

**4L EVM Hazard•Gard®
H.I.D. Luminaires**
**Mogul Base
Factory Sealed (Groups C, D)**

Cl. I, Div. 1, Groups B (GB suffix), C, D
Cl. I, Zone 1, Groups IIB + H₂
(with suffix – GB), IIB IIA
Cl. II, Div. 1, Groups E, F, G; Class III

Paint Spray
(100W max)
Marine & Wet
Locations
3, 3R, 4, 4X; IP66

Applications:

Hazard•Gard® luminaires are used in:

- Heavy process industries where flammable or explosive vapors, gases or combustible dusts are present
- Hazardous areas, both indoors and outdoors where long life and low maintenance costs are desired
- Petroleum refineries, chemical, petrochemical and other heavy process industry facilities
- Paint spray facilities
- Hazardous locations requiring elevated ambient capability

Features:

- Luminaire is factory wired; power is fed through "wireless" connection block which serves as a mechanical seal between conduit and ballast compartments, eliminating the need for an external, field installed seal. The result is fast, easy installation.
- Dome and 30° angle reflectors made of Krydon® material – won't rust, corrode, dent, chip or peel (order separately – see page 1059).
- High bay reflectors of Alzak® aluminum for high wattage applications.
- Internally fluted glass globes reduce glare and provide comfortable viewing light.
- Wide range of light sources and wattages to meet specific lighting needs – 50 – 400W high pressure sodium (HPS); 70 – 400W metal halide (MH).
- High power factor (90%+) ballasts reduce power costs – allow more luminaires per circuit.
- Four mounting arrangements to suit any lighting layout – pendant, ceiling, wall bracket and stanchion.
- Paint spray booth suitability on 50 to 100 watt luminaires provides efficient, economical H.I.D. lighting for areas where paint residue may accumulate on luminaires.
- Elevated ambient capability permits reliable operation at high ambient temperature. Selected luminaires are suitable for ambient temperature up to 75°C.
- Integral ballasts – separate ballasts are not required. Lowest installed cost.
- Factory sealed, porcelain, mogul base socket.



**Certifications and
Compliances:**

- NEC and CEC:
Class I, Division 1, Groups B (with suffix GB), C, D
Class I, Zone 1, Groups IIB + H₂ (with suffix GB), IIB, IIA
100W max – Paint Spray Suitability
175W max – Class II, Class III
- UL Standards:
844 Hazardous (Classified) Locations
1598 Luminaires
1598A Marine Locations
- CSA Standards:
C22.2 No. 137

Standard Materials:

- Mounting modules, cover, ballast housing, guard, globe ring – copper-free aluminum
- Globe – heat and impact resistant glass
- Exterior hardware – stainless steel
- Lamp socket – porcelain with stainless steel screw shell
- Reflectors – dome and angle: Krydon fiberglass-reinforced polyester material; high bay: Alzak aluminum

Standard Finishes:

- Copper-free aluminum – epoxy powder coat
- Krydon – high reflectance white
- Alzak – natural (anodized)

Options:

| Description | Suffix |
|---|---------|
| • Fused – to protect ballast and capacitor against abnormal line conditions. (Not suitable for marine applications)..... | S658\$† |
| • Instant restrike – enables a hot HPS lamp to immediately restrike after a momentary loss of arc due to voltage fluctuation or power outage. It has no effect on the warm-up period of a cold lamp (50-150W LX HPS only)..... | IR* |
| • Quartz auxiliary lighting – quartz lamp comes to full brightness instantly upon restoration of power to provide emergency illumination during the normal restrike period of the H.I.D. lamp (for use with ED28 lamp). (Quartz lamp not included; use 100 W single-ended lamp – Q100DC, Q100CL/DC, or 100Q/CL/DC.) | QT‡ |
| • Ballast-Gard™ – to eliminate the normally continuous high voltage pulsing in the event of a cycling lamp, inoperative lamp, or no lamp in the socket extending the life of the ballast. (For use with 50-400W HPS lamps.) | BG* |
| • Group B suitability – luminaires suitable for use in Class I, Group B hazardous (classified) locations..... | GB |
| • Hazard•Gard® supplied with trunnion arm for floodlighting applications. For use on pendant mount luminaires only. See Floodlight Section | S812 |

Size Ranges:

- ¾", 1" and 1¼" hubs (see ordering information – see pages 1057–1058)

Electrical Rating Ranges:

- 120, 208, 240, 277, 347, 480, 600, multi-tap*
- 50 to 400 watts

*IR and BG options cannot be used together.
†When ordering fuses for luminaires, option S658, you must specify the operating voltage. S658 cannot be ordered with /MT in the catalog number.
‡Can be used with BG option.
§CSA Certified are not available with multi-tap ballast or S658 fuse option.

Alzak is a registered trademark of ALCOA.

50–400W EVM
Hazard•Gard®
H.I.D. Luminaires
Mogul Base
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Cl. I, Div. 1, Groups B (GB suffix), C, D
 Cl. I, Zone 1, Groups IIB + H₂
 (with suffix GB), IIB, IIA
 Cl. II, Div. 1, Groups E, F, G; Class III

Paint Spray
 (100W max)
 Marine & Wet
 Locations
 3, 3R, 4, 4X; IP66

4L



| Watts | Hub Size (In.) | Pendant Luminaires | | Wall Bracket Luminaires | | Ceiling Luminaires | | Stanchion Luminaires (25°) | |
|-----------------------------|----------------|----------------------|-------------------|-------------------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
| | | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # |
| High Pressure Sodium | | | | | | | | | |
| 50 | 3/4 | EVMA42050 | EVMA42051 | EVMBX42050 | EVMBX42051 | EVMCX42050 | EVMCX42051 | | |
| | 1 | EVMA43050 | EVMA43051 | EVMBX43050 | EVMBX43051 | EVMCX43050 | EVMCX43051 | EVMJ44050 | EVMJ44051 |
| | 1 1/4 | | | | | | | | |
| 70 | 3/4 | EVMA42070 | EVMA42071 | EVMBX42070 | EVMBX42071 | EVMCX42070 | EVMCX42071 | | |
| | 1 | EVMA43070 | EVMA43071 | EVMBX43070 | EVMBX43071 | EVMCX43070 | EVMCX43071 | EVMJ44070 | EVMJ44071 |
| | 1 1/4 | | | | | | | | |
| 100 | 3/4 | EVMA42100 | EVMA42101 | EVMBX42100 | EVMBX42101 | EVMCX42100 | EVMCX42101 | | |
| | 1 | EVMA43100 | EVMA43101 | EVMBX43100 | EVMBX43101 | EVMCX43100 | EVMCX43101 | EVMJ44100 | EVMJ44101 |
| | 1 1/4 | | | | | | | | |
| 150 | 3/4 | EVMA42150 | EVMA42151 | EVMBX42150 | EVMBX42151 | EVMCX42150 | EVMCX42151 | | |
| | 1 | EVMA43150 | EVMA43151 | EVMBX43150 | EVMBX43151 | EVMCX43150 | EVMCX43151 | EVMJ44150 | EVMJ44151 |
| | 1 1/4 | | | | | | | | |
| 200 | 3/4 | EVMA42200 | EVMA42201 | EVMBX42200 | EVMBX42201 | EVMCX42200 | EVMCX42201 | | |
| | 1 | EVMA43200 | EVMA43201 | EVMBX43200 | EVMBX43201 | EVMCX43200 | EVMCX43201 | EVMJ44200 | EVMJ44201 |
| | 1 1/4 | | | | | | | | |
| 250 | 3/4 | EVMA42250 | EVMA42251 | EVMBX42250 | EVMBX42251 | EVMCX42250 | EVMCX42251 | | |
| | 1 | EVMA43250 | EVMA43251 | EVMBX43250 | EVMBX43251 | EVMCX43250 | EVMCX43251 | EVMJ44250 | EVMJ44251 |
| | 1 1/4 | | | | | | | | |
| 400 | 3/4 | EVMA42400 | EVMA42401 | EVMBX42400 | EVMBX42401 | EVMCX42400 | EVMCX42401 | | |
| | 1 | EVMA43400 | EVMA43401 | EVMBX43400 | EVMBX43401 | EVMCX43400 | EVMCX43401 | EVMJ44400 | EVMJ44401 |
| | 1 1/4 | | | | | | | | |

4L

Complete the Catalog Number by Adding Voltage and Options Suffixes as Follows:

- Standard Voltage Ballasts – 60Hz

| | NEC/UL | | | CEC/CSA (cUL) | |
|-------------------|---------------|-----------|-----------|---------------|-----------|
| | Multi Tap /MT | 120V /120 | 480V /480 | Tri Tap /TT | 120V /120 |
| 1. Voltage Suffix | | | | | |
- Optional Voltage Ballasts – 50 or 60Hz

| | CEC/CSA (cUL)- CWI Isolated Ballasts | | | | EXPORT | | |
|-------------------------|--------------------------------------|------------------|------------------|------------------|----------------|-------------------|-------------------|
| | 208V CWI /208CWI | 240V CWI /240CWI | 480V CWI /480CWI | 600V CWI /600CWI | 220V 60Hz /220 | 220V 50Hz /220 50 | 230V 50Hz /230 50 |
| Optional Voltage Suffix | | | | | | | |
- 150W HPS Luminaires, 55V Lamps is Standard, for 100V lamps - Add suffix "CE"
- Options - Add the Required Options Suffixes, see page 1056, in alpha-numeric order.

