

Code•Master™ Jr. HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

Integrally Ballasted. 50 W, 70 W, 100 W, 150 W HPS; 175 W PSMH. 175 W MH ①. Medium Base. For Use with Threaded Metal Conduit.

NEC:

Class I, Division 1 and 2, Groups B, C, D
Class II, Division 1 and 2, Groups E, F, G
Class III
Marine type electric fixtures, outside type
(salt water)

CEC:

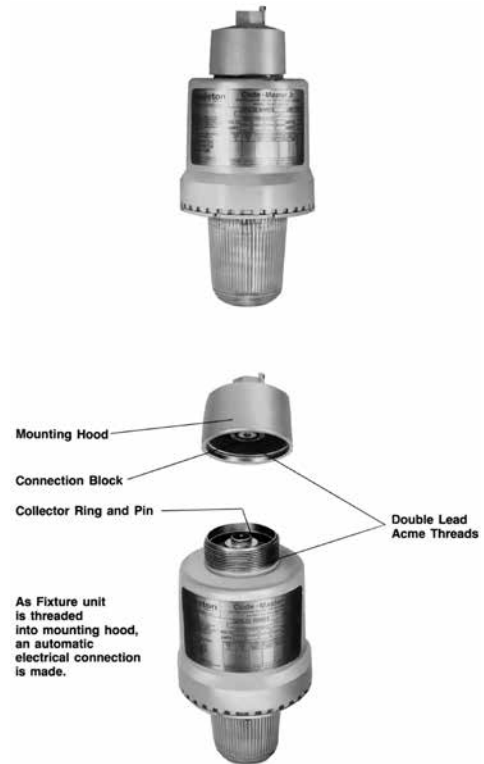
Class I, Division 1 and 2, Groups B, C, D
Class II, Division 1 and 2, Groups E, F, G
Class III
Type 4X
Exd IIB + H₂

Applications

- For use in chemical and petrochemical plants, such as manufacturers of plastics, paints and thinners; in refineries; and in other areas where ignitable vapors, dust, moisture and corrosive elements may be present.
- Suitable for outdoor saltwater locations and for other wet locations.

Features

- Fixtures operate safely in high ambient temperatures.
- Arrangement of heat-producing components results in efficient heat dissipation for cooler fixture operation.
- Patented “wireless” design. Threading of fixture unit onto mounting hood makes electrical connection. Only wiring required is attaching two wires to connection block in mounting hood.
- Connection block is easily wired: (a) loosen two screws, (b) make wire connections, and (c) re-position connection block.
- Safe, easy servicing without disconnecting any wiring. “Wireless” fixture unit threads off mounting hood for convenient servicing or for immediate replacement with a “stand-by” unit.
- Acme double-lead threads speed installation and fixture removal from mounting hood – only half as many turns are required as for single-lead threads. The threads do not stick or gall, eliminating problems often encountered with single-lead threads during fixture unit removal.
- All threaded joints are flame-tight.
- Integrally ballasted HID lighting fixtures; separate ballasts not required.
- Factory sealed. External seals not required for Groups C and D.
- Fixtures for use in NEC Group B locations furnished complete with UL required sealing fitting. Not required for CEC approval.
- Strategic location of lamp socket, in combination with interior prism design of the glass globe, provides optimum light distribution and control.
- Heat and impact-resistant globes have smooth dust-resistant exterior.
- Superior corrosion resistance, with epoxy powder coat finish.
- Shock-absorbing medium-base socket mounts prolong lamp life.
- Porcelain socket with nickel-plated phosphor bronze screw shell.
Assures long trouble-free operation in high ambient areas.
- Choice of mountings: pendant, ceiling, bracket and stanchion.
- Fiberglass-reinforced polyester reflectors, in standard dome, or 30° angle styles, are ideal in installations where luminaire is subject to exceptionally severe corrosive atmospheres.
- Optional guards protect globes from damage. Secured to fixture with three stainless steel screws.
- Variety of light sources: high pressure sodium, pulse start metal halide and metal halide. HPS is excellent where long lamp life is required. HPS provides high lumens per watt and is less expensive to operate. PSMH and MH are desirable where colors in illuminated areas must be close to natural.
- A wide range of ballasts and voltages are available for both domestic and export applications.
- Ballasts operate at low temperatures – PSMH/MH: -29 °C (-20 °F); HPS: -40 °C (-40 °F).
- 50 W through 150 W high pressure sodium ballasts are high reactance, high power factor type.



Standard Materials

- Ballast bodies and guards: copperfree (4/10 of 1% max.) aluminum
- Pendant mounting hoods: diecast copperfree (4/10 of 1% max.) aluminum
- Ceiling, bracket and stanchion mounting hoods: sand cast copperfree (4/10 of 1% max.) aluminum
- Reflectors: fiberglass reinforced polyester

Standard Finishes

- Ballast bodies, guards and mounting hoods: epoxy powder coat finish, electrostatically applied for complete, uniform corrosion protection

Options

- Fuses: order fuses for field installation by catalog number, see *Ballast and Fuse Kit Data*.
- “Hot Restrike” – add suffix **-R**. “Smart Starter” – add suffix **-S**. Emergency Options available for 50 W through 150 W HPS only.
- For CEC Exd IIB + H₂ rating, add suffix **-Z**.
- For safety chain, add suffix **-SC**.

