The updated Victorian style Morino, designed with decorative arms that lend itself perfectly to any post classic settings. Conceived with a high efficiency heat sink, integrated Utility Fitter and a flat glass lens, the Morino is an efficient high performance fixture with practical tool-free access in all wrapped up in a traditional package that is anything but old-fashioned.

CONSTRUCTION
- Heavy spun aluminum hood with finial and a choice of 2 decorative die-cast arm styles encircle a sturdy diecast aluminum housing with integrated driver compartment
- Certified IP67 optical system
- Silicone gaskets and stainless steel hardware
- Mounts onto Ø4” O.D. x 3” long tenon with available 2 7/8” O.D. (R28) and 3” O.D. (R30) fitter adaptors.

LED, LENS & OPTICS
- Type 2, 3, 3m (wide), 4 & 5 Roadway optics available
- Optional House-side shield available to cut back light
  - High power LED available in 3000K & 4000K

FINISH
- Available in 10 standard colors
- Textured (TX) or smooth (SM) finish
- Optional RAL colors are also available
- Super durable extremely resistant exterior polyester powder coating meets AAMA 2604 requirements (5 years South Florida exposure)
- For added protection a Marine Grade (MG) pre-finish is available to meet ASTM G7, B117,D1654 and D2247 requirements (salt spray, corrosion and humidity resistance)

ELECTRICAL
- Dimmable 0-10 volt, high power factor (90%) driver
- 120, 208, 240, 277, 347 OR 480 volts available
- 10 kA Surge protector supplied standard

OPTIONAL
- Programmable driver (PROG)
- 7-Pin ANSI C136.41 receptacle (PTDR) available with shorting cap (PX), photocell (PT) or long-life photocell (PTL)
- Field adjustable 10% increment step-dimming switch (SD)

Contact factory for WIRELESS CONTROLS and further details
The Galaxy Light engine unit is a custom designed, modular system that combines state-of-the-art optics, LEDs and thermal management and is rigorously tested to ensure high performance and long life.

**ROBUST DESIGN**
- Sealed IP67
- Modular aluminum LED board with acrylic optic
- Die cast aluminum alloy heat sink with thermal interface
- Heat sink designed and tested for optimal thermal management performance in all weather from 40C/-40F to 50C/122F
- High Power LEDs with thermal and electric protection for stability and protects it from electrical surge.

**PERFORMANCE DRIVEN**
- Modular design allows the GALAXY wattages ranging from 20 to 120W
- Equivalent to 50-250W HID with 60% energy saving
- GALAXY engines are tested & designed for a lifespan of over 100,000 hours
- Tested according to LM79 standard by recognize NVLAP independent laboratories

**IES Distribution types**
Cyclone Lighting offers optically engineered performance systems based on a series of acrylic injection molded lens of IES Roadway distribution types giving you the performance of a cobra head in a sleek decorative fixture.

**House Side Shield option**
The HOUSE SIDE SHIELD (HS) give you a better back control for those LEED projects where light spill or light trespass are critical. This options can be added post installation.

Please consult website for latest IES files
Luminaire
SCALE GUIDE

CMO19T4A
PD12
BD41

CMO19T4B
PA40
BD55

CMO19T4C
PA40
BD13
# Post Top

**CMO19T4A / CMO19T4B / CMO19T4C**

## Ordering Template

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LENS</th>
<th>DIST.</th>
<th>WATT</th>
<th>CCT</th>
<th>VOLT</th>
<th>FITTER</th>
<th>OPTIONS</th>
<th>COLOR</th>
<th>TEXTURE</th>
<th>OP.FIN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM19T4A</td>
<td>FGC</td>
<td>2</td>
<td>20W</td>
<td>3K</td>
<td>120</td>
<td>NONE</td>
<td>NONE</td>
<td>BK</td>
<td>TX</td>
<td>MG</td>
</tr>
<tr>
<td>COM19T4B</td>
<td>FGF</td>
<td>3</td>
<td>40W</td>
<td>4K</td>
<td>208</td>
<td>R28</td>
<td>MT</td>
<td>SM2</td>
<td>PT1</td>
<td>DG</td>
</tr>
<tr>
<td>COM19T4C</td>
<td>3M</td>
<td>60W</td>
<td>4K</td>
<td>240</td>
<td>R30</td>
<td>R30</td>
<td>PT1</td>
<td>MT</td>
<td>MT</td>
<td>MG</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>80W</td>
<td>5</td>
<td>277</td>
<td>347</td>
<td>PTDR1</td>
<td>PTDR1</td>
<td>SI</td>
<td>MA</td>
<td>MA</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>100W</td>
<td>2HS</td>
<td>120W</td>
<td>480</td>
<td>PROG</td>
<td>PROG</td>
<td>BZ</td>
<td>BZ</td>
<td>BZ</td>
</tr>
<tr>
<td></td>
<td>3HS</td>
<td>140W</td>
<td>3MHS</td>
<td></td>
<td></td>
<td>SD</td>
<td>SD</td>
<td>BG</td>
<td>BG</td>
<td>BG</td>
</tr>
<tr>
<td></td>
<td>4HS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GM</td>
<td>GM</td>
<td>GM</td>
</tr>
</tbody>
</table>