4L **70-400W EVM**
Hazard•Gard®
H.I.D Luminaires
Factory Sealed (Groups C, D)

Cl. I, Div. 1, Groups B
 (GB suffix), C, D
 Cl. I, Zone 1, Groups IIB + H₂
 (with suffix GB), IIB, IIA
 Cl. II, Div. 1, Groups E, F, G;
 Class III

Paint Spray (100W max.)
 Marine & Wet Locations
 3, 3R, 4, 4X; IP66



| Watts | Hub Size (In.) | Pendant Luminaires | | Wall Bracket Luminaires | | Ceiling Luminaires | | Stanchion Luminaires (25°) | |
|---------------------------------|----------------|----------------------|-------------------|-------------------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
| | | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # |
| Pulse Start Metal Halide | | | | | | | | | |
| 150 | 3/4 | EVMA92150 S828 | EVMA92151 S828 | EVMBX92150 S828 | EVMBX92151 S828 | EVMCX92150 S828 | EVMCX92151 S828 | | |
| | 1 | EVMA93150 S828 | EVMA93151 S828 | EVMBX93150 S828 | EVMBX93151 S828 | EVMCX93150 S828 | EVMCX93151 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94150 S828 | EVMJ94151 S828 |
| 175 | 3/4 | EVMA92170 S828 | EVMA92171 S828 | EVMBX92170 S828 | EVMBX92171 S828 | EVMCX92170 S828 | EVMCX92171 S828 | | |
| | 1 | EVMA93170 S828 | EVMA93171 S828 | EVMBX93170 S828 | EVMBX93171 S828 | EVMCX93170 S828 | EVMCX93171 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94170 S828 | EVMJ94171 S828 |
| 200 | 3/4 | EVMA92200 S828 | EVMA92201 S828 | EVMBX92200 S828 | EVMBX92201 S828 | EVMCX92200 S828 | EVMCX92201 S828 | | |
| | 1 | EVMA93200 S828 | EVMA93201 S828 | EVMBX93200 S828 | EVMBX93201 S828 | EVMCX93200 S828 | EVMCX93201 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94200 S828 | EVMJ94201 S828 |
| 250 | 3/4 | EVMA92250 S828 | EVMA92251 S828 | EVMBX92250 S828 | EVMBX92251 S828 | EVMCX92250 S828 | EVMCX92251 S828 | | |
| | 1 | EVMA93250 S828 | EVMA93251 S828 | EVMBX93250 S828 | EVMBX93251 S828 | EVMCX93250 S828 | EVMCX93251 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94250 S828 | EVMJ94251 S828 |
| 320 | 3/4 | EVMA92320 S828 | EVMA92321 S828 | EVMBX92320 S828 | EVMBX92321 S828 | EVMCX92320 S828 | EVMCX92321 S828 | | |
| | 1 | EVMA93320 S828 | EVMA93321 S828 | EVMBX93320 S828 | EVMBX93321 S828 | EVMCX93320 S828 | EVMCX93321 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94320 S828 | EVMJ94321 S828 |
| 400 | 3/4 | EVMA92400 S828 | EVMA92401 S828 | EVMBX92400 S828 | EVMBX92401 S828 | EVMCX92400 S828 | EVMCX92401 S828 | | |
| | 1 | EVMA93400 S828 | EVMA93401 S828 | EVMBX93400 S828 | EVMBX93401 S828 | EVMCX93400 S828 | EVMCX93401 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94400 S828 | EVMJ94401 S828 |
| Metal Halide | | | | | | | | | |
| 70 | 3/4 | EVMA92070 | EVMA92071 | EVMBX92070 | EVMBX92071 | EVMCX92070 | EVMCX92071 | | |
| | 1 | EVMA93070 | EVMA93071 | EVMBX93070 | EVMBX93071 | EVMCX93070 | EVMCX93071 | | |
| | 1 1/4 | | | | | | | EVMJ94070 | EVMJ94071 |
| 100 | 3/4 | EVMA92100 | EVMA92101 | EVMBX92100 | EVMBX92101 | EVMCX92100 | EVMCX92101 | | |
| | 1 | EVMA93100 | EVMA93101 | EVMBX93100 | EVMBX93101 | EVMCX93100 | EVMCX93101 | | |
| | 1 1/4 | | | | | | | EVMJ94100 | EVMJ94101 |
| 175 | 3/4 | EVMA92170 | EVMA92171 | EVMBX92170 | EVMBX92171 | EVMCX92170 | EVMCX92171 | | |
| | 1 | EVMA93170 | EVMA93171 | EVMBX93170 | EVMBX93171 | EVMCX93170 | EVMCX93171 | | |
| | 1 1/4 | | | | | | | EVMJ94170 | EVMJ94171 |
| 250 | 3/4 | EVMA92250 | EVMA92251 | EVMBX92250 | EVMBX92251 | EVMCX92250 | EVMCX92251 | | |
| | 1 | EVMA93250 | EVMA93251 | EVMBX93250 | EVMBX93251 | EVMCX93250 | EVMCX93251 | | |
| | 1 1/4 | | | | | | | EVMJ94250 | EVMJ94251 |
| 400 | 3/4 | EVMA92400 | EVMA92401 | EVMBX92400 | EVMBX92401 | EVMCX92400 | EVMCX92401 | | |
| | 1 | EVMA93400 | EVMA93401 | EVMBX93400 | EVMBX93401 | EVMCX93400 | EVMCX93401 | | |
| | 1 1/4 | | | | | | | EVMJ94400 | EVMJ94401 |

Complete the Catalog Number by Adding Voltage and Options Suffixes as Follows:

Standard Voltage Ballasts - 60Hz

| Voltage Suffix | NEC/UL | | | CEC/CSA (cUL) | | |
|----------------|---------------|--------------|-----------|---------------|--------------|-----------|
| | Multi Tap /MT | Dual-Tap /DT | 120V /120 | Tri Tap /TT | Dual-Tap /DT | 120V /120 |
| | | | 120V /120 | 480V /480 | | 120V /120 |

Optional Voltage Ballasts - 50 or 60Hz

| Voltage Suffix | *CEC/CSA (cUL) - CWI Isolated Ballasts | | | | EXPORT | | | |
|----------------|--|------------------|------------------|----------------|-------------------|-------------------|-------------------|--|
| | 208V CWI /208CWI | 240V CWI /240CWI | 600V CWI /600CWI | 220V 60Hz /220 | 220V 50Hz /230 50 | 230V 50Hz /230 50 | 240V 50Hz /240 50 | |
| | | | | | | | | |

2. 150W HPS Luminaires, 55V Lamps is Standard, for 100V lamps - Add suffix *CE*

3. Options - Add the Required Options Suffixes, see page 1056, in alpha-numeric order.

*CWI Isolated Ballasts are only available for 175W-400W metal halide (non pulse start) luminaires.

