

# Mercmaster™ III HID 50–250 Watt Luminaires

## High Pressure Sodium and Pulse Start Metal Halide

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

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

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

*Fixtures Outside Type (Salt Water)*  
*Type 4X*  
*IP66*

### Applications

- Enclosed and gasketed fixtures suitable for use in:
  - Marine and wet locations
  - A wide range of industrial, chemical processing and other areas where flammable gases and vapors or combustible dusts are present under conditions defined by the National Electrical Code as Class I, Division 2; Class II, Division 1 and 2; and Class III
  - For Zone 2, the method of protection is AEx nA nR – Restricted Breathing/Nonsparking or AEx nR – Restricted Breathing
  - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered. 18% cooler operation allows use in ambient temperatures up to 149°F/65°C depending on fixture component combinations
- Typical applications include:
  - Pulp and paper mills
  - Processing plants
  - Chemical plants
  - Oil refineries
  - Foundries
  - Manufacturing plants
  - Storage areas
  - Marine applications
- Fixtures have NEMA 4X listing.
- Suitability includes listing for use where there may be simultaneous exposure to combustible dusts and flammable gases and vapors. See listing pages for compliance data on specific fixture component combinations.

### Features

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



**Pendant Mount Fixture  
with Prismatic Glass Refractor**



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



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



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

- Reflector choice includes standard dome and 30° angle types, both made of Fiberglass reinforced white polyester. Highly resistant to unusually corrosive applications. Reflectors are vented for cooler, dirt-free operation and maintained lumen output. They secure to ballast housing with stainless steel screws threading into stainless steel inserts.
- For high corrosion resistance, fixture housing, mounting hoods and guards are copperfree cast aluminum with baked epoxy finish, electrostatically applied for uniformity. All exposed hardware is stainless steel.
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing-away design of captive bolt and nut simplifies servicing.
- Body gaskets and globe gaskets are high-temperature silicone rubber.
- Capacitors are non-PCB type, thermally isolated from ballast.

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

‡ CSA Certification Only.

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

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

Fixtures Outside Type (Salt Water)  
Type 4X  
IP66

Lighting

LIGHTING: ENCLOSED AND GASKETED – AREA – HID

- Mogul base porcelain socket with nickel-plated contacts has 392 °C / 200 °C welded leads, prewired to the ballast. Assures trouble-free operation in installations where high ambient temperatures are encountered.
- HPS ballasts are High Power Factor (min. P.F. 90%).
- A wide range of voltages available (120 to 600 Volt) and ballast types (Reactor, CWA, CWI and Super CWA).
- All Mercmaster III mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kit listings in this catalog section).
- For electrical protection, a ground wire is provided on each Mercmaster to bond hood and ballast housing.
- The AEx nA nR / Ex nR (†) factory sealed Mercmaster III prevents vapors and gases from entering the globe chamber. There are no seals or putty required which will reduce installation time and installation errors.
- The AEx nR Mercmaster III fixture requires all wiring entries to be sealed.

### Standard Materials

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

### Standard Finishes

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

### Options

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

- Hot Restrike will restrike HPS lamp immediately when power is restored after a momentary power interruption. Add suffix **-R**.
- Smart Hot Restrike will immediately restrike HPS lamp when power is restored after a momentary power interruption. The smart function removes the hot restrike ignitor from the circuit if the lamp burns out or is removed from the socket. Eliminates starter failures caused by prolonged operation with cycling or failing lamps. Add suffix **-SR**.
- Smart Starter incorporates a 1-1/2-minute timer and performs as a conventional starter to normally start lamp. Removes itself from circuit if lamp burns out or is removed from socket. Eliminates starter failures caused by prolonged operation with cycling or failing lamps and simplifies finding their location, reducing maintenance and repair costs. Available for all HPS and PSMH fixtures. Add suffix **-S**.
- Optional photocell for all fixtures except cone and ceiling mount provides automatic "on-off" control.
- Quartz Auxiliary comes to full brightness immediately and remains lit until the HID lamp attains 60-70% of full illumination. Quartz Auxiliary supplied with relay switch and socket to accept 120 V quartz double contact bayonet base lamp (not included). Add suffix **-E** to fixture catalog number. ‡

### Certifications and Compliances

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

### Related Products

- Classified area photo controls are also available.

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

† CSA Certification Only.

