

# Mercmaster™ III Low Profile Luminaires

## High Pressure Sodium and Pulse Start Metal Halide

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

**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
  - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
  - For Zone 2, the method of protection is AEx nA nR – Restricted Breathing/Nonsparking or AEx nR – Restricted Breathing
  - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
  - Ambient temperature range:
    - Incandescent: -40°C to +65°C (-40°F to +149°F)
    - 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
  - Waste and sewage treatment
  - Parking garages
  - Other areas where dust, water, dirt and rough usage are a problem

### Features

- Compact light weight low profile design is suited for low mounting heights in conjunction with lower wattage fixtures.
- Modular design allows scores of fixture component combinations to meet installation and lighting needs. Uses same mounting hoods and optical accessories as Mercmaster III.
- A choice of heat-resistant prismatic glass refractors (NEMA I, III or V) or heat-resistant globes which thread directly into ballast housing. Photometrics available upon request – contact your local sales representative.
- Standard dome or 30° angle reflectors made of fiberglass reinforced white polyester. Highly resistant to corrosive atmospheres.
- Accommodates medium base lamps.
- A wide range of voltages available (120 to 600 Volt) and ballast types (Reactor, CWA and Super CWA).
- Medium base lamp type and watts:
  - HPS 50 W-150 W
  - PSMH 175 W
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All Mercmaster III mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kits).
- Fixtures are for use in Class I, Zone 2 hazardous locations.



- The AEx nA nR 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.

### Standard Materials

- Mounting hoods, bodies and guard: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Reflectors: Fiberglass reinforced white polyester
- Globes and Refractors: heat-resistant prismatic glass

### Standard Finishes

- Mounting hoods, bodies and guards: baked gray epoxy-clad finish, electrostatically applied for complete uniform protection

### Options

- Quartz Auxiliary comes to full brightness immediately and remains lit until the HID lamp attains 60-70% of full illumination. Quartz Auxiliary supplied with relay switch and socket to accept 120 V quartz double-contact bayonet base lamp (not included). Add suffix **-E** ①.
- Guards with gray epoxy painted to match fixtures, supplied with stainless steel screws. Add suffix **-G** before voltage suffix.
- Hot Restrike to restrike HPS lamp immediately when power is restored after a momentary power interruption. Add suffix **-R**.
- Smart Starter incorporates a 1-1/2 minute timer and performs as a conventional starter to normally start lamp. Removes itself from circuit if lamp burns out or is removed from socket. Eliminates starter failures caused by prolonged operation with cycling or failing lamps and simplifies finding their location, reducing maintenance and repair costs. Available for all fixtures. Add suffix **-S**.
- AEx nA nR fixtures, add suffix **-Z2**. Only available for certain ballast types.
- AEx/Ex nR fixtures, add suffix **-ZB**.
- Reflectors are available as standard dome and 30° angle polyester. Order separately.

### NEC/CEC Certifications and Compliances ②

- cULus Listed: E10444
- UL Standard: ANSI/UL 844, 1598, 60079-0, 60079-15, 1598A
- CSA Certified: 025428
- CSA Standard: CSA C22.2 No. 250.0, C22.2 No. 137; CAN/CSA E60079-0, E60079-15

### Related Products

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

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

② Compliance data varies for specific fixtures. Consult Appleton regarding suitability of specific fixtures for a particular application.

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 Type 4X  
 IP66

### Illustrated Features

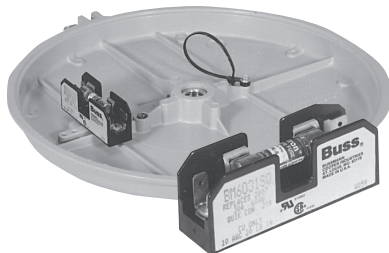


**High Temperature Sockets**  
 Medium base high-temperature porcelain sockets.

**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).

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



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

**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.



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

**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.

**Prismatic Glass Globes and Refractors**  
 Heat-resistant globes and refractors thread directly into ballast housing and seal against a high-temperature silicone rubber gasket.



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



**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 gaskets seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.

**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.



**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.

APPLETON™

HID/AREA: NEC/CEC ENCLOSED AND GASKETED

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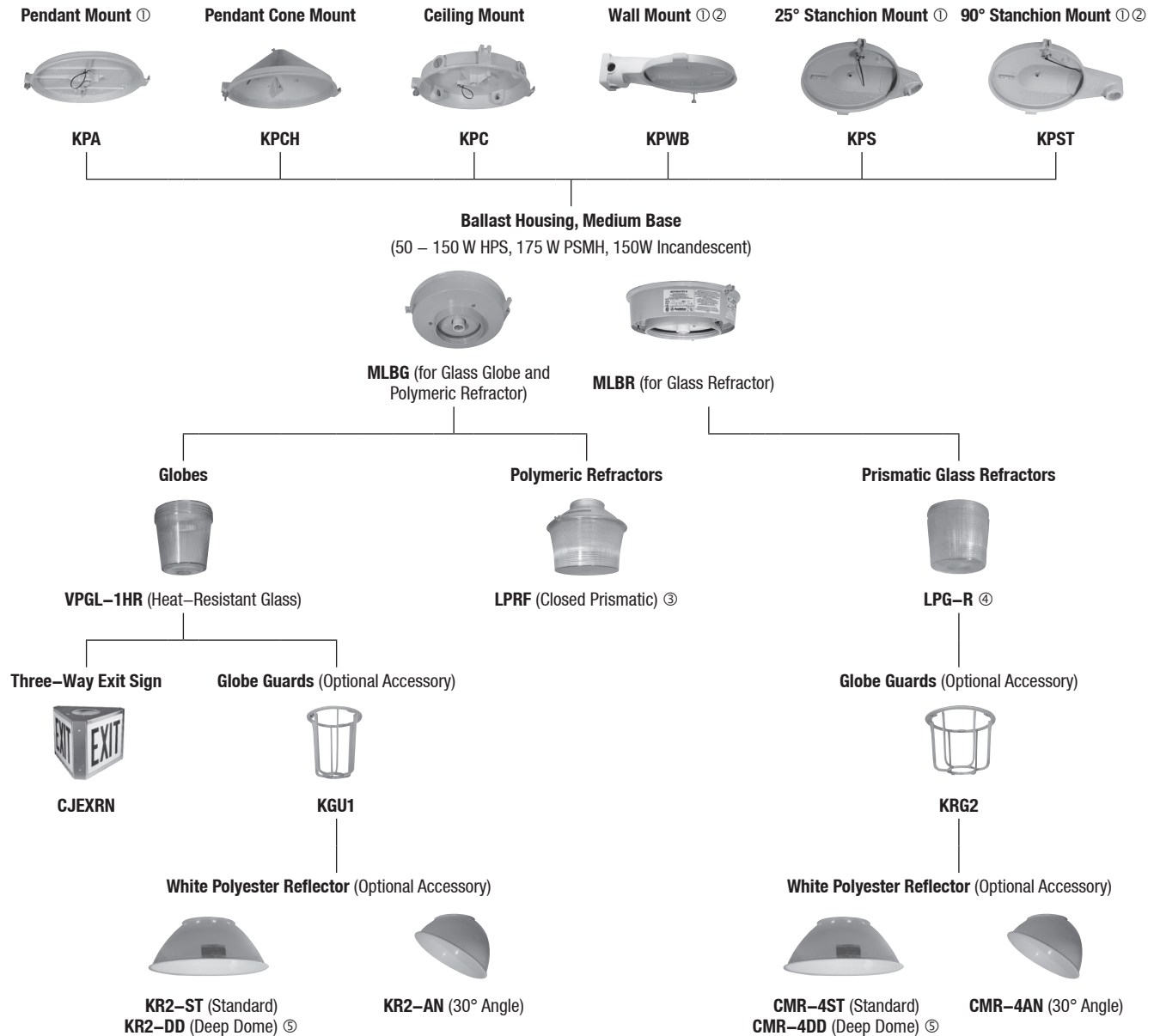
**NEC/CEC:**

