

Mercmaster™ III Low Profile Compact Fluorescent Luminaires

Enclosed and Gasketed. For Hazardous and Wet Locations

Compact Fluorescent listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

NEC/CEC:

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

NEC/CEC:

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

Applications

- Enclosed and gasketed fixtures suitable for use in marine and wet locations, and in a wide range of industrial, chemical processing and other areas where flammable gases and vapors or combustible dusts are present under conditions defined by the National Electrical Code as Class I, Division 2; Class II, Division 1 and 2; and Class III. The method of protection for the Zone 2 Mercmaster is AEx/Ex nR – Restricted Breathing.
- For use in areas of low clearance, low ceiling heights or where fixture weights must be minimized.
- Suited for use in non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust or corrosive atmospheres are present.
- Typical applications include oil refineries, pulp and paper mills, chemical plants, food-processing areas, inspection facilities, foundries, power plants, storage areas, waste and sewage treatment, parking garages, and other areas where dust, water, dirt and rough usage are a problem.

Features

- Energy-efficient, compact fluorescent light sources possess superior lamp efficiency.
- Fluorescent provides long lamp life, thereby reducing relamping costs.
- “Instant on” nature of this electronically ballasted fluorescent eliminates the possibility of an extended blackout due to a momentary power dip.
- High efficacies (up to 75 lumens per Watt) offer a desirable low-glare/instant-on alternative to low wattage HID sources.
- High output under widely varying conditions: Greater than 90% of rated lumens in ambient temperatures from -5 °C to +54 °C (+23 °F to +130 °F).
- Excellent color rendering (82 CRI) makes it the best choice for food processing and inspection facilities.
- A wide variety of lamp wattages: 26 W, 32 W, 42 W, 52 W, 64 W, 84 W.
- Electronic ballast permits low operating costs with power factor greater than 99%. Also allows flicker-free starting.
- Cold weather starting to a minimum temperature of -18 °C (0 °F).
- Fixtures are available for operation from an external 125 Vdc source.
- Compact, light-weight low profile design creates ease of installation and maintenance.
- Modular design, with multiple mounting hoods, optics and reflectors, permits a wide array of fixtures to meet installation and lighting needs.
- Body gaskets and optic gaskets are high temperature silicone O-Rings that provide superior sealing.
- Mounting hoods have a high hinge for added safety during installation and servicing.
- Choice of heat-resistant prismatic glass refractor (NEMA I, III or V), heat-resistant clear globes, color globes or polymeric refractors (NEMA II, III, IV or V). (Polymeric refractors are not listed for Zone 2.)



Pendant Mount Fixture
with Glass Globe



Ceiling Mount Fixture with
Prismatic Glass Refractor

Standard Materials

- Standard dome or 30° angle reflectors: highly reflective fiberglass reinforced white polyester to provide strength, corrosion resistance and excellent photometrics
- Fixture housing, mounting hoods, and guards: die-cast, copperfree (4/10 of 1% max.) aluminum with epoxy finish for corrosion resistance
- Exposed hardware: stainless steel. Latch assemblies have stainless steel bolt and captive nut; reflectors and guards attach with stainless steel screws threading into stainless steel inserts
- Globes and glass refractors: heat-resistant prismatic glass
- Polymeric refractor: spun aluminum refractor and a lens made of an engineered thermoplastic

Standard Finishes

- Epoxy powder coat finish electrostatically applied for complete, uniform surface protection

Options

- Fuse can be field installed. Kits include fuse block, wire connectors and screws for attachment to mounting hood.
 - Fixtures with fuses do not comply with UL 1598A for marine listing
 - Canadian Electrical Code does NOT allow fusing in hazardous locations
- Guards with gray epoxy painted to match fixtures, supplied with stainless steel screws. Add suffix **-G**.
- Reflectors are available as standard dome and 30° angle polyester. Order separately.

NEC/CEC Certifications and Compliances

- UL Standard: UL 1598, UL 1598A, UL 844, UL 60079-0, UL 60079-15
- UL Listed: E10444
- CSA Standard: C22.2 No. 250, C22.2 No. 137, CAN E60079-0, CAN E60079-15
- CSA Certified: 025428

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Illustrated Features



Epoxy Finish

Ballast housing, hoods and guards are copperfree aluminum with epoxy powder coat finish.

