Up Plugs</b>						
	PSMH	250 ⑥	3/4	KPCP2575	KPCP2575J5	KPCP2575R
			1	KPCP2510	KPCP2510J5	KPCP2510R
	PSMH	320	3/4	KPCP3275	KPCP3275J5	KPCP3275R
			1	KPCP3210	KPCP3210J5	KPCP3210R
	PSMH	350	3/4	KPCP3575	KPCP3575J5	KPCP3575R
			1	KPCP3510	KPCP3510J5	KPCP3510R
	PSMH	400	3/4	KPCP4075	KPCP4075J5	KPCP4075R
			1	KPCP4010	KPCP4010J5	KPCP4010R

① For Flexible Pendant Mount, change **A** to **F** in catalog number.

② To order fixture with NEMA Type II refractor, change digits **J5** in catalog number to **J2**. Refractor not available for Z, Z2 or ZB suffix.

③ For fixtures with guards, add suffix **G** before adding voltage suffix. **BG** for refractor. **NG** for enclosed reflector.

④ Add the following voltage and frequency designations before Z2 or ZB suffix:

Lamp Type	Lamp Watts	Voltage Suffixes							
		MT	5MT	48	125	225	226	235	245
HPS	250	X	X	X	X	—	X	X	—
HPS	400	X	X	X	X	—	—	X	—
PSMH	250	—	X	X	X	—	—	X	—
PSMH	320	X	X	X	X	—	—	X	—
PSMH	350	X	X	X	X	—	—	X	—
PSMH	400	X	X	X	—	—	—	X	—

Voltages: 48 - 480 V 60 Hz 226 - 220 V 60 Hz

MT - 120/208/240/277 V 60 Hz 125 - 120 V 50 Hz 235 - 230 V 50 Hz

5MT - 120/208/240/277/480 V 60 Hz 225 - 225 V 50 Hz 245 - 240 V 50 Hz

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

⑥ Available for 480 V, 50 Hz and 5MT ballast options. For MT and TT voltage suffix, see Mercmaster III 50-250 Luminaires.

Appleton

HD/AREA: NEC/CEC ENCLOSED AND GASKETED




# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

250 W, 320 W, 350 W, 400 W PSMH

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

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

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

Type Mounting	Lamp Type	Lamp Watts	Hub Size (Inches)	With Globe	Catalog Numbers ③④⑤		
					With Type V 12" Refractor ②	With Enclosed Reflector	
<b>Wall Five Hubs, Four Close-Up Plugs</b>							
	PSMH	250 ⑥	3/4	KPWPB2575	KPWPB2575J5	KPWPB2575R	
			1	KPWPB2510	KPWPB2510J5	KPWPB2510R	
	PSMH	320	3/4	KPWPB3275	KPWPB3275J5	KPWPB3275R	
			1	KPWPB3210	KPWPB3210J5	KPWPB3210R	
	PSMH	350	3/4	KPWPB3575	KPWPB3575J5	KPWPB3575R	
			1	KPWPB3510	KPWPB3510J5	KPWPB3510R	
	PSMH	400	3/4	KPWPB4075	KPWPB4075J5	KPWPB4075R	
			1	KPWPB4010	KPWPB4010J5	KPWPB4010R	
<b>25° Stanchion One Hub</b>							
	PSMH	250 ⑥	1-1/4	KPSP25125	KPSP25125J5	KPSP25125R	
			1-1/2	KPSP25150	KPSP25150J5	KPSP25150R	
	PSMH	320	1-1/4	KPSP32125	KPSP32125J5	KPSP32125R	
			1-1/2	KPSP32150	KPSP32150J5	KPSP32150R	
	PSMH	350	1-1/4	KPSP35125	KPSP35125J5	KPSP35125R	
			1-1/2	KPSP35150	KPSP35150J5	KPSP35150R	
	PSMH	400	1-1/4	KPSP40125	KPSP40125J5	KPSP40125R	
			1-1/2	KPSP40150	KPSP40150J5	KPSP40150R	
<b>90° Stanchion One Hub</b>							
	PSMH	250 ⑥	1-1/4	KPSTP25125	KPSTP25125J5	KPSTP25125R	
			1-1/2	KPSTP25150	KPSTP25150J5	KPSTP25150R	
	PSMH	320	1-1/4	KPSTP32125	KPSTP32125J5	KPSTP32125R	
			1-1/2	KPSTP32150	KPSTP32150J5	KPSTP32150R	
	PSMH	350	1-1/4	KPSTP35125	KPSTP35125J5	KPSTP35125R	
			1-1/2	KPSTP35150	KPSTP35150J5	KPSTP35150R	
	PSMH	400	1-1/4	KPSTP40125	KPSTP40125J5	KPSTP40125R	
			1-1/2	KPSTP40150	KPSTP40150J5	KPSTP40150R	