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 Class I, Zone 2, AEx nA nR IIC (Z2)  
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 IP66

### Mercmaster III Low Profile 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, 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.).

④ Available in NEMA Type I, III and V.

⑤ Fixtures when used with Deep Dome Refletors are NOT UL Listed.

# Mercmaster™ III Low Profile Luminaires

## High Pressure Sodium and Pulse Start Metal Halide

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 Type 4X  
 IP66

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

### Catalog Numbering Guide

<p><b>ML</b></p> <p>Series: ML - Mercmaster III Low Profile</p>	<p><b>A</b></p> <p>Mounting: A - Pendant (rigid mounting) C - Ceiling D - Pendant Cone Hood F - Pendant (flexible mounting) R - 90° Stanchion S - 25° Stanchion W - Wall</p>	<p><b>L</b></p> <p>Lamp Type: I - Incandescent L - High Pressure Sodium P - Pulse Start Metal Halide</p>	<p><b>15</b></p> <p>Wattage: 10 - 100 W HPS 15 - 150 W HPS ⑦ and 60-150 W max. Incandescent 17 - 175 W PSMH 50 - 50 W HPS 70 - 70 W HPS</p>	<p><b>2</b></p> <p>Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion</p>	<p><b>G1</b></p> <p>Optical Assembly: ② G1 - Globe J1 - NEMA I Glass Refractor J3 - NEMA III Glass Refractor J5 - NEMA V Glass Refractor P2 - NEMA II Polymeric Refractor P3 - NEMA III Polymeric Refractor P4 - NEMA IV Polymeric Refractor P5 - NEMA V Polymeric Refractor</p>	<p><b>G</b></p> <p>Guard Options: G - Cast Guard N - No Guard</p>	<p><b>MT</b></p> <p>Voltage: ① LB - Incandescent, 120, 60 Hz MT - 120/208/240/277, 60 Hz 48 - 480, 60 Hz 125 - 120, 50 Hz 225 - 225, 50 Hz 226 - 220, 60 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</p>	<p><b>R</b></p> <p>Options: E - Emergency Quartz ⑤ F - Fuse Kit (Specify Voltage) R - Hot Restrike ③ S - Smart Starter ④ H1 - Photocontrol 120 V H2 - Photocontrol 208 V H3 - Photocontrol 240 V H4 - Photocontrol 277 V D - E-27 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) ⑧ ZB - Zone 2 suffix (required for AEx/Ex nR)</p>
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Lamp Type	Lamp Watts	Voltage Suffixes												
		LB	MT	48	125	225	226	235	236	245	246	GP	GK	GC
Inc.	150 Max.	X	—	—	—	—	—	—	—	—	—	—	—	—
HPS	50	—	X	—	—	X	X	—	—	X	—	—	X	—
HPS	70	—	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	—	—	—	—	—	—	—	—	—	—

Voltages:

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

- ① Other voltages, frequencies available – contact your local sales representative. Voltages shown are limited to specific combinations; refer to following pages.
- ② 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.). Reflectors ordered separately.
- ③ Available for 50-150 W HPS fixtures only.
- ④ Available for HPS or PSMH fixtures.
- ⑤ Fixtures equipped with quartz auxiliary lamp are not suitable for use in classified locations.
- ⑥ Optional fusing is available for use with MT and 48 voltage suffixes ONLY.
- ⑦ For 150 W HPS fixtures, use S-55 lamp type only.
- ⑧ The **-Z2** suffix (AEx nA nR) is available for use with MT, 48 and 246 voltage suffixes ONLY.

# Mercmaster™ III Low Profile Luminaires

Class I, Division 2; Class II, Division 1; Simultaneous exposure to hazardous conditions in both classifications

Temperature identification numbers of Mercmaster III Low Profile High Pressure Sodium and Pulse Start Metal Halide

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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  
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 Fixtures Outside Type (Salt Water)  
 Type 4X  
 IP66

Lamp Watts	Supply Wire Min. Temp. °C (°F)	Ambient Temp. °C (°F)	Class I, Division 2			Class II, Division 1 Groups E, F and G			Simultaneous Exposure Class I, Division 2 / Class II, Division 1			
			Globe	Globe & Reflector	Reflector	Globe	Globe & Reflector	Reflector	Globe	Globe & Reflector	Reflector	
50	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3B	T4A	T4A	T5	T3	T3	T3
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3A	T4A	T4A	T4A	T2D	T2D	T2D
		90 °C (194 °F)	65 °C (149 °F)	T3	T3	T3A	T4	T4	T4A	T2C	T2C	T2C
70	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	T4	T4	T5	T2B	T2B	T2D
		90 °C (194 °F)	55 °C (131 °F)	T2D	T2D	T3	T3C	T3C	T4A	T2B	T2B	T2C
		90 °C (194 °F)	65 °C (149 °F)	—	—	T3	—	—	T4	—	—	T2B
100	HPS	90 °C (194 °F)	40 °C (104 °F)	T2C	T2C	T2D	T4	T4	T4A	T2B	T2B	T2B
		90 °C (194 °F)	55 °C (131 °F)	T2B	T2B	T2C	T3C	T3C	T4	T2A	T2A	T2A
		90 °C (194 °F)	65 °C (149 °F)	—	—	—	—	—	—	—	—	—
150	HPS	90 °C (194 °F)	40 °C (104 °F)	T2A	T2A	T2B	T3A ①	—	T4	325	—	T2
175	PSMH	105 °C (221 °F)	40 °C (104 °F)	350	350	325	—	—	T3B	—	—	T1
60	Inc.	90 °C (194 °F)	40 °C (104 °F)	T3B	T3B	T3C	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T3A	T3A	T3C	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	T3A	T3A	T3C	—	—	—	—	—	—
100	Inc.	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	T2D	T2D	T3	—	—	—	—	—	—
150	Inc.	90 °C (194 °F)	40 °C (104 °F)	T2D	T2D	T3	—	—	—	—	—	—
		90 °C (194 °F)	55 °C (131 °F)	T2B	T2B	T2D	—	—	—	—	—	—
		90 °C (194 °F)	65 °C (149 °F)	T2B	T2B	T2D	—	—	—	—	—	—

“T” Numbers Represent the Maximum Lamp Temperature for Class I, Division 2 Locations and Maximum Surface Temperature Under Dust Blanket for Class II, Division 1 Locations.

