

## MERCMASTER™ LED LOW PROFILE LUMINAIRES FOR HAZARDOUS LOCATIONS

### SUITABLE LOCATIONS AND APPLICATIONS

- Enclosed and gasketed fixtures suitable for use in:
  - A wide range of industrial, chemical processing and other areas where flammable gases, vapors, and dusts are present
  - Marine and wet locations
  - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
- Typical applications include:
  - Walkways/catwalks/stairwells
  - Grain elevators
  - Tunnels
  - Pipe racks
  - Offshore rigs
  - Vessel lighting
  - Cooling towers
  - Processing areas

### FEATURES

- Choice of color temperature (CCT): 5000K cool white, 4000K neutral white or 3000K warm white.
- Seven standard mounting hood designs allow for mounting in any location. Uses same mounting hoods as Mercmaster™ III, Mercmaster™ Premium LED and Mercmaster™ LED Generation 3.
- Customize to the application requirements with four different field replaceable globe options: clear and diffused polycarbonate, clear glass, or prismatic glass refractor ☉.
- Three light output levels for retrofit of HID fixtures up to 175 W.

Nominal Lumens ☉	HID Equivalent	Model Number
3300	70–100W	MLLED2CG5BU
4400	100–150W	MLLED3CG5BU
5500	150–175W	MLLED4CG5BU

- Retrofit adapters for Crouse Hinds™ + hood available. See Mercmaster™ CH Adapters.
- Retrofit adapters for Mercmaster™ II hoods available. See Mercmaster™ II Adapters.
- Retrofit adapter for Killark™ hoods available. See Killark™ Adapter.
- New Watertight Pendant Hood available to address water ingress into luminaire via conduit.
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on fixture housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- Standard 6 kV surge protection.
- Ambient Temperature: †
  - BU: -40 °C to +65 °C (-40 °F to +149 °F)
  - BH: -40 °C up to +65 °C (-40 °F up to +149 °F)
- Standard screw-type terminal block can accept UL/CSA 26-10 AWG wire.
- Heavy duty, high temperature silicone rubber gaskets.
- Standard NPT threads.
- LED L70 rated at 109,000 Hours with a calculated fixture life of 200,000 hours @ +25 °C (+77 °C).
- Field replaceable globes and LED driver.
- Rugged housing with superior thermal design translates to long luminaire life.
- Photobiological Safety, per IEC standards

### OPTIONS

- Glass globe and glass refractor guard available, purchase separately.
- All Mercmasters have provision for fusing; add suffix -F at the end of the catalog number. ☉

- Photocontrols are available with all except ceiling and pendant cone mounting hoods. Add suffix -1 for 120V, -2 for 208V, -3 for 240V, -4 for 277V. ☉

### STANDARD MATERIALS

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate or glass
- Refractor: heat-resistant prismatic glass
- Glass globe or refractor guard: stainless steel wire
- Refractor: fiberglass reinforced white polyester

### STANDARD FINISHES

- Mounting hoods, bodies and glass refractor guard: gray epoxy powder coat finish, electrostatically applied for complete uniform protection

### ACCESSORIES

- Safety Cable - LEDSC
- Refractor Guard - KRG2S
- Globe Guard - MGU1
- Angled Reflector - CMR4AN
- Visor - MMVISOR

### DESIGNLIGHTS™ CONSORTIUM

- Check DLC QPL for current list of products.

### INTERNATIONAL DARK-SKY ASSOCIATION

- IDA Dark Sky Approved when ordering [I]MLLED[A/B/C/D/R/W]xxW[P/D/G]5Bxxx with MMVISOR accessory

### RELATED PRODUCTS

- Mercmaster™ Retrofit Adapters
- Mercmaster™ III Products
- Mercmaster™ Generation 3 Products

☉ Nominal lumen value for 5000K, clear glass globe. Type V. Detailed lumen information is provided in tables in catalog pages.

☉ Prismatic glass refractor is cCSAus certified only.

☉ Factory installed. Fusing only permitted for cCSAus rating. (For retrofit applications, fusing must be removed from the mounting hood and ordered in the luminaire). Use of fuse voids Marine Outside Type (Salt Water) rating.