NEC/CEC Certifications and Compliances

- UL Standard: UL 1598, UL 844
- UL Listed: E10444
- CSA Standard: C22.2 No. 250, C22.2 No. 137
- CSA Certified: 025428

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Lamp Watts	Ballast Type ②	+40 °C (+104 °F) ③		+55 °C (+131 °F) ③		+65 °C (+149 °F) ③		+40 °C (+104 °F) ④	
		Ambient Temp. "T" Numbers	Supply Wire Temp °C (°F)	Ambient Temp. "T" Numbers	Supply Wire Temp °C (°F)	Ambient Temp. "T" Numbers	Supply Wire Temp °C (°F)	Ambient Temp. "T" Numbers	Supply Wire Temp °C (°F)
High Pressure Sodium – Medium Base Lamps									
50	MT, TT	T6	75 (167)	T5	75 (167)	T4A	75 (167)	T4	75 (167)
70	MT, TT, 480 V	T5	75 (167)	T4A	75 (167)	T4A	75 (167)	T4	90 (194)
100	MT, TT, 480 V	T4A	75 (167)	T4	90 (194)	—	—	T3B	90 (194)
150	MT, TT, 480 V	T3C	75 (167)	—	—	—	—	—	—
Pulse Start Metal Halide – Medium Base Lamps									
175	MT, TT, 480 V	T3B	90 (194)	—	—	—	—	—	—
Metal Halide① – Medium Base Lamps									
175	MT, TT, 480 V	T3B	85 (185)	—	—	—	—	—	—

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

"T" Number	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range (°C)	351-450	326-350	301-325	281-300	261-280	231-260	216-230	201-215	181-200	166-180	161-165	136-160	121-135	101-120	86-100	85
Temp. Range (°F)	664-842	619-662	574-617	538-572	502-536	448-500	421-446	394-419	358-392	331-356	322-329	277-320	250-275	214-248	187-212	185

Fixture and Accessory Weights kg (lb)

Fixture Size	Fixture Weight	Reflector Weight	Guard Weight
50 W thru 175 W	12.70-14.51 (28-32)	1.36 (3)	0.45 (1)

Mounting Hood Weights kgs (lbs)

Pendant	Ceiling	Bracket	Stanchion
0.91 (2)	1.81 (4)	2.72 (6)	0.91 (2)

NOTE: The maximum operating temperature of the fixture must not exceed the ignition temperature of the gas, vapor or dust to be encountered per the National Electrical Code and the Canadian Electrical Code.

① Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

② MT is Multi-Tap for 120/208/240/277 V, TT is Tri-Tap for 120/277/347 V.

③ Class I, Division 1 Locations.

④ Class II, Division 1 Locations.




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Type Mounting	Lamp Watts	ANSI Lamp Type ⑥		Hub Size (Inches)	Catalog Number ③	
		HPS	PSMH		HPS ②	PSMH
Pendant - One Hub, Rigid or Flexible Mounting						
	50	S68	—	3/4	CJLPB5075 ④	—
	70	S62	—	3/4	CJLPB7075 ⑤	—
	100	S54	—	3/4	CJLPB1075 ⑤	—
	150	S55	—	3/4	CJLPB1575 ⑤	—
	175	—	M152	3/4	—	CJPPB1775 ⑤
25° Stanchion - One Hub						
	50	S68	—	1-1/2	CJLSB50150 ④	—
	70	S62	—	1-1/2	CJLSB70150 ⑤	—
	100	S54	—	1-1/2	CJLSB10150 ⑤	—
	150	S55	—	1-1/2	CJLSB15150 ⑤	—
	175	—	M152	1-1/2	—	CJPSB17150 ⑤
Mounting Hoods						
Type Mounting			Hub Size (Inches)	Catalog Number		
	Pendant					
		One Hub	3/4	CAP-75B		
	25° Stanchion					
		One Hub	1-1/2	CAS-150B		

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 ② Add suffix **-R** for "Hot Restrike" and **-S** for "Smart Starter" options.
 ③ To order fixture with guard, add suffix **-G** (before adding voltage suffix).
 ④ Add voltage **-MT** for 120/208/240/277 V. For 480 V, contact your sales representative.
 ⑤ Add voltage suffix **-MT** for 120/208/240/277 V, or **-48** for 480 V. Contact your sales representative for available 50 Hz ballasts.
 ⑥ Refer to lamp manufacturer's data regarding lamp burning position restrictions.

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 Type 4X
 Exd IIB + H₂

HID/AREA: NEC/CEC EXPLOSIONPROOF

Lamp Watts	ANSI Lamp Type ⑦		Hub Size ⑧ (Inches)	Catalog Number ③		
	HPS	PSMH/MH		HPS ②	PSMH	MH ①
Pendant — One Hub, Rigid or Flexible Mounting						
50	S68	M110	3/4	CJLP5075MT ④	—	—
			1	CJLP5075TTCN ⑨④	—	—
70	S62	M98	3/4	CJLP7075MT ⑤	—	—
			1	CJLP7075TTCN ⑨⑥	—	—
100	S54	M90	3/4	CJLP1075MT ⑤	—	—
			1	CJLP1075TTCN ⑨⑥	—	—
150	S55	—	3/4	CJLP1575MT ⑤	—	—
			1	CJLP1575TTCN ⑨⑥	—	—
175	—	M152	3/4	—	CJPP1775MT ⑤	CJHP1775MTCN ⑨⑤
			1	—	CJPP1775TTCN ⑨⑥	CJHP1775TTCN ⑨⑥
Ceiling — Four Hubs, Three Close-Up Plugs						
50	S68	M110	3/4	CJLC5075MT ④	—	—
			1	CJLC5075TTCN ⑨④	—	—
70	S62	M98	3/4	CJLC7075MT ⑤	—	—
			1	CJLC7075TTCN ⑨⑥	—	—
100	S54	M90	3/4	CJLC1075MT ⑤	—	—
			1	CJLC1075TTCN ⑨⑥	—	—
150	S55	—	3/4	CJLC1575MT ⑤	—	—
			1	CJLC1575TTCN ⑨⑥	—	—
175	—	M152	3/4	—	CJPC1775MT ⑤	CJHC1775MTCN ⑨⑤
			1	—	CJPC1775TTCN ⑨⑥	CJHC1775TTCN ⑨⑥
Shaded area indicates items suitable for Class I, Division 1, Group B.						