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

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

Fixtures Outside Type (Salt Water)  
Type 4X  
IP66

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

### Catalog Numbering Guide

KP	A	L	70	10	J5	G	MT	R	Z2
Series: KP - Mercmaster III 250		Lamp Type: L - High Pressure Sodium H or P - Pulse Start Metal Halide <sup>1</sup>		Hub Size: 75 - 3/4" NPT 10 - 1" NPT 125 - 1-1/4" NPT stanchion 150 - 1-1/2" NPT stanchion		Guard Options: G - Guard Blank - No Guard		Options: E - Emergency Quartz F - Fuse Kit (Specify Voltage) R - Hot Restrike (50-150 W HPS only) S - Smart Starter SR - Smart Hot Restrike K - Kynar Coating H1 - Photocontrol 120 V H2 - Photocontrol 208 V H3 - Photocontrol 240 V H4 - Photocontrol 277 V C - Safety Cable Adapted <sup>2</sup> E40 - Export Socket D - E-40 Export Socket <sup>2</sup> T - Terminal Blocks <sup>2</sup> V - Anti-Vibration Modifications <sup>2</sup> X - Appledapter <sup>3</sup> Mounting Hood Adapter <sup>2</sup> Optional Fusing <sup>4</sup> FN - 120 V FP - 208 V FS - 240 V FT - 277 V FF - 480 V	
	Mounting: A - Pendant (rigid mounting) C - Ceiling CH - Pendant Cone Hood F - Pendant (flexible mounting) ST - 90° Stanchion S - 25° Stanchion WB - Wall		Wattage: 10 - 100 W HPS, PSMH 15 - 150 W HPS, PSMH 17 - 175 W PSMH 20 - 200 W PSMH 25 - 250 W PSMH <sup>5</sup> 50 - 50 W HPS (MT - Voltage Only) 70 - 70 W HPS, PSMH 17 - 175 W MH <sup>2</sup> 25 - 250 W MH <sup>2</sup>		Optical Assembly: Blank - Glass Globe J1 - NEMA I Glass Refractor J3 - NEMA III Glass Refractor J5 - NEMA V Glass Refractor G3 - Large Glass Globe		Voltage: <sup>2</sup> MT - 120/208/240/277, 60 Hz 5MT - 120/208/240/ 277/480, 60 Hz 48 - 480, 60 Hz 125 - 120, 50 Hz 225 - 225, 50 Hz 226 - 220, 60 Hz 235 - 230, 50 Hz 245 - 240, 50 Hz C2 - 208, 60 Hz, CWI <sup>2</sup> C3 - 240, 60 Hz, CWI <sup>2</sup> C6 - 480, 60 Hz, CWI <sup>2</sup> C7 - 600, 60 Hz, CWI <sup>2</sup> TT - 120/277/347, 60 Hz, CWA <sup>2</sup>	Suffix: Z2 - Zone 2 suffix (required for AEx nA nR rating) ZB - Zone 2 suffix (required for AEx nR rating) Z - Zone 2 suffix (required for Ex nR) <sup>2</sup>	

Reflectors are ordered separately – see Accessories page.

<sup>1</sup> H - Lamp type is for 70W and 100W fixtures only.

<sup>2</sup> P - Lamp type is for 175W, 200W and 250W fixtures only.

<sup>3</sup> Voltages shown are limited to specific combinations.

<sup>4</sup> Appledapter is available for use with the pendant, ceiling and angled stanchion mounting only.

<sup>5</sup> Optional fusing is available for use with MT, 5MT and 48 voltage suffixes ONLY.

<sup>6</sup> PSMH 250 W, MT Fixtures are non UL.

<sup>7</sup> CSA Certification Only.

# 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 100 W or 175 W Pulse Start Metal Halide Lamps. Mogul Base Lamps.

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

Class II, Division 1 and 2, Groups E, F, G  
Class III  
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. For mounting hood and reflectors selection, see below and order separately. Hood and Reflector will be packaged separately.



### PRE-PAK Fixtures ④

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 ⑤	Ballast Assembly with Refractor and Guard
100 W PSMH ⑥	KPBU100H-MT	KPBU100HG-MT	—	KPBU100HJ5-MT	KPBU100HJ5G-MT
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
175 W MH <sup>1</sup>	KPBU175H-TT	KPBU175HG-TT	—	KPBU175HJ5-TT	KPBU175HJ5G-TT
250 W MH <sup>1</sup>	KPBU250H-TT	KPBU250HG-TT	—	KPBU250HJ5-TT	KPBU250HJ5G-TT

### Mounting Hoods

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

### White Polyester Reflectors

Description	Catalog Number
<b>Standard Dome</b> For Globe Fixtures	KR2-ST
<b>30° Angle</b> For Globe Fixtures	KR2-AN
<b>Standard Dome</b> For Glass Refractor Fixtures	CMR-4ST
<b>30° Angle</b> For Glass Refractor Fixtures	CMR-4AN

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.