☉ Available for 120-277 Vac models only. NEC, Class I, Division 2 photocells for classified use are available, see PCD2 Series.

☉ Mounting hoods with photocontrols are not rated IP66, Type 4X or Marine Outside Type (Salt Water), or rated Class II, but are suitable for wet locations.

† Refer to ambient range table contained in the IECEx certificate of conformity or the T-code ratings table in the catalog pages.

✦ Killark is a registered trademark of Hubbell Incorporated.

✦ Crouse-Hinds is a registered trademarks of Cooper Crouse-Hinds.

For product information:  
www.appletonelec.com  
1.800.621.1506

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# MERCMASTER™ LED LOW PROFILE LUMINAIRES FOR HAZARDOUS LOCATIONS

## NEC/CEC RATINGS

- Class I, Division 2, Group A, B, C, D
- Class I, Zone 2, Group IIC
- Class II, Division 1, Group E, F, G
- Zone 20, Group IIC
- Zone 21, AEx tb IIC, EX tb IIC
- Class III
- Suitable for use in Wet Locations
- Marine Outside Type (Salt Water) ⌘
- Type 3R, 4 and 4X
- IP66/IP67
- Simultaneous Exposure
- American Bureau of Shipping (ABS) Certified
- International Dark Sky (IDA) Approved Ⓞ

## ATEX RATINGS:

- Zone 2 and 21/22
- Ⓢ II 2D
- Ⓢ II 3GD
- IP66
- IK08

## IECEX RATINGS

- Zone 2 and 21/22
- Ex ec IIC T\* Gc
- Ex op is tb IIIC T\*\*C Db
- Ex tc IIIC T\*\*C Dc
- IP66
- IK08

## NEC/CEC CERTIFICATIONS AND COMPLIANCES

- UL Standards: UL1598, UL1598A, UL8750, UL50E, UL 844
- CSA Standards: C22.2 No. 0-10; C22.2 No. 94.2-15; C22.2 No. 137 -M1981; C22.2 No. 250.0 - 08; C22.2 No. 250.13 - 14; C22.2 No. 60598-1:16;
- NEMA, ANSI/IEC Standard: 60529
- cCSAus Listed: Master Contract 164460, Certificate Number 70134063

## ATEX/IECEX CERTIFICATIONS AND COMPLIANCES

- Certification Type: Mercmaster Low Profile
  - Gas: Zones 2
    - Conforming to ATEX 2014/34/EU: II 3 G
    - Type of Protection: Ex ec IIC T\* Gc
    - Temperature Class: T5 to T4
  - Dust: Zones 21 and 22
    - Conforming to ATEX 2014/34/EU: II 2 D
    - Type of Protection: Ex op is tb IIIC T\*\*C Db
    - Ex tc IIIC T\*\*C Dc
    - Surface Temperature: +66 °C to +88 °C (+151 °F to +190 °F)
- Ambient Temperature: -40 °C up to +65 °C (-40 °F up to 149 °F)
- ATEX Certificate: Sira 17ATEX9365X
- IECEX Certificate: IECEX SIR 17.0085X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Photobiological Safety, IEC 62778 and IEC 62471, RGO on all models and globes

## OTHER CERTIFICATIONS

- INMETRO Certificate: BVC20.3821-X

## CATALOG NUMBERING GUIDE

### Example part number: MLLEDA42CJ5BUF1

This is a Mercmaster™ LED Low Profile Series luminaire with a pendant mount, 5000 lumen output, 3/4" NPT hub size, 5000K CCT color temperature, with a NEMA Type V Glass Refractor globe. The voltage is 120-277 Vac or 125-300 Vdc, 50/60Hz. It has fusing and 120V photocontrol.