Reflectors



Dome



30° Angle



High Bay

| Type | Cat. # |
|-----------|--------|
| Dome | RD739 |
| 30° Angle | RA739 |
| High Bay | EV3912 |

Temperature Performance Data
Maximum Ambient

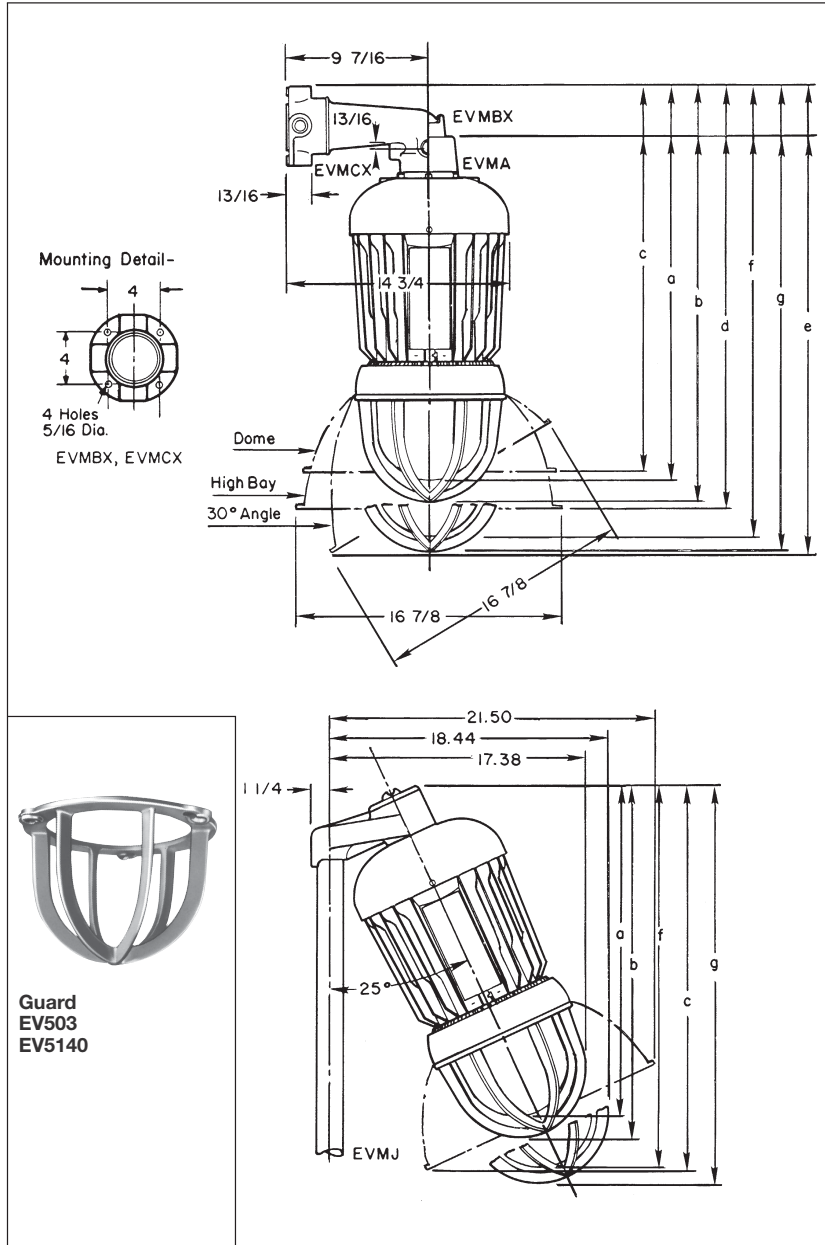
| Watts | Class I | | | | Class II (E, F, G) | Simultaneous Presence | Paint Spray Booth | Supply Wire |
|---|---------|------|------|------|-----------------------|--------------------------|-------------------------|----------------|
| | 40°C | 55°C | 65°C | 75°C | 40°C | 40°C | 40°C | °C |
| High Pressure Sodium | | | | | | | | |
| 50 | T6 | T6 | T6 | T5 | T4 | T4 | T4A | 90 |
| 70 | T6 | T6 | T5 | T4A | T4 | T4 | T4A | 90 |
| 100 | T5 | T5 | T4A | T4A | T4 | T4 | T4A | 90 |
| 150 | T4A | T4A | T4 | — | T3C | T3C | — | 90 |
| 200 | T4A | T4A | T4 | — | — | — | — | 90 |
| 250 | T4 | T3C | — | — | — | — | — | 90 |
| 400 | T3C | — | — | — | — | — | — | 90 |
| Metal Halide (Including Pulse Start) | | | | | | | | |
| 70 | T6 | T6 | T5 | T3 | T3C | T3C | T4A | 90 |
| 100 | T5 | T5 | T4A | T3 | T3C | T3C | T4A | 90 |
| 150 | T4A | T4 | T4 | — | T3C | T3C | — | 90 |
| 175 | T4A | T4 | T4 | — | T3C | T3C | — | 90 |
| 200 | T4 | T3C | — | — | — | — | — | 90 |
| 250 | T4 | T3C | — | — | — | — | — | 90 |
| 320 | T3A | — | — | — | — | — | — | 90 |
| 400 | T3A | — | — | — | — | — | — | 90 |

4L

4L EVM Hazard•Gard® H.I.D. Luminaires

Dimensions and Weights

Dimensions:



Guard
EVM503
EVM5140

Luminaire Net Weights:

| H.I.D. Source | Lamp Watts | Luminaire Only with Globe and Guard (lbs.) |
|----------------------|------------|--|
| High Pressure Sodium | 50 | 40 |
| | 70 | 40 |
| | 100 | 44 |
| | 150 (55V) | 45 |
| | 150 (100V) | 44 |
| | 200 | 46 |
| Metal Halide | 250 | 46 |
| | 400 | 55 |
| | 70 | 39 |
| | 100 | 39 |
| Metal Halide | 175 | 42 |
| | 250 | 43 |
| | 400 | 51 |

| Type | Lbs. | Type | Lbs. |
|----------------------------------|------|-----------|-------|
| Add for Mounting Modules: | | | |
| Pendant | 1 | Bracket | 4 1/4 |
| Ceiling | 2 | Stanchion | 2 1/4 |

| | | | |
|--|-------|--|--|
| Add for Reflectors: | | | |
| RD739 | 1 3/4 | | |
| RA739 | 2 | | |
| EV3912 | 2 1/2 | | |
| Deduct: 1 1/2 lbs. for luminaire without guard. | | | |

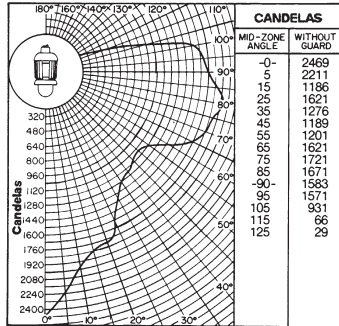
100, 175, 250W MV 50, 70, 100, 150W HPS 70, 100, 175, 250W MH
All luminaires with QTZ option and 200, 250, 400W HPS 400W MV & MH

All - Reflectors

| Type | a | b | f | g | Dome - c | High Bay - d | 30° Angle - e |
|-------|----------|----------|---------|---------|----------|--------------|---------------|
| EVMA | 25 1/16 | 26 | 27 5/16 | 28 1/4 | 23 5/8 | 26 7/16 | 28 5/8 |
| EVMBX | 27 7/8 | 28 13/16 | 30 1/8 | 31 1/16 | 26 11/16 | 29 3/4 | 31 5/8 |
| EVMCX | 24 | 24 15/16 | 26 1/4 | 27 3/16 | 22 13/16 | 25 5/8 | 27 1/2 |
| EVMJ | 22 11/16 | 24 1/8 | 25 1/4 | 26 5/8 | 25 3/8 | 27 1/16 | 28 3/4 |

**Lamp: 150W/E-23-1/2 high pressure sodium (HPS)
Total bare lamp lumens: 16,000**

Luminaire With Globe and Without Guard



Note: Photometric data was developed using a 150 watt clear high pressure sodium lamp (16,000 lumens). For other clear lamps, use the following conversion factors (multipliers): 50W HPS – .25; 70W HPS – .40; 100W HPS – .59. Multipliers are for use with candela curve only.

Luminaire spacing ratio is 0.80.

Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

| % Reflectance Eff. Ceil. | Wall | Room Cavity Ratio | | | | |
|-----------------------------|------|-------------------|------|------|------|------|
| | | 1 | 2 | 3 | 4 | 5 |
| 80 | 50 | .695 | .579 | .494 | .410 | .382 |
| | 30 | .644 | .509 | .417 | .326 | .305 |
| | 10 | .599 | .450 | .356 | .262 | .246 |
| 70 | 50 | .659 | .549 | .469 | .387 | .363 |
| | 30 | .613 | .484 | .397 | .311 | .291 |
| | 10 | .570 | .431 | .341 | .251 | .236 |
| 50 | 50 | .592 | .491 | .419 | .344 | .327 |
| | 30 | .555 | .439 | .360 | .279 | .265 |
| | 10 | .522 | .393 | .312 | .229 | .218 |
| 30 | 50 | .531 | .438 | .373 | .304 | .292 |
| | 30 | .502 | .396 | .325 | .250 | .240 |
| | 10 | .474 | .358 | .284 | .207 | .200 |
| 10 | 50 | .476 | .390 | .331 | .267 | .260 |
| | 30 | .451 | .355 | .291 | .222 | .217 |
| | 10 | .429 | .325 | .257 | .184 | .181 |
| 0 | 0 | .399 | .295 | .230 | .159 | .159 |
| % Reflectance Eff. Ceil. | Wall | Room Cavity Ratio | | | | |
| | | 6 | 7 | 8 | 9 | 10 |
| 80 | 50 | .342 | .306 | .278 | .265 | .233 |
| | 30 | .266 | .234 | .209 | .198 | .168 |
| | 10 | .212 | .184 | .160 | .153 | .127 |
| 70 | 50 | .324 | .292 | .265 | .253 | .222 |
| | 30 | .254 | .223 | .201 | .191 | .163 |
| | 10 | .202 | .176 | .155 | .149 | .123 |
| 50 | 50 | .292 | .263 | .240 | .231 | .203 |
| | 30 | .232 | .203 | .184 | .177 | .150 |
| | 10 | .187 | .162 | .143 | .139 | .114 |
| 30 | 50 | .262 | .236 | .218 | .210 | .185 |
| | 30 | .211 | .186 | .167 | .162 | .138 |
| | 10 | .172 | .148 | .132 | .129 | .105 |
| 10 | 50 | .234 | .213 | .195 | .191 | .167 |
| | 30 | .190 | .169 | .152 | .149 | .125 |
| | 10 | .156 | .135 | .121 | .118 | .096 |
| 0 | 0 | .135 | .116 | .103 | .103 | .081 |

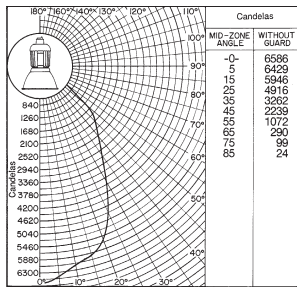
4L

4L EVM Hazard•Gard® H.I.D. Luminaires

Photometric Data

Lamp: 150W/E-23-1/2 high pressure sodium (HPS)
Total bare lamp lumens: 16000

Luminaire With Globe, Hi-Bay Reflector and Without Guard



Note: Photometric data was developed using a 150 watt clear high pressure sodium lamp (16,000 lumens). For other clear lamps, use the following conversion factors (multipliers): 50W HPS - .25; 70W HPS - .40; 100W HPS - .59. Multipliers are for use with candela curve only.
Luminaire spacing ratio is 1.00.

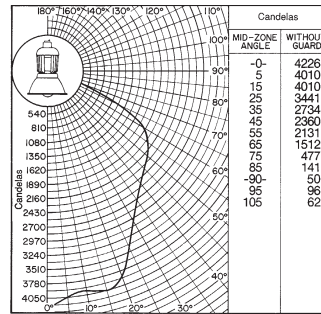
Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
|---------------|-------------------|--|-----------------------------------|------|------|------|------|
| | | | 1 | 2 | 3 | 4 | 5 |
| 80 | 50 | | .668 | .618 | .573 | .531 | .494 |
| | 30 | | .651 | .592 | .542 | .495 | .455 |
| | 10 | | .636 | .569 | .517 | .468 | .427 |
| 70 | 50 | | .655 | .608 | .566 | .525 | .487 |
| | 30 | | .639 | .583 | .536 | .491 | .452 |
| | 10 | | .625 | .564 | .513 | .464 | .425 |
| 50 | 50 | | .629 | .587 | .550 | .511 | .476 |
| | 30 | | .616 | .568 | .525 | .482 | .446 |
| | 10 | | .606 | .550 | .505 | .459 | .422 |
| 30 | 50 | | .606 | .569 | .535 | .498 | .466 |
| | 30 | | .597 | .554 | .514 | .474 | .438 |
| | 10 | | .588 | .539 | .497 | .454 | .418 |
| 10 | 50 | | .586 | .553 | .522 | .487 | .457 |
| | 30 | | .578 | .539 | .504 | .466 | .433 |
| | 10 | | .570 | .528 | .489 | .449 | .413 |
| 0 | 0 | | .560 | .517 | .479 | .439 | .404 |
| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
| | | | 6 | 7 | 8 | 9 | 10 |
| 80 | 50 | | .460 | .427 | .396 | .369 | .328 |
| | 30 | | .420 | .388 | .358 | .330 | .288 |
| | 10 | | .394 | .361 | .330 | .303 | .262 |
| 70 | 50 | | .455 | .423 | .392 | .366 | .325 |
| | 30 | | .418 | .385 | .356 | .328 | .288 |
| | 10 | | .391 | .359 | .329 | .303 | .262 |
| 50 | 50 | | .444 | .414 | .385 | .360 | .320 |
| | 30 | | .412 | .380 | .352 | .325 | .285 |
| | 10 | | .388 | .357 | .328 | .301 | .261 |
| 30 | 50 | | .436 | .406 | .379 | .354 | .315 |
| | 30 | | .407 | .377 | .348 | .322 | .282 |
| | 10 | | .385 | .354 | .326 | .300 | .259 |
| 10 | 50 | | .428 | .400 | .373 | .348 | .311 |
| | 30 | | .402 | .373 | .345 | .319 | .280 |
| | 10 | | .382 | .352 | .324 | .298 | .258 |
| 0 | 0 | | .373 | .343 | .315 | .290 | .249 |

Lamp: 150W/E-23-1/2 high pressure sodium (HPS)
Total bare lamp lumens: 16000

Luminaire With Globe, Dome Reflector and Without Guard



Note: Photometric data was developed using a 150 watt clear high pressure sodium lamp (16,000 lumens). For other clear lamps, use the following conversion factors (multipliers): 50W HPS - .25; 70W HPS - .40; 100W HPS - .59. Multipliers are for use with candela curve only.
Luminaire spacing ratio is 1.20.

Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
|---------------|-------------------|--|-----------------------------------|------|------|------|------|
| | | | 1 | 2 | 3 | 4 | 5 |
| 80 | 50 | | .716 | .637 | .568 | .507 | .455 |
| | 30 | | .689 | .596 | .519 | .452 | .398 |
| | 10 | | .666 | .561 | .480 | .410 | .355 |
| 70 | 50 | | .700 | .624 | .559 | .498 | .446 |
| | 30 | | .675 | .585 | .512 | .447 | .393 |
| | 10 | | .653 | .555 | .476 | .407 | .353 |
| 50 | 50 | | .668 | .598 | .538 | .479 | .432 |
| | 30 | | .648 | .567 | .498 | .435 | .385 |
| | 10 | | .631 | .539 | .466 | .400 | .349 |
| 30 | 50 | | .640 | .575 | .518 | .463 | .417 |
| | 30 | | .625 | .549 | .485 | .425 | .376 |
| | 10 | | .610 | .526 | .457 | .394 | .344 |
| 10 | 50 | | .615 | .554 | .500 | .447 | .404 |
| | 30 | | .602 | .532 | .472 | .415 | .369 |
| | 10 | | .590 | .513 | .448 | .388 | .339 |
| 0 | 0 | | .575 | .498 | .434 | .373 | .326 |
| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
| | | | 6 | 7 | 8 | 9 | 10 |
| 80 | 50 | | .413 | .373 | .339 | .312 | .275 |
| | 30 | | .355 | .318 | .285 | .258 | .222 |
| | 10 | | .316 | .280 | .246 | .221 | .187 |
| 70 | 50 | | .405 | .368 | .334 | .308 | .271 |
| | 30 | | .352 | .314 | .283 | .256 | .222 |
| | 10 | | .312 | .277 | .245 | .221 | .187 |
| 50 | 50 | | .392 | .356 | .324 | .299 | .264 |
| | 30 | | .345 | .307 | .277 | .252 | .217 |
| | 10 | | .309 | .274 | .243 | .219 | .185 |
| 30 | 50 | | .380 | .345 | .316 | .291 | .257 |
| | 30 | | .338 | .303 | .272 | .247 | .214 |
| | 10 | | .306 | .270 | .241 | .217 | .183 |
| 10 | 50 | | .369 | .337 | .307 | .283 | .251 |
| | 30 | | .331 | .298 | .267 | .244 | .210 |
| | 10 | | .301 | .267 | .238 | .215 | .181 |
| 0 | 0 | | .289 | .255 | .226 | .203 | .170 |