*ONLY ONE OF THESE OPTION CAN BE CHOSEN*

### ORDERING CODE

#### LENS
- **FGC**: Flat Glass Clear
- **FGF**: Flat Glass Frosted

#### DISTRIBUTION
- **HS**: Internal House Shield

#### CCT
- **3K**: 3000K
- **4K**: 4000K

#### WATT

See photometric page for lumen output

#### FITTER
- **NONE**: Fits 4” O.D. X 3” Long Tenon
- **R28**: Reducer 4” O.D. To 2 7/8” O.D. X 3” Long Tenon
- **R30**: Reducer 4” O.D. To 3” O.D. X 3” Long Tenon

#### OPTIONS
- **NONE**: None
- **PT**: Photocell W/7-PIN Receptacle (ANSI C136.41)
- **PTL**: Long Life Photocell W/7-PIN Receptacle (ANSI C136.41)
- **PTDR**: 7-PIN Receptacle (ANSI C136.41)
- **PX**: Shorting Cap W/7-PIN Receptacle (ANSI C136.41)
- **PROG**: Programmable Driver
- **SD**: Field Adjustable 10% Increment Step-Dimming Switch

*CONTACT FACTORY FOR WIRELESS APPLICATIONS AND FOR MORE DETAILS*

### References

#### COLOR
- **BK**: Black RAL9005
- **MT**: Metallic Graphite Textured Only (Proprietary Formula)
- **DG**: Dark Green RAL6012
- **MA**: Marine Blue RAL5013
- **SI**: Metallic Silver RAL9006 (Smooth Only)
- **BZ**: Dark Bronze RAL8019
- **BG**: Burgundy RAL3005
- **GM**: Moss Green RAL6005
- **PG**: Pale Grey RAL7040
- **WH**: White RAL9003

#### TEXTURE
- **TX**: Textured
- **SM2**: Smooth (Metallic Silver RAL9006 Only)

#### OP.FIN. (OPTIONAL FINISH)
- **MG**: Marine Grade Pre-Finish

### Luminaire

![CMO19T4A](image1.png)  ![CMO19T4B](image2.png)  ![CMO19T4C](image3.png)
## Photometry

**CMO19T4A / CMO19T4B / CMO19T4C**

**SOURCE: LED 4000K ± 150K, 70 CRI minimum**
**WATERPROOF RATING: IP67 optical system**
**MAINTENANCE: Tool free utility series fitter**
**Dark Sky friendly optical system**
**Data based on luminaire using FGC (Flat glass clear)**

### Type 2

<table>
<thead>
<tr>
<th>LED CODE</th>
<th>LUMEN OUTPUT</th>
<th>EFFICACY (LM/W)</th>
<th>WATTAGE LED</th>
<th>WATTAGE SYSTEM*</th>
<th>LED CURRENT (mA)</th>
<th>BUG RATING</th>
<th>HID EQUIVALENCY³</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-20W-4K</td>
<td>2339</td>
<td>106</td>
<td>20</td>
<td>22</td>
<td>350</td>
<td>B1-U1-G1</td>
<td>50W</td>
</tr>
<tr>
<td>2-40W-4K</td>
<td>4288</td>
<td>95</td>
<td>40</td>
<td>45</td>
<td>700</td>
<td>B1-U2-G1</td>
<td>70W</td>
</tr>
<tr>
<td>2-60W-4K</td>
<td>6498</td>
<td>97</td>
<td>60</td>
<td>67</td>
<td>700</td>
<td>B1-U2-G1</td>
<td>100W</td>
</tr>
<tr>
<td>2-80W-4K</td>
<td>8577</td>
<td>95</td>
<td>80</td>
<td>90</td>
<td>700</td>
<td>B1-U2-G1</td>
<td>150W</td>
</tr>
<tr>
<td>2-100W-4K</td>
<td>10786</td>
<td>96</td>
<td>100</td>
<td>112</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>200W</td>
</tr>
<tr>
<td>2-120W-4K</td>
<td>12995</td>
<td>96</td>
<td>120</td>
<td>135</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>250W</td>
</tr>
<tr>
<td>2-140W-4K</td>
<td>14944</td>
<td>95</td>
<td>140</td>
<td>158</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>250W</td>
</tr>
</tbody>
</table>