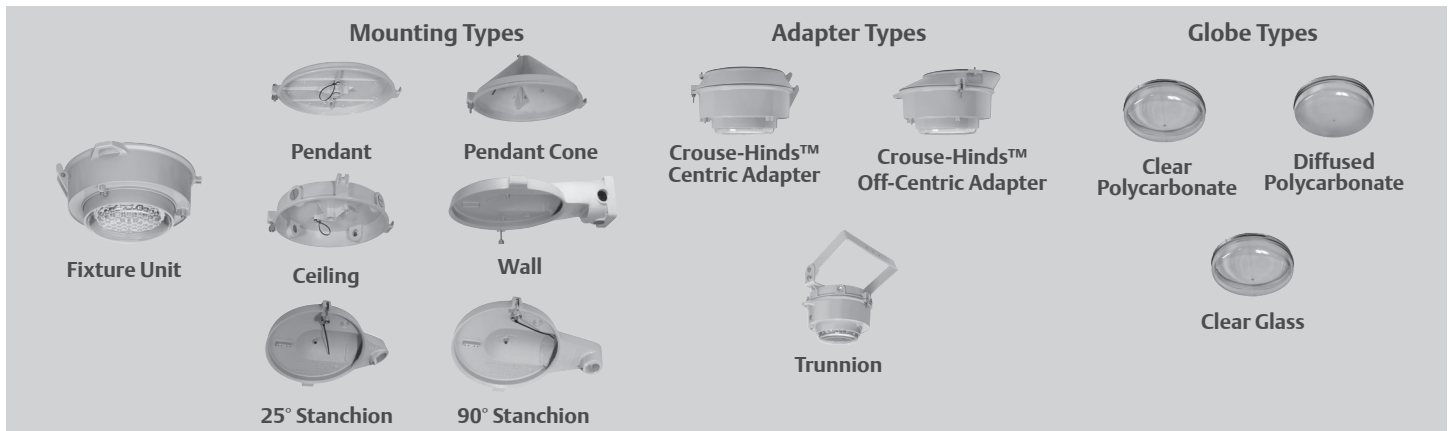
<b>MLLED</b>	<b>A</b>	<b>4</b>	<b>2</b>	<b>C</b>	<b>J5</b>	<b>BU</b>	<b>F</b>	<b>1</b>
MLLED - NEC/CEC and IECEX/ATEX Certified Mercmaster LED Low Profile Series		Lumen Output Ⓢ: 2 - 3K Lumens 3 - 4K Lumens 4 - 5K Lumens		Color Temperature: C - Cool 5000K CCT N - Neutral 4000K CCT W - Warm 3000K CCT		Voltage: BU - 120-277 Vac, 50/60 Hz; or 125-300 Vdc BH - 347-480 Vac, 50/60 Hz Ⓢ		Photocontrol: 1 - Photocontrol 120V Ⓢ 2 - Photocontrol 208V Ⓢ 3 - Photocontrol 240V Ⓢ 4 - Photocontrol 277V Ⓢ Blank - No Photocontrol
	Mounting:		Hub Size:		Globe Material:		Options:	
	A - Pendant B - Watertight Pendant hood Ⓢ C - Ceiling Ⓞ D - Pendant Cone Hood Ⓞ R - 90° Stanchion Ⓞ S - 25° Stanchion Ⓞ T - Trunnion W - Wall K - Killark™ Adapter Universal Ⓢ X - Crouse Hinds™ Adapter, Ceiling or Pendant Ⓢ Y - Crouse Hinds Adapter, Stanchion or Wall Ⓢ U - Mercmaster II Adapter, Ceiling or Pendant Ⓢ V - Mercmaster II Adapter, Stanchion or Wall Ⓢ Blank - No mounting hood		2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion 6 - M20 Metric hub Blank - No hub if using adapter or ordering ballast housing only (no mounting hood)		P5 - NEMA Type V Clear Polycarbonate Globe D5 - NEMA Type V Diffused Polycarbonate Globe G5 - NEMA Type V Glass Globe Ⓞ J5 - NEMA Type V Glass Refractor ⓄⓈ		F - Fusing ⓈⓈ Blank - No Fusing	