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② Add suffix **-R** for "Hot Restrike" and **-S** for "Smart Starter" options.

③ To order fixture with guard, add suffix **-G** before adding voltage suffix.

④ For 480 V, contact your sales representative.

⑤ Change voltage suffix **-MT** to **-48** for 480 V.

⑥ Change voltage suffix **-TT** (120/277/347 V) to **-MT** for 120/208/240/277 V, **-C2** for 208 V, **-C3** for 240 V, **-C6** for 480 V, or **-C7** for 600 V. These voltage suffixes have CSA Certification only.

⑦ Refer to lamp manufacturer's data regarding lamp burning position restrictions.

⑧ Fixtures with 1" hubs listed for Class I, Group D, and Class II, Groups E, F, G only.

⑨ Catalog numbers with **-CN** suffix have CSA Certification only.

♦ Shaded area indicates items suitable for Class I, Division 1, Group B.

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CEC:

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Class III
Type 4X
Exd IIB + H₂

Lamp Watts	ANSI Lamp Type ⑦		Hub Size ⑧ (Inches)	Catalog Number ③		
	HPS	PSMH/MH		HPS ②	PSMH	MH ①
Bracket – Four Hubs, Three Close-Up Plugs						
50	S68	M110	3/4	CJLB5075MT ④	—	—
			1	CJLB5075TTCN ⑩④	—	—
70	S62	M98	3/4	CJLB7075MT ⑤	—	—
			1	CJLB7075TTCN ⑩⑥	—	—
100	S54	M90	3/4	CJLB1075MT ⑤	—	—
			1	CJLB1075TTCN ⑩⑥	—	—
150	S55	—	3/4	CJLB1575MT ⑤	—	—
			1	CJLB1575TTCN ⑩⑥	—	—
175	—	M152	3/4	—	CJPB1775MT ⑤	CJHB1775MTCN ⑩⑤
			1	—	CJPB1775TTCN ⑩⑥	CJHB1775TTCN ⑩⑥
25° Stanchion – One Hub						
50	S68	M110	1-1/4 or 1-1/2 ⑨	CJLS50150MT ④	—	—
			1	CJLS50150TTCN ⑩④	—	—
70	S62	M98	1-1/4 or 1-1/2 ⑨	CJLS70150MT ⑤	—	—
			1	CJLS70150TTCN ⑩⑤	—	—
100	S54	M90	1-1/4 or 1-1/2 ⑨	CJLS10150MT ⑤	—	—
			1	CJLS10150TTCN ⑩⑤	—	—
150	S55	—	1-1/4 or 1-1/2 ⑨	CJLS15150MT ⑤	—	—
			1	CJLS15150TTCN ⑩⑤	—	—
175	—	M152	1-1/4 or 1-1/2 ⑨	—	CJPS17150MT	CJHS17150MTCN ⑩
			1	—	CJPS17150TTCN ⑩	CJHS17150TTCN ⑩



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② Add suffix **-R** for "Hot Restrike" and **-S** for "Smart Starter" options.

③ To order fixture with guard, add suffix **-G** before adding voltage suffix.

④ For 480 V, contact your sales representative.

⑤ Change voltage suffix **-MT** to **-48** for 480 V.

⑥ Change voltage suffix **-TT** (120/277/347 V) to **-MT** for 120/208/240/277 V, **-C2** for 208 V, **-C3** for 240 V, **-C6** for 480 V, or **-C7** for 600 V. These voltage suffixes have CSA Certification only.

⑦ Refer to lamp manufacturer's data regarding lamp burning position restrictions.

⑧ Fixtures with 1" hubs listed for Class I, Group D, and Class II, Groups E, F, G only.

⑨ 1-1/2" tapped hub furnished with 1-1/2" to 1-1/4" reducer.

⑩ Catalog numbers with **-CN** suffix have CSA Certification only.

◆ Shaded area indicates items suitable for Class I, Division 1, Group B.

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Mounting Hoods

	Hub Size (Inches)	Catalog Number
Pendant — One Hub		
	3/4	CAP-75
	1 ③	CAP-100
Ceiling — Four Hubs, Three Close-Up Plugs		
	3/4	CAC-75
	1 ③	CAC-100
Bracket — Four Hubs, Three Close-Up Plugs		
	3/4	CALB-75
	1 ③	CALB-100
25° Stanchion — One Hub		
	1-1/4 or 1-1/2 ②	CAS-150
Mounting Adapter with Connection Block		
	Permits use of existing A-51 mounting hoods (AAC Ceiling or AALB Bracket) with the new Code•Master 2 Fixture Unit. After removing existing fixture unit and adapter, screw in the new CMAD-1 Adapter. Then thread new fixture unit into the CMAD-1.	CMAD-1

Fixture Units

Ballast body with globe. Indicate voltage desired by adding voltage suffix to fixture unit catalog number listed below.