Shown with 12" Glass Refractor

Shown with Prismatic Glass Globe and Optional Guard

Shown with Prismatic Glass Globe and Optional Guard

② To order fixture with NEMA Type II refractor, change digits **J5** in catalog number to **J2**. Refractor not available for Z, Z2 or ZB suffix.

③ For fixtures with guards, add suffix **G** before adding voltage suffix. **BG** for refractor. **NG** for enclosed reflector.

④ Add the following voltage and frequency designations before Z2 or ZB suffix:

Lamp Type	Lamp Watts	Voltage Suffixes							
		MT	5MT	48	125	225	226	235	245
HPS	250	X	X	X	X	—	X	X	—
HPS	400	X	X	X	X	—	—	X	—
PSMH	250	—	X	X	X	—	—	X	—
PSMH	320	X	X	X	X	—	—	X	—
PSMH	350	X	X	X	X	—	—	X	—
PSMH	400	X	X	X	—	—	—	X	—

Voltages: **48** - 480 V 60 Hz **226** - 220 V 60 Hz

**MT** - 120/208/240/277 V 60 Hz **125** - 120 V 50 Hz **235** - 230 V 50 Hz

**5MT** - 120/208/240/277/480 V 60 Hz **225** - 225 V 50 Hz **245** - 240 V 50 Hz

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

⑥ Available for 480 V, 50 Hz and 5MT ballast options. For MT and TT voltage suffix, see Mercmaster III 50-250 Luminaires.

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations








## High Pressure Sodium and Pulse Start Metal Halide - Hazardous and Wet Locations

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

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

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

### Mounting Hoods

	Description	Hub Size (Inches)	Catalog Number
	One Hub, Rigid Mounting	3/4	KPA-75
		1	KPA-100
	One Hub, Flexible Mounting	3/4	KPAF-75
		1	KPAF-100
	One Hub, Rigid	3/4	KPCH-75
		1	KPCH-100
	Five Hubs, Four Close-Up Plugs	3/4	KPC-75
		1	KPC-100
	Five Hubs, Four Close-Up Plugs	3/4	KPWB-75
		1	KPWB-100
	One Hub	1-1/4	KPS-125
		1-1/2	KPS-150
	One Hub	1-1/4	KPST-125
		1-1/2	KPST-150

### Ballast Bodies



**High Pressure Sodium** — Constant Wattage (Min. P.F. 90%)  
**Pulse Start Metal Halide** — Super Constant Wattage (Min. P.F. 90%)

Lamp Type	Lamp Watts	Catalog Numbers ②④	Voltage Suffixes							
			MT	5MT	48	125	225	226	235	245
HPS	250	KPB250L ①③	X	X	X	X	—	X	X	—
HPS	400	KPB400L ①③	X	X	X	X	—	—	X	—
PSMH	250	KPB250P ①③④	—	X	X	X	—	—	X	—
PSMH	320	KPB320P ①③	X	X	X	X	—	—	X	—
PSMH	350	KPB350P ①③	X	X	X	X	—	—	X	—
PSMH	400	KPB400P ①③	X	X	X	—	—	—	X	—

Voltagess:

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

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

**48** - 480 V 60 Hz

**125** - 120 V 50 Hz

**225** - 225 V 50 Hz

**226** - 220 V 60 Hz

**235** - 230 V 50 Hz

**245** - 240 V 50 Hz

① Add **-S** after voltage designation for ballast body with Smart Starter (HPS and PSMH only).

② Add **-E** after voltage designation for ballast body with provision for Quartz Emergency Light (not suitable for hazardous location).

③ Add **Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add **ZB** suffix for restricted breathing protection (AEx nR).

④ Not available in MT. See Mercmaster III 50-250 Luminaires.