### Type 3

<table>
<thead>
<tr>
<th>LED CODE</th>
<th>LUMEN OUTPUT</th>
<th>EFFICACY (LM/W)</th>
<th>WATTAGE LED</th>
<th>WATTAGE SYSTEM*</th>
<th>LED CURRENT (mA)</th>
<th>BUG RATING</th>
<th>HID EQUIVALENCY³</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-20W-4K</td>
<td>2304</td>
<td>105</td>
<td>20</td>
<td>22</td>
<td>350</td>
<td>B1-U1-G1</td>
<td>50W</td>
</tr>
<tr>
<td>3-40W-4K</td>
<td>4225</td>
<td>94</td>
<td>40</td>
<td>45</td>
<td>700</td>
<td>B1-U2-G1</td>
<td>70W</td>
</tr>
<tr>
<td>3-60W-4K</td>
<td>6401</td>
<td>96</td>
<td>60</td>
<td>67</td>
<td>700</td>
<td>B1-U2-G1</td>
<td>100W</td>
</tr>
<tr>
<td>3-80W-4K</td>
<td>8449</td>
<td>94</td>
<td>80</td>
<td>90</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>150W</td>
</tr>
<tr>
<td>3-100W-4K</td>
<td>10626</td>
<td>95</td>
<td>100</td>
<td>112</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>200W</td>
</tr>
<tr>
<td>3-120W-4K</td>
<td>12802</td>
<td>95</td>
<td>120</td>
<td>135</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>250W</td>
</tr>
<tr>
<td>3-140W-4K</td>
<td>14722</td>
<td>93</td>
<td>140</td>
<td>158</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>250W</td>
</tr>
</tbody>
</table>

### Type 3M

<table>
<thead>
<tr>
<th>LED CODE</th>
<th>LUMEN OUTPUT</th>
<th>EFFICACY (LM/W)</th>
<th>WATTAGE LED</th>
<th>WATTAGE SYSTEM*</th>
<th>LED CURRENT (mA)</th>
<th>BUG RATING</th>
<th>HID EQUIVALENCY³</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M-20W-4K</td>
<td>2053</td>
<td>93</td>
<td>20</td>
<td>22</td>
<td>350</td>
<td>B1-U1-G1</td>
<td>50W</td>
</tr>
<tr>
<td>3M-40W-4K</td>
<td>3764</td>
<td>84</td>
<td>40</td>
<td>45</td>
<td>700</td>
<td>B1-U1-G2</td>
<td>70W</td>
</tr>
<tr>
<td>3M-60W-4K</td>
<td>5702</td>
<td>85</td>
<td>60</td>
<td>67</td>
<td>700</td>
<td>B1-U1-G2</td>
<td>100W</td>
</tr>
<tr>
<td>3M-80W-4K</td>
<td>7527</td>
<td>84</td>
<td>80</td>
<td>90</td>
<td>700</td>
<td>B1-U2-G2</td>
<td>150W</td>
</tr>
<tr>
<td>3M-100W-4K</td>
<td>9466</td>
<td>85</td>
<td>100</td>
<td>112</td>
<td>700</td>
<td>B2-U2-G3</td>
<td>200W</td>
</tr>
<tr>
<td>3M-120W-4K</td>
<td>11405</td>
<td>84</td>
<td>120</td>
<td>135</td>
<td>700</td>
<td>B2-U2-G3</td>
<td>250W</td>
</tr>
<tr>
<td>3M-140W-4K</td>
<td>13115</td>
<td>83</td>
<td>140</td>
<td>158</td>
<td>700</td>
<td>B2-U2-G3</td>
<td>250W</td>
</tr>
</tbody>
</table>

¹IES-TM-21 Calculated L70 is over 363 000 hours.
²IES-TM-21 Reported more than 54 000 hours.
³System wattage includes the LED and the Driver.
⁴Equivalency should always be verified by photometric layout.
⁵4000K used for testing, 3000K photometrics is available on website.

Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Cyclone Lighting. Cyclone Lighting reserves the right to substitute materials or change the manufacturing process of its products without prior notification. See the latest results and updates on our website at www.cyclonelighting.com
**Photometry**

CMO19T4A/CMO19T4B/CMO19T4C

**SOURCE**: LED 4000K ± 150K, 70 CRI minimum¹

**WATERPROOF RATING**: IP67 optical system

**MAINTENANCE**: Tool free utility series fitter

Dark Sky friendly optical system

Data based on luminaire using FGC (Flat glass clear)

---

**Color temperature**

**LED Wattage**

**Optical distribution**

---

**LED code definition:**

2 - 20W - 4K

---

### Type 4

<table>
<thead>
<tr>
<th>LED CODE</th>
<th>LUMEN OUTPUT</th>
<th>EFFICACY (LM/W)</th>
<th>WATTAGE LED</th>
<th>WATTAGE SYSTEM²</th>
<th>LED CURRENT (mA)</th>
<th>BUG RATING</th>
<th>HID EQUIVALENCY³</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-20W-4K</td>
<td>2317</td>
<td>105</td>
<td>20</td>
<td>22</td>
<td>350</td>
<td>B1-U1-G1</td>
<td>50W</td>
</tr>
<tr>
<td>4-40W-4K</td>
<td>4247</td>
<td>94</td>
<td>40</td>
<td>45</td>
<td>700</td>
<td>B1-U2-G1</td>
<td>70W</td>
</tr>
<tr>
<td>4-60W-4K</td>
<td>6435</td>
<td>96</td>
<td>60</td>
<td>67</td>
<td>700</td>
<td>B1-U2-G2</td>
<td>100W</td>
</tr>
<tr>
<td>4-80W-4K</td>
<td>8494</td>
<td>94</td>
<td>80</td>
<td>90</td>
<td>700</td>
<td>B1-U2-G2</td>
<td>150W</td>
</tr>
<tr>
<td>4-100W-4K</td>
<td>10682</td>
<td>95</td>
<td>100</td>
<td>112</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>200W</td>
</tr>
<tr>
<td>4-120W-4K</td>
<td>12870</td>
<td>95</td>
<td>120</td>
<td>135</td>
<td>700</td>
<td>B2-U2-G2</td>
<td>250W</td>
</tr>
<tr>
<td>4-140W-4K</td>
<td>14801</td>
<td>94</td>
<td>140</td>
<td>158</td>
<td>700</td>
<td>B2-U2-G3</td>
<td>250W</td>
</tr>
</tbody>
</table>

---

### Type 5

<table>
<thead>
<tr>
<th>LED CODE</th>
<th>LUMEN OUTPUT</th>
<th>EFFICACY (LM/W)</th>
<th>WATTAGE LED</th>
<th>WATTAGE SYSTEM²</th>
<th>LED CURRENT (mA)</th>
<th>BUG RATING</th>
<th>HID EQUIVALENCY³</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-20W-4K</td>
<td>2412</td>
<td>110</td>
<td>20</td>
<td>22</td>
<td>350</td>
<td>B1-U1-G1</td>
<td>50W</td>
</tr>
<tr>
<td>5-40W-4K</td>
<td>4421</td>
<td>98</td>
<td>40</td>
<td>45</td>
<td>700</td>
<td>B2-U2-G1</td>
<td>70W</td>
</tr>
<tr>
<td>5-60W-4K</td>
<td>6699</td>
<td>100</td>
<td>60</td>
<td>67</td>
<td>700</td>
<td>B3-U2-G1</td>
<td>100W</td>
</tr>
<tr>
<td>5-80W-4K</td>
<td>8842</td>
<td>98</td>
<td>80</td>
<td>90</td>
<td>700</td>
<td>B3-U2-G2</td>
<td>150W</td>
</tr>
<tr>
<td>5-100W-4K</td>
<td>11120</td>
<td>99</td>
<td>100</td>
<td>112</td>
<td>700</td>
<td>B3-U2-G2</td>
<td>200W</td>
</tr>
<tr>
<td>5-120W-4K</td>
<td>13398</td>
<td>99</td>
<td>120</td>
<td>135</td>
<td>700</td>
<td>B4-U2-G2</td>
<td>250W</td>
</tr>
<tr>
<td>5-140W-4K</td>
<td>15407</td>
<td>98</td>
<td>140</td>
<td>158</td>
<td>700</td>
<td>B4-U2-G2</td>
<td>250W</td>
</tr>
</tbody>
</table>

¹IES-TM-21 Calculated L70 is over 363 000 hours.

²IES-TM-21 Reported more than 54 000 hours.

³System wattage includes the LED and the Driver.

⁴Equivalency should always be verified by photometric layout.

⁵4000K used for testing, 3000K photometrics is available on website.

---

Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Cyclone Lighting. Cyclone Lighting reserves the right to substitute materials or change the manufacturing process of its products without prior notification. See the latest results and updates on our website at www.cyclonelighting.com