4L EVM Hazard•Gard® H.I.D. Luminaires

**Mogul Base
Factory Sealed (Groups C, D)**

Cl. I, Div. 1, Groups B (GB suffix), C, D
Cl. I, Zone 1, Groups IIB + H₂
(with suffix – GB), IIB IIA
Cl. II, Div. 1, Groups E, F, G; Class III

Paint Spray
(100W max)
Marine & Wet
Locations
3, 3R, 4, 4X; IP66

Applications:

Hazard•Gard® luminaires are used in:

- Heavy process industries where flammable or explosive vapors, gases or combustible dusts are present
- Hazardous areas, both indoors and outdoors where long life and low maintenance costs are desired
- Petroleum refineries, chemical, petrochemical and other heavy process industry facilities
- Paint spray facilities
- Hazardous locations requiring elevated ambient capability

Features:

- Luminaire is factory wired; power is fed through "wireless" connection block which serves as a mechanical seal between conduit and ballast compartments, eliminating the need for an external, field installed seal. The result is fast, easy installation.
- Dome and 30° angle reflectors made of Krydon® material – won't rust, corrode, dent, chip or peel (order separately – see page 1059).
- High bay reflectors of Alzak® aluminum for high wattage applications.
- Internally fluted glass globes reduce glare and provide comfortable viewing light.
- Wide range of light sources and wattages to meet specific lighting needs – 50 – 400W high pressure sodium (HPS); 70 – 400W metal halide (MH).
- High power factor (90%+) ballasts reduce power costs – allow more luminaires per circuit.
- Four mounting arrangements to suit any lighting layout – pendant, ceiling, wall bracket and stanchion.
- Paint spray booth suitability on 50 to 100 watt luminaires provides efficient, economical H.I.D. lighting for areas where paint residue may accumulate on luminaires.
- Elevated ambient capability permits reliable operation at high ambient temperature. Selected luminaires are suitable for ambient temperature up to 75°C.
- Integral ballasts – separate ballasts are not required. Lowest installed cost.
- Factory sealed, porcelain, mogul base socket.



Certifications and Complies:

- NEC and CEC:
Class I, Division 1, Groups B (with suffix GB), C, D
Class I, Zone 1, Groups IIB + H₂ (with suffix GB), IIB, IIA
100W max – Paint Spray Suitability
175W max – Class II, Class III
- UL Standards:
844 Hazardous (Classified) Locations
1598 Luminaires
1598A Marine Locations
- CSA Standards:
C22.2 No. 137

Standard Materials:

- Mounting modules, cover, ballast housing, guard, globe ring – copper-free aluminum
- Globe – heat and impact resistant glass
- Exterior hardware – stainless steel
- Lamp socket – porcelain with stainless steel screw shell
- Reflectors – dome and angle: Krydon fiberglass-reinforced polyester material; high bay: Alzak aluminum

Standard Finishes:

- Copper-free aluminum – epoxy powder coat
- Krydon – high reflectance white
- Alzak – natural (anodized)

Options:

| Description | Suffix |
|---|---------|
| • Fused – to protect ballast and capacitor against abnormal line conditions. (Not suitable for marine applications)..... | S658\$† |
| • Instant restrike – enables a hot HPS lamp to immediately restrike after a momentary loss of arc due to voltage fluctuation or power outage. It has no effect on the warm-up period of a cold lamp (50-150W LX HPS only)..... | IR* |
| • Quartz auxiliary lighting – quartz lamp comes to full brightness instantly upon restoration of power to provide emergency illumination during the normal restrike period of the H.I.D. lamp (for use with ED28 lamp). (Quartz lamp not included; use 100 W single-ended lamp – Q100DC, Q100CL/DC, or 100Q/CL/DC.) | QT‡ |
| • Ballast-Gard™ – to eliminate the normally continuous high voltage pulsing in the event of a cycling lamp, inoperative lamp, or no lamp in the socket extending the life of the ballast. (For use with 50-400W HPS lamps.) | BG* |
| • Group B suitability – luminaires suitable for use in Class I, Group B hazardous (classified) locations..... | GB |
| • Hazard•Gard® supplied with trunnion arm for floodlighting applications. For use on pendant mount luminaires only. See Floodlight Section | S812 |

Size Ranges:

- 3/4", 1" and 1 1/4" hubs (see ordering information – see pages 1057–1058)

Electrical Rating Ranges:

- 120, 208, 240, 277, 347, 480, 600, multi-tap*
- 50 to 400 watts

*IR and BG options cannot be used together.
†When ordering fuses for luminaires, option S658, you must specify the operating voltage. S658 cannot be ordered with /MT in the catalog number.
‡Can be used with BG option.
§CSA Certified are not available with multi-tap ballast or S658 fuse option.

Alzak is a registered trademark of ALCOA.

50–400W EVM
Hazard•Gard®
H.I.D. Luminaires
Mogul Base
Factory Sealed (Groups C, D)

Cl. I, Div. 1, Groups B (GB suffix), C, D
 Cl. I, Zone 1, Groups IIB + H₂
 (with suffix GB), IIB, IIA
 Cl. II, Div. 1, Groups E, F, G; Class III

Paint Spray
 (100W max)
 Marine & Wet
 Locations
 3, 3R, 4, 4X; IP66

4L



| Watts | Hub Size (In.) | Pendant Luminaires | | Wall Bracket Luminaires | | Ceiling Luminaires | | Stanchion Luminaires (25°) | |
|-----------------------------|----------------|----------------------|-------------------|-------------------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
| | | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # |
| High Pressure Sodium | | | | | | | | | |
| 50 | 3/4 | EVMA42050 | EVMA42051 | EVMBX42050 | EVMBX42051 | EVMCX42050 | EVMCX42051 | | |
| | 1 | EVMA43050 | EVMA43051 | EVMBX43050 | EVMBX43051 | EVMCX43050 | EVMCX43051 | EVMJ44050 | EVMJ44051 |
| | 1 1/4 | | | | | | | | |
| 70 | 3/4 | EVMA42070 | EVMA42071 | EVMBX42070 | EVMBX42071 | EVMCX42070 | EVMCX42071 | | |
| | 1 | EVMA43070 | EVMA43071 | EVMBX43070 | EVMBX43071 | EVMCX43070 | EVMCX43071 | EVMJ44070 | EVMJ44071 |
| | 1 1/4 | | | | | | | | |
| 100 | 3/4 | EVMA42100 | EVMA42101 | EVMBX42100 | EVMBX42101 | EVMCX42100 | EVMCX42101 | | |
| | 1 | EVMA43100 | EVMA43101 | EVMBX43100 | EVMBX43101 | EVMCX43100 | EVMCX43101 | EVMJ44100 | EVMJ44101 |
| | 1 1/4 | | | | | | | | |
| 150 | 3/4 | EVMA42150 | EVMA42151 | EVMBX42150 | EVMBX42151 | EVMCX42150 | EVMCX42151 | | |
| | 1 | EVMA43150 | EVMA43151 | EVMBX43150 | EVMBX43151 | EVMCX43150 | EVMCX43151 | EVMJ44150 | EVMJ44151 |
| | 1 1/4 | | | | | | | | |
| 200 | 3/4 | EVMA42200 | EVMA42201 | EVMBX42200 | EVMBX42201 | EVMCX42200 | EVMCX42201 | | |
| | 1 | EVMA43200 | EVMA43201 | EVMBX43200 | EVMBX43201 | EVMCX43200 | EVMCX43201 | EVMJ44200 | EVMJ44201 |
| | 1 1/4 | | | | | | | | |
| 250 | 3/4 | EVMA42250 | EVMA42251 | EVMBX42250 | EVMBX42251 | EVMCX42250 | EVMCX42251 | | |
| | 1 | EVMA43250 | EVMA43251 | EVMBX43250 | EVMBX43251 | EVMCX43250 | EVMCX43251 | EVMJ44250 | EVMJ44251 |
| | 1 1/4 | | | | | | | | |
| 400 | 3/4 | EVMA42400 | EVMA42401 | EVMBX42400 | EVMBX42401 | EVMCX42400 | EVMCX42401 | | |
| | 1 | EVMA43400 | EVMA43401 | EVMBX43400 | EVMBX43401 | EVMCX43400 | EVMCX43401 | EVMJ44400 | EVMJ44401 |
| | 1 1/4 | | | | | | | | |

4L

Complete the Catalog Number by Adding Voltage and Options Suffixes as Follows:

- Standard Voltage Ballasts – 60Hz
- | 1. Voltage Suffix | NEC/UL | | | CEC/CSA (cUL) | |
|-------------------|---------------|-----------|-----------|---------------|-----------|
| | Multi Tap /MT | 120V /120 | 480V /480 | Tri Tap /TT | 120V /120 |
| | | | | | |
- Optional Voltage Ballasts – 50 or 60Hz
- | Voltage Suffix | CEC/CSA (cUL)- CWI Isolated Ballasts | | | | EXPORT | | | |
|----------------|--------------------------------------|------------------|------------------|------------------|----------------|-------------------|-------------------|-------------------|
| | 208V CWI /208CWI | 240V CWI /240CWI | 480V CWI /480CWI | 600V CWI /600CWI | 220V 60Hz /220 | 220V 50Hz /220 50 | 230V 50Hz /230 50 | 240V 50Hz /240 50 |
| | | | | | | | | |
- 150W HPS Luminaires, 55V Lamps is Standard, for 100V lamps - Add suffix "CE"
 - Options - Add the Required Options Suffixes, see page 1056, in alpha-numeric order.

