

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

Integrally Ballasted. 50 W, 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH; 175 W, 250 W, 400 W MH.

Mogul Base. For use with threaded metal conduit.

NEC:

Class I, Division 1 and 2, Groups 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 I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

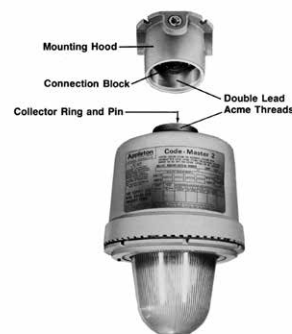
CSA Type 4X
Exd IIB, Zone 1

Applications

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

Features

- Fixtures operate safely in high ambient temperatures. For example, in Class I areas the 150 W HPS fixture operates at a maximum temperature of +120 °C (+248 °F) in a +65 °C (+149 °F) ambient [+100 °C (+212 °F) temperature in a +40 °C (+104 °F) ambient].
- Arrangement of heat-producing components results in more efficient heat dissipation for cooler fixture operation.
- "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 easily 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 the troublesome 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.
- Strategic location of lamp socket in combination with the interior prism design of the glass globe provides optimum light distribution and control.
- Superior corrosion resistance, with epoxy powder coat finish.
- 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, deep dome or 30° angle, are ideal in installations where luminaire is subject to exceptionally severe corrosive atmospheres. The high bay aluminum reflector is indicated in installations where mounting height from work plane ranges from 20 feet/6 meters and higher.
- Optional guards protect globes from damage. Secured to fixture with three screws.
- Light sources: high pressure sodium, pulse start metal halide or metal halide. HPS is excellent where long lamp life is required. HPS provides high lumens per watt and is less expensive to operate. PSMH/MH is desirable where colors of illuminated areas must be close to natural. PSMH/MH provides better color rendition, increased lumen output, longer lamp life, and faster restrike after momentary power interruption.
- A wide range of ballasts and voltages are available for both domestic and export applications.
- Ballasts operate at low temperatures — PSMH: -29 °C (-20 °F); HPS: -40 °C (-40 °F); MH: -35 °C (-31 °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: aluminum or fiberglass reinforced polyester

Standard Finishes

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

Options

- Fuses for field installation can be ordered by catalog number from fuse kit table.
- Quartz Auxiliary Emergency Lamp for PSMH/MH and HPS fixtures. Relay switch installed in fixture. Add suffix **-E** to fixture catalog number. ①
- Hot Restrike Option available for 50 W through 150 W HPS only. Add suffix **-R**.
- Smart Starter Option available for 50 W through 400 W HPS and PSMH/MH. Add suffix **-S**.

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

① Quartz Auxiliary Emergency Lamps for PSMH/MH and HPS fixtures are for ordinary locations only.

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Class I, Zone 1 and 2; IIB, IIA
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Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

Classified Area Suitability of Code•Master 2 Series HID Fixtures — Suitability includes use of reflector

Lamp Type	Lamp Watts	Supply Wire °C (°F)	Ambient Temp °C (°F)	Class I, Division 1 and 2 With Globe or with Globe and Reflector UL/NEC/CEC Temp. Ident. No.			Class II, Division 1 and 2 With Globe or with Globe and Reflector UL/NEC/CEC Temp. Ident. No. ①	
				Nameplate Marking	NEC Groups	CEC Groups	Nameplate Marking	Groups
High Pressure Sodium	50	60 (140)	40 (104)	T6	C,D	B, C, D	T4	E,F,G
	50	75 (167)	55 (131)	T5	C,D	B, C, D	—	—
	50	85 (185)	65 (149)	T5	C,D	B, C, D	—	—
	70	60 (140)	40 (104)	T6	C,D	B, C, D	T4	E,F,G
	70	75 (167)	55 (131)	T5	C,D	B, C, D	—	—
	70	85 (185)	65 (149)	T5	C,D	B, C, D	—	—
	100	60 (140)	40 (104)	T5	C,D	B, C, D	T4	E,F,G
	100	75 (167)	55 (131)	T5	C,D	B, C, D	—	—
	100	85 (185)	65 (149)	T4A	C,D	B, C, D	—	—
	150	60 (140)	40 (104)	T5	C,D	B, C, D	T3A	E,F
	150	75 (167)	55 (131)	T4A	C,D	B, C, D	T3	—
	250	75 (167)	40 (104)	T3C	C,D	B, C, D	—	—
Pulse Start Metal Halide	250	75 (167)	55 (131)	T3C	C,D	B, C, D	—	—
	400	85 (185)	40 (104)	T3C	C,D	B, C, D	—	—
	175	75 (167)	40 (104)	T4	C,D	B, C, D	T3C	E,F,G
	250	75 (167)	40 (104)	T4	C,D	B, C, D	T3A	E,F
	320	75 (167)	40 (104)	T3C	C,D	B, C, D	—	—
	350	75 (167)	40 (104)	T3C	C,D	B, C, D	—	—
Metal Halide ②	400	75 (167)	40 (104)	T3C	C,D	B, C, D	—	—
	175	75 (167)	40 (104)	T4	—	B, C, D	T3C	E, F, G
	250	75 (167)	40 (104)	T4	—	B, C, D	T3A	E, F
	400	75 (167)	40 (104)	T3C	—	B, C, D	—	—

“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	187-12	185

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 Applies to Code•Master 2 only.

② 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™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof. Groups C and D Applications

Integrally Ballasted. 50 W, 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH.

Mogul Base. For use with threaded metal conduit.

NEC:

Class I, Division 1 and 2, Groups C, D ♦

Class II, Division 1 and 2, Groups E, F, G

Class III

Marine Type Electric Fixtures

Outside Type (Salt Water)

HID/AREA: NEC/CEC EXPLOSIONPROOF



	Lamp Watts	ANSI Lamp Type		Hub Size (Inches)	Catalog Number ②③	
		HPS	PSMH		HPS	PSMH
	Pendant — One Hub, Rigid or Flexible Mounting					
	50	S68	—	3/4	CLP5075 ①	—
				1	CLP5010 ①	—
	70	S62	—	3/4	CLP7075	—
				1	CLP7010	—
	100	S54	—	3/4	CLP1075	—
				1	CLP1010	—
	150	S55	—	3/4	CLP1575	—
				1	CLP1510	—
	175	—	M152	3/4	—	CPP1775
				1	—	CPP1710
	250	S50	M153	3/4	CLP2575	CPP2575
				1	CLP2510	CPP2510
	320	—	M154	3/4	—	CPP3275
				1	—	CPP3210
	350	—	M131	3/4	—	CPP3575
				1	—	CPP3510
	400	S51	M155	3/4	CLP4075	CPP4075
1				CLP4010	CPP4010	



Ceiling — Four Hubs, Three Close-Up Plugs						
	50	S68	—	3/4	CLC5075 ①	—
				1	CLC5010 ①	—
	70	S62	—	3/4	CLC7075	—
				1	CLC7010	—
	100	S54	—	3/4	CLC1075	—
				1	CLC1010	—
	150	S55	—	3/4	CLC1575	—
				1	CLC1510	—
	175	—	M152	3/4	—	CPC1775
				1	—	CPC1710
	250	S50	M153	3/4	CLC2575	CPC2575
				1	CLC2510	CPC2510
	320	—	M154	3/4	—	CPC3275
				1	—	CPC3210
	350	—	M131	3/4	—	CPC3575
				1	—	CPC3510
	400	S51	M155	3/4	CLC4075	CPC4075
				1	CLC4010	CPC4010

① Add voltage **-MT** for 120/208/240/277 V. For 480 V, contact your sales representative.