Type	Lamp Watts	Fixture Unit Number	Add Voltage Suffixes		
			120/208/240/277	120/277/347 ⑤	480 V
High Pressure Sodium ④ High Power Factor (Min. P.F. 90%)	50	CJB50L-	MT	TTCN	—
	70	CJB70L-	MT	TTCN	48
	100	CJB100L-	MT	TTCN	48
	150	CJB150L-	MT	TTCN	48
Pulse Start Metal Halide Constant Wattage (Min. P.F. 90%)	175	CJB175P-	MT	TTCN	48
Metal Halide Constant Wattage (Min. P.F. 90%)	175	CJB175H-	MT	TT	C6

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② 1-1/2" Tapped hub furnished with 1-1/2" to 1-1/4" reducer.

③ Mounting Hoods with 1" hub listed for Class I, Group D; Class II, Groups E,F,G; and Class III only.

④ Add suffix **-R** for "Hot Restrike" and **-S** for "Smart Starter" options.

⑤ Change voltage suffix **-TTCN** to **-MTCN** for 120/208/240/277 V, **-C2** for 208 V, **-C3** for 240 V, **-C6** for 480 V, or **-C7** for 600 V. These voltage suffixes have CSA Certification only.

♦ Shaded area indicates items suitable for Class I, Division 1, Group B.

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Appleton

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	Description	Catalog Number
Polyester Reflectors		
 <p data-bbox="240 611 370 632">Standard Dome</p> <p data-bbox="477 611 558 632">30° Angle</p>	<p data-bbox="889 499 1040 558">Standard Dome 30° Angle</p>	<p data-bbox="1377 499 1455 558">KR2-ST KR2-AN</p>
Three-Way Exit Sign		
	<p data-bbox="691 682 1235 741">Epoxy enameled steel — 6"-high red lettering Mounts to Code•Master Jr. fixture units in place of guard.</p>	<p data-bbox="1377 682 1463 703">CJEXRN</p>
Single Sided Exit Sign		
	<p data-bbox="691 850 1235 909">Epoxy enameled steel — 6"-high red lettering Mounts to Code•Master Jr. fixture units in place of guard.</p> <p data-bbox="656 930 1271 951">*Contact your sales representative regarding hazardous location suitability.</p>	<p data-bbox="1377 854 1479 875">AEXR-15R</p>
Prismatic Glass Globe and Ring Assembly — 50 W through 175 W		
		<p data-bbox="1377 1056 1474 1077">CJGL-175</p>
Aluminum Guards — 50 W through 175 W		
		<p data-bbox="1377 1236 1468 1257">CJGU-15</p>
Replacement Sockets — 50 W through 175 W		
	<p data-bbox="862 1425 1068 1446">Medium base sockets</p>	<p data-bbox="1377 1425 1479 1446">CJMS-175</p>
Connection Block — 50 W through 175 W		
	<p data-bbox="833 1581 1097 1602">For all Code•Master fixtures</p>	<p data-bbox="1377 1581 1435 1602">VPT-7</p>
HPS Hot Restrike		
<p data-bbox="199 1682 1101 1734">Restrikes HPS lamp immediately when power is restored after a momentary power interruption. Optional for fixture watts of 50, 70, 100 or 150 (HPS only)</p>		<p data-bbox="1325 1709 1451 1730">Add suffix -R</p>
Smart Starter		
<p data-bbox="199 1778 1471 1879">Smart Starter is for HPS fixtures only. 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 which reduces maintenance and repair costs. Optional for all HPS and PSMH fixtures.</p>		<p data-bbox="1325 1854 1451 1875">Add suffix -S</p>

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HID/AREA: NEC/CEC EXPLOSIONPROOF

Appleton®

Lamp	Watts	Volts	Ballast Amps				Fuse Quantity Required	Fuse Kit Catalog Number		
			High Pressure Sodium HX-H.P.F. ②		Pulse Start Metal Halide HX-H.P.F. ② — Super CWA ③			HPS	PSMH	MH ①
			Start	Operating	Start	Operating				
50		120	0.58	0.58	—	—	1	CF-5	—	—
		208	0.35	0.33	—	—	2	CF-3	—	—
		240	0.31	0.29	—	—	2	CF-3	—	—
		277	0.25	0.25	—	—	1	CF-2	—	—
		347 ④	—	—	—	—	—	—	—	—
		480	—	—	—	—	—	—	—	—
70		120	0.90	0.82	—	—	1	CF-5	—	—
		208	0.50	0.48	—	—	2	CF-3	—	—
		240	0.44	0.41	—	—	2	CF-3	—	—
		277	0.35	0.36	—	—	1	CF-2	—	—
		347 ④	0.30	0.30	—	—	1	CF-2	—	—
		480	0.21	0.21	—	—	2	CF-2	—	—
100		120	1.30	1.15	—	—	1	CF-8	—	—
		208	0.76	0.67	—	—	2	CF-5	—	—
		240	0.66	0.58	—	—	2	CF-5	—	—
		277	0.60	0.50	—	—	1	CF-3	—	—
		347 ④	0.45	0.30	—	—	1	CF-2	—	—
		480	0.33	0.31	—	—	2	CF-3	—	—
150		120	2.00	1.66	—	—	1	CF-10	—	—
		208	1.16	0.96	—	—	2	CF-5	—	—
		240	1.00	0.83	—	—	2	CF-5	—	—
		277	1.00	0.83	—	—	1	CF-5	—	—
		347 ④	0.52	0.56	—	—	1	CF-3	—	—
		480	0.88	0.75	—	—	2	CF-5	—	—
175		120	1.30	1.80	0.80	1.80	1	—	CF-5	CF-5
		208	0.75	1.04	0.50	1.00	2	—	CF-3	CF-3
		240	0.65	0.90	0.40	0.90	2	—	CF-3	CF-3
		277	0.55	0.80	0.40	0.80	1	—	CF-2	CF-2
		347 ④	0.27	0.65	0.25	0.65	1	—	CF-2	CF-2
		480	0.35	0.45	0.15	0.45	2	—	CF-3	CF-2