“T” #	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range (°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 “T” numbers are for Groups E and F only.

# Mercmaster™ III Low Profile Luminaires

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

Temperature identification numbers of Mercmaster III Zone 2 Low Profile 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)  
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 Class III

**NEC/CEC:**

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

Lamp				Class I, Zone 2 AEx nA nR IIC			Class I, Zone 2 AEx nR IIC		
Watts	Type	Supply Wire Temp. °C (°F)	Ambient Temp. °C (°F)	Globe	Globe w/ Reflector	Reflector	Globe	Globe w/ Reflector	Reflector
50	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	T5	T5	T6
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3	T4	T4	T5
		90 °C (194 °F)	65 °C (149 °F)	T3	T3	T3	T4	T4	T5
70	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	T5	T5	T5
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3	T4	T4	T4
		90 °C (194 °F)	65 °C (149 °F)	—	—	T3	—	—	T4
100	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	T4	T4
150	HPS	90 °C (194 °F)	40 °C (104 °F)	T3	T3	T3	T4	T4	T4
175	PSMH	105 °C (221 °F)	40 °C (104 °F)	T3	T3	T3	T3	T3	T4
60	Inc.	75 °C (167 °F)	40 °C (104 °F)	T3	T3	T3	T6	T6	T6
		90 °C (194 °F)	55 °C (131 °F)	T3	T3	T3	T5	T5	T6
		90 °C (194 °F)	65 °C (149 °F)	T3	T3	T3	T4	T4	T5
100	Inc.	90 °C (194 °F)	40 °C (104 °F)	T2	T2	T2	T3	T3	T4
		90 °C (194 °F)	55 °C (131 °F)	T2	T2	T2	T4	T4	T4
		110 °C (230 °F)	65 °C (149 °F)	T2	T2	T2	T4	T4	T4
150	Inc.	110 °C (230 °F)	40 °C (104 °F)	T2	T2	T2	T4	T4	T6
		110 °C (230 °F)	55 °C (131 °F)	T2	T2	T2	T3	T3	T5
		110 °C (230 °F)	65 °C (149 °F)	T2	T2	T2	T3	T3	T4

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

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.

“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

APPLETON™

HID/AREA: NEC/CEC ENCLOSED AND GASKETED

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**Ballast Bodies**



**Ballast Body for Glass Refractor**

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



**Ballast Body for Glass Globe or Polymeric Refractor**

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

Lamp Type	Lamp Watts	Catalog Number ④		Voltage Suffixes												
		For Globe	For Refractor	LB	MT	48	125	225	226	235	236	245	246	GP	GK	GC
Inc.	150 Max.	<b>MLBG15I</b>	<b>MLBR15I</b>	X	—	—	—	—	—	—	—	—	—	—	—	—
HPS	50	<b>MLBG50L</b> ①②	<b>MLBR50L</b> ①②	—	X	—	—	X	X	—	—	X	—	—	X	—
HPS	70	<b>MLBG70L</b> ①②	<b>MLBR70L</b> ①②	—	X	X	X	X	X	—	X	X	X	X	—	X
HPS	100	<b>MLBG10L</b> ①②	<b>MLBR10L</b> ①②	—	X	X	X	X	X	—	X	X	X	X	—	—
HPS	150	<b>MLBG15L</b> ①②	<b>MLBR15L</b> ①②	—	X	X	X	X	X	—	X	X	X	X	—	—
PSMH	175	<b>MLBG17P</b> ②③	<b>MLBR17P</b> ②③	—	X	X	—	—	—	—	—	—	—	—	—	—

**Voltages:**

- LB** - Incandescent, 120 V 60 Hz
- MT** - 120/208/240/277 V 60 Hz ④
- 48** - 480 V 60 Hz ④
- 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 ④
- GP** - 120/200-240 V 50 Hz
- GK** - 220/240 V 50 Hz
- GC** - 230 V 50 Hz

① After voltage suffix add: **-S** for Smart Starter, **-R** for ballast body with Hot Restrike Ignitor.  
 ② Add **-E** after voltage suffix for ballast body with provision for Quartz Emergency Light. Not suitable for hazardous locations.  
 ③ After voltage suffix add: **-S** for Smart Starter.  
 ④ Add **-Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). The **-Z2** suffix (AEx nA nR) is only available on these ballast types. Add **-ZB** suffix for restricted breathing protection (AEx/Ex nR).

# Mercmaster™ III Low Profile Luminaires


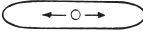



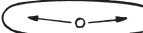
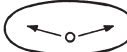








## High Pressure Sodium and Pulse Start Metal Halide

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

**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

### Accessories and Replacement Parts

		Description	Catalog Number
<b>Prismatic Glass Globes — Heat-Resistant</b>			
		Clear	VPGL-1HR
<b>Glass Globe</b>			
<b>Closed Prismatic Glass Refractors — All Heat-Resistant</b>			
	<b>Light Distribution</b>	<b>IES/NEMA Distribution Curves</b>	<b>Catalog Number</b>
	NEMA Type I		LPG-R1
	NEMA Type III		LPG-R3
	NEMA Type V		LPG-R5
			
<b>Glass Refractor</b>			
<b>Closed Prismatic Polymeric Refractors — For Use with PSMH Lamps Only</b> 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)			
	NEMA Type II		LPRF-2CP
	NEMA Type III		LPRF-3CP
	NEMA Type IV		LPRF-4CP
	NEMA Type V		LPRF-5CP
			
<b>Polymeric Refractor</b>			
		Description	Catalog Number
<b>White Polyester Reflectors</b>			
		For Globe Fixtures	Standard Dome KR2-ST Deep Dome KR2-DD ①④ 30° Angle KR2-AN
<b>Standard Dome</b>	<b>30° Angle</b>	For Glass Refractor Fixtures	Standard Dome CMR-4ST ② Deep Dome CMR-4DD ①④ 30° Angle CMR-4AN
<b>Guards</b>			
		Globe Guard	KGU1
<b>Globe Guard</b>	<b>Refractor Guard</b>	30° Angle Refractor Guard	KRG2 ③
<b>Replacement Globe Gaskets — Silicone Rubber</b>			
		Globe Gasket	VPGL-GK
<b>Globe Gaskets</b>		Refractor Gasket	KRF-GK

① Dark Skies Compliant.