② Add voltage suffix **-MT** for -120/208/240/277 V; or **-480** for 480 V.

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

♦ Shaded items are suitable for Class I, Group D ONLY.

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof. Groups C and D Applications

Integrally Ballasted. 50 W, 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH.

Mogul Base. For use with threaded metal conduit.

NEC:

Class I, Division 1 and 2, Groups C, D◆

Class II, Division 1 and 2, Groups E, F, G

Class III

Marine Type Electric Fixtures

Outside Type (Salt Water)

	Lamp Watts	ANSI Lamp Type		Hub Size (Inches)	Catalog Number ②③	
		HPS	PSMH		HPS	PSMH
	Bracket - Four Hubs, Three Close-Up Plugs					
	50	S68	—	3/4	CLB5075 ①	—
				1	CLB5010 ①	—
	70	S62	—	3/4	CLB7075	—
				1	CLB7010	—
	100	S54	—	3/4	CLB1075	—
				1	CLB1010	—
	150	S55	—	3/4	CLB1575	—
				1	CLB1510	—
	175	—	M152	3/4	—	CPB1775 ②
				1	—	CPB1710 ②
	250	S50	M153	3/4	CLB2575	CPB2575 ②
				1	CLB2510	CPB2510 ②
	320	—	M154	3/4	—	CPB3275 ②
				1	—	CPB3210 ②
	350	—	M131	3/4	—	CPB3575 ②
1				—	CPB3510 ②	
400	S51	M155	3/4	CLB4075	CPB4075 ②	
			1	CLB4010	CPB4010 ②	
	25° Stanchion - One Hub					
	50	S68	—	1-1/4 or 1-1/2 ④	CLS50150 ①	—
	70	S62	—	1-1/4 or 1-1/2 ④	CLS70150	—
	100	S54	—	1-1/4 or 1-1/2 ④	CLS10150	—
	150	S55	—	1-1/4 or 1-1/2 ④	CLS15150	—
	175	—	M152	1-1/4 or 1-1/2 ④	—	CPS17150 ②
	250	S50	M153	1-1/4 or 1-1/2 ④	CLS25150	CPS25150 ②
	320	—	M154	1-1/4 or 1-1/2 ④	—	CPS32150 ②
	350	—	M131	1-1/4 or 1-1/2 ④	—	CPS35150 ②
	400	S51	M155	1-1/4 or 1-1/2 ④	CLS40150 ②	CPS40150 ②

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② Add voltage suffix **-MT** for 120/208/240/277 V; or **-480** for 480 V.

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

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

◆ Shaded items are suitable for Class I, Group D ONLY.

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof. Groups B, C and D Applications

Integrally Ballasted. 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH; 175 W, 250 W, 400 W MH.

Mogul Base. For use with threaded metal conduit.

CEC:
Class I, Division 1 and 2, Groups B, C, D ♦
Class I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:
CSA Type 4X
Exd IIB, Zone 1

Lamp Watts	ANSI Lamp Type				Hub Size (Inches)	Catalog Number ①②		
	HPS	PSMH	MH			HPS	PSMH	MH ③

Pendant — One Hub, Rigid or Flexible Mounting



70	S62	—	—	3/4	1	CLP7075TTCN	—	—
						CLP7010TTCN	—	—
100	S54	—	—	3/4	1	CLP1075TTCN	—	—
						CLP1010TTCN	—	—
150	S55	—	—	3/4	1	CLP1575TTCN	—	—
						CLP1510TTCN	—	—
175	—	M152	M57	3/4	1	—	CPP1775TTCN	CHP1775TTCN
						—	CPP1710TTCN	CHP1710TTCN
250	S50	M153	M58	3/4	1	CLP2575TTCN	CPP2575TTCN	CHP2575TTCN
						CLP2510TTCN	CPP2510TTCN	CHP2510TTCN
320	—	M154	—	3/4	1	—	CPP3275TTCN	—
						—	CPP3210TTCN	—
350	—	M131	—	3/4	1	—	CPP3575TTCN	—
						—	CPP3510TTCN	—
400	S51	M155	M59	3/4	1	CLP4075TTCN	CPP4075TTCN	CHP4075TTCN
						CLP4010TTCN	CPP4010TTCN	CHP4010TTCN

Ceiling — Four Hubs, Three Close-Up Plugs



70	S62	—	—	3/4	1	CLC7075TTCN	—	—
						CLC7010TTCN	—	—
100	S54	—	—	3/4	1	CLC1075TTCN	—	—
						CLC1010TTCN	—	—
150	S55	—	—	3/4	1	CLC1575TTCN	—	—
						CLC1510TTCN	—	—
175	—	M152	M57	3/4	1	—	CPC1775TTCN	CHC1775TTCN
						—	CPC1710TTCN	CHC1710TTCN
250	S50	M153	M58	3/4	1	CLC2575TTCN	CPC2575TTCN	CHC2575TTCN
						CLC2510TTCN	CPC2510TTCN	CHC2510TTCN
320	—	M154	—	3/4	1	—	CPC3275TTCN	—
						—	CPC3210TTCN	—
350	—	M131	—	3/4	1	—	CPC3575TTCN	—
						—	CPC3510TTCN	—
400	S51	M155	M59	3/4	1	CLC4075TTCN	CPC4075TTCN	CHC4075TTCN
						CLC4010TTCN	CPC4010TTCN	CHC4010TTCN

① 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.

② To order fixture with guard, add suffix -**G** (before adding voltage suffix).

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Mogul Base. For use with threaded metal conduit.