Ⓞ Ceiling and pendant cone hood mounted luminaires are not designed to use the PCD2 photocontrol. Ceiling mounts must use an FS/FD box with a photocontrol. Contact your local sales representative for more information.  
 Ⓢ Factory installed. Fusing is mounted in the driver housing. (For retrofit applications that require fusing, fusing must be removed from the mounting hood and ordered in the luminaire). Fusing only permitted for cCSAus rating. Use of fuse voids Marine Outside Type (Salt Water) rating.  
 Ⓢ Luminaires with photocontrol are not rated IP66/67, Marine Outside Type (Salt Water), or Class II and voids the NEMA ratings on the fixture but remains suitable for use in wet locations. Photocontrol available for 120-277 Vac only.  
 Ⓢ Guards for the glass refractors and globes are ordered separately. See the Accessories for more information.  
 Ⓢ For specific lumen output information, see Lamp Comparison Chart in Mercmaster™ Low Profile LED catalog pages.  
 Ⓢ Certified for cCSAus only.  
 Ⓢ 3/4" NPT, 1" NPT and Metric M20 hub entries not offered in this mounting option.  
 Ⓢ IDA Dark Sky Approved when ordering [I]MLLED[A/B/C/D/R/W]xx[V[P/D/G]5Bxxx with MMVISOR accessory.  
 Ⓢ Use of fuse voids Marine Outside Type (Salt Water) rating.

	MLLED2	MLLED3	MLLED4
<b>Voltage Range</b>	BU: 120-277 Vac, 125-300 Vdc, 50/60Hz   BH: 347-480 Vac, 50/60Hz		
<b>Input Power (@ 120V)</b>	28W	38W	48W
<b>Color Temperature (CCT)</b>	5000K	4000K	3000K
<b>- P5 Lumens</b>	3200	3000	3000
<b>- D5 Lumens</b>	3100	2900	2900
<b>- G5 Lumens</b>	3300	3100	3100
<b>- J5 Lumens</b>	3000	2800	2800
<b>Line Current</b>	0.28 @ 120V   0.10 @ 347V 0.13 @ 277V   0.06 @ 480V	0.38 @ 120V   0.13 @ 347V 0.16 @ 277V   0.08 @ 480V	0.48 @ 120V   0.16 @ 347V 0.20 @ 277V   0.10 @ 480V
<b>NEC/CEC T-Code (@ 65 °C simultaneous use)</b>	T4A	T4A	T4
<b>ATEX/IECEX Zone 2 T-Code</b>	MLLED2 = T4 @ +65 °C (+149 °F)	MLLED3 = T4 @ +65 °C (+149 °F)	MLLED4 = T4 @ +65 °C (+149 °F)
<b>Ambient Temperature</b>	-40 °C to +65 °C (-40 °F to +149 °F)		
<b>CCT/CRI</b>	5000K, 4000K, 3000K/70 CRI		
<b>Fixture Weight</b>	10.1 lb. (without hood)		
<b>Warranty</b>	60,000+ hours; 5 years		

United States: 1.800.621.1506 | Asia/Pacific: + 65.6556.1100 | Australia: + 61.3.9721.0387  
 Canada: + 1.888.765.2226 | China: + 86.21.3338.7000 | Europe: + 33.3.22.54.13.90  
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[www.appletonelec.com](http://www.appletonelec.com)





## MERCMASTER™ LED LOW PROFILE EMERGENCY BATTERY BACKUP LUMINAIRES FOR HAZARDOUS LOCATIONS

### SUITABLE LOCATIONS AND APPLICATIONS

- Enclosed and gasketed fixtures suitable for use in:
  - A wide range of industrial, chemical processing and other areas where flammable gases, vapors and combustible dusts are present including simultaneous exposure
  - Marine and wet locations
  - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
- Typical applications include:
  - Walkways/catwalks/stairwells
  - Grain elevators
  - Tunnels
  - Pipe racks
  - Offshore rigs
  - Vessel lighting
  - Cooling towers
  - Processing areas

### FEATURES

- Provides up to 1400 lumens illumination for 90 minutes of emergency lighting with clear lens or 800 lumens illumination for 180 minutes of emergency lighting.
- Functional diagnostic test self-initiates every 14 days after initial start up.
- Duration test is automatically performed once per year.
- Green and Red LED lamps indicate charging status and provide fault warning.
- Simple quick disconnect connector disconnects power between LEDs and battery management module to allow maintenance in hazardous locations.
- Choice of color temperature (CCT): 5000K cool white, 4000K neutral white or 3000K warm white.
- Seven standard mounting hood designs allow for mounting in any location. Uses same mounting hoods as Mercmaster™ III, Mercmaster™ Premium LED and Mercmaster™ LED Generation 3.
- Customize to the application requirements with three different field replaceable globe options: clear and diffused polycarbonate and clear glass.