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

③ Not for use with CMR-4ST or CMR-400, only CMR-4AN refractor.

④ Fixtures when used with Deep Dome Refletors are NOT UL Listed.

# Mercmaster™ III Low Profile Luminaires

## High Pressure Sodium and Pulse Start Metal Halide

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

**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	Starting Amps	Operating Amps	Total Watts
<b>50 Watt High Pressure Sodium</b>			
120	0.65	0.61	66
208	0.37	0.35	66
240	0.32	0.31	66
277	0.30	0.26	66
<b>70 Watt High Pressure Sodium</b>			
120	0.90	0.82	94
208	0.50	0.48	94
240	0.44	0.41	94
277	0.35	0.36	94
480	0.21	0.21	94
<b>100 Watt High Pressure Sodium</b>			
120	1.30	1.15	130
208	0.76	0.67	130
240	0.66	0.60	130
277	0.60	0.52	130
480	0.33	0.31	135
<b>150 Watt High Pressure Sodium ①</b>			
120	2.00	1.70	188
208	1.15	0.95	188
240	1.00	0.85	188
277	0.85	0.72	188
480	0.50	0.47	189

### Electrical Specifications

Line Voltage	Starting Amps	Operating Amps	Total Watts
<b>175 Watt Pulse Start Metal Halide</b>			
120	0.80	1.80	198
208	0.50	1.00	198
240	0.40	0.90	198
277	0.40	0.80	198
480	0.15	0.45	196

### Fuse Kit for Field Installation

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

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

# Mercmaster™ III Low Profile Luminaires

## High Pressure Sodium and Pulse Start Metal Halide

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

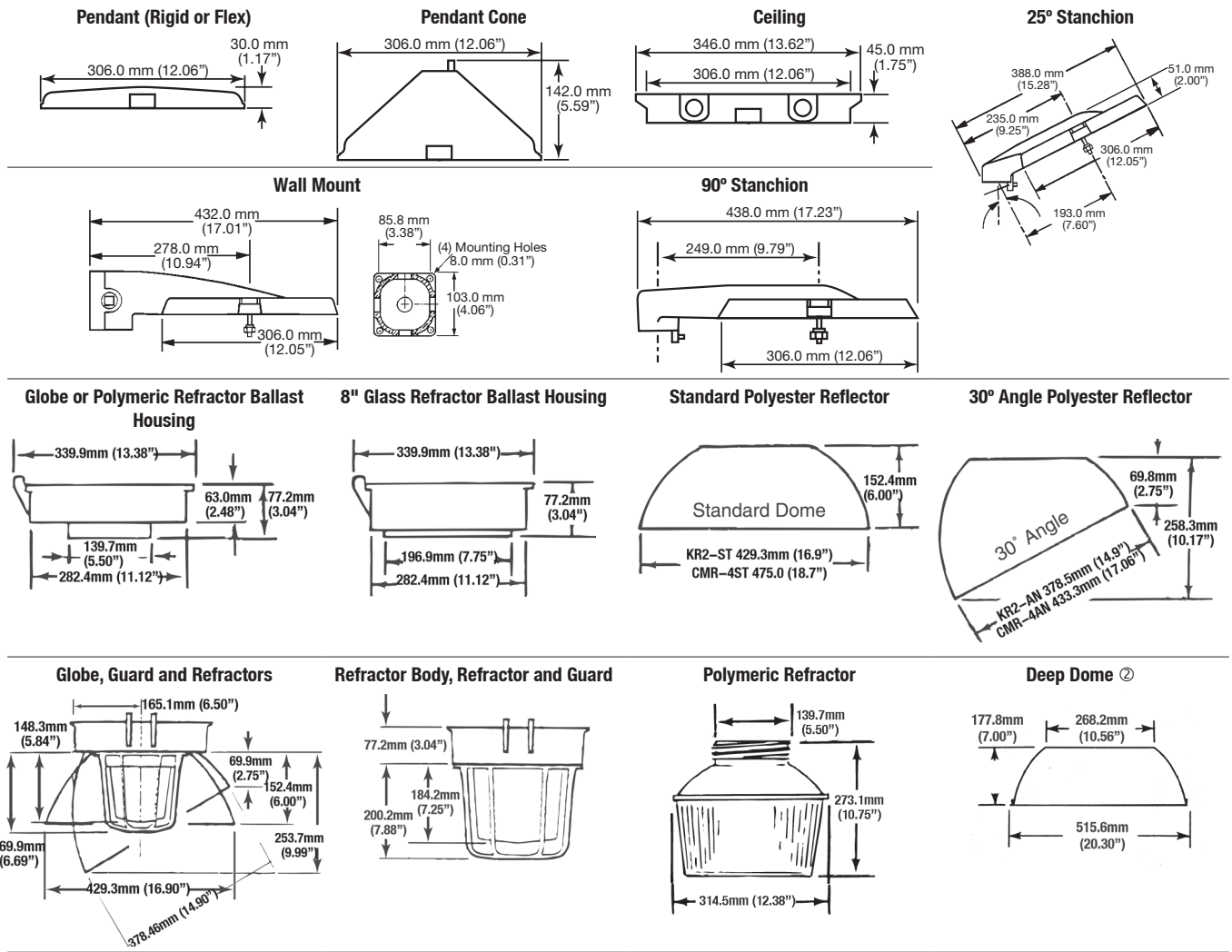
**NEC/CEC:**

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)**



**Mercmaster III Low Profile Ballast and Accessory Weights ①**

Watts	Globe Housing Ballast Wt. kg (lb)		Refractor Housing Ballast Wt. kg (lb)		Mounting Hoods	Wt. Kg (Lb)	Refractors, Globes, Guards and Reflectors	Wt. Kg (Lb)
	HPS	PSMH	HPS	PSMH				
50	3.3 (7.28)	—	3.5 (7.72)	—	Pendant	1.0 (2.20)	8" Glass Refractor	2.4 (5.29)
70	3.7 (8.16)	—	4.0 (8.82)	—	Pendant Cone	1.1 (2.43)	Glass Globe	1.7 (3.75)
100	4.4 (9.70)	—	4.6 (10.14)	—	Ceiling	1.4 (3.09)	Refractor Guard	0.5 (1.10)
150	4.9 (10.80)	—	5.1 (11.24)	—	Wall	1.8 (3.97)	Globe Guard	0.5 (1.10)
175	—	5.0 (11.02)	—	5.2 (11.46)	25° Stanchion	1.5 (3.31)	Standard Dome	1.1 (2.43)
					90° Stanchion	1.7 (3.75)	Deep Dome ②	2.3 (5.07)
							30° Angle	1.1 (2.43)
							Polymeric Refractor	1.1 (2.43)

① Weights are approximate. Add 0.1 kg (0.25 lbs) for Quartz option.  
 ② Fixtures when used with Deep Dome Refletors are NOT UL Listed.