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Class I, Zone 1 and 2; IIB, IIA

Class II, Division 1, Groups E, F, G

Class II, Division 2, Groups F, G

Class III

CEC:

CSA Type 4X

Exd IIB, Zone 1



Lamp Watts	ANSI Lamp Type			Hub Size (Inches)	Catalog Number ①②		
	HPS	PSMH	MH		HPS	PSMH	MH ③
Bracket - Four Hubs, Three Close-Up Plugs							
70	S62	—	—	3/4	CLB7075TTCN	—	—
				1	CLB7010TTCN	—	—
100	S54	—	—	3/4	CLB1075TTCN	—	—
				1	CLB1010TTCN	—	—
150	S55	—	—	3/4	CLB1575TTCN	—	—
				1	CLB1510TTCN	—	—
175	—	M152	M57	3/4	—	CPB1775TTCN	CHB1775TTCN
				1	—	CPB1710TTCN	CHB1710TTCN
250	S50	M153	M58	3/4	CLB2575TTCN	CPB2575TTCN	CHB2575TTCN
				1	CLB2510TTCN	CPB2510TTCN	CHB2510TTCN
320	—	M154	—	3/4	—	CPB3275TTCN	—
				1	—	CPB3210TTCN	—
350	—	M131	—	3/4	—	CPB3575TTCN	—
				1	—	CPB3510TTCN	—
400	S51	M155	M59	3/4	CLB4075TTCN	CPB4075TTCN	CHB4075TTCN
				1	CLB4010TTCN	CPB4010TTCN	CHB4010TTCN



25° Stanchion - One Hub



70	S62	—	—	1-1/4 or 1-1/2 ④	CLS70150TTCN	—	—
100	S54	—	—	1-1/4 or 1-1/2 ④	CLS10150TTCN	—	—
150	S55	—	—	1-1/4 or 1-1/2 ④	CLS15150TTCN	—	—
175	—	M152	M57	1-1/4 or 1-1/2 ④	—	CPS17150TTCN	CHS17150TTCN
250	S50	M153	M58	1-1/4 or 1-1/2 ④	CLS25150TTCN	CPS25150TTCN	CHS25150TTCN
320	—	M154	—	1-1/4 or 1-1/2 ④	—	CPS32150TTCN	—
350	—	M131	—	1-1/4 or 1-1/2 ④	—	CPS35150TTCN	—
400	S51	M155	M59	1-1/4 or 1-1/2 ④	CLS40150TTCN	CPS40150TTCN	CHS40150TTCN

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

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Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

Mounting Hoods

	Hub Size (Inches)	Catalog Number
Pendant — One Hub		
	3/4	CAP-75
	1	CAP-100
Ceiling — Four Hubs, Three Close-Up Plugs		
	3/4	CAC-75
	1	CAC-100
Bracket — Four Hubs, Three Close-Up Plugs		
	3/4	CALB-75
	1	CALB-100
25° Stanchion — One Hub		
	1-1/4 or 1-1/2 ①	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 ③	480 V
High Pressure Sodium High Power Factor (Min. P.F. 90%)	50	CMBL50	MT	TTCN	—
	70	CMBL70	MT	TTCN	48
	100	CMBL100	MT	TTCN	48
	150	CMBL150	MT	TTCN	48
	250	CMBL250	MT	TTCN	48
	400	CMBL400	MT	TTCN	48
Pulse Start Metal Halide Constant Wattage (Min. P.F. 90%)	175	CMBP175	MT	TTCN	48
	250	CMBP250	MT	TTCN	48
	320	CMBP320	MT	TTCN	48
	350	CMBP350	MT	TTCN	48
	400	CMBP400	MT	TTCN	48
Metal Halide ④	175	CMBH175	MT	TT	C6
	250	CMBH250	MT	TT	C6
	400	CMBH400	MT	TT	C6

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

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

③ 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.

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HID/AREA: NEC/CEC EXPLOSIONPROOF

Appleton®

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

Integrally Ballasted. 50 W, 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH; 175 W, 250 W, 400 W MH.

Mogul Base. For use with threaded metal conduit.

NEC:

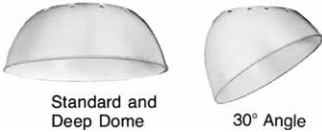
Class I, Division 1 and 2, Groups C, D
Class II, Division 1 and 2, Groups E, F, G
Class III
Marine Type Electric Fixtures
Outside Type (Salt Water)

CEC:

Class I, Division 1 and 2, Groups B, C, D
Class I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

Description		Catalog Number
Polyester Reflectors — 50 W - 400 W		
 Standard and Deep Dome 30° Angle	Standard Dome	CMR-4ST
	Deep Dome	CMR-4DD
	30° Angle	CMR-4AN
Aluminum High Bay Reflectors — 50 W - 400 W		
		CMR-4HB
Prismatic Glass Globes — 50 W - 400 W		
	50, 70, 100, 150 W HPS; 175, 250 W PSMH; 175, 250 W MH	CGL-250
	250, 400 W HPS; 320, 350, 400 W PSMH; 400 W MH	CGL-400
Aluminum Guards — 50 W - 400 W		
	50, 70, 100, 150 W HPS; 175, 250 W PSMH; 175, 250 W MH	CGU2
	250, 400 W HPS; 320, 350, 400 W PSMH; 400 W MH	CGU4
Replacement Sockets — 50 W - 400 W (Mogul Base)		
 VPT-7	For all Code•Master 2 HID fixtures	CMS-400
	Connection Block – 50 W through 400 W	
	For all Code•Master 2 HID fixtures	VPT-7

Quartz Emergency Option for Pulse Start Metal Halide and High Pressure Sodium Fixtures

Fixtures can be supplied with a socket to accept a 150 W or 250 W, 120 V quartz lamp (lamp not included). This D.C. bayonet base socket is in addition to the standard lamp socket, independent of the lighting fixture voltage.

Add suffix **-E**

HPS Hot Restrike

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)

Add suffix **-R**

HPS Smart Starter

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 fixtures.

Add suffix **-S**

HID/AREA: NEC/CEC EXPLOSIONPROOF

Appleton®

Code•Master™ 2 HID Factory Sealed Luminaires

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Integrally Ballasted. 50 W, 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH; 175 W, 250 W, 400 W MH.

Mogul Base. For use with threaded metal conduit.

NEC:

Class I, Division 1 and 2, Groups C, D
Class II, Division 1 and 2, Groups E, F, G
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Marine Type Electric Fixtures
Outside Type (Salt Water)

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Class I, Division 1 and 2, Groups B, C, D
Class I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