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## High Pressure Sodium and Pulse Start Metal Halide - Hazardous and Wet Locations

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

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

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

Description	Catalog Number
-------------	----------------

### Prismatic Glass Globes — Heat-Resistant



Glass Globe

Clear

VPGL-4HR

### Enclosed Reflector Assembly



Enclosed Reflector

Heat- and impact-resistant glass lens

KPR-4HB

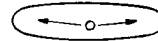
Light Distribution	IES/NEMA Distribution Curves	Catalog Number
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### Closed Prismatic Glass Refractors ② — All Heat-Resistant



Glass Refractor

NEMA Type II



KPRF400-2

NEMA Type V



KPRF400-5

Item	Description	Catalog Number
------	-------------	----------------

### White Polyester Reflectors



Standard and Deep Dome



30° Angle

For use with globe fixtures

Standard Dome

CMR-4ST①

30° Angle

CMR-4AN

Deep Dome

CMR-4DD①

### Guards



Globe Guard



Refractor Guard

Globe Guard

KPGU400

Refractor Guard

KPBG12

Enclosed Refractor Guard

G-HB7000-NG



Enclosed Refractor Guard

① Contact your local sales representative if used with KPWB or KPST mounting hoods.  
 ② Not suitable for use with Z2 or ZB suffixes (Zone 2).

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## High Pressure Sodium and Pulse Start Metal Halide - Hazardous and Wet Locations

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

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

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

### Electrical Specifications

Line Voltage	Type of Ballast ①	Frequency	Starting Amps	Operating Amps	Total Watts
<b>250 Watt High Pressure Sodium</b>					
120	C.W.A.	60	2.00	2.50	295
208	C.W.A.	60	1.20	1.50	295
240	C.W.A.	60	1.00	1.30	295
277	C.W.A.	60	0.85	1.10	295
480	C.W.A.	60	0.40	0.65	295
120	C.W.A.	50	1.85	2.75	300
230	C.W.A.	50	0.95	1.44	300
<b>400 Watt High Pressure Sodium</b>					
120	C.W.A.	60	3.30	3.80	465
208	C.W.A.	60	1.80	2.20	465
240	C.W.A.	60	1.60	1.90	465
277	C.W.A.	60	1.40	1.70	465
480	C.W.A.	60	0.80	1.00	465
120	C.W.A.	50	3.70	4.00	465
230	C.W.A.	50	1.85	2.00	465
<b>250 Watt Pulse Start Metal Halide</b>					
120	C.W.A.	60	1.96	2.50	291
208	C.W.A.	60	1.13	1.45	291
240	C.W.A.	60	0.98	1.25	291
277	C.W.A.	60	0.85	1.10	291
480	C.W.A.	60	0.32	0.69	298
480	Super C.W.A.	60	0.45	0.60	285
120	Super C.W.A.	50	1.90	2.60	288
230	Super C.W.A.	50	1.00	1.35	288
<b>320 Watt Pulse Start Metal Halide</b>					
120	Super C.W.A.	60	2.60	3.25	368
208	Super C.W.A.	60	1.50	1.90	368
240	Super C.W.A.	60	1.30	1.65	368
277	Super C.W.A.	60	1.15	1.40	368
480	Super C.W.A.	60	0.60	0.80	368
120	Super C.W.A.	50	2.28	3.05	365
230	Super C.W.A.	50	1.14	1.60	365
<b>350 Watt Pulse Start Metal Halide</b>					
120	Super C.W.A.	60	3.30	3.60	400
208	Super C.W.A.	60	1.90	2.10	400
240	Super C.W.A.	60	1.65	1.80	400
277	Super C.W.A.	60	1.40	1.55	400
480	Super C.W.A.	60	0.75	0.90	400
120	Super C.W.A.	50	2.45	3.34	394
230	Super C.W.A.	50	1.26	1.74	394
<b>400 Watt Pulse Start Metal Halide</b>					
120	Super C.W.A.	60	3.50	4.00	454
208	Super C.W.A.	60	2.00	2.30	454
240	Super C.W.A.	60	1.75	2.00	454
277	Super C.W.A.	60	1.50	1.25	454
480	Super C.W.A.	60	0.90	1.00	454
120	Super C.W.A.	50	3.17	3.90	454
230	Super C.W.A.	50	1.65	2.00	454

### Fuse Kit

Order fuses as a separate item by catalog number from right columns.