Photocell

In mounting hoods except cone and ceiling mount. Provides continuous on-off dusk-to-dawn control. Not for use in hazardous Class II or Zone 2 areas. Hazardous location Class 1, Division 2 rated photocells also available. See Accessories page.



Vented Reflectors

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

Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from #8 to #24 AWG.

Stainless Steel Inserts

Ballast bodies have stainless steel threaded inserts to receive stainless steel screws for reflectors and guard. Prevents "freezing", allowing guards and reflectors to be easily removed and replaced at any time, without damage to the housing.

Prismatic Glass Globes and Refractors

Heat-resistant globes and glass refractors and polymeric refractors thread directly into ballast housing and seal against a high temperature silicone rubber gasket. (Polymeric refractors are not listed for Zone 2 areas.)



Stainless Steel Latch Assembly

Captive, stainless steel latch assembly bolt and nut closes securely, resists attack of corrosive atmospheres. Swing-away design simplifies servicing.

Hood/Ballast Gasket

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

Electrical Protection

Ground wire provided to bond mounting hood to ballast housing.



Cooler Operating Cone Hood

Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.



Fuses

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



"Safety" High Hinge

Extra-high hinge provides additional protection against accidental ballast housing disengagement during installation or maintenance.

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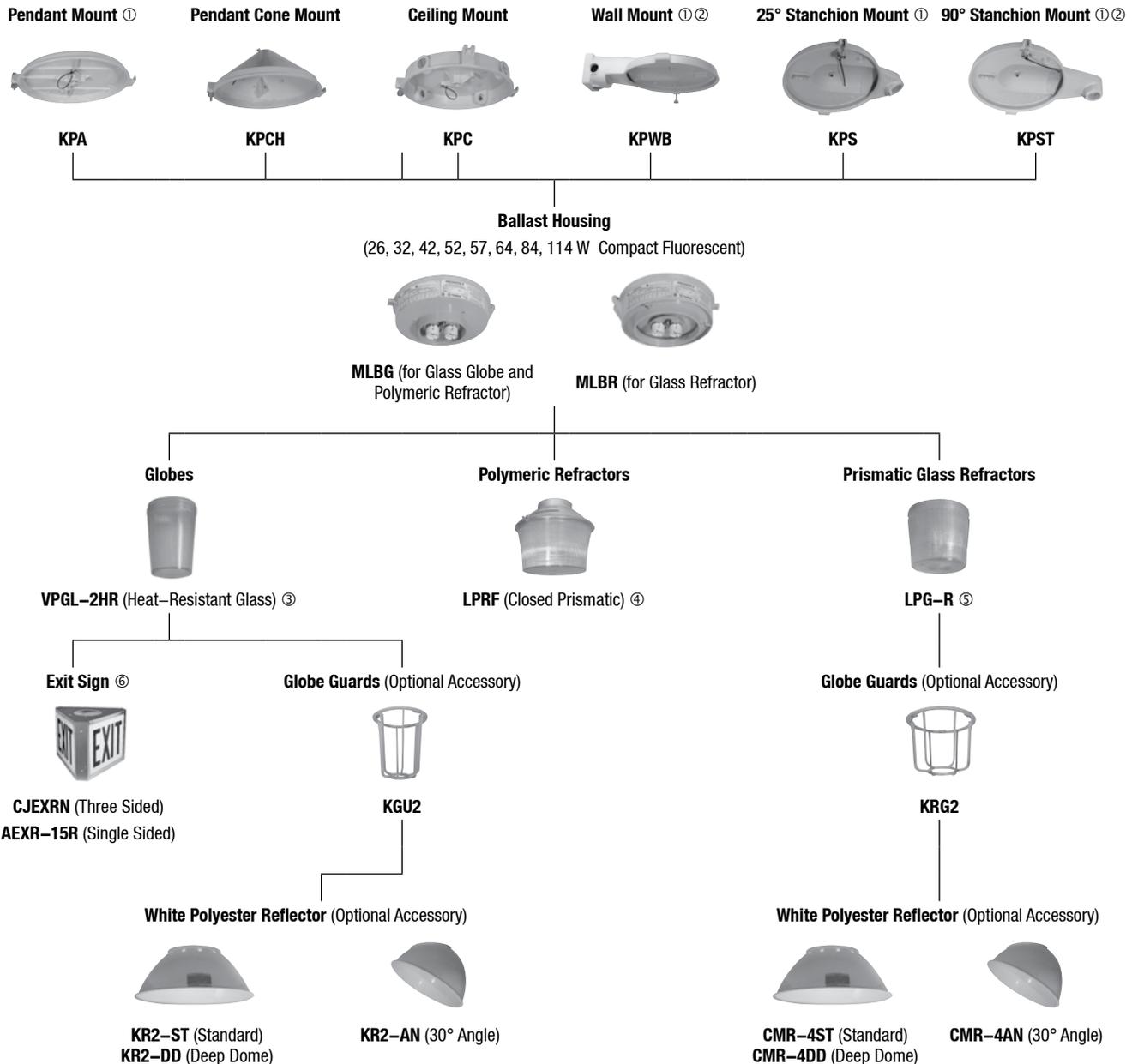
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Mercmaster III Low Profile Compact Fluorescent Family Tree