Lamp		High Pressure Sodium ①		Ballast Amps Pulse Start Metal Halide Super CWA		Metal Halide CWA		Fuse Quantity Required	Fuse Kit Catalog Number		
Watts	Volts	Start	Operating	Start	Operating	Start	Operating		HPS	PSMH	MH ②
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	—	—	—	—	—	—	—	—	—	—
	480	—	—	—	—	—	—	—	—	—	—
70	120	0.90	0.82	—	—	—	—	1	CF-5	—	—
	208	0.50	0.48	—	—	—	—	2	CF-3	—	—
	240	0.44	0.44	—	—	—	—	2	CF-3	—	—
	277	0.35	0.36	—	—	—	—	1	CF-2	—	—
	347	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	0.45	0.39	—	—	—	—	1	CF-3	—	—
	480	0.33	0.29	—	—	—	—	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	0.88	0.75	—	—	—	—	1	CF-5	—	—
	347	0.52	0.56	—	—	—	—	1	CF-5	—	—
	480	0.50	0.44	—	—	—	—	2	CF-3	—	—
175	120	—	—	1.10	1.86	1.30	1.80	1	—	CF-5	CF-5
	208	—	—	0.75	1.23	0.75	1.10	2	—	CF-3	CF-3
	240	—	—	0.65	0.98	0.65	0.90	2	—	CF-3	CF-3
	277	—	—	0.55	0.87	0.55	0.80	1	—	CF-2	CF-2
	347	—	—	0.25	0.65	0.50	0.65	1	—	CF-2	CF-2
	480	—	—	0.25	0.50	—	—	2	—	CF-2	—
250	120	1.75	2.70	1.96	2.50	1.20	2.60	1	CF-8	CF-8	CF-8
	208	1.00	1.50	1.13	1.45	0.65	1.50	2	CF-5	CF-5	CF-5
	240	0.85	1.30	0.98	1.25	0.60	1.30	2	CF-5	CF-5	CF-5
	277	0.75	1.15	0.85	1.10	0.50	1.12	1	CF-5	CF-3	CF-3
	347	0.60	0.93	0.62	0.90	0.80	0.90	1	CF-5	CF-3	CF-3
	480	0.40	0.65	0.32	0.67	—	—	2	CF-2	CF-2	—
320	120	—	—	3.30	3.25	—	—	1	—	CF-8	—
	208	—	—	1.90	1.90	—	—	2	—	CF-6	—
	240	—	—	1.60	1.65	—	—	2	—	CF-5	—
	277	—	—	1.40	1.40	—	—	1	—	CF-5	—
	347	—	—	0.70	1.10	—	—	1	—	CF-5	—
	480	—	—	0.45	0.85	—	—	2	—	CF-3	—
350	120	—	—	3.60	3.70	—	—	1	—	CF-10	—
	208	—	—	2.10	2.10	—	—	2	—	CF-8	—
	240	—	—	1.80	1.80	—	—	2	—	CF-5	—
	277	—	—	1.60	1.60	—	—	1	—	CF-5	—
	347	—	—	0.70	1.01	—	—	1	—	CF-5	—
	480	—	—	0.60	0.90	—	—	2	—	CF-3	—
400	120	3.10	3.90	3.50	4.00	3.25	4.00	1	CF-15	CF-10	CF-10
	208	1.80	2.25	2.00	2.30	1.90	2.30	2	CF-8	CF-8	CF-8
	240	1.60	1.95	1.75	2.00	1.65	2.00	2	CF-5	CF-5	CF-5
	277	1.35	1.70	1.50	1.75	1.40	1.75	1	CF-5	CF-5	CF-5
	347	1.00	1.32	1.10	1.35	1.20	1.40	1	CF-5	CF-5	CF-5
	480	0.80	1.00	0.75	1.00	—	—	2	CF-5	CF-3	—

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 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-6** = 6 amp; **CF-8** = 8 amp; **CF-10** = 10 amp

① 50 through 150 W HPS have H.P.F. High Reactance ballasts; 250 W and 400 W HPS have CWA ballasts.

② 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.

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Integrally Ballasted. 50 W, 70 W, 100 W, 150 W, 250 W, 400 W HPS; 175 W, 250 W, 320 W, 350 W, 400 W PSMH; 175 W, 250 W, 400 W MH.

Mogul Base. For use with threaded metal conduit.

NEC:

Class I, Division 1 and 2, Groups C, D
Class II, Division 1 and 2, Groups E, F, G
Class III
Marine Type Electric Fixtures
Outside Type (Salt Water)

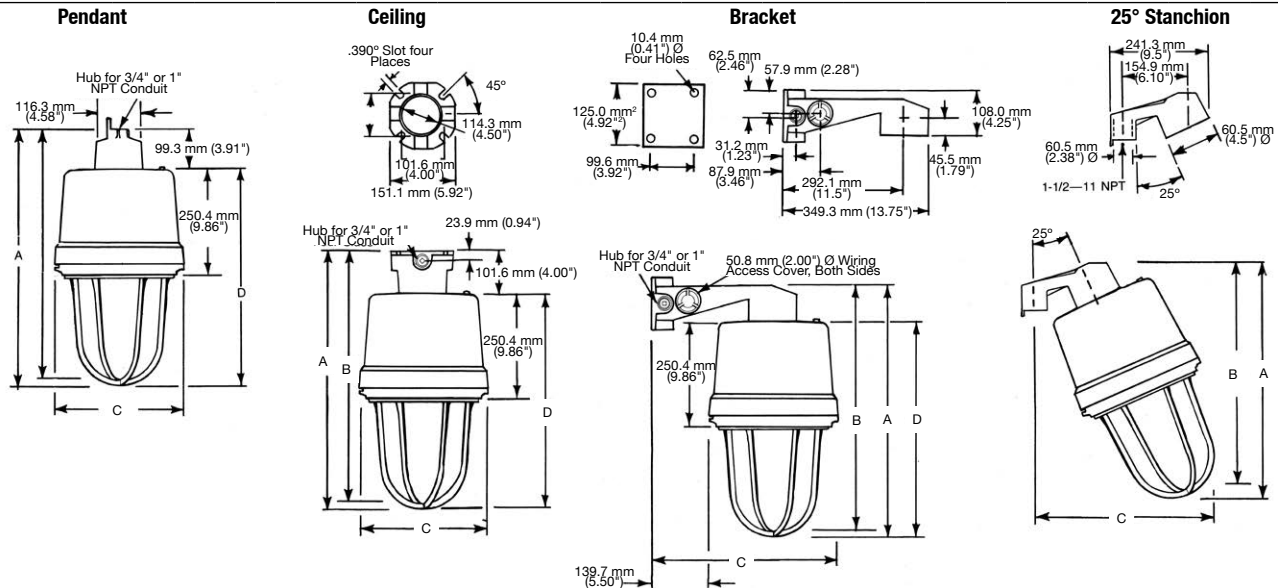
CEC:

Class I, Division 1 and 2, Groups B, C, D
Class I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

Dimensions in Millimeters (Inches)



	Pendant				Ceiling				Bracket				25° Stanchion		
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
50-250 W ①	546.1 (21.50)	520.7 (20.50)	304.8 (12.00)	447.3 (17.61)	548.9 (21.61)	523.5 (20.61)	304.8 (12.00)	447.3 (17.61)	555.2 (21.86)	529.8 (20.86)	444.5 (17.50)	447.3 (17.61)	495.3 (19.50)	475.0 (18.70)	406.4 (16.00)
250-400 W ②	522.3 (24.50)	596.9 (23.50)	304.8 (12.00)	507.1 (20.36)	618.7 (24.36)	507.1 (20.36)	304.8 (12.00)	507.1 (20.36)	625.1 (24.61)	599.7 (23.61)	444.5 (17.50)	507.1 (20.36)	563.9 (22.20)	538.5 (21.20)	444.5 (17.50)