Lamp Watts	Volts	Fuse Quantity Required	Fuse Catalog Number	
			HPS	PSMH
250	120	1	F7	—
	208	2	F4	—
	240	2	F4	—
	277	1	F3	—
	480	2	F2	—
	120	1	F7	—
	230	2	F4	—
250	480	2	—	F2
	230	1	—	F3
	120	1	—	F9
320	208	2	—	F6
	240	2	—	F5
	277	1	—	F4
	480	2	—	F3
	120	1	—	F10
	230	2	—	F5
	120	1	—	F10
350	208	2	—	F7
	240	2	—	F5
	277	1	—	F5
	480	2	—	F3
	120	1	—	F10
	230	2	—	F5
	120	1	—	F15
400	208	2	F8	F7
	240	2	F8	F5
	277	1	F5	F5
	480	2	F5	F3
	120	1	F10	F10
	230	2	F6	F5

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

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

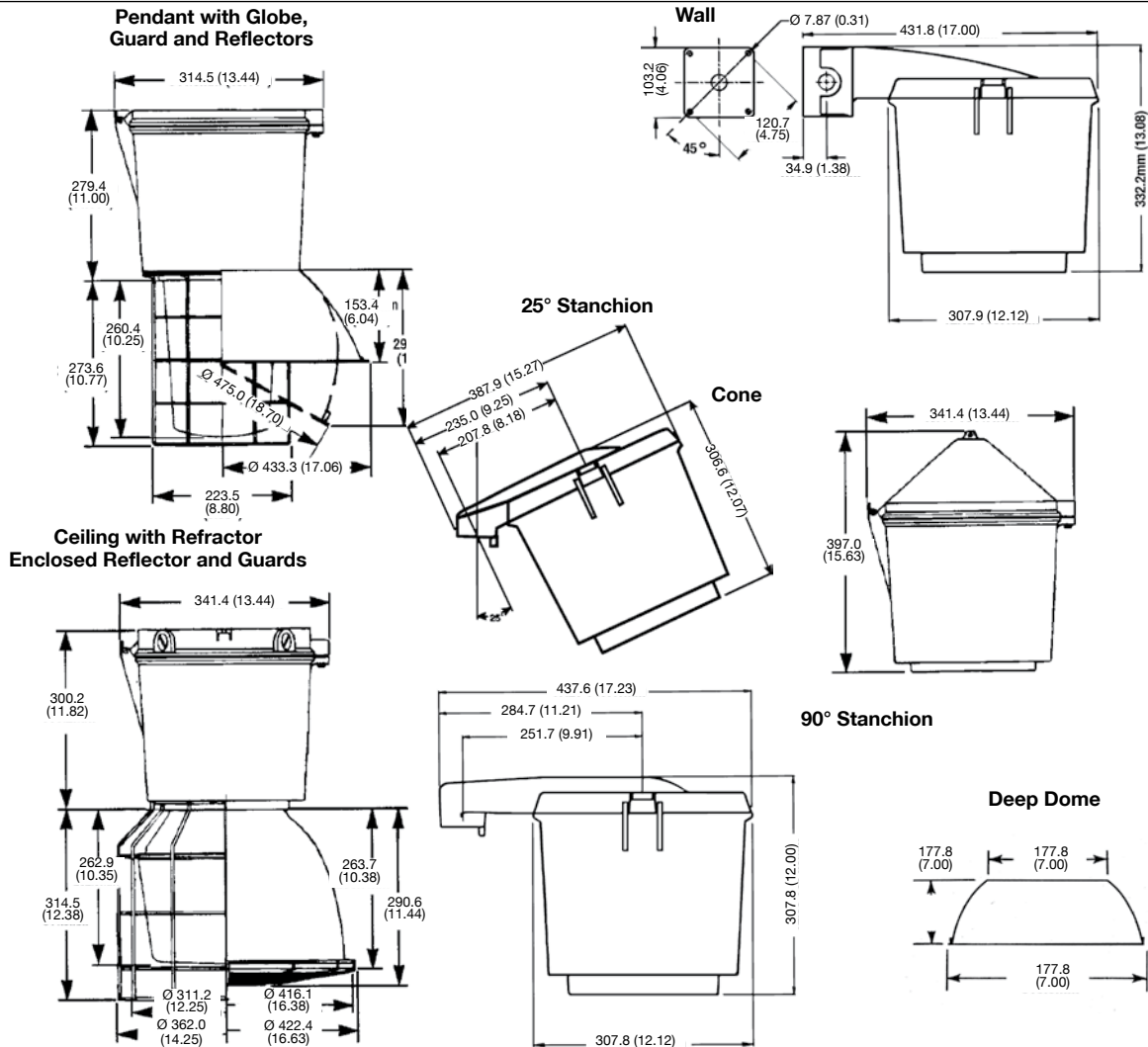
## High Pressure Sodium and Pulse Start Metal Halide - Hazardous and Wet Locations