- Three light output levels for retrofit of HID fixtures up to 175 W.

Nominal Lumens ①	HID Equivalent	Model Number
3300	70–100W	MLLED2
4400	100–150W	MLLED3
5500	150–175W	MLLED4

- Retrofit adapters for Crouse Hinds™ † hood available. See Mercmaster CH Adapters.
- Retrofit adapters for Mercmaster II hoods available. See Mercmaster II Adapters.
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on fixture housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- Standard 6 kV surge protection.
- Ambient Temperature: BU: -20 °C to +55 °C (-4 °F to +131 °F)
- Standard screw-type terminal block can accept UL/CSA .14 to 6 mm<sup>2</sup> (26-10 AWG) wire.
- Heavy duty, high temperature silicone rubber gaskets.
- Standard NPT threads.
- LED L70 rated at 109,000 Hours @ +25 °C (+77 °C).
- Field replaceable globes, battery management module (BMM), battery pack and LED driver.
- Rugged housing with superior thermal design translates to long luminaire life.

### OPTIONS

- Glass and polycarbonate globe guard available, purchase separately.

### STANDARD MATERIALS

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate or glass
- Glass and polycarbonate globe guard: stainless steel wire
- Reflector: fiberglass reinforced white polyester

### STANDARD FINISHES

- Mounting hoods, bodies and glass refractor guard: gray epoxy powder coat finish, electrostatically applied for complete uniform protection

### NEC/CEC RATINGS

- Class I, Division 2, Groups A,B,C,D
- Class I, Zone 2, Group IIC
- Class II, Division 1, Groups E,F,G
- Zone 20, Group IIIC
- Class II, Division 2, Groups F,G
- Class III
- Type 3R, 4, 4X
- IP66/IP67
- Simultaneous Exposure
- Suitable for Use in Wet Locations
- Marine Outside Type (Salt Water) For USA ONLY ‡
- American Bureau of Shipping (ABS) Certified

### NEC/CEC CERTIFICATIONS AND COMPLIANCES

- UL Standard: UL 50E, Second Edition; UL 844, Thirteenth Edition; UL 1598, Third Edition; UL 1598A, First Edition; UL 8750, Second Edition; UL 924, Tenth Edition
- CSA Standard: C22.2 No 0-10; C22.2 No. 94.2-15; C22.2 No. E60598-1:16; C22.2 No. 137-18; C22.2 No. 250.0-08; C22.2 No. 250.13-14; C22.2 No. 141-15
- ANSI/IEC Standard: 60529
- cCSAus Listed: Master contract 164460
- Ambient Temperature: 120-277 Volts: -20 °C up to +55 °C (-4 °F up to +131 °F)

### DESIGNLIGHTS™ CONSORTIUM

- Mercmaster LED Mounting Adapters
- Mercmaster LED Low Profile Luminaires

### RELATED PRODUCTS

- Check DLC QPL for current list of products.

① Nominal lumen value for 5000K CCT, clear glass globe. Detailed lumen information is provided in tables.

† Crouse-Hinds is a registered trademarks of Cooper Crouse-Hinds.

‡ Use of fuse voids Marine Outside Type (Salt Water) rating.