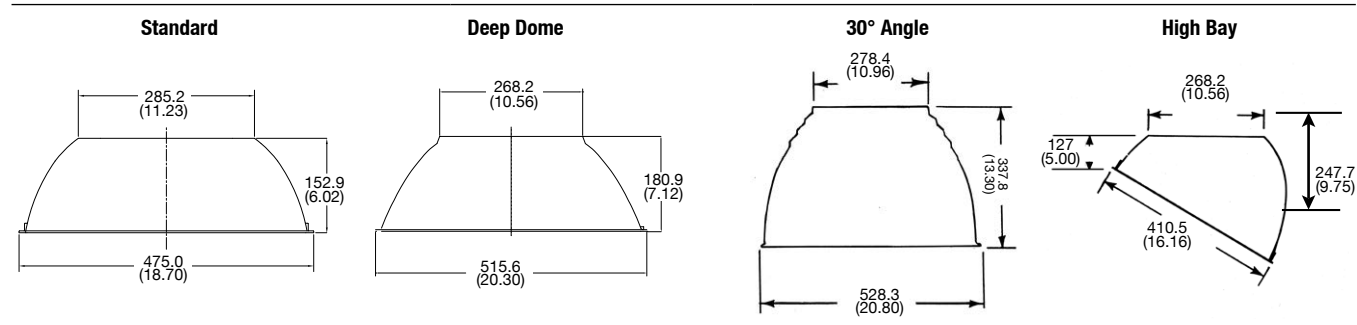
Fixture and Accessory Weights kg (lb)

Fixture Size	Fixture Weight	Reflector Weight	Guard Weight
50 W through 175 W	14.5 (31.97)	1.4 (3.09)	0.5 (1.10)
250 W PSMH/MH	16.9 (37.26)	1.4 (3.09)	0.5 (1.10)
250 W HPS	18.1 (39.90)	1.4 (3.09)	0.9 (1.98)
320 W, 350 W and 400 W PSMH, 400 W MH	20.4 (44.97)	1.4 (3.09)	0.9 (1.98)

Mounting Hood Weights kgs (lbs)

Pendant	Ceiling	Bracket	Stanchion
0.9 (2)	1.8 (4)	2.7 (6)	0.9 (2)

Reflector Dimensions in Millimeters (Inches)



① 50, 70, 100 and 150 W HPS; 175 W PSMH; 175 and 250 W MH.

② 250 and 400 W HPS; 250, 320, 350, and 400 W PSMH; 400 W MH.

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

* Photometric data is based on a 100-watt clear HPS lamp (9,500 lumens). For candlepower values of fixtures with other lamps, use the following multipliers: 50 W HPS – 0.42 (4,000 lumens); 70 W HPS – 0.61 (6,300 lumens); and 150 W HPS – 1.68 (16,000 lumens).

NEC:

Class I, Division 1 and 2, Groups 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 I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

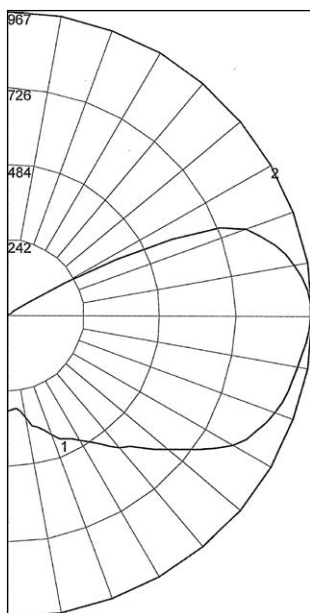
Photometric Data

Total Luminaire Efficiency = 76.4%

CIE Type – Semi-Direct

Plane	Spacing Criteria
0-180	2.66
90-270	2.66
Diagonal	2.84

Zone	Lumens
0-10	29.80
10-20	106.54
20-30	202.92
30-40	318.52
40-50	468.31
50-60	670.49
60-70	866.67
70-80	976.61
80-90	1038.41
90-100	1042.18
100-110	927.00
110-120	551.82
120-130	51.82
130-140	2.51
140-150	0.25
150-160	0.00
160-170	0.00
170-180	0.00



REPORT NUMBER: CL10G

Lamps: 100 W High Pressure Sodium with Globe only

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50				30				10				0
% Walls R _w	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	84	84	84	84	79	79	79	79	70	70	70	61	61	61	53	53	53	49	49	49	49
1	72	66	61	56	66	61	57	52	53	49	46	45	42	40	38	36	34	30	30	30	30
2	63	54	47	41	58	51	44	39	43	38	34	37	32	29	30	27	24	21	21	21	21
3	56	46	38	32	52	43	36	30	36	31	26	31	26	22	25	22	18	15	15	15	15
4	51	40	32	26	47	37	30	24	31	25	21	26	22	18	22	18	14	12	12	12	12
5	46	35	27	21	42	32	25	20	28	22	17	23	18	14	19	15	12	9	9	9	9
6	42	31	23	18	39	29	22	17	24	19	14	21	16	12	17	13	10	7	7	7	7
7	39	28	20	15	36	26	19	14	22	16	12	18	14	10	15	11	8	6	6	6	6
8	36	25	18	13	33	23	17	12	20	14	10	17	12	9	14	10	7	5	5	5	5
9	33	23	16	11	31	21	15	11	18	13	9	15	11	8	13	9	6	4	4	4	4
10	31	21	14	10	29	19	13	9	17	12	8	14	10	7	12	8	6	4	4	4	4

Zonal Lumen Summary

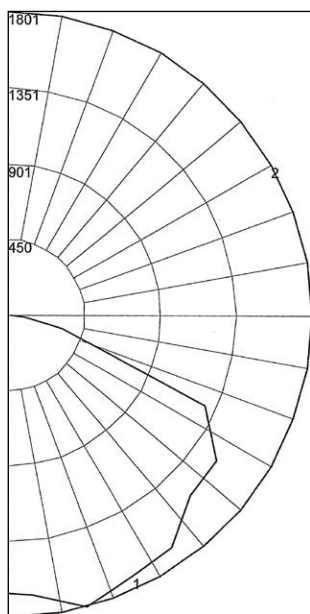
Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	339.26	3.6	4.7	90-120	2521.83	26.5	34.8
0-40	657.79	6.9	9.1	90-130	2572.83	27.1	35.5
0-60	1796.59	18.9	24.8	90-150	2575.59	27.1	35.5
0-90	4678.28	49.2	64.5	90-180	2575.59	27.1	35.5
				0-180	7253.87	76.4	100.0

Total Luminaire Efficiency = 71.3%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.54
90-270	1.54
Diagonal	1.66

Zone	Lumens
0-10	40.00
10-20	331.02
20-30	660.22
30-40	934.51
40-50	1131.33
50-60	1272.76
60-70	1322.68
70-80	826.95
80-90	254.44
90-100	0.00
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