- ① Mounting hood with a 120 V or 208-277 V factory installed photocell is available.
- ② Standard and deep dome reflectors may interfere with bottom conduit entry if used with KPST and KPWB mounting hoods.
- ③ Non hazardous rated globes for special applications. Available in clear, amber, blue, green and red.
- ④ Available in NEMA Type II, III, IV and V. Polymeric Refractor suitable for Class II, Groups F and G, NEMA 4X and Marine Type Electric Fixtures Outside Type (Salt Water) only (100 W PSMH Max.). Not for Zone 2.
- ⑤ Available in NEMA Type I, III and V.
- ⑥ Not UL Listed.

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Enclosed and Gasketed. For Hazardous and Wet Locations

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 Class I, Zone 2, AEx/Ex nR IIC (ZB)
 Class II, Division 1 and 2, Groups E, F, G
 Class III

NEC/CEC:

Simultaneous Exposure (Class I, Division 2/
 Class II, Division 1)
 Fixtures Outside Type (Salt Water)
 Type 4X
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Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide For Zone 2 Mercmaster III Compact Fluorescent Luminaires

<p>ML</p> <p>Series: ML - Mercmaster III Low Profile</p>	<p>A</p> <p>Mounting Hood: A - Pendant (Rigid or Flexible) C - Ceiling D - Pendant Cone R - 90° Stanchion S - 25° Stanchion W - Wall</p>	<p>F</p> <p>Lamp Type: F - Fluorescent</p>	<p>84</p> <p>Wattage: 26 - One 26 Watt PL-T 32 - One 32 Watt PL-T 42 - One 42 Watt PL-T 52 - Two 26 Watt PL-T 57 - One 57 Watt PL-T ④ 64 - Two 32 Watt PL-T 84 - Two 42 Watt PL-T 114 - Two 57 Watt PL-T ④</p>	<p>2</p> <p>Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT Stanchion 5 - 1-1/2" NPT Stanchion</p>	<p>G2</p> <p>Optical Assembly: ① G2 - VPGL2HR Globe (not for 57, 114 Watt) G4 - VPGL4HR Globe (57, 114 Watt only) ④ J1 - NEMA I Glass Refractor J3 - NEMA III Glass Refractor J5 - NEMA V Glass Refractor P2 - NEMA II Polymeric Refractor P3 - NEMA III Polymeric Refractor P4 - NEMA IV Polymeric Refractor P5 - NEMA V Polymeric Refractor</p>	<p>G</p> <p>Guard Options: G - Cast Guard (Glass Refractor and Globe only) N - No Guard</p>	<p>BU</p> <p>Voltage: BU - 120 to 277 V, 50/60 Hz and 125 Vdc A5 - 347 V, 60 Hz ④</p>	<p>L</p> <p>Lamp Options: L - Lamp(s) included Blank - Lamp(s) excluded</p>	<p>ZB</p> <p>Suffix: DP - Safety Cable SC - Safety Chain ZB - Zone 2 Suffix (Required for AEx/Ex nR rating) C - Safety Cable ④ F - Fused Mtg. Hood ③④ (Non-Haz. Loc. only) P - Non-Haz. Photocell (Specify Voltage) ④ Q - Division 2 Haz. Photocell (Specify Voltage) ④ T - Terminal Blocks ④ V - Vibration Protection ④ X - Appledapter ② Mounting Hood Adapter ④</p>
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① Polymeric refractors suitable for Class II, Groups F and G; NEMA 4X; and Marine Type Electric Fixture Outside Type (Salt Water) only.