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

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

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

### Dimensions in Millimeters (Inches)



### Mercmaster III – 400 Ballast and Accessory Weights

Lamp Watts	Ballast Housing Wt. kg (lb)		Mounting Hoods and Reflectors	Wt. kg (lb)	Globe Refractor, Enclosed Reflector and Guards	
	HPS	PSMH			Reflector and Guards	Wt. kg (lb)
250	11.1 (24.5)	—	Pendant	1.0 (2.25)	Glass Globe	3.2 (7.0)
320	—	12.7 (28.0)	Pendant Cone	1.1 (2.50)	Globe Guard	1.4 (3.0)
			Ceiling	1.4 (3.00)	12" Glass Refractor	5.4 (12.0)
350	—	12.9 (28.5)	Wall	1.8 (4.00)	Refractor Guard	2.0 (4.5)
			25° Stanchion	1.5 (3.25)	Enclosed Reflector	5.0 (11.0)
400	12.9 (28.5)	12.9 (28.5)	90° Stanchion	1.7 (3.75)	Enclosed Reflector Guard	0.9 (2.0)
			Standard Dome	1.6 (3.50)		
			30° Angle	1.6 (3.50)		

Weights are approximate. Add 0.11 kg (0.25 lb). for Quartz option.



# PCD2 Series Factory Sealed Hazardous Location Photocontrol

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

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

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

## Applications

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

- 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.

## Features




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

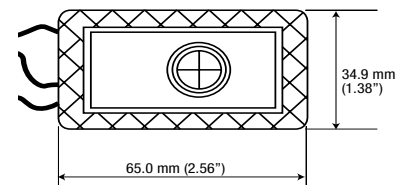
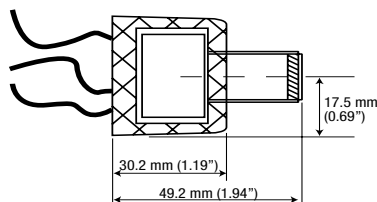
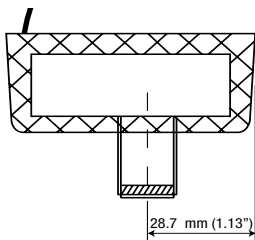
## Materials

- Encapsulated with epoxy sealing compound
- FS: aluminum

## NEC/CEC Certifications and Compliances

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

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





# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## 400 W PSMH

\* Photometric data is based on a fixture with a 400-watt clear Pulse Start Metal Halide lamp (44,000 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 320 W (33,000 lumen) PSMH lamp – .750; for a 350 W (37,000 lumen) PSMH lamp – .840. For candlepower values of fixture with guard, multiply by – 0.95.

### NEC/CEC:

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

### NEC/CEC:

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

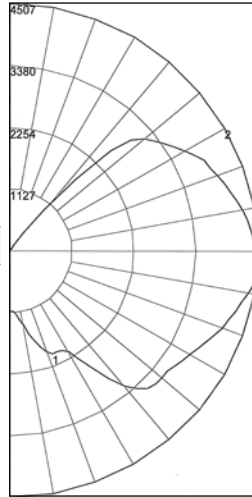
### Photometric Data

**Zone Lumens TOTAL LUMINAIRE EFFICIENCY = 92.6%**

Zone	Lumens	CIE Type – General Diffuse		
0-10	118.85			
10-20	488.36			
20-30	948.99			
30-40	1678.84			
40-50	2714.15			
50-60	3299.55			
60-70	3919.47			
70-80	4497.45			
80-90	4892.41			
90-100	4803.79			
100-110	4404.56			
110-120	3849.71			
120-130	3078.18			
130-140	1852.83			
140-150	185.86			
150-160	14.88			
160-170	1.78			
170-180	0.12			

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30	1556.19	3.5	3.8
0-40	3235.03	7.4	7.9
0-60	9248.74	21.0	22.7
0-90	22558.07	51.3	55.4
90-120	13058.07	29.7	32.0
90-130	16136.25	36.7	39.6
90-150	18174.93	41.3	44.6
90-180	18191.71	41.3	44.6
0-180	40749.78	92.6	100.0