REPORT NUMBER: CL10ST

Lamps: 100 W High Pressure Sodium with Standard Dome Reflector

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	80				70				50				30				10				0
% Walls R _w	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	85	85	85	85	83	83	83	83	79	79	79	76	76	76	73	73	73	71	71	71	71
1	76	71	68	64	74	70	66	63	67	64	61	64	61	59	61	59	57	56	56	56	56
2	67	60	54	49	65	59	53	49	56	51	47	54	50	46	51	48	45	43	43	43	43
3	60	51	44	39	58	50	44	38	48	42	38	46	41	37	44	40	36	34	34	34	34
4	54	44	37	31	52	43	36	31	41	35	31	40	34	30	38	33	30	28	28	28	28
5	49	39	31	26	48	38	31	26	36	30	25	35	29	25	33	29	25	23	23	23	23
6	45	34	27	22	43	33	27	22	32	26	21	31	25	21	30	25	21	19	19	19	19
7	41	30	23	19	40	30	23	18	29	23	18	28	22	18	27	22	18	16	16	16	16
8	38	27	21	16	37	27	20	16	26	20	16	25	20	16	24	19	16	14	14	14	14
9	35	25	18	14	34	24	18	14	24	18	14	23	18	14	22	17	14	12	12	12	12
10	33	23	17	12	32	22	16	12	22	16	12	21	16	12	20	15	12	11	11	11	11

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	1031.23	10.9	15.2	90-120	0.00	0.0	0.0
0-40	1965.74	20.7	29.0	90-130	0.00	0.0	0.0
0-60	4369.83	46.0	64.5	90-150	0.00	0.0	0.0
0-90	6773.90	71.3	100.0	90-180	0.00	0.0	0.0
				0-180	6773.90	71.3	100.0

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NEC:

Class I, Division 1 and 2, Groups 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 I, Zone 1 and 2; IIB, IIA
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Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

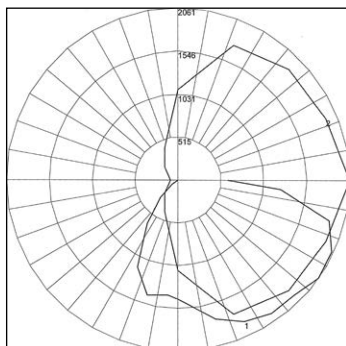
Photometric Data

Total Luminaire Efficiency = 61.9%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.96
90-270	1.62
Diagonal	1.50

Zone	Lumens
0-10	34.59
10-20	289.50
20-30	587.71
30-40	825.38
40-50	944.04
50-60	952.84
60-70	900.69
70-80	740.88
80-90	607.55
90-100	0.00
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



REPORT NUMBER: **CL10AN**

Lamps: 100 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
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	74	74	74	74	72	72	72	72	69	69	69	66	66	66	63	63	63	62				
1	64	60	56	53	62	59	55	52	56	53	50	53	51	49	51	49	47	46				
2	57	51	45	41	55	49	44	40	47	43	39	45	41	38	43	40	37	36				
3	51	43	37	32	50	42	37	32	40	35	31	38	34	31	37	33	30	28				
4	47	38	31	26	45	37	31	26	35	30	26	34	29	25	32	28	25	23				
5	42	33	27	22	41	32	26	22	31	26	21	30	25	21	28	24	21	19				
6	39	29	23	19	38	29	23	18	28	22	18	26	22	18	25	21	18	16				
7	36	26	20	16	35	26	20	16	25	20	16	24	19	16	23	19	15	14				
8	33	24	18	14	32	23	18	14	22	17	14	22	17	14	21	17	13	12				
9	31	22	16	12	30	21	16	12	20	15	12	20	15	12	19	15	12	11				
10	29	20	14	11	28	19	14	11	19	14	11	18	14	11	18	13	11	9				

Zonal Lumen Summary

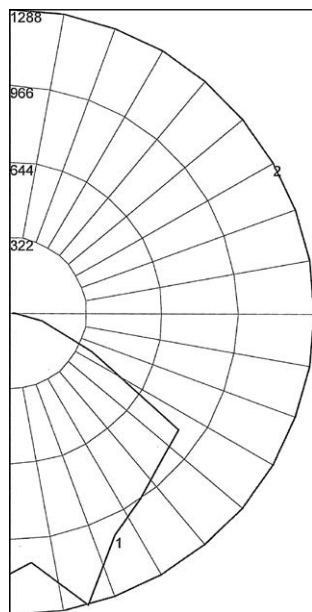
Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	911.80	9.6	15.5	90-120	0.0	0.0	0.0
0-40	1737.18	18.3	29.5	90-130	0.0	0.0	0.0
0-60	3634.06	38.3	61.8	90-150	0.0	0.0	0.0
0-90	5883.18	61.9	100.0	90-180	0.0	0.0	0.0
0-180	5883.18	61.9	100.0				

Total Luminaire Efficiency = 37.8%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.36
90-270	1.36
Diagonal	1.54

Zone	Lumens
0-10	26.07
10-20	224.04
20-30	437.71
30-40	551.18
40-50	656.83
50-60	743.35
60-70	592.81
70-80	265.53
80-90	94.52
90-100	0.00
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



REPORT NUMBER: **CL10DD**

Lamps: 100 W High Pressure Sodium with Deep Dome Reflector

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	45	45	45	45	44	44	44	44	42	42	42	40	40	40	39	39	39	38				
1	41	39	37	35	40	38	36	35	36	35	34	35	34	33	33	32	32	31				
2	37	33	30	28	36	32	30	28	31	29	27	30	28	26	29	27	26	25				
3	33	29	25	22	32	28	25	22	27	24	22	26	23	21	25	23	21	20				
4	30	25	21	18	29	24	21	18	23	20	18	22	20	18	22	19	18	17				
5	27	22	18	15	26	21	18	15	21	17	15	20	17	15	19	17	15	14				
6	25	19	16	13	24	19	16	13	18	15	13	18	15	13	17	15	13	12				
7	23	17	14	11	22	17	14	11	16	13	11	16	13	11	15	13	11	10				
8	21	16	12	10	21	15	12	10	15	12	10	14	12	10	14	11	10	9				
9	20	14	11	9	19	14	11	9	13	11	9	13	10	8	13	10	8	8				
10	18	13	10	8	18	13	10	8	12	10	8	12	9	8	12	9	7	7				

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	687.82	7.2	19.1	90-120	0.0	0.0	0.0
0-40	1239.00	13.0	34.5	90-130	0.0	0.0	0.0
0-60	2639.18	27.8	73.5	90-150	0.0	0.0	0.0
0-90	3592.04	37.8	100.0	90-180	0.0	0.0	0.0
0-180	3592.04	37.8	100.0				

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

* Photometric data is based on a 400-watt clear Pulse Start Metal Halide lamp (34,000 lumens). For candlepower values of fixtures with other lamps, use the following multipliers: 400 W HPS – 1.13 (50,000 lumens); and 250 W HPS – 0.68 (30,000 lumens).