Reflectors ordered separately (for use with globe fixtures only): Standard Dome: KR2-ST 30-degree Angle: KR2-AN

② Appledapter is available for use with the pendant, ceiling and angled stanchion mounting only.

③ Canadian Electrical Code (CEC) does NOT allow fusing in hazardous locations.

④ Certified to meet the Canadian Electrical Code (CEC) only.

Mercmaster™ III Low Profile Compact Fluorescent Luminaires

Class I, Division 2; Class II, Division 1; Simultaneous Exposure to Hazardous Conditions

Temperature identification numbers of Mercmaster III Low Profile Fluorescent Fixtures

NEC/CEC:

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

NEC/CEC:

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

Thermal Performance

Lamp Watts	Ambient Temp °C (°F) ①	Class I, Division 2				Class II, Division 1 Groups E, F and G ②				Simultaneous Exposure (Class I, Div 2 and Class II, Division 1)			
		Globe	Reflector	Glass Refractor	Polymeric Refractor	Globe	Reflector	Glass Refractor	Polymeric Refractor	Globe	Reflector	Glass Refractor	Polymeric Refractor
26	40 °C (104 °F)	T3	T3	T3	—	T5	T5	T5	T6	T3	T3	T3	—
32	40 °C (104 °F)	T3	T3	T3	—	T5	T5	T5	T6	T3	T3	T3	—
42	40 °C (104 °F)	T3	T3	T3	—	T5	T5	T5	T6	T3	T3	T3	—
52	40 °C (104 °F)	T2D	T2D	T3	—	T4A	T4A	T4A	T6	T2C	T2C	T2C	—
	55 °C (151 °F)	T2C	T2C	T2C	—	T4	T4	T4	—	T2C	T2C	T2C	—
57 ③	40 °C (104 °F)	T2D	T2D	T3	—	T4A	T4A	T4A	T6	—	—	—	—
64	40 °C (104 °F)	T2D	T2D	T3	—	T4A	T4A	T4A	T6	T2C	T2C	T2C	—
	55 °C (151 °F)	T2C	T2C	T2C	—	T4	T4	T4	—	—	—	—	—
84	40 °C (104 °F)	T2C	T2C	T2D	—	T3C	T3C	T3C	T6	T2B	T2B	T2B	—
114 ③	40 °C (104 °F)	T2C	T2C	T2D	—	T3C	T3C	T3C	T6	—	—	—	—

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

“T” 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

Lamp Watts	Supply Wire Temp. °C (°F)	Ambient Temp. °C (°F)	Class I, Zone 2, AEx/Ex nR IIC		
			Globe	Globe and Reflector	Refractor
26	75 °C (167 °F)	40 °C (104 °F)	T5	T5	T6
32	75 °C (167 °F)	40 °C (104 °F)	T5	T5	T6
42	75 °C (167 °F)	40 °C (104 °F)	T6	T6	T6
52	75 °C (167 °F)	40 °C (104 °F)	T5	T5	T6
	75 °C (167 °F)	55 °C (131 °F)	T4	T4	T4
57 ③	75 °C (167 °F)	40 °C (104 °F)	T6	T6	T6
64	75 °C (167 °F)	40 °C (104 °F)	T5	T5	T6
	75 °C (167 °F)	55 °C (131 °F)	T4	T4	T4
84	75 °C (167 °F)	40 °C (104 °F)	T4	T4	T5
114 ③	75 °C (167 °F)	40 °C (104 °F)	T6	T6	T6

“T” Numbers Represent the Maximum Surface Temperature for Luminaires with AEx/Ex nR Rating

“T” Number	T1	T2	T3	T4	T5	T6
Temperature Range (°C)	301-450	201-300	136-200	101-135	86-100	85
Temperature Range (°F)	574-842	394-572	277-392	214-275	187-212	185

① Use +75 °C (+167 °F) rated supply wire.

② Fixtures with Polymeric Refractor are listed for Groups F and G only.

③ Certified to meet the Canadian Electrical Code (CEC) only.

Mercmaster™ III Low Profile Compact Fluorescent Luminaires

Enclosed and Gasketed. For Hazardous and Wet Locations

High Power Factor Electronic Ballast (Min. P.F. 99%), PL-T Lamps.