② 100 W fixtures use ED-28 mogul base lamps.

③ 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.

④ For CSA 120/277/347 Vac tri-tap ballast, change -MT to -TT <sup>1</sup>.

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








# Mercmaster™ III HID 50–250 Watt Luminaire Mounting Hoods

## High Pressure Sodium and Pulse Start Metal Halide

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Lighting

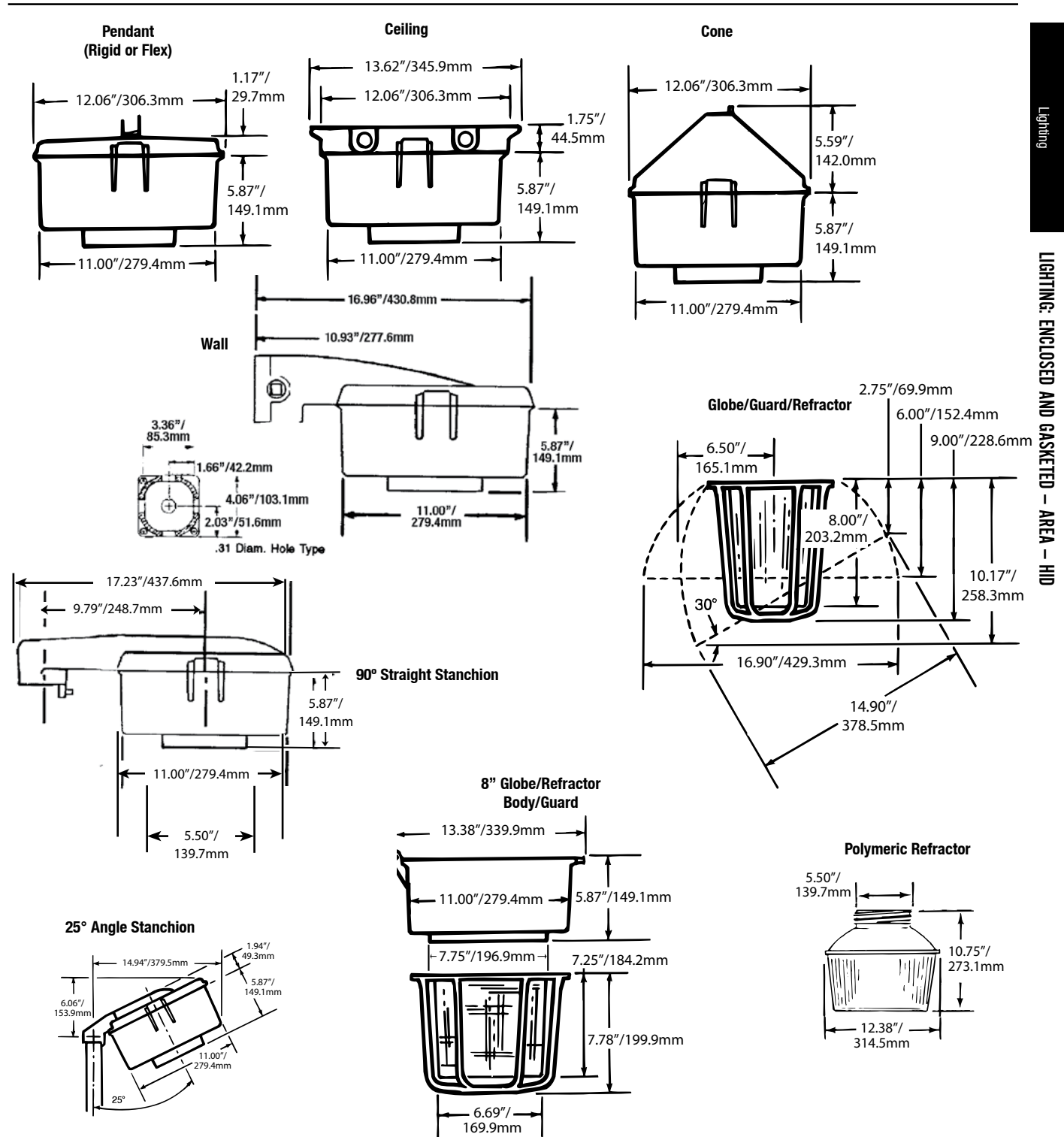
LIGHTING: ENCLOSED AND GASKETED – AREA – HID

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

# Mercmaster™ III HID 50–250 Watt Luminaire Dimensions

## High Pressure Sodium and Pulse Start Metal Halide

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Lighting

LIGHTING: ENCLOSED AND GASKETED - AREA - HID