NEC:

Class I, Division 1 and 2, Groups 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 I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

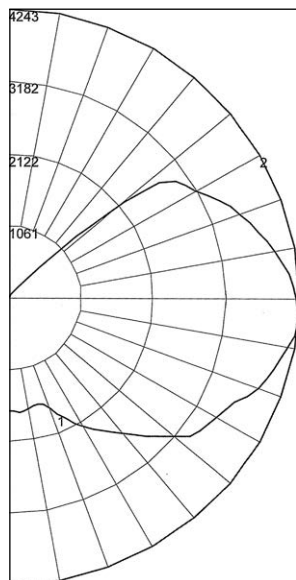
CSA Type 4X
Exd IIB, Zone 1

Photometric Data

Total Luminaire Efficiency = 81.9%

CIE Type – General Diffuse

Zone	Lumens
0-10	161.29
10-20	470.38
20-30	918.96
30-40	1511.24
40-50	2242.10
50-60	3052.29
60-70	3653.41
70-80	4255.87
80-90	4603.15
90-100	4476.83
100-110	4007.91
110-120	3380.83
120-130	2599.55
130-140	672.85
140-150	18.11
150-160	2.59
160-170	1.21
170-180	0.65



REPORT NUMBER: CP40G

Lamps: 400 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
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0		89	89	89	89	83	83	83	83	72	72	72	61	61	61	52	52	52	47
1		76	70	65	60	70	65	60	56	55	51	48	46	43	40	38	35	33	29
2		67	59	51	45	62	54	48	42	45	40	36	37	33	30	30	27	24	20
3		60	50	42	36	55	46	39	33	39	33	28	32	27	23	25	22	19	15
4		55	43	35	29	50	40	32	27	33	27	23	27	22	19	22	18	15	12
5		50	38	30	24	45	35	28	22	29	23	19	24	19	15	19	15	12	9
6		45	34	26	20	41	31	24	18	26	20	16	21	16	13	17	13	10	8
7		42	30	22	17	38	28	21	16	23	18	13	19	14	11	15	11	9	6
8		39	27	20	15	35	25	18	14	21	15	12	17	13	9	14	10	7	5
9		36	25	18	13	33	23	16	12	19	14	10	16	11	8	13	9	6	5
10		33	22	16	11	31	21	15	10	18	12	9	15	10	7	12	8	6	4

Zonal Lumen Summary

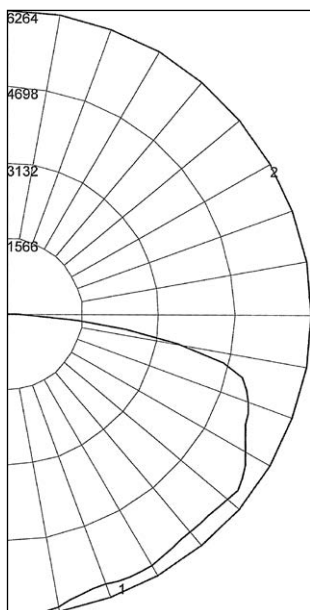
Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	1550.63	3.5	4.3	90-120	11865.57	27.0	32.9
0-40	3061.87	7.0	8.5	90-130	14465.12	32.9	40.1
0-60	8356.25	19.0	23.2	90-150	15156.08	34.4	40.1
0-90	20868.68	47.4	57.9	90-180	15160.53	34.5	42.1
				0-180	36029.22	81.9	100.0

Total Luminaire Efficiency = 70.4%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.46
90-270	1.46
Diagonal	1.70

Zone	Lumens
0-10	595.04
10-20	1709.44
20-30	2776.90
30-40	3730.18
40-50	4573.20
50-60	5290.95
60-70	5418.07
70-80	5086.12
80-90	1757.09
90-100	33.71
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



REPORT NUMBER: CP40ST

Lamps: 400 W Pulse Start Metal Halide with Standard Dome Reflector

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50			30			10			0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0		84	84	84	84	82	82	82	82	78	78	78	75	75	75	72	72	72	70
1		74	69	65	62	72	68	64	60	64	61	58	62	59	57	59	57	55	53
2		65	58	52	47	63	57	51	46	54	49	45	51	47	44	49	46	43	41
3		58	49	42	37	57	48	42	36	46	40	36	44	39	35	42	38	34	32
4		53	43	35	30	51	42	35	30	40	34	29	38	33	29	36	32	28	26
5		48	38	30	25	46	37	30	25	35	29	24	34	28	24	32	27	24	22
6		44	33	26	21	43	33	26	21	31	25	21	30	25	21	29	24	20	19
7		41	30	23	18	39	29	23	18	28	22	18	27	22	18	26	21	18	16
8		38	27	21	16	37	27	20	16	26	20	16	25	19	16	24	19	15	14
9		35	25	18	14	34	24	18	14	23	18	14	23	18	14	22	17	14	12
10		33	23	17	13	32	22	17	13	22	16	13	21	16	12	20	16	12	11

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	5081.38	11.5	16.4	90-120	33.71	0.1	0.1
0-40	8811.56	20.0	28.5	90-130	33.71	0.1	0.1
0-60	18675.71	42.4	60.3	90-150	33.71	0.1	0.1
0-90	30936.99	70.3	99.9	90-180	33.71	0.1	0.1
				0-180	30970.7	70.4	100.0

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

* Photometric data is based on a 400-watt clear Pulse Start Metal Halide lamp (34,000 lumens). For candlepower values of fixtures with other lamps, use the following multipliers: 400 W HPS – 1.13 (50,000 lumens); and 250 W HPS – 0.68 (30,000 lumens).

NEC:

Class I, Division 1 and 2, Groups 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 I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:

CSA Type 4X
Exd IIB, Zone 1

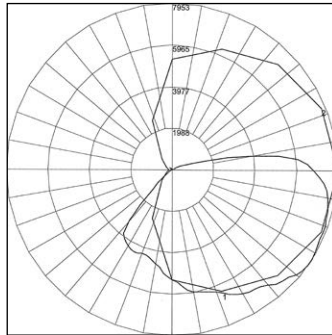
Photometric Data

Total Luminaire Efficiency = 62.5%

CIE Type – Direct

Plane	Spacing Criteria
0-180	2.02
90-270	1.48
Diagonal	1.64

Zone	Lumens
0-10	503.08
10-20	1461.14
20-30	2434.06
30-40	3353.43
40-50	3867.50
50-60	3954.40
60-70	3752.38
70-80	3368.71
80-90	2643.39
90-100	1531.50
100-110	421.63
110-120	86.74
120-130	65.68
130-140	20.81
140-150	11.94
150-160	7.93
160-170	4.46
170-180	1.47



REPORT NUMBER: CP40AN

Lamps: 400 W Pulse Start Metal Halide with 30° Angle Dome Reflector

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	73	73	73	73	71	71	71	71	67	67	67	63	63	63	59	59	59	58	58	58	58	58
1	64	60	56	53	62	58	55	52	54	52	49	51	49	47	48	46	44	42	42	42	42	42
2	57	51	45	41	55	49	44	40	46	42	38	43	40	37	40	38	35	33	33	33	33	33
3	51	44	38	33	49	42	37	32	39	35	31	37	33	30	35	31	26	27	27	27	27	27
4	47	38	32	27	45	37	31	26	35	29	25	32	28	25	30	27	24	22	22	22	22	22
5	43	34	27	23	41	33	27	22	31	25	22	29	24	21	27	23	20	19	19	19	19	19
6	39	30	24	19	38	29	23	19	27	22	18	26	21	18	24	20	17	16	16	16	16	16
7	36	27	21	17	35	26	21	17	25	20	16	23	19	16	22	18	15	14	14	14	14	14
8	34	24	19	15	32	24	18	15	22	18	14	21	17	14	20	16	13	12	12	12	12	12
9	31	22	17	13	30	22	16	13	21	16	13	20	15	12	19	15	12	11	11	11	11	11
10	29	20	15	12	28	20	15	12	19	14	11	18	14	11	17	13	11	10	10	10	10	10