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

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

APPLETON™

FLUORESCENT/AREA: NEC/CEC ENCLOSED AND GASKETED

Lamp Watts	Hub Size (Inches)	With Globe ①④	Catalog Numbers ②③	
			With Type V 8" Glass Refractor ①④⑤	With Type V Polymeric Refractor ⑥

Pendant — One Hub (Rigid or Flexible Mounting)



Shown with Glass Globe

1 x 26 W	3/4	MLAF262G2N	MLAF262J5N	MLAF262P5N
	1	MLAF263G2N	MLAF263J5N	MLAF263P5N
1 x 32 W	3/4	MLAF322G2N	MLAF322J5N	MLAF322P5N
	1	MLAF323G2N	MLAF323J5N	MLAF323P5N
1 x 42 W	3/4	MLAF422G2N	MLAF422J5N	MLAF422P5N
	1	MLAF423G2N	MLAF423J5N	MLAF423P5N
2 x 26 W	3/4	MLAF522G2N	MLAF522J5N	MLAF522P5N
	1	MLAF523G2N	MLAF523J5N	MLAF523P5N
1 x 57 W	3/4	MLAF572G4N ⑦	MLAF572J5N ⑦	MLAF572P5N ⑦
	1	MLAF573G4N ⑦	MLAF573J5N ⑦	MLAF573P5N ⑦
2 x 32 W	3/4	MLAF642G2N	MLAF642J5N	MLAF642P5N
	1	MLAF643G2N	MLAF643J5N	MLAF643P5N
2 x 42 W	3/4	MLAF842G2N	MLAF842J5N	MLAF842P5N
	1	MLAF843G2N	MLAF843J5N	MLAF843P5N
2 x 57 W	3/4	MLAF1142G4N ⑦	MLAF1142J5N ⑦	MLAF1142P5N ⑦
	1	MLAF1143G4N ⑦	MLAF1143J5N ⑦	MLAF1143P5N ⑦

Pendant Cone — One Hub (Rigid or Flexible Mounting)



Shown with 8" Glass Refractor

1 x 26 W	3/4	MLDF262G2N	MLDF262J5N	MLDF262P5N
	1	MLDF263G2N	MLDF263J5N	MLDF263P5N
1 x 32 W	3/4	MLDF322G2N	MLDF322J5N	MLDF322P5N
	1	MLDF323G2N	MLDF323J5N	MLDF323P5N
1 x 42 W	3/4	MLDF422G2N	MLDF422J5N	MLDF422P5N
	1	MLDF423G2N	MLDF423J5N	MLDF423P5N
2 x 26 W	3/4	MLDF522G2N	MLDF522J5N	MLDF522P5N
	1	MLDF523G2N	MLDF523J5N	MLDF523P5N
1 x 57 W	3/4	MLDF572G4N ⑦	MLDF572J5N ⑦	MLDF572P5N ⑦
	1	MLDF573G4N ⑦	MLDF573J5N ⑦	MLDF573P5N ⑦
2 x 32 W	3/4	MLDF642G2N	MLDF642J5N	MLDF642P5N
	1	MLDF643G2N	MLDF643J5N	MLDF643P5N
2 x 42 W	3/4	MLDF842G2N	MLDF842J5N	MLDF842P5N
	1	MLDF843G2N	MLDF843J5N	MLDF843P5N
2 x 57 W	3/4	MLDF1142G4N ⑦	MLDF1142J5N ⑦	MLDF1142P5N ⑦
	1	MLDF1143G4N ⑦	MLDF1143J5N ⑦	MLDF1143P5N ⑦

① For fixtures with guard, substitute **G** for **N** before adding voltage suffix.

② Add voltage suffix **-BU** for 120 through 277 V, 50/60 Hz and 125 Vdc. Add voltage suffix **-A5** for 347 V, 60 Hz.

③ Add **L** after voltage suffix to include lamp.

④ Add **-ZB** suffix for restricted breathing protection (AEx/Ex nR).

⑤ To order fixture with NEMA Type I or III glass refractor, change **J5** to **J1** or **J3** respectively.

⑥ To order fixture with NEMA Type II, III, or IV polymeric refractor, change **P5** to **P2**, **P3** or **P4** respectively. Polymeric refractor fixtures are UL Listed and CSA Certified for Class II, Division 1 and 2, Groups F and G; Class III; Marine Outdoor Salt Water (UL1598A); NEMA 4X and CSA Type 4X.

⑦ Certified to meet the Canadian Electrical Code (CEC) only.