Fuse Kit includes fuse, fuse holder and necessary hardware for field installation. Mounts easily in ballast body with one screw. Order one fuse for 120 V and 277 V, and 2 fuses for 208, 240 and 480 V. CF-2 = 2 Amp; CF-3 = 3 Amp; CF-5 = 5 Amp; CF-8 = 8 Amp; CF-10 = 10 Amp

① Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

② 35 W through 150 W HPS have H.P.F. High Reactance ballasts.

③ 175 W PSMH 480 volts has CWA ballast. Multi-tap has CWA ballast.

④ 347 V lamp has CSA Certification only.

Code•Master™ Jr. HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

Integrally Ballasted. 50 W, 70 W, 100 W, 150 W HPS; 175 W PSMH. 175 W MH ①. Medium Base. For Use with Threaded Metal Conduit.

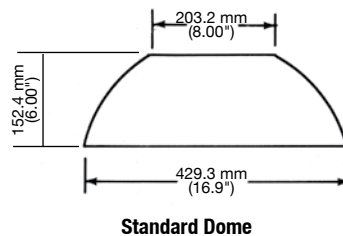
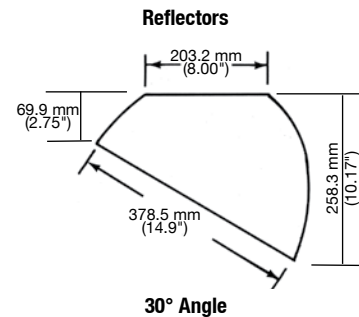
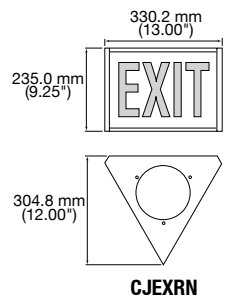
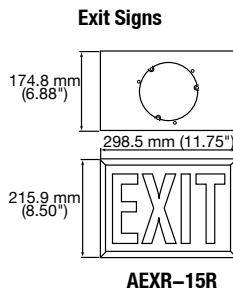
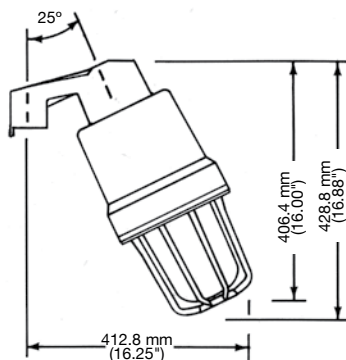
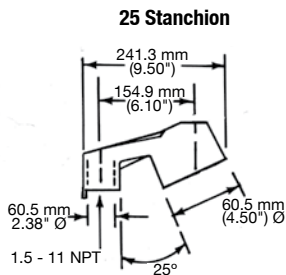
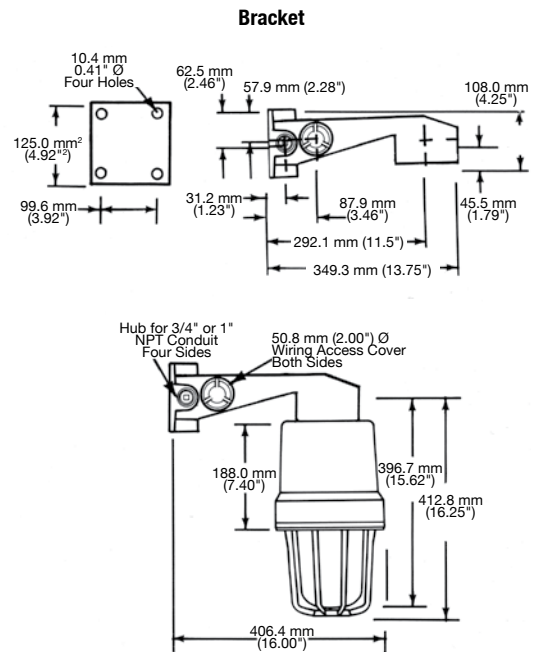
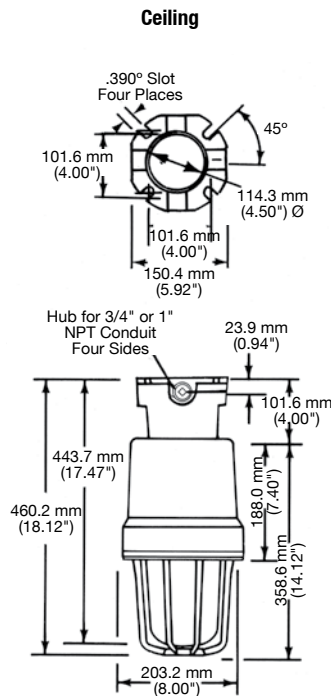
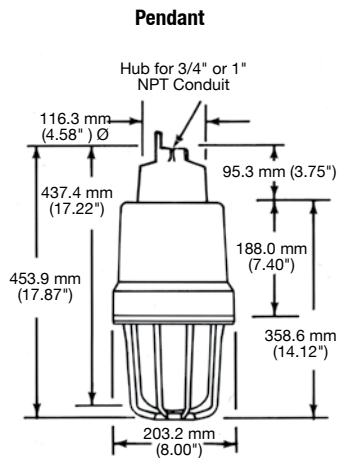
NEC:

Class I, Division 1 and 2, Groups B, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III
 Marine type electric fixtures, outside type
 (salt water)

CEC:

Class I, Division 1 and 2, Groups B, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III
 Type 4X
 Exd IIB + H₂

Dimensions in Millimeters (Inches)



① Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

Code•Master™ Jr. HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

* Photometric data is based on a fixture with a 150-watt clear High Pressure Sodium lamp (16,000 lumen), without guard. 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 – 0.394; for a 70 W (5800 lumen) HPS lamp – 0.363; for a 50 W (4,000 lumen) HPS lamp – 0.25; for a 35 W (2,250 lumen) HPS lamp – 0.141. For candlepower values of fixture with guard, multiply by 0.95.

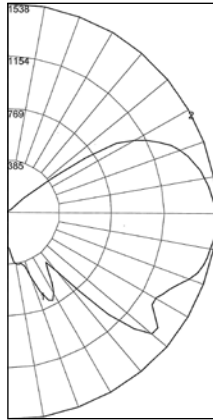
NEC:
 Class I, Division 1 and 2, Groups B, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III
 Marine type electric fixtures, outside type
 (salt water)

CEC:
 Class I, Division 1 and 2, Groups B, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III
 Type 4X
 Exd IIB + H₂

HPS Photometric Data

Zone	Lumens	Total Luminaire Efficiency = 77.5%
0-10	32.97	CIE Type – General Diffuse
10-20	119.16	
20-30	313.87	
30-40	349.57	
40-50	804.55	
50-60	1193.29	
60-70	1327.33	
70-80	1576.23	
80-90	1672.01	
90-100	1647.69	
100-110	1507.22	
110-120	1221.25	
120-130	607.81	
130-140	27.17	
140-150	1.62	
150-160	0.35	
160-170	0.07	
170-180	0.02	

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	465.99	2.9	3.8
0-40	815.56	5.1	6.6
0-60	2813.41	17.6	22.7
0-90	7388.98	46.2	59.6
90-120	4376.17	27.4	35.3
90-130	4983.97	31.1	40.2
90-150	5012.76	31.3	40.2
90-180	5013.20	31.3	40.4
180-0	12402.18	77.5	100.0



REPORT NUMBER: **CJL15G**

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

Coefficients of Utilization – Zonal Cavity Method
 Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80			70			50			30			10			0	
		70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	85	85	85	85	79	79	79	79	69	69	69	59	59	59	50	50	50	46
1	72	66	61	57	67	61	57	53	52	49	45	44	41	38	36	34	32	28
2	64	55	48	42	58	51	44	39	43	38	33	35	31	28	29	26	23	19
3	57	47	39	33	52	43	36	30	36	30	26	30	25	21	24	20	17	14
4	51	40	32	26	47	37	30	24	31	25	21	25	21	17	20	16	13	10
5	46	35	27	21	42	32	25	20	27	21	17	22	17	14	18	14	11	8
6	42	31	23	18	39	29	22	17	24	18	14	20	15	11	16	12	9	6
7	39	28	20	15	36	26	19	14	21	16	12	18	13	10	14	10	7	5
8	36	25	18	13	33	23	17	12	19	14	10	16	11	8	13	9	6	4
9	33	23	16	11	31	21	15	10	18	12	9	15	10	7	12	8	6	4
10	31	21	14	10	29	19	13	9	16	11	8	13	9	6	11	7	5	3

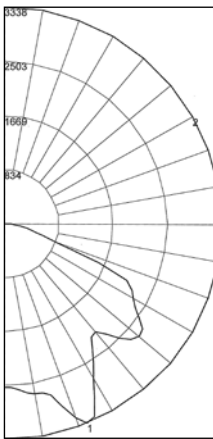
HID/AREA: NEC/CEC EXPLOSIONPROOF

Appleton®

Zone	Lumens	Total Luminaire Efficiency = 66.9%
0-10	249.34	CIE Type – Direct
10-20	810.25	
20-30	1450.35	
30-40	1495.68	
40-50	1920.69	
50-60	2259.61	
60-70	1846.14	
70-80	541.69	
80-90	125.07	
90-100	0.70	
100-110	0.00	
110-120	0.00	
120-130	0.00	
130-140	0.00	
140-150	0.00	
150-160	0.00	
160-170	0.00	
170-180	0.00	

Plane	Spacing Criteria
0-180	1.44
90-270	1.44
Diagonal	1.80

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	2509.94	15.7	23.5
0-40	4005.62	25.0	37.4
0-60	8185.92	51.2	76.5
0-90	10698.82	66.9	100.0
90-120	0.70	0.0	0.0
90-130	0.70	0.0	0.0
90-150	0.70	0.0	0.0
90-180	0.70	0.0	0.0
180-0	10699.52	66.9	100.0