Zonal Lumen Summary

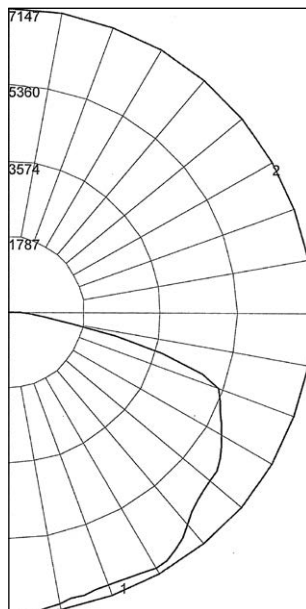
Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	4398.28	10.0	16.0	90-120	2039.87	4.6	7.4
0-40	7751.71	17.6	28.2	90-130	2105.55	4.8	7.7
0-60	15573.61	35.4	56.7	90-150	2138.30	4.9	7.7
0-90	25338.08	57.6	92.2	90-180	2152.16	4.9	7.8
				0-180	27490.24	62.5	100.0

Total Luminaire Efficiency = 69.1%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.48
90-270	1.48
Diagonal	1.62

Zone	Lumens
0-10	676.92
10-20	1962.51
20-30	3199.12
30-40	4281.42
40-50	4889.12
50-60	5408.09
60-70	5456.18
70-80	3822.90
80-90	693.25
90-100	20.14
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



REPORT NUMBER: CP40DD

Lamps: 400 W Pulse Start Metal Halide with Deep Dome Reflector

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	82	82	82	82	80	80	80	80	77	77	77	73	73	73	70	70	70	69	69	69	69	69
1	74	70	66	63	72	68	65	62	65	63	60	63	60	58	60	58	57	55	55	55	55	55
2	66	59	54	49	64	58	53	49	55	51	47	53	49	46	51	48	45	44	44	44	44	44
3	59	51	44	39	57	50	44	39	48	42	38	46	41	38	44	40	37	35	35	35	35	35
4	54	44	38	32	52	43	37	32	42	36	32	40	35	31	38	34	31	29	29	29	29	29
5	49	39	32	27	47	38	32	27	37	31	27	35	30	26	34	29	26	24	24	24	24	24
6	45	35	28	23	44	34	28	23	33	27	23	32	26	23	30	26	22	21	21	21	21	21
7	41	31	24	20	40	31	24	20	30	24	20	29	23	20	28	23	19	18	18	18	18	18
8	38	28	22	18	37	28	22	18	27	21	17	26	21	17	25	21	17	16	16	16	16	16
9	36	26	20	16	35	25	20	16	25	19	16	24	19	15	23	19	15	14	14	14	14	14
10	34	24	18	14	33	23	18	14	23	18	14	22	17	14	21	17	14	12	12	12	12	12

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	5838.56	13.3	19.2	90-120	20.14	0.0	0.1
0-40	10119.98	23.0	33.3	90-130	20.14	0.0	0.1
0-60	20417.19	46.4	67.1	90-150	20.14	0.0	0.1
0-90	30389.51	69.1	99.9	90-180	20.14	0.0	0.1
				0-180	30409.65	69.1	100.0

Code•Master™ 2 HID Factory Sealed Luminaires

Explosionproof, Dust-Ignitionproof

* Photometric data is based on a 400-watt clear Pulse Start Metal Halide lamp (34,000 lumens). For candlepower values of fixtures with other lamps, use the following multipliers: 400 W HPS – 1.13 (50,000 lumens); and 250 W HPS – 0.68 (30,000 lumens).

NEC:
Class I, Division 1 and 2, Groups 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 I, Zone 1 and 2; IIB, IIA
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

CEC:
CSA Type 4X
Exd IIB, Zone 1

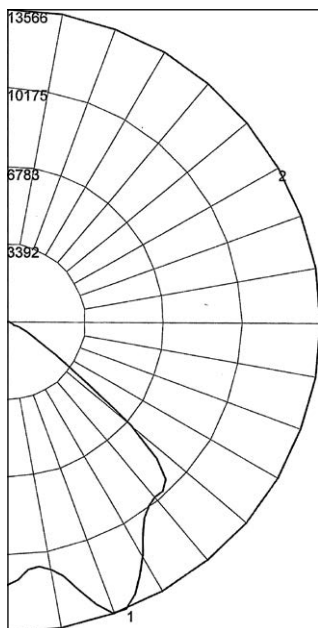
Photometric Data

Total Luminaire Efficiency = 63.4%

CIE Type – Direct

Plane	Spacing Criteria
0-180	1.40
90-270	1.40
Diagonal	1.52

Zone	Lumens
0-10	1044.42
10-20	3491.70
20-30	5976.88
30-40	6632.58
40-50	7143.25
50-60	2844.46
60-70	634.65
70-80	115.54
80-90	20.82
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



REPORT NUMBER: CP40HB

Lamps: 400 W Pulse Start Metal Halide with High Bay Reflector

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	80				70				50				30				10				0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
	0	76	76	76	76	74	74	74	74	70	70	70	67	67	67	65	65	65	65	65	65	63
	1	71	69	67	65	69	67	65	64	65	63	62	62	61	60	60	59	58	57	57	57	57
	2	66	62	59	56	64	61	58	55	59	56	54	57	55	53	55	53	52	50	50	50	50
	3	61	56	52	48	60	55	51	48	53	50	47	51	49	46	50	48	46	44	44	44	44
	4	57	50	46	42	55	50	45	42	48	44	42	47	44	41	45	43	40	39	39	39	39
	5	53	46	41	37	51	45	40	37	44	40	37	43	39	36	42	38	36	35	35	35	35
	6	49	42	37	33	48	41	36	33	40	36	33	39	35	32	38	35	32	31	31	31	31
	7	46	38	33	30	44	37	33	29	37	32	29	36	32	29	35	31	29	28	28	28	28
	8	42	35	30	27	42	34	30	26	34	29	26	33	29	26	32	29	26	25	25	25	25
	9	40	32	27	24	39	32	27	24	31	27	24	30	26	24	30	26	24	23	23	23	23
	10	37	29	25	22	36	29	25	22	29	24	22	28	24	22	27	24	21	20	20	20	20

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	10513.00	23.9	37.7	90-120	1.23	0.0	0.0
0-40	17145.58	39.0	61.4	90-130	1.23	0.0	0.0
0-60	27133.29	61.7	97.2	90-150	1.23	0.0	0.0
0-90	27904.30	63.4	100.0	90-180	1.23	0.0	0.0
				0-180	27905.53	63.4	100.0

HID/AREA: NEC/CEC EXPLOSIONPROOF

Appleton®