For product information:  
www.appletonelec.com  
1.800.621.1506

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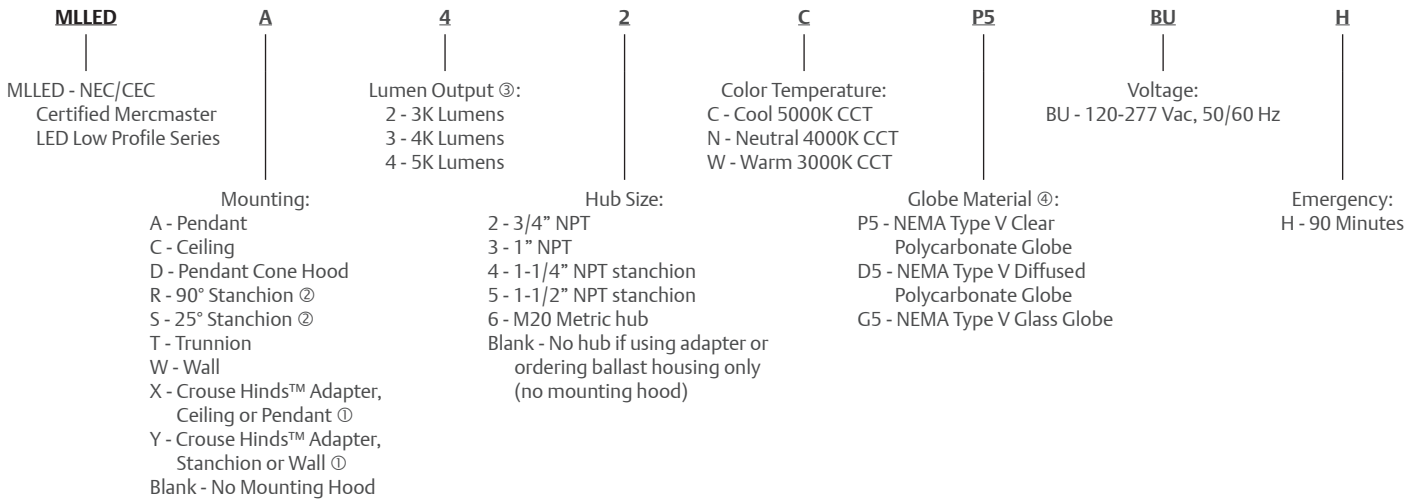
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# MERCMASTER™ LED LOW PROFILE EMERGENCY BATTERY BACKUP LUMINAIRES FOR HAZARDOUS LOCATIONS

## CATALOG NUMBERING GUIDE

### Example part number: MLLEDA42CD5BUH

This is a Mercmaster LED Low Profile Series Luminaire with a pendant mount, 5000 lumen output, 3/4" NPT hub size, 5000K CCT color temperature, with a NEMA Type V Diffused Polycarbonate globe. The voltage is 120-277 Vac or 50/60 Hz. It comes with a 90 minute Emergency Battery Backup.



	MLLED2			MLLED3			MLLED4		
<b>Voltage Range (-BU)</b>	120-277 Vac, 50/60 Hz								
<b>Input Power (@ 120V)</b>	28W			38W			48W		
<b>Color Temperature (CCT)</b>	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
<b>- P5 Lumens</b>	3200	3000	3000	4200	4000	3900	5300	5000	4900
<b>- D5 Lumens</b>	3100	2900	2900	4100	3900	3800	5150	4900	4800
<b>- G5 Lumens</b>	3300	3100	3100	4400	4200	4100	5500	5200	5100
<b>- P5 Lumens (Emergency Battery Backup)</b>	1400	1270	1150	1400	1270	1150	1400	1270	1150
<b>- D5 Lumens (Emergency Battery Backup)</b>	1350	1200	1100	1350	1200	1100	1350	1200	1100
<b>- G5 Lumens (Emergency Battery Backup)</b>	1450	1330	1200	1450	1330	1200	1450	1330	1200
<b>Line Current</b>	0.27 @ 120V 0.13 @ 277V			0.33 @ 120V 0.16 @ 277V			0.42 @ 120V 0.20 @ 277V		
<b>NEC/CEC T-Code (@ 65 °C simultaneous use)</b>	T4A			T5			T4A		
<b>Ambient Temperature</b>	-20 °C to +55 °C (-4 °F to +131 °F)								
<b>CCT/CRI</b>	5000K, 4000K, 3000K/70 CRI								
<b>Fixture Weight</b>	5.8 kg (13.8 lb) (without hood)								
<b>Warranty</b>	60,000+ hours; 5 years								

① Certified for cCSAus only.  
 ② 3/4" NPT, 1" NPT and Metric M20 hub entries not offered in this mounting option.  
 ③ For specific lumen output information, see Lamp Comparison Chart.  
 ④ Guards for the glass globes are ordered separately. See the Accessories for more information.