APPLETON™  
 HID/AREA: NEC/CEC ENCLOSED AND GASKETED

# 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) 18 AWG stranded leads 152.4 mm (6.00 in) in length.
- Will fit through standard 1/2" knockout.
- Supplied with locknut and gasket.

## Features




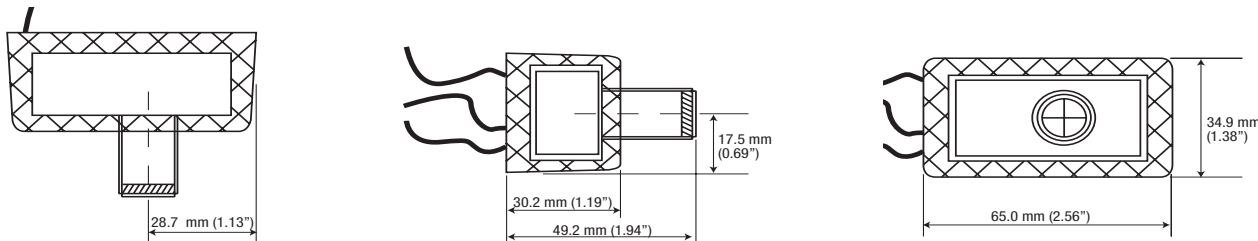
- Factory sealed design eliminates the need for an explosionproof enclosure.
- Can be easily installed in the field.
- Solid state design for performance and reliability.
- Available for 120, 208, 240, or 277 volts.

## 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>				
	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>Photocontrol assembly supplied with two stainless steel screws and one neoprene gasket.</i> <i>For additional neoprene gaskets, order catalog numbers 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 Low Profile Luminaires

## 150 W HPS

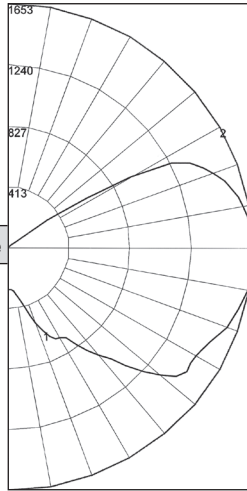
\* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen). For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 100 W (9,500 lumen) HPS lamp – 0.594; for a 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen) HPS lamp – 0.25. For candlepower values of fixture with guard, multiply by – 0.95.

**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	Total Luminaire Efficiency = 83%											
0-10	28.58	<b>CIE Type – Semi-Direct</b>											
10-20	123.97	<table border="1"> <thead> <tr> <th>Plane</th> <th>Spacing Criteria</th> </tr> </thead> <tbody> <tr> <td>0-180</td> <td>3.9</td> </tr> <tr> <td>90-270</td> <td>3.9</td> </tr> <tr> <td>Diagonal</td> <td>3.7</td> </tr> </tbody> </table>				Plane	Spacing Criteria	0-180	3.9	90-270	3.9	Diagonal	3.7
Plane	Spacing Criteria												
0-180	3.9												
90-270	3.9												
Diagonal	3.7												
20-30	304.16												
30-40	513.64												
40-50	889.19												
50-60	1299.53												
60-70	1506.73												
70-80	1706.16	<b>Zonal Lumen Summary</b>											
80-90	1800.53	<b>Zone</b>	<b>Lumens</b>	<b>% Lamp</b>	<b>% Fixture</b>								
90-100	1791.58	0-30	4563.72	2.9	3.4								
100-110	1652.69	0-40	970.35	6.1	7.3								
110-120	1311.22	0-60	3159.07	19.7	23.8								
120-130	351.25	0-90	8172.49	51.1	61.5								
130-140	5.14	90-120	4755.49	29.7	35.8								
140-150	0.00	90-130	5106.74	31.9	38.4								
150-160	0.00	90-150	5111.87	31.9	38.4								
160-170	0.00	90-180	5111.87	31.9	38.5								
170-180	0.00	0-180	13284.37	83.0	100.0								



REPORT NUMBER: **ML15LG**

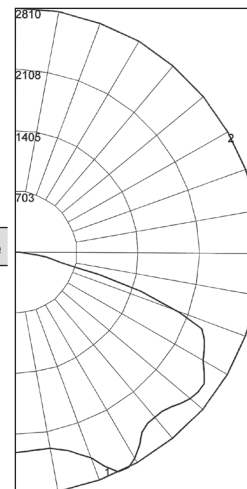
Lamps: 150 W High Pressure Sodium with Globe only \*

#### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	% Walls	Rw	80		70		50		30		10		0					
			70	50	30	10	70	50	30	10	50	30	10	50	30	10	0	
0	91	91	91	91	85	85	85	85	75	75	75	65	65	65	55	55	55	51
1	77	71	66	61	72	66	61	57	57	53	49	48	45	42	40	37	35	31
2	68	59	51	45	63	55	48	42	46	41	36	39	34	31	32	28	25	21
3	61	50	42	35	56	46	39	33	39	33	28	32	27	23	26	22	19	16
4	55	43	35	28	50	40	32	26	34	27	22	28	23	18	22	18	15	12
5	50	38	29	23	46	35	27	21	29	23	18	24	19	15	19	15	12	9
6	46	33	25	19	42	31	23	18	26	20	15	21	16	12	17	13	10	7
7	42	30	22	16	38	27	20	15	23	17	13	19	14	10	15	11	8	6
8	39	27	19	14	36	25	18	13	21	15	11	17	12	9	14	10	7	5
9	36	24	17	12	33	22	16	11	19	13	9	16	11	8	13	9	6	4
10	33	22	15	11	31	20	14	10	17	12	8	15	10	7	12	8	5	4

Zone	Lumens	Total Luminaire Efficiency = 73.2%											
0-10	219.96	<b>CIE Type – Direct</b>											
10-20	683.41	<table border="1"> <thead> <tr> <th>Plane</th> <th>Spacing Criteria</th> </tr> </thead> <tbody> <tr> <td>0-180</td> <td>1.64</td> </tr> <tr> <td>90-270</td> <td>1.64</td> </tr> <tr> <td>Diagonal</td> <td>1.88</td> </tr> </tbody> </table>				Plane	Spacing Criteria	0-180	1.64	90-270	1.64	Diagonal	1.88
Plane	Spacing Criteria												
0-180	1.64												
90-270	1.64												
Diagonal	1.88												
20-30	1267.92												
30-40	1613.68												
40-50	1967.79												
50-60	2333.86												
60-70	2328.33												
70-80	1118.52	<b>Zonal Lumen Summary</b>											
80-90	174.91	<b>Zone</b>	<b>Lumens</b>	<b>% Lamp</b>	<b>% Fixture</b>								
90-100	1.23	0-30	2171.29	13.6	18.5								
100-110	0.00	0-40	3784.97	23.7	32.3								
110-120	0.00	0-60	8086.62	50.5	69.1								
120-130	0.00	0-90	11708.37	73.2	100.0								
130-140	0.00	90-120	1.23	0.0	0.0								
140-150	0.00	90-130	1.23	0.0	0.0								
150-160	0.00	90-150	1.23	0.0	0.0								
160-170	0.00	90-180	1.23	0.0	0.0								
170-180	0.00	0-180	11709.6	73.2	100.0								