REPORT NUMBER: **KP40PG**

Lamps: 400 W Pulse Start Metal Halide with Globe \*

#### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

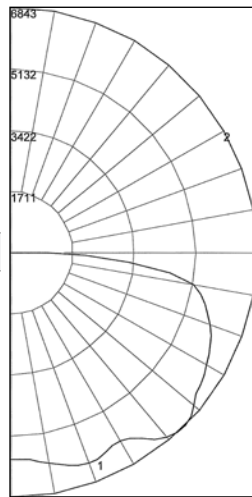
% Ceiling	Rcc	80			70			50			30			10			0		
		70	50	30	10	70	50	30	10	50	30	10	50	30	10				
0	100	100	100	100	100	93	93	93	93	80	80	80	68	68	68	57	57	57	51
1	86	80	74	69	79	73	68	64	62	58	54	51	48	45	41	39	37	32	32
2	76	67	59	52	70	61	54	48	51	45	41	42	37	33	33	30	27	22	22
3	68	57	48	41	62	52	44	38	45	37	32	35	30	26	28	24	20	16	16
4	62	49	40	33	56	45	37	30	37	31	26	30	25	21	24	20	16	13	13
5	56	43	34	27	51	40	31	25	33	26	21	27	21	17	21	17	13	10	10
6	51	38	29	23	47	35	27	21	29	23	18	24	18	14	18	14	11	8	8
7	47	34	25	20	43	31	24	18	26	20	15	21	16	12	17	12	9	7	7
8	44	31	22	17	40	28	21	16	24	17	13	19	14	10	15	11	8	6	6
9	41	28	20	15	37	26	18	14	21	15	11	18	13	9	14	10	7	5	5
10	38	25	18	13	35	23	16	12	20	14	10	16	11	8	13	9	6	4	4

**Zone Lumens TOTAL LUMINAIRE EFFICIENCY = 81.4%**

Zone	Lumens	CIE Type – Direct		
0-10	561.93			
10-20	1748.92			
20-30	2859.54			
30-40	4018.21			
40-50	5254.58			
50-60	5772.38			
60-70	6052.84			
70-80	5887.04			
80-90	3512.71			
90-100	137.17			
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			

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30	5170.39	11.8	14.4
0-40	9188.60	20.9	25.7
0-60	20215.55	45.9	56.5
0-90	35668.14	81.1	99.6
90-120	137.17	0.3	0.4
90-130	137.17	0.3	0.4
90-150	137.17	0.3	0.4
90-180	137.17	0.3	0.4
0-180	35805.32	81.4	100.0



REPORT NUMBER: **KP40PST**

Lamps: 400 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		
		70	50	30	10	70	50	30	10	50	30	10	50	30	10				
0	97	97	97	97	95	95	95	95	90	90	90	86	86	86	83	83	83	81	81
1	84	78	73	68	81	76	71	67	72	69	65	69	66	63	66	63	61	59	59
2	74	65	58	51	72	63	57	51	60	54	49	57	52	48	55	51	47	45	45
3	66	55	47	40	64	54	46	40	51	44	39	49	43	38	46	42	37	35	35
4	60	48	39	32	58	47	39	32	44	37	32	42	36	31	40	35	31	28	28
5	55	42	33	27	53	41	33	27	39	32	26	37	31	26	36	30	26	24	24
6	50	37	29	23	48	36	28	23	35	28	22	33	27	22	32	26	22	20	20
7	46	33	25	20	44	33	25	19	31	24	19	30	24	19	29	23	19	17	17
8	43	30	22	17	41	30	22	17	28	22	17	27	21	17	26	21	17	15	15
9	40	28	20	15	38	27	20	15	26	19	15	25	19	15	24	19	15	13	13
10	37	25	18	13	36	25	18	13	24	18	13	23	17	13	22	17	13	12	12

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## 400 W PSMH

\* Photometric data is based on a fixture with a 400-watt clear Pulse Start Metal Halide lamp (44,000 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 320 W (33,000 lumen) PSMH lamp – .750; for a 350 W (37,000 lumen) PSMH lamp – .840. For candlepower values of fixture with guard, multiply by – 0.95.