REPORT NUMBER: **CJL15T**

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

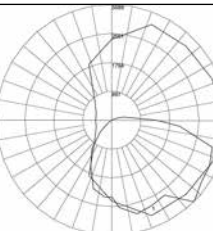
Coefficients of Utilization – Zonal Cavity Method
 Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80			70			50			30			10			0	
		70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	80	80	80	80	78	78	78	78	74	74	74	71	71	71	68	68	68	67
1	73	69	66	64	71	68	65	63	65	63	61	62	61	59	60	59	57	56
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6	45	36	30	25	44	35	29	25	34	29	25	33	28	24	32	27	24	23
7	42	32	26	22	40	32	26	22	31	25	21	30	25	21	29	24	21	20
8	39	29	23	19	38	29	23	19	28	23	19	27	22	19	26	22	19	17
9	36	27	21	17	35	26	21	17	25	20	17	25	20	17	24	20	17	15
10	34	24	19	15	33	24	19	15	23	19	15	23	18	15	22	18	15	14

Zone	Lumens	Total Luminaire Efficiency = 61.8%
0-10	58.31	CIE Type – Direct
10-20	482.43	
20-30	904.49	
30-40	1163.85	
40-50	1479.08	
50-60	1630.56	
60-70	1467.51	
70-80	1258.91	
80-90	1077.10	
90-100	153.91	
100-110	155.65	
110-120	52.23	
120-130	8.33	
130-140	0.10	
140-150	0.00	
150-160	0.00	
160-170	0.00	
170-180	0.00	

Plane	Spacing Criteria
0-180	2.08
90-270	1.38
Diagonal	1.54

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	1445.23	9.0	14.6
0-40	2609.08	16.3	26.4
0-60	5718.73	35.7	57.8
0-90	9522.24	59.5	96.3
90-120	361.80	2.3	3.7
90-130	370.13	2.3	3.7
90-150	370.23	2.3	3.7
90-180	370.23	2.3	3.7
180-0	9892.48	61.8	100.0



REPORT NUMBER: **CJL15A**

Lamps: 150 W High Pressure Sodium lamp 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	50	30	10			
0	73	73	73	73	71	71	71	71	67	67	67	64	64	64	61	61	61	60
1	64	59	55	52	61	58	54	51	54	51	49	51	49	47	49	47	45	43
2	56	50	44	40	54	48	43	39	46	41	38	43	39	36	41	38	35	33
3	51	43	36	31	49	41	36	31	39	34	30	37	33	29	35	31	28	27
4	46	37	30	25	44	36	30	25	34	29	24	32	28	24	30	26	23	22
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6	38	29	22	18	37	28	22	18	27	21	17	25	21	17	24	20	17	15
7	35	26	20	15	34	25	19	15	24	19	15	23	18	15	22	17	14	13
8	33	23	17	13	31	23	17	13	22	17	13	21	16	13	20	16	12	11
9	30	21	16	12	29	21	15	12	20	15	11	19	14	11	18	14	11	10
10	28	19	14	10	27	19	14	10	18	13	10	17	13	10	17	13	10	9

Code•Master™ Jr. HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

* Photometric data is based on a fixture with a 175-watt clear Pulse Start Metal Halide lamp (14,000 lumen), without guard. For candlepower values of fixtures with other PSMH lamps, use the following multipliers: for a 100 W (8,500 lumen) PSMH lamp – 0.607; for a 70 W (5,000 lumen) PSMH lamp – 0.357. For candlepower values of fixture with guard, multiply by – 0.95.

NEC:

Class I, Division 1 and 2, Groups B, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III
 Marine type electric fixtures, outside type
 (salt water)

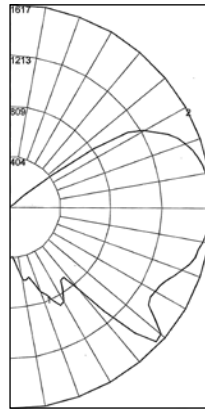
CEC:

Class I, Division 1 and 2, Groups B, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III
 Type 4X
 Exd IIB + H₂

PSMH Photometric Data

Zone	Lumens	Total Luminaire Efficiency = 77.8%
0-10	46.64	CIE Type – General Diffuse
10-20	176.99	
20-30	380.01	
30-40	480.30	
40-50	1042.35	
50-60	1252.88	
60-70	1378.40	
70-80	1611.81	
80-90	1741.68	
90-100	1758.28	
100-110	1643.71	
110-120	1371.76	
120-130	694.24	
130-140	27.13	
140-150	3.14	
150-160	0.67	
160-170	0.08	
170-180	0.03	

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	603.64	3.4	4.4
0-40	1083.94	6.2	8.0
0-60	3379.18	19.3	24.8
0-90	8111.07	46.3	59.6
90-120	4773.75	27.3	35.1
90-130	5467.99	31.2	40.2
90-150	5498.26	31.4	40.2
90-180	5499.05	31.4	40.4
180-0	13610.12	77.8	100.0