REPORT NUMBER: **ML15LST**

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

#### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	% Walls	Rw	80		70		50		30		10		0					
			70	50	30	10	70	50	30	10	50	30	10	50	30	10	0	
0	87	87	87	87	85	85	85	85	81	81	81	78	78	78	75	75	75	73
1	79	75	71	68	77	73	70	67	70	67	65	67	65	63	64	62	61	59
2	70	63	58	53	68	62	57	52	59	55	51	57	53	50	55	52	49	47
3	63	54	48	42	61	53	47	42	51	46	41	49	44	40	47	43	40	38
4	57	47	40	35	55	46	39	34	44	38	34	42	37	33	41	36	33	31
5	52	41	34	29	50	41	34	29	39	33	28	37	32	28	36	31	28	26
6	48	37	30	24	46	36	29	24	35	29	24	33	28	24	32	27	24	22
7	44	33	26	21	42	32	26	21	31	25	21	30	25	21	29	24	20	19
8	41	30	23	18	39	29	23	18	28	22	18	27	22	18	26	22	18	16
9	38	27	21	16	37	27	20	16	26	20	16	25	20	16	24	19	16	14
10	35	25	19	15	34	24	18	14	24	18	14	23	18	14	22	18	14	13

# Mercmaster™ III Low Profile Luminaires

## 150 W HPS

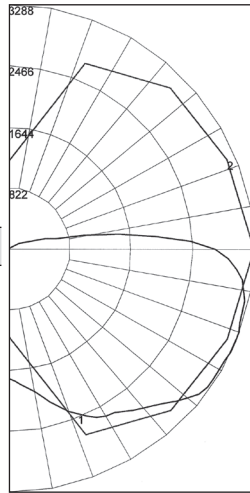
\* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen). For candlepower values of fixtures with other HPS lamps, use the following multipliers: for a 100 W (9,500 lumen) HPS lamp – 0.594; for a 70 W (6,400 lumen) HPS lamp – 0.40; for a 50 W (4,000 lumen) HPS lamp – 0.25. For candlepower values of fixture with guard, multiply by – 0.95.

**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	Total Luminaire Efficiency = 68.4%			
0-10	168.01	<b>CIE Type – Direct</b>			
10-20	536.92	<b>Plane</b>	<b>Spacing Criteria</b>		
20-30	972.38				
30-40	1342.99	0-180	2.3		
40-50	1625.08	90-270	2.0		
50-60	1721.88	Diagonal	1.8		
60-70	1586.98				
70-80	1369.71	<b>Zonal Lumen Summary</b>			
80-90	995.76	<b>Zone</b>	<b>Lumens</b>	<b>% Lamp</b>	<b>% Fixture</b>
90-100	461.94	0-30	1677.30	10.5	15.3
100-110	127.24	0-40	3020.29	18.9	27.6
110-120	27.54	0-60	6367.25	39.8	58.2
120-130	4.31	0-90	10319.70	64.5	94.3
130-140	2.68	90-120	616.71	3.9	5.6
140-150	0.00	90-130	621.02	3.9	5.7
150-160	0.00	90-150	623.70	3.9	5.7
160-170	0.00	90-180	623.70	3.9	5.7
170-180	0.00	0-180	10943.41	68.4	100.0



REPORT NUMBER: **ML15LAN**

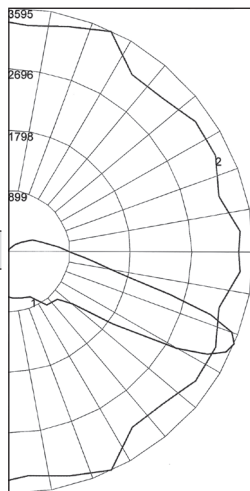
Lamps: 150 W High Pressure Sodium with  
 30° Angle Dome Reflector \*

#### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80	70			50			30			10			0				
		70	50	30	10	70	50	30	10	50	30	10						
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0		
0	80	80	80	80	78	78	78	78	74	74	74	70	70	70	66	66	66	64
1	70	66	62	58	68	64	60	57	60	57	54	57	54	52	54	52	50	48
2	63	56	50	45	60	54	49	44	51	46	42	48	44	41	45	42	39	37
3	56	48	41	36	54	46	40	35	44	38	34	41	37	33	39	35	32	30
4	51	42	35	29	49	40	34	29	38	32	28	36	31	27	34	30	26	24
5	47	37	30	24	45	36	29	24	34	28	23	32	27	23	30	26	22	20
6	43	33	26	21	41	32	25	20	30	24	20	28	23	19	27	22	19	17
7	39	29	23	18	38	28	22	18	27	21	17	26	21	17	24	20	16	15
8	37	26	20	16	35	26	20	15	24	19	15	23	18	15	22	18	14	13
9	34	24	18	14	33	23	18	14	22	17	13	21	17	13	20	16	13	11
10	32	22	16	12	31	22	16	12	21	15	12	20	15	12	19	15	11	10

Zone	Lumens	Total Luminaire Efficiency = 77.6%			
0-10	16.51	<b>CIE Type – Semi-Direct</b>			
10-20	135.03	<b>Plane</b>	<b>Spacing Criteria</b>		
20-30	274.24				
30-40	463.44	0-180	2.22		
40-50	1125.38	90-270	2.20		
50-60	1688.89	Diagonal	3.50		
60-70	3137.76				
70-80	2421.27	<b>Zonal Lumen Summary</b>			
80-90	1145.98	<b>Zone</b>	<b>Lumens</b>	<b>% Lamp</b>	<b>% Fixture</b>
90-100	411.16	0-30	425.77	2.7	3.4
100-110	632.32	0-40	889.22	5.6	7.2
110-120	448.30	0-60	3703.50	23.1	29.8
120-130	293.08	0-90	10408.50	65.1	83.8
130-140	154.61	90-120	1491.78	9.3	12.0
140-150	59.30	90-130	1784.86	11.2	14.4
150-160	9.99	90-150	1998.77	12.5	14.4
160-170	0.49	90-180	2009.26	12.6	16.2
170-180	0.00	0-180	12417.76	77.6	100.0



REPORT NUMBER: **ML15LJ5**

Lamps: 150 W High Pressure Sodium with  
 8" Prismatic Glass Refractor – NEMA Type V \*

#### Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80	70			50			30			10			0				
		70	50	30	10	70	50	30	10	50	30	10						
% 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	79	79	79	73	73	73	68	68	68	65
1	76	70	65	60	72	67	62	58	61	57	54	56	53	50	51	48	46	43
2	66	56	49	42	62	54	47	41	49	43	38	44	39	35	40	36	32	29
3	58	46	38	31	54	44	36	30	40	33	27	36	30	25	32	27	23	21
4	51	39	30	23	48	37	29	22	33	26	21	30	24	19	27	22	17	15
5	46	34	25	18	43	32	24	18	29	22	16	26	20	15	23	18	13	11
6	42	29	21	15	40	28	20	14	25	18	13	22	16	12	20	15	11	8
7	39	26	18	12	36	25	17	12	22	15	11	20	14	10	18	13	9	7
8	36	23	15	10	33	22	15	10	20	13	9	18	12	8	16	11	7	5
9	33	21	14	9	31	20	13	8	18	12	8	16	11	7	15	10	6	4
10	31	19	12	8	29	18	12	7	17	11	7	15	10	6	13	9	5	4

# Mercmaster™ III Low Profile Luminaires

## 175 W PSMH

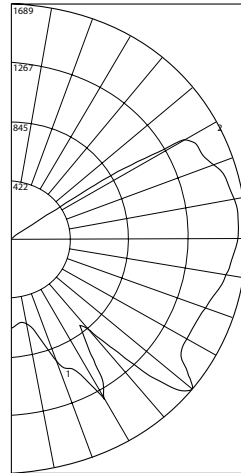
**NEC/CEC:**  
 Class I, Division 2, Groups A, B, C, D  
 Class I, Zone 2, AEx nA nR IIC (Z2)  
 Class I, Zone 2, AEx/Ex nR IIC (ZB)  
 Class II, Division 1 and 2, Groups E, F, G  
 Class III

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

### Photometric Data

Total Luminaire Efficiency = 80.00%

Zonal Lumen Summary					
Zone	Lumens	Zone	Lumens	% Lamp	% Fixture
0-10	58.11	0-20	273.15	1.60	2.00
10-20	215.04	0-30	778.21	4.40	5.60
20-30	505.06	0-40	1403.32	8.00	10.10
30-40	625.11	0-60	3819.52	21.80	27.40
40-50	1058.31	0-80	6857.15	39.20	49.10
50-60	1357.89	0-90	8591.61	49.10	61.50
60-70	1439.44	10-90	8533.5	48.80	61.10
70-80	1598.2	20-40	1130.17	6.50	8.10
80-90	1734.46	20-50	2188.48	12.50	15.70
90-100	1770.13	40-70	3855.64	17.40	21.80
100-110	1678.73	60-80	3037.64	17.40	21.80
110-120	1474.6	70-80	1598.2	9.10	11.40
120-130	436.54	80-90	1734.46	9.90	12.40
130-140	6.39	90-110	3448.86	19.70	24.70
140-150	1.68	90-120	4923.47	28.10	35.30
150-160	0.74	90-130	5360.01	30.60	38.40
160-170	0.16	90-150	5368.08	30.70	38.50
170-180	0.15	90-180	5369.13	30.70	38.50
		110-180	1920.27	11.00	13.80
		0-180	13960.74	79.80	100.00



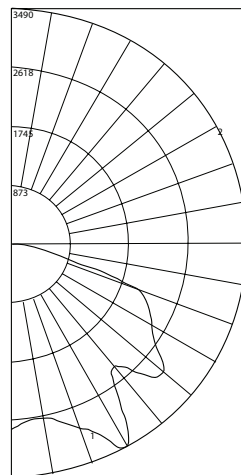
REPORT NUMBER: **ML17PG**

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

Coefficients of Utilization – Zonal Cavity Method																							
Effective Floor Cavity Reflectance 0.20																							
% Ceiling Rcc	% Walls	Rw	80				70				50				30				10				0
			70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	
0	88	88	88	88	82	82	82	82	72	72	72	62	62	62	53	53	53	49					
1	75	69	64	60	70	65	60	56	55	52	49	47	44	42	39	37	25	31					
2	66	58	51	45	61	54	48	42	46	41	37	39	35	31	32	29	26	22					
3	60	49	42	35	55	46	39	33	39	33	29	33	28	24	27	23	20	17					
4	54	43	35	29	49	40	32	27	34	28	23	28	23	20	23	19	16	13					
5	49	38	30	24	45	35	28	22	30	24	19	25	20	16	20	16	13	11					
6	45	33	26	20	41	31	24	19	26	20	16	22	17	14	18	14	11	9					
7	41	30	22	17	38	28	21	16	24	18	14	20	15	12	16	12	9	7					
8	38	27	20	15	35	25	18	14	21	16	12	18	13	10	15	11	8	6					
9	35	24	17	13	33	23	16	12	19	14	10	16	12	9	13	10	7	5					
10	33	22	16	11	30	21	15	11	18	13	9	15	11	8	12	9	6	5					

Total Luminaire Efficiency = 69.00%

Zonal Lumen Summary					
Zone	Lumens	Zone	Lumens	% Lamp	% Fixture
0-10	252.99	0-20	1034.2	5.90	8.60
10-20	781.21	0-30	2520.47	14.40	20.90
20-30	1486.27	0-40	4264.36	24.40	35.30
30-40	1743.89	0-60	8714.99	49.80	72.10
40-50	2109.55	0-80	11917.14	68.10	98.60
50-60	2341.08	0-90	12081.71	69.00	100.00
60-70	2194.91	10-90	11828.72	67.60	97.90
70-80	1007.24	20-40	3230.16	18.50	26.70
80-90	164.57	20-50	5339.71	30.50	44.20
90-100	0.82	40-70	6645.54	38.00	55.00
100-110	0.00	60-80	3202.15	18.30	26.50
110-120	0.00	70-80	1007.24	5.80	8.30
120-130	0.00	80-90	164.57	0.90	1.40
130-140	0.00	90-110	0.82	0.00	0.00
140-150	0.00	90-120	0.82	0.00	0.00
150-160	0.00	90-130	0.82	0.00	0.00
160-170	0.00	90-150	0.82	0.00	0.00
170-180	0.00	90-180	0.82	0.00	0.00
		110-180	0.00	0.00	0.00
		0-180	12082.53	69.00	100.00



REPORT NUMBER: **ML17PST**

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	% Walls	Rw	80				70				50				30				10				0
			70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	
0	82	82	82	82	80	80	80	80	77	77	77	73	73	73	70	70	70	69					
1	74	71	68	65	73	69	66	64	66	64	62	64	62	60	61	60	58	57					
2	67	61	56	51	65	59	55	51	57	53	49	55	51	48	52	50	47	46					
3	60	52	46	41	59	51	46	41	49	44	40	47	43	39	45	42	39	37					
4	55	46	39	34	53	45	39	34	43	38	33	41	37	33	40	36	32	31					
5	50	40	34	29	48	39	33	28	38	32	28	36	32	28	35	31	27	26					
6	46	36	29	24	44	35	29	24	34	28	24	33	28	24	31	27	24	22					
7	42	32	26	21	41	32	25	21	30	25	21	29	24	21	28	24	21	19					
8	39	29	23	19	38	29	23	19	28	22	18	27	22	18	26	21	18	17					
9	36	27	21	16	35	26	20	16	25	20	16	25	20	16	24	19	16	15					
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# Mercmaster™ III Low Profile Luminaires