4L **70-400W EVM**
Hazard•Gard®
H.I.D Luminaires
Factory Sealed (Groups C, D)

Cl. I, Div. 1, Groups B
 (GB suffix), C, D
 Cl. I, Zone 1, Groups IIB + H₂
 (with suffix GB), IIB, IIA
 Cl. II, Div. 1, Groups E, F, G;
 Class III

Paint Spray (100W max.)
 Marine & Wet Locations
 3, 3R, 4, 4X; IP66



| Watts | Hub Size (In.) | Pendant Luminaires | | Wall Bracket Luminaires | | Ceiling Luminaires | | Stanchion Luminaires (25°) | |
|---------------------------------|----------------|----------------------|-------------------|-------------------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
| | | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # | Without Guard Cat. # | With Guard Cat. # |
| Pulse Start Metal Halide | | | | | | | | | |
| 150 | 3/4 | EVMA92150 S828 | EVMA92151 S828 | EVMBX92150 S828 | EVMBX92151 S828 | EVMCX92150 S828 | EVMCX92151 S828 | | |
| | 1 | EVMA93150 S828 | EVMA93151 S828 | EVMBX93150 S828 | EVMBX93151 S828 | EVMCX93150 S828 | EVMCX93151 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94150 S828 | EVMJ94151 S828 |
| 175 | 3/4 | EVMA92170 S828 | EVMA92171 S828 | EVMBX92170 S828 | EVMBX92171 S828 | EVMCX92170 S828 | EVMCX92171 S828 | | |
| | 1 | EVMA93170 S828 | EVMA93171 S828 | EVMBX93170 S828 | EVMBX93171 S828 | EVMCX93170 S828 | EVMCX93171 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94170 S828 | EVMJ94171 S828 |
| 200 | 3/4 | EVMA92200 S828 | EVMA92201 S828 | EVMBX92200 S828 | EVMBX92201 S828 | EVMCX92200 S828 | EVMCX92201 S828 | | |
| | 1 | EVMA93200 S828 | EVMA93201 S828 | EVMBX93200 S828 | EVMBX93201 S828 | EVMCX93200 S828 | EVMCX93201 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94200 S828 | EVMJ94201 S828 |
| 250 | 3/4 | EVMA92250 S828 | EVMA92251 S828 | EVMBX92250 S828 | EVMBX92251 S828 | EVMCX92250 S828 | EVMCX92251 S828 | | |
| | 1 | EVMA93250 S828 | EVMA93251 S828 | EVMBX93250 S828 | EVMBX93251 S828 | EVMCX93250 S828 | EVMCX93251 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94250 S828 | EVMJ94251 S828 |
| 320 | 3/4 | EVMA92320 S828 | EVMA92321 S828 | EVMBX92320 S828 | EVMBX92321 S828 | EVMCX92320 S828 | EVMCX92321 S828 | | |
| | 1 | EVMA93320 S828 | EVMA93321 S828 | EVMBX93320 S828 | EVMBX93321 S828 | EVMCX93320 S828 | EVMCX93321 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94320 S828 | EVMJ94321 S828 |
| 400 | 3/4 | EVMA92400 S828 | EVMA92401 S828 | EVMBX92400 S828 | EVMBX92401 S828 | EVMCX92400 S828 | EVMCX92401 S828 | | |
| | 1 | EVMA93400 S828 | EVMA93401 S828 | EVMBX93400 S828 | EVMBX93401 S828 | EVMCX93400 S828 | EVMCX93401 S828 | | |
| | 1 1/4 | | | | | | | EVMJ94400 S828 | EVMJ94401 S828 |
| Metal Halide | | | | | | | | | |
| 70 | 3/4 | EVMA92070 | EVMA92071 | EVMBX92070 | EVMBX92071 | EVMCX92070 | EVMCX92071 | | |
| | 1 | EVMA93070 | EVMA93071 | EVMBX93070 | EVMBX93071 | EVMCX93070 | EVMCX93071 | | |
| | 1 1/4 | | | | | | | EVMJ94070 | EVMJ94071 |
| 100 | 3/4 | EVMA92100 | EVMA92101 | EVMBX92100 | EVMBX92101 | EVMCX92100 | EVMCX92101 | | |
| | 1 | EVMA93100 | EVMA93101 | EVMBX93100 | EVMBX93101 | EVMCX93100 | EVMCX93101 | | |
| | 1 1/4 | | | | | | | EVMJ94100 | EVMJ94101 |
| 175 | 3/4 | EVMA92170 | EVMA92171 | EVMBX92170 | EVMBX92171 | EVMCX92170 | EVMCX92171 | | |
| | 1 | EVMA93170 | EVMA93171 | EVMBX93170 | EVMBX93171 | EVMCX93170 | EVMCX93171 | | |
| | 1 1/4 | | | | | | | EVMJ94170 | EVMJ94171 |
| 250 | 3/4 | EVMA92250 | EVMA92251 | EVMBX92250 | EVMBX92251 | EVMCX92250 | EVMCX92251 | | |
| | 1 | EVMA93250 | EVMA93251 | EVMBX93250 | EVMBX93251 | EVMCX93250 | EVMCX93251 | | |
| | 1 1/4 | | | | | | | EVMJ94250 | EVMJ94251 |
| 400 | 3/4 | EVMA92400 | EVMA92401 | EVMBX92400 | EVMBX92401 | EVMCX92400 | EVMCX92401 | | |
| | 1 | EVMA93400 | EVMA93401 | EVMBX93400 | EVMBX93401 | EVMCX93400 | EVMCX93401 | | |
| | 1 1/4 | | | | | | | EVMJ94400 | EVMJ94401 |

Complete the Catalog Number by Adding Voltage and Options Suffixes as Follows:

Standard Voltage Ballasts - 60Hz

| Voltage Suffix | NEC/UL | | | CEC/CSA (cUL) | | |
|----------------|---------------|--------------|-----------|---------------|--------------|-----------|
| | Multi Tap /MT | Dual-Tap /DT | 120V /120 | Tri Tap /TT | Dual-Tap /DT | 120V /120 |
| | | | 120V /120 | 480V /480 | | 120V /120 |

Optional Voltage Ballasts - 50 or 60Hz

| Voltage Suffix | *CEC/CSA (cUL) - CWI Isolated Ballasts | | | | EXPORT | | |
|----------------|--|------------------|------------------|----------------|-------------------|-------------------|-------------------|
| | 208V CWI /208CWI | 240V CWI /240CWI | 600V CWI /600CWI | 220V 60Hz /220 | 220V 50Hz /230 50 | 230V 50Hz /230 50 | 240V 50Hz /240 50 |
| | | | | | | | |

2. 150W HPS Luminaires, 55V Lamps is Standard, for 100V lamps - Add suffix *CE*

3. Options - Add the Required Options Suffixes, see page 1056, in alpha-numeric order.

*CWI Isolated Ballasts are only available for 175W-400W metal halide (non pulse start) luminaires.