**NEC/CEC:**

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

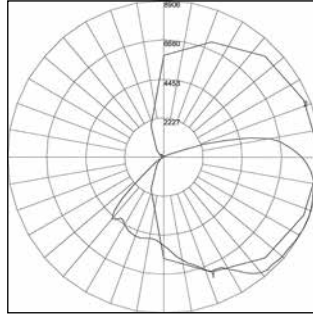
**NEC/CEC:**

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

**Photometric Data**

**Zone Lumens TOTAL LUMINAIRE EFFICIENCY = 76%**

Zone	Lumens	CIE Type – Direct	
		Plane	Spacing Criteria
0-10	499.96		
10-20	1605.38		
20-30	2680.72		
30-40	3841.49	0-180	2.28
40-50	4899.23	90-270	1.92
50-60	4819.21	Diagonal	1.84
60-70	4564.58		
70-80	4063.65		
80-90	3258.13		



REPORT NUMBER: **KP40PAN**  
 Lamps: 400 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							
		70	50	30	10	70	50	30	10	50	30		10						
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0			
	0	89	89	89	89	86	86	86	86	80	80	80	75	75	75	71	71	71	69
	1	78	72	68	64	75	70	66	62	65	62	59	61	58	56	57	55	53	50
	2	69	61	55	49	66	59	53	48	55	50	46	51	47	43	48	44	41	39
	3	62	52	45	39	59	51	44	38	47	41	37	44	39	35	41	37	33	31
	4	56	46	38	32	54	44	37	31	41	35	30	38	33	29	36	31	28	26
	5	51	40	33	27	49	39	32	26	36	30	25	34	29	24	32	27	23	21
	6	47	36	28	23	45	35	28	22	32	26	22	30	25	21	29	24	20	18
	7	43	32	25	20	42	31	24	19	29	23	19	27	22	18	26	21	17	16
	8	40	29	22	17	39	28	22	17	27	21	16	25	20	16	24	19	15	14
	9	37	26	20	15	36	26	19	15	24	19	15	23	18	14	22	17	14	12
	10	35	24	18	14	34	24	17	13	22	17	13	21	16	13	20	15	12	11

**ZONAL LUMEN SUMMARY**

Zone	Lumens	% Lamp	% Fixture
100-110	762.24		
110-120	138.12	0-30	4786.06 10.9 14.3
120-130	77.59	0-40	8627.55 19.6 25.8
130-140	73.07	0-60	18345.99 41.7 54.9
140-150	25.07	0-90	30232.35 68.7 90.4
150-160	10.91	90-120	3005.49 6.8 9.0
160-170	5.30	90-130	3083.09 7.0 9.2
170-180	1.45	90-150	3181.23 7.2 9.5
		90-180	3198.89 7.3 9.6
		0-180	33431.25 76.0 100.0



HID/AREA: NEC/CEC ENCLOSED AND GASKETED

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## 400 W PSMH

\* Photometric data is based on a fixture with a 400-watt clear Pulse Start Metal Halide lamp (44,000 lumen). For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 320 W (33,000 lumen) PSMH lamp – .750; for a 350 W (37,000 lumen) PSMH lamp – .840. For candlepower values of fixture with guard, multiply by – 0.95.

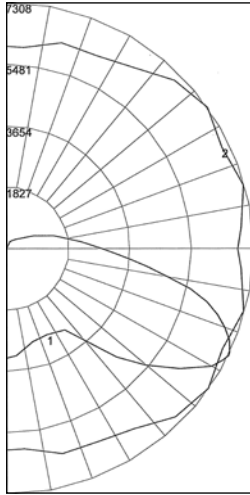
**NEC/CEC:**  
 Class I, Division 2, Groups A, B, C, D  
 Class I, Zone 2, AEx nA nR IIC (Z2)  
 Class I, Zone 2, AEx nR IIC (ZB)  
 Class II, Division 1 and 2, Groups E, F, G  
 Class III

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

### Photometric Data

**Zone Lumens TOTAL LUMINAIRE EFFICIENCY = 78.4%**

Zone	Lumens	CIE Type – Semi-Direct		
		Plane	Spacing Criteria	
0-10	77.24			
10-20	575.14			
20-30	1061.45			
30-40	1581.40	0-180	1.36	
40-50	4468.52	90-270	1.40	
50-60	4938.88	Diagonal	2.42	
60-70	6338.26			
70-80	5875.90			
ZONAL LUMEN SUMMARY				
Zone	Lumens	% Lamp	% Fixture	
80-90	3886.90			
90-100	1318.17	0-30	1713.83	3.9 5.0
100-110	1872.98	0-40	3295.23	7.5 9.6
110-120	1122.17	0-60	12702.64	28.9 36.8
120-130	616.83	0-90	28803.69	65.5 83.5
130-140	358.56	90-120	4313.33	9.8 12.5
140-150	224.03	90-130	4930.15	11.2 14.3
150-160	128.38	90-150	5512.75	12.5 16.0
160-170	50.79	90-180	5699.61	13.0 16.5
170-180	7.69	0-180	34503.3	78.4 100.0