## 175 W PSMH

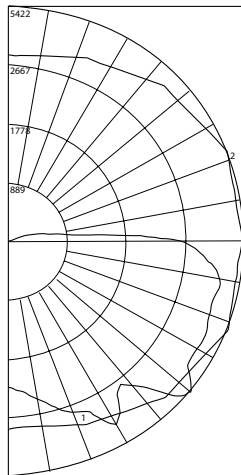
**NEC/CEC:**  
 Class I, Division 2, Groups A, B, C, D  
 Class I, Zone 2, AEx nA nR IIC (Z2)  
 Class I, Zone 2, AEx/Ex nR IIC (ZB)  
 Class II, Division 1 and 2, Groups E, F, G  
 Class III

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

### Photometric Data

Total Luminaire Efficiency = 66.00%

Zone		Zonal Lumen Summary			
Zone	Lumens	Zone	Lumens	% Lamp	% Fixture
0-10	205.50	0-20	855.80	4.90	7.50
10-20	650.30	0-30	2059.99	11.80	17.90
20-30	1204.19	0-40	3553.44	20.30	31.00
30-40	1493.45	0-60	7023.13	40.10	61.20
40-50	1718.01	0-80	9901.48	56.60	86.30
50-60	1751.68	0-90	10878.35	62.20	94.80
60-70	1549.56	10-90	10672.86	61.00	93.00
70-80	1328.79	20-40	2697.64	15.40	23.50
80-90	976.87	20-50	4415.65	25.20	38.50
90-100	426.94	40-70	5019.25	28.70	43.70
100-110	125.06	60-80	2878.35	16.40	25.10
110-120	26.96	70-80	1328.79	7.60	11.60
120-130	4.22	80-90	976.87	5.60	8.50
130-140	5.33	90-110	551.99	3.20	4.80
140-150	4.48	90-120	578.96	3.30	5.00
150-160	2.90	90-130	583.18	3.30	5.10
160-170	1.65	90-150	592.99	3.40	5.20
170-180	0.54	90-180	598.09	3.40	5.20
		110-180	46.09	0.30	0.40
		0-180	11476.44	65.60	100.00



REPORT NUMBER: **ML17PAN**

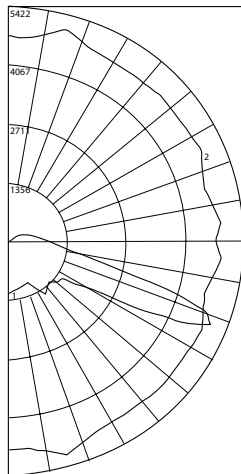
Lamps: 175 W Pulse Start Metal Halide with 30° Angle Dome Reflector \*

#### Coefficients of Utilization – Zonal Cavity Method

		Effective Floor Cavity Reflectance 0.20																							
% Ceiling Rcc	% Walls	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	77	75	75	75	75	71	71	71	67	67	67	64	64	64	62						
1	68	64	60	57	66	62	59	55	58	56	53	55	53	51	52	50	49	47							
2	61	54	49	44	59	53	48	43	50	45	42	47	43	40	44	41	39	37							
3	55	47	40	36	53	45	40	35	43	38	34	41	36	33	38	35	32	30							
4	50	41	34	29	48	40	34	29	38	32	28	36	31	27	34	30	27	25							
5	46	36	30	25	44	35	29	24	33	28	24	32	27	23	30	26	23	21							
6	42	32	26	21	40	31	25	21	30	24	20	28	24	20	27	23	20	18							
7	39	29	23	18	37	28	22	18	27	22	18	26	21	17	24	20	17	16							
8	36	26	20	16	35	26	20	16	24	19	16	23	19	15	22	18	15	14							
9	33	24	18	14	32	23	18	14	22	17	14	21	17	14	21	16	13	12							
10	31	22	17	13	30	22	16	13	21	16	13	20	15	12	19	15	12	11							

Total Luminaire Efficiency = 84.00%

Zone		Zonal Lumen Summary			
Zone	Lumens	Zone	Lumens	% Lamp	% Fixture
0-10	27.52	0-20	232.24	1.30	1.60
10-20	204.72	0-30	617.91	3.50	4.20
20-30	385.68	0-40	1249.7	7.10	8.50
30-40	631.79	0-60	4191.82	24.00	28.60
40-50	1402.70	0-80	11131.69	63.60	76.00
50-60	1539.42	0-90	12403.45	70.90	84.70
60-70	4097.48	10-90	12375.93	70.70	84.50
70-80	2842.39	20-40	1017.46	5.80	6.90
80-90	1271.76	20-50	2420.16	13.80	16.50
90-100	465.21	40-70	7039.6	40.20	48.10
100-110	720.39	60-80	6939.87	39.70	47.40
110-120	495.54	70-80	2842.38	16.20	19.40
120-130	313.01	80-90	1271.76	7.30	8.70
130-140	163.78	90-110	1185.6	6.80	8.10
140-150	68.20	90-120	1681.15	9.60	11.50
150-160	17.98	90-130	1994.16	11.40	13.60
160-170	2.35	90-150	2226.14	12.70	15.20
170-180	0.14	90-180	2246.61	12.80	15.30
		110-180	1061.00	6.10	7.20
		0-180	14650.06	83.70	100.00



REPORT NUMBER: **ML17PJ5**

Lamps: 175 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																							
% Ceiling Rcc	% Walls	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	97	97	97	97	93	93	93	93	86	86	86	79	79	79	74	74	74	71							
1	82	76	70	65	78	73	68	63	67	62	58	61	57	54	56	53	50	47							
2	71	61	53	46	67	58	51	44	53	47	41	48	43	38	43	39	35	32							
3	63	50	41	33	59	48	39	32	43	36	30	39	33	28	35	30	26	23							
4	56	42	3	25	52	40	31	25	36	29	23	33	26	21	29	24	19	16							
5	50	37	27	20	47	35	26	19	31	24	18	28	22	16	25	19	15	12							
6	46	32	23	16	43	30	22	16	27	20	14	25	18	13	22	16	12	10							
7	42	28	20	13	39	27	19	13	24	17	12	22	16	11	20	14	10	8							
8	39	25	17	11	36	24	16	11	22	15	10	20	14	9	18	12	8	6							
9	36	23	15	10	34	22	14	9	20	13	9	18	12	8	16	11	7	5							
10	33	21	13	8	32	20	13	8	18	12	7	17	11	7	15	10	6	4							