4L

Reflectors



Dome



30° Angle



High Bay

| Type | Cat. # |
|-----------|--------|
| Dome | RD739 |
| 30° Angle | RA739 |
| High Bay | EV3912 |

Temperature Performance Data
Maximum Ambient

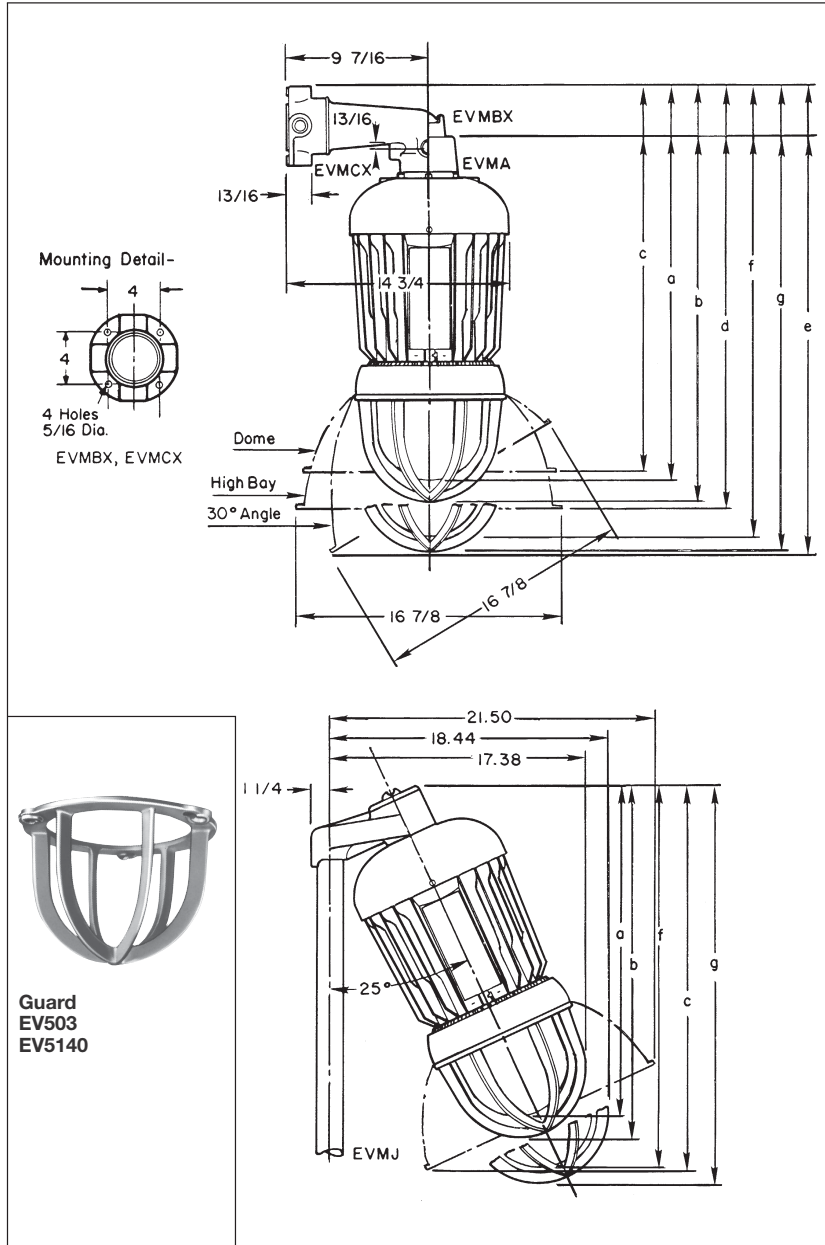
| Watts | Class I | | | | Class II (E, F, G) | Simultaneous Presence | Paint Spray Booth | Supply Wire |
|---|---------|------|------|------|--------------------|-----------------------|-------------------|-------------|
| | 40°C | 55°C | 65°C | 75°C | 40°C | 40°C | 40°C | °C |
| High Pressure Sodium | | | | | | | | |
| 50 | T6 | T6 | T6 | T5 | T4 | T4 | T4A | 90 |
| 70 | T6 | T6 | T5 | T4A | T4 | T4 | T4A | 90 |
| 100 | T5 | T5 | T4A | T4A | T4 | T4 | T4A | 90 |
| 150 | T4A | T4A | T4 | — | T3C | T3C | — | 90 |
| 200 | T4A | T4A | T4 | — | — | — | — | 90 |
| 250 | T4 | T3C | — | — | — | — | — | 90 |
| 400 | T3C | — | — | — | — | — | — | 90 |
| Metal Halide (Including Pulse Start) | | | | | | | | |
| 70 | T6 | T6 | T5 | T3 | T3C | T3C | T4A | 90 |
| 100 | T5 | T5 | T4A | T3 | T3C | T3C | T4A | 90 |
| 150 | T4A | T4 | T4 | — | T3C | T3C | — | 90 |
| 175 | T4A | T4 | T4 | — | T3C | T3C | — | 90 |
| 200 | T4 | T3C | — | — | — | — | — | 90 |
| 250 | T4 | T3C | — | — | — | — | — | 90 |
| 320 | T3A | — | — | — | — | — | — | 90 |
| 400 | T3A | — | — | — | — | — | — | 90 |

4L

4L EVM Hazard•Gard® H.I.D. Luminaires

Dimensions and Weights

Dimensions:



Luminaire Net Weights:

| H.I.D. Source | Lamp Watts | Luminaire Only with Globe and Guard (lbs.) |
|----------------------|------------|--|
| High Pressure Sodium | 50 | 40 |
| | 70 | 40 |
| | 100 | 44 |
| | 150 (55V) | 45 |
| | 150 (100V) | 44 |
| | 200 | 46 |
| Metal Halide | 250 | 46 |
| | 400 | 55 |
| | 70 | 39 |
| | 100 | 39 |
| Metal Halide | 175 | 42 |
| | 250 | 43 |
| | 400 | 51 |

| Type | Lbs. | Type | Lbs. |
|----------------------------------|------|-----------|-------|
| Add for Mounting Modules: | | | |
| Pendant | 1 | Bracket | 4 1/4 |
| Ceiling | 2 | Stanchion | 2 1/4 |

Add for Reflectors:
 RD739 1 3/4
 RA739 2
 EV3912 2 1/2
Deduct: 1 1/2 lbs. for luminaire without guard.

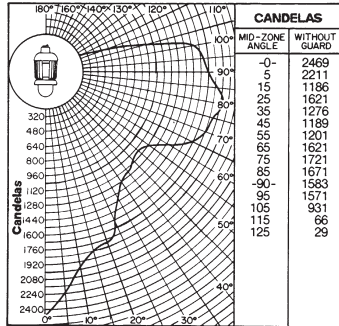
100, 175, 250W MV 50, 70, 100, 150W HPS 70, 100, 175, 250W MH
 All luminaires with QTZ option and 200, 250, 400W HPS 400W MV & MH

All - Reflectors

| Type | a | b | f | g | Dome - c | High Bay - d | 30° Angle - e |
|-------|----------|----------|---------|---------|----------|--------------|---------------|
| EVMA | 25 1/16 | 26 | 27 5/16 | 28 1/4 | 23 5/8 | 26 7/16 | 28 5/8 |
| EVMBX | 27 7/8 | 28 13/16 | 30 1/8 | 31 1/16 | 26 11/16 | 29 3/4 | 31 5/8 |
| EVMCX | 24 | 24 15/16 | 26 1/4 | 27 3/16 | 22 13/16 | 25 5/8 | 27 1/2 |
| EVMJ | 22 11/16 | 24 1/8 | 25 1/4 | 26 5/8 | 25 3/8 | 27 1/16 | 28 3/4 |

**Lamp: 150W/E-23-1/2 high pressure sodium (HPS)
Total bare lamp lumens: 16,000**

Luminaire With Globe and Without Guard



Note: Photometric data was developed using a 150 watt clear high pressure sodium lamp (16,000 lumens). For other clear lamps, use the following conversion factors (multipliers): 50W HPS – .25; 70W HPS – .40; 100W HPS – .59. Multipliers are for use with candela curve only.

Luminaire spacing ratio is 0.80.

Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

| % Reflectance Eff. Ceil. | Wall | Room Cavity Ratio | | | | |
|-----------------------------|------|-------------------|------|------|------|------|
| | | 1 | 2 | 3 | 4 | 5 |
| 80 | 50 | .695 | .579 | .494 | .410 | .382 |
| | 30 | .644 | .509 | .417 | .326 | .305 |
| | 10 | .599 | .450 | .356 | .262 | .246 |
| 70 | 50 | .659 | .549 | .469 | .387 | .363 |
| | 30 | .613 | .484 | .397 | .311 | .291 |
| | 10 | .570 | .431 | .341 | .251 | .236 |
| 50 | 50 | .592 | .491 | .419 | .344 | .327 |
| | 30 | .555 | .439 | .360 | .279 | .265 |
| | 10 | .522 | .393 | .312 | .229 | .218 |
| 30 | 50 | .531 | .438 | .373 | .304 | .292 |
| | 30 | .502 | .396 | .325 | .250 | .240 |
| | 10 | .474 | .358 | .284 | .207 | .200 |
| 10 | 50 | .476 | .390 | .331 | .267 | .260 |
| | 30 | .451 | .355 | .291 | .222 | .217 |
| | 10 | .429 | .325 | .257 | .184 | .181 |
| 0 | 0 | .399 | .295 | .230 | .159 | .159 |
| % Reflectance Eff. Ceil. | Wall | Room Cavity Ratio | | | | |
| | | 6 | 7 | 8 | 9 | 10 |
| 80 | 50 | .342 | .306 | .278 | .265 | .233 |
| | 30 | .266 | .234 | .209 | .198 | .168 |
| | 10 | .212 | .184 | .160 | .153 | .127 |
| 70 | 50 | .324 | .292 | .265 | .253 | .222 |
| | 30 | .254 | .223 | .201 | .191 | .163 |
| | 10 | .202 | .176 | .155 | .149 | .123 |
| 50 | 50 | .292 | .263 | .240 | .231 | .203 |
| | 30 | .232 | .203 | .184 | .177 | .150 |
| | 10 | .187 | .162 | .143 | .139 | .114 |
| 30 | 50 | .262 | .236 | .218 | .210 | .185 |
| | 30 | .211 | .186 | .167 | .162 | .138 |
| | 10 | .172 | .148 | .132 | .129 | .105 |
| 10 | 50 | .234 | .213 | .195 | .191 | .167 |
| | 30 | .190 | .169 | .152 | .149 | .125 |
| | 10 | .156 | .135 | .121 | .118 | .096 |
| 0 | 0 | .135 | .116 | .103 | .103 | .081 |

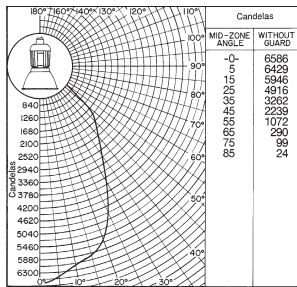
4L

4L EVM Hazard•Gard® H.I.D. Luminaires

Photometric Data

Lamp: 150W/E-23-1/2 high pressure sodium (HPS)
Total bare lamp lumens: 16000

Luminaire With Globe, Hi-Bay Reflector and Without Guard



Note: Photometric data was developed using a 150 watt clear high pressure sodium lamp (16,000 lumens). For other clear lamps, use the following conversion factors (multipliers): 50W HPS – .25; 70W HPS – .40; 100W HPS – .59. Multipliers are for use with candela curve only.
Luminaire spacing ratio is 1.00.

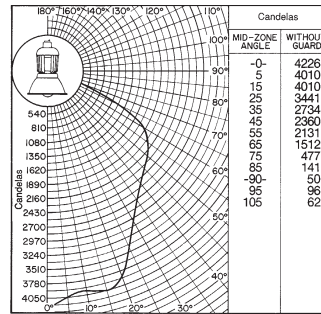
Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
|---------------|-------------------|--|-----------------------------------|------|------|------|------|
| | | | 1 | 2 | 3 | 4 | 5 |
| 80 | 50 | | .668 | .618 | .573 | .531 | .494 |
| | 30 | | .651 | .592 | .542 | .495 | .455 |
| | 10 | | .636 | .569 | .517 | .468 | .427 |
| 70 | 50 | | .655 | .608 | .566 | .525 | .487 |
| | 30 | | .639 | .583 | .536 | .491 | .452 |
| | 10 | | .625 | .564 | .513 | .464 | .425 |
| 50 | 50 | | .629 | .587 | .550 | .511 | .476 |
| | 30 | | .616 | .568 | .525 | .482 | .446 |
| | 10 | | .606 | .550 | .505 | .459 | .422 |
| 30 | 50 | | .606 | .569 | .535 | .498 | .466 |
| | 30 | | .597 | .554 | .514 | .474 | .438 |
| | 10 | | .588 | .539 | .497 | .454 | .418 |
| 10 | 50 | | .586 | .553 | .522 | .487 | .457 |
| | 30 | | .578 | .539 | .504 | .466 | .433 |
| | 10 | | .570 | .528 | .489 | .449 | .413 |
| 0 | 0 | | .560 | .517 | .479 | .439 | .404 |
| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
| | | | 6 | 7 | 8 | 9 | 10 |
| 80 | 50 | | .460 | .427 | .396 | .369 | .328 |
| | 30 | | .420 | .388 | .358 | .330 | .288 |
| | 10 | | .394 | .361 | .330 | .303 | .262 |
| 70 | 50 | | .455 | .423 | .392 | .366 | .325 |
| | 30 | | .418 | .385 | .356 | .328 | .288 |
| | 10 | | .391 | .359 | .329 | .303 | .262 |
| 50 | 50 | | .444 | .414 | .385 | .360 | .320 |
| | 30 | | .412 | .380 | .352 | .325 | .285 |
| | 10 | | .388 | .357 | .328 | .301 | .261 |
| 30 | 50 | | .436 | .406 | .379 | .354 | .315 |
| | 30 | | .407 | .377 | .348 | .322 | .282 |
| | 10 | | .385 | .354 | .326 | .300 | .259 |
| 10 | 50 | | .428 | .400 | .373 | .348 | .311 |
| | 30 | | .402 | .373 | .345 | .319 | .280 |
| | 10 | | .382 | .352 | .324 | .298 | .258 |
| 0 | 0 | | .373 | .343 | .315 | .290 | .249 |

Lamp: 150W/E-23-1/2 high pressure sodium (HPS)
Total bare lamp lumens: 16000

Luminaire With Globe, Dome Reflector and Without Guard



Note: Photometric data was developed using a 150 watt clear high pressure sodium lamp (16,000 lumens). For other clear lamps, use the following conversion factors (multipliers): 50W HPS – .25; 70W HPS – .40; 100W HPS – .59. Multipliers are for use with candela curve only.
Luminaire spacing ratio is 1.20.

Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
|---------------|-------------------|--|-----------------------------------|------|------|------|------|
| | | | 1 | 2 | 3 | 4 | 5 |
| 80 | 50 | | .716 | .637 | .568 | .507 | .455 |
| | 30 | | .689 | .596 | .519 | .452 | .398 |
| | 10 | | .666 | .561 | .480 | .410 | .355 |
| 70 | 50 | | .700 | .624 | .559 | .498 | .446 |
| | 30 | | .675 | .585 | .512 | .447 | .393 |
| | 10 | | .653 | .555 | .476 | .407 | .353 |
| 50 | 50 | | .668 | .598 | .538 | .479 | .432 |
| | 30 | | .648 | .567 | .498 | .435 | .385 |
| | 10 | | .631 | .539 | .466 | .400 | .349 |
| 30 | 50 | | .640 | .575 | .518 | .463 | .417 |
| | 30 | | .625 | .549 | .485 | .425 | .376 |
| | 10 | | .610 | .526 | .457 | .394 | .344 |
| 10 | 50 | | .615 | .554 | .500 | .447 | .404 |
| | 30 | | .602 | .532 | .472 | .415 | .369 |
| | 10 | | .590 | .513 | .448 | .388 | .339 |
| 0 | 0 | | .575 | .498 | .434 | .373 | .326 |
| % Reflectance | Room Cavity Ratio | | Eff. Floor Cavity Reflectance 20% | | | | |
| | | | 6 | 7 | 8 | 9 | 10 |
| 80 | 50 | | .413 | .373 | .339 | .312 | .275 |
| | 30 | | .355 | .318 | .285 | .258 | .222 |
| | 10 | | .316 | .280 | .246 | .221 | .187 |
| 70 | 50 | | .405 | .368 | .334 | .308 | .271 |
| | 30 | | .352 | .314 | .283 | .256 | .222 |
| | 10 | | .312 | .277 | .245 | .221 | .187 |
| 50 | 50 | | .392 | .356 | .324 | .299 | .264 |
| | 30 | | .345 | .307 | .277 | .252 | .217 |
| | 10 | | .309 | .274 | .243 | .219 | .185 |
| 30 | 50 | | .380 | .345 | .316 | .291 | .257 |
| | 30 | | .338 | .303 | .272 | .247 | .214 |
| | 10 | | .306 | .270 | .241 | .217 | .183 |
| 10 | 50 | | .369 | .337 | .307 | .283 | .251 |
| | 30 | | .331 | .298 | .267 | .244 | .210 |
| | 10 | | .301 | .267 | .238 | .215 | .181 |
| 0 | 0 | | .289 | .255 | .226 | .203 | .170 |