REPORT NUMBER: **KP40PJ5**

Lamps: 400 W Pulse Start Metal Halide with  
 8" Prismatic Glass Refractor – NEMA Type V \*

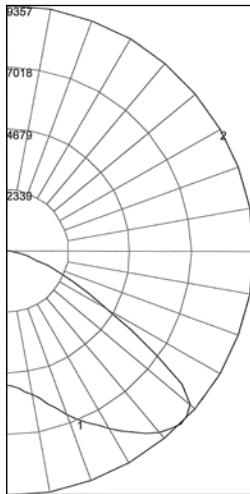
### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Floors	Rfc	20																	
		80			70			50			30			10			0		
% Ceiling	Rcc	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	90	90	90	90	90	87	87	87	87	80	80	80	74	74	74	68	68	68	65
1	77	71	66	61	61	73	68	63	59	62	58	54	57	53	50	52	49	47	44
2	67	58	50	44	44	64	55	48	42	50	44	39	45	41	37	41	37	34	31
3	59	48	40	33	33	56	46	38	32	42	35	30	38	32	27	34	29	25	23
4	53	41	33	26	26	50	39	31	25	35	29	23	32	26	21	29	24	20	17
5	48	36	27	21	21	45	34	26	20	31	24	18	28	22	17	25	20	16	13
6	44	31	23	17	17	41	30	22	16	27	20	15	24	18	14	22	17	13	11
7	40	28	20	14	14	38	26	19	14	24	17	13	22	16	12	19	14	11	9
8	37	25	17	12	12	35	24	17	11	22	15	11	19	14	10	18	13	9	7
9	34	22	15	10	10	32	21	15	10	20	13	9	18	12	8	16	11	8	6
10	32	20	14	9	9	30	20	13	9	18	12	8	16	11	7	15	10	7	5

**Zone Lumens TOTAL LUMINAIRE EFFICIENCY = 64.2%**

Zone	Lumens	CIE Type – Direct		
		Plane	Spacing Criteria	
0-10	514.26			
10-20	1734.49			
20-30	3370.99			
30-40	5333.06	0-180	2.32	
40-50	7165.13	90-270	2.32	
50-60	6195.93	Diagonal	2.04	
60-70	2879.28			
70-80	921.95			
ZONAL LUMEN SUMMARY				
Zone	Lumens	% Lamp	% Fixture	
80-90	111.28			
90-100	0.14	0-30	5619.74	12.8 19.9
100-110	0.00	0-40	10952.81	24.9 38.8
110-120	0.00	0-60	24313.86	55.3 86.1
120-130	0.00	0-90	28226.37	64.2 100.0
130-140	0.00	90-120	0.14	0.0 0.0
140-150	0.00	90-130	0.14	0.0 0.0
150-160	0.00	90-150	0.14	0.0 0.0
160-170	0.00	90-180	0.14	0.0 0.0
170-180	0.00	0-180	28226.50	64.2 100.0



REPORT NUMBER: **KP40PHB**

Lamps: 400 W Pulse Start Metal Halide with  
 Enclosed Reflector (KPR-4HB) \*

### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Floors	Rfc	20																	
		80			70			50			30			10			0		
% Ceiling	Rcc	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	76	76	76	76	76	75	75	75	75	71	71	71	68	68	68	65	65	65	64
1	70	67	65	63	63	69	66	64	62	63	61	60	61	59	58	59	57	56	55
2	64	59	55	51	51	62	58	54	50	55	52	49	53	51	48	51	49	47	46
3	58	51	46	42	42	56	50	46	42	48	44	41	47	43	40	45	42	40	38
4	53	45	39	35	35	51	44	39	35	43	38	34	41	37	34	40	36	33	32
5	48	40	34	30	30	47	39	34	29	38	33	29	36	32	29	35	31	28	27
6	44	35	29	25	25	43	35	29	25	34	29	25	32	28	25	31	28	24	23
7	41	32	26	22	22	39	31	26	22	30	25	22	29	25	21	28	24	21	20
8	37	29	23	19	19	36	28	23	19	27	22	19	26	22	19	26	22	19	17
9	35	26	20	17	17	34	25	20	17	25	20	17	24	20	16	23	19	16	15
10	32	24	18	15	15	32	23	18	15	23	18	15	22	18	15	21	17	15	13