REPORT NUMBER: **CJP17G**

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

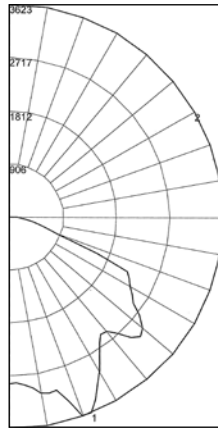
Coefficients of Utilization – Zonal Cavity Method
 Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80		70		50		30		10		0						
		70	50	30	10	70	50	30	10	50	30		10					
0	85	85	85	85	79	79	79	79	69	69	69	59	59	59	51	51	51	46
1	73	67	62	58	67	62	58	54	53	49	46	45	42	39	37	35	33	29
2	64	56	49	43	59	52	45	40	44	39	35	36	32	29	30	27	24	20
3	57	48	40	34	53	44	37	31	37	31	27	31	26	22	25	21	18	15
4	52	41	33	27	48	38	31	25	32	26	22	26	22	18	21	17	14	12
5	47	36	28	22	43	33	26	21	28	22	18	23	18	15	19	15	12	9
6	43	32	24	19	40	29	23	18	25	19	15	20	16	12	16	13	10	7
7	40	28	21	16	36	26	20	15	22	17	13	18	14	10	15	11	8	6
8	37	26	19	14	34	24	17	13	20	15	11	17	12	9	13	10	7	5
9	34	23	17	12	31	21	15	11	18	13	9	15	11	8	12	9	6	4
10	32	21	15	11	29	20	14	10	17	12	8	14	10	7	11	8	5	4

Zone	Lumens	Total Luminaire Efficiency = 66.4%
0-10	281.17	CIE Type – Direct
10-20	914.71	
20-30	1567.70	
30-40	1691.30	
40-50	2211.91	
50-60	2339.53	
60-70	1900.87	
70-80	568.93	
80-90	145.98	
90-100	1.23	
100-110	0.00	
110-120	0.00	
120-130	0.00	
130-140	0.00	
140-150	0.00	
150-160	0.00	
160-170	0.00	
170-180	0.00	

Plane	Spacing Criteria
0-180	1.42
90-270	1.42
Diagonal	1.76

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	2763.57	15.8	23.8
0-40	4454.87	25.5	38.3
0-60	9006.31	51.5	77.5
0-90	11622.09	66.4	100.0
90-120	1.23	0.0	0.0
90-130	1.23	0.0	0.0
90-150	1.23	0.0	0.0
90-180	1.23	0.0	0.0
180-0	11623.32	66.4	100.0



REPORT NUMBER: **CJP17ST**

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

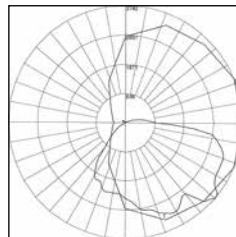
Coefficients of Utilization – Zonal Cavity Method
 Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80		70		50		30		10		0						
		70	50	30	10	70	50	30	10	50	30		10					
0	79	79	79	79	77	77	77	77	74	74	74	71	71	71	68	68	68	66
1	72	69	66	64	70	67	65	63	65	63	61	62	60	59	60	58	57	56
2	65	60	55	51	64	58	54	51	56	52	49	54	51	48	52	49	47	46
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6	45	36	30	25	44	35	29	25	34	29	25	33	28	25	32	28	24	23
7	42	32	26	22	41	32	26	22	31	26	22	30	25	22	29	25	21	20
8	39	29	23	19	38	29	23	19	28	23	19	27	22	19	26	22	19	18
9	36	27	21	17	35	26	21	17	26	21	17	25	20	17	24	20	17	16
10	34	25	19	16	33	24	19	16	24	19	15	23	18	15	22	18	15	14

Zone	Lumens	Total Luminaire Efficiency = 63.2%
0-10	238.28	CIE Type – Direct
10-20	739.68	
20-30	1242.92	
30-40	1491.36	
40-50	1770.34	
50-60	1739.56	
60-70	1484.79	
70-80	1197.57	
80-90	689.02	
90-100	254.20	
100-110	105.48	
110-120	35.72	
120-130	41.95	
130-140	8.72	
140-150	6.06	
150-160	4.53	
160-170	2.20	
170-180	0.68	

Plane	Spacing Criteria
0-180	2.10
90-270	1.60
Diagonal	1.62

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	2220.87	12.7	20.1
0-40	3712.23	21.2	33.6
0-60	7222.13	41.3	65.3
0-90	10593.52	60.5	95.8
90-120	395.41	2.3	3.6
90-130	437.36	2.5	4.0
90-150	452.13	2.6	4.0
90-180	459.54	2.6	4.2
180-0	11053.05	63.2	100.0



REPORT NUMBER: **CJP17AN**

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

Coefficients of Utilization – Zonal Cavity Method
 Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80		70		50		30		10		0						
		70	50	30	10	70	50	30	10	50	30		10					
0	75	75	75	75	73	73	73	73	69	69	69	65	65	65	62	62	62	61
1	66	63	59	56	64	61	58	55	58	55	53	55	53	51	52	50	49	47
2	60	53	48	44	58	52	47	43	49	45	42	47	43	41	44	42	39	38
3	54	46	40	36	52	45	40	35	43	38	34	41	37	33	39	35	32	31
4	49	41	34	30	47	39	34	29	38	33	29	36	31	28	34	30	27	26
5	45	36	30	25	43	35	29	25	33	28	24	32	27	24	30	26	23	22
6	41	32	26	22	40	31	26	21	30	25	21	29	24	21	27	23	20	19
7	38	29	23	19	37	28	23	19	27	22	18	26	21	18	25	21	18	16
8	35	26	21	17	34	26	20	17	25	20	16	24	19	16	23	19	16	14
9	33	24	19	15	32	24	18	15	23	18	15	22	17	14	21	17	14	13
10	31	22	17	13	30	22	17	13	21	16	13	20	16	13	19	15	13	12