LUNERA T5HO/T5 LED 4FT
25W/11W LED Replacement for Bi-Pin 4FT T5HO/T5 Fluorescent Lamps
Type A - Ballast Driven

Description
The LUNERA T5HO LED 4FT is a plug and play (Type A, ballast driven) linear T-LED replacement for a 54W, G5 bi-pin T5HO fluorescent lamp. It operates off of the existing electronic ballast and supports instant start, rapid start, and programmed start ballasts.

This LED lamp emits beautiful light with a 330° Beam Angle, has a Color Rendering Index (CRI) of 80+ and delivers up to 3,500 lumens of usable light. The T5HO/T5 LED 4FT features a glass tube for improved optics and is available in 3000K, 3500K, 4000K and 5000K color temperatures.

This lamp includes Thermal Fuse Switch protection to eliminate failures caused by overdriving the lamp or thermal/overheating issues as may be caused by arcing or incorrect ballast wiring. The Thermal Fuse Switch will disable the lamp until the temperature conditions are nominal, at which time the lamp will restart.

Additionally, the lamp is compatible with 28W T5 ballasts and may replace a T5 lamp. In this application, it is rated at 11W and delivers 1,300 lumens.

The LUNERA T5HO LED 4FT is rated at 50,000 hours. It is supported by a five-year warranty. This lamp contains no mercury allowing for non-hazardous waste disposal.

This lamp does not support line voltage and may be installed with Shunted or Non-Shunted mini G5 Tombstone sockets.

Features
- Directly replaces 54W 4FT bi-pin T5HO fluorescent lamps with 25W LED
- Also replaces 28W 4FT T5 fluorescent lamps with 11W LED (1,300lm)
- Plug-and-play Type A (ballast driven) installation. Supports Instant-, Rapid- and Programmed-Start Ballasts
- Delivers up to 3,500 lumens (T5HO) or 1,300 lumens (T5) of usable light with >80 CRI
- Thermal Fuse Switch protects against overheating caused by arcing or ballast failure
- CCT 3000K, 3500K, 4000K and 5000K
- 50,000 hours life to L70
- 5-Year Warranty

Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th>Socket Type</th>
<th>Power Supply</th>
<th>Dimension</th>
<th>Lamp Wattage</th>
<th>CCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN Lunera T5HO</td>
<td>T5 Bi-pin</td>
<td>D</td>
<td>48</td>
<td>25W</td>
<td>830: 3000K</td>
</tr>
<tr>
<td></td>
<td>G5 sockets</td>
<td></td>
<td></td>
<td>Replaces:</td>
<td>835: 3500K</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>54W T5HO with 3,500lm or</td>
<td>840: 4000K</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28W T5 with 1,300lm @ 11W</td>
<td>850: 5000K</td>
</tr>
</tbody>
</table>


Example: HN-T5-D-48-25W-830
Product Specifications

Illumination
- Color Temperatures: 3000K, 3500K, 4000K, 5000K
- Delivered Lumens:
  - T5HO: Up to 3,500lm
  - T5: Up to 1,300lm
- CRI: >80
- Color Consistency: Lunera TruColor LED Selection
- Lumen Maintenance (L70): 50,000+ hours life

Electrical System
- Power Factor: >90%
- Total Harmonic Distortion: <20%
- Input Voltage: Dependent of the ballast (Lamp operates off of rapid, instant, and programmed start electronic ballasts)
- Lamp Power:
  - T5HO: 25W
  - T5: 11W
- Total Power*:
  - T5HO: 28W
  - T5: 18W
- Lamp Wattage Replaced: Up to 54W (T5HO) / 28W (T5)
- Dimming: No
- Ballast Factor: <1
- The Lunera T5 lamp may be used with Low Ballast Factor (LBF) and Normal Ballast Factor (NBF) electronic ballasts.
- Thermal Fuse Switch**: Yes

Physical
- Weight: 0.25 lbs
- Housing and Finish: Frosted White Glass, Gray Endcap
- Optics: Optical Glass Diffusion
- Bean Angle / Beam Spread: 330° / 230°

Environment
- Ambient Operating Temp: -40°F to 104°F (-40°C to 40°C)
- Ambient Operating Humidity: Dry and Damp Certified

Installation
- Socket Type: G5 bi-pin T5 socket (Shunted & Non-Shunted Tombstone)
- Line Voltage: No, this lamp is NOT approved for use with line voltage.

Certifications & Qualifications
- UL (US and Canada): Listed (UL1993)
- RoHS Compliant: Contains no lead or mercury
- DesignLights Consortium Listed: Yes, 4.2

Warranty
- Warranty: 5 years

Dimensions

Photometric and Power Data

Photometric and power data with 54W and 28W ballasts:

<table>
<thead>
<tr>
<th>Ballast Type</th>
<th>System Power</th>
<th>Lamp Lumens</th>
</tr>
</thead>
<tbody>
<tr>
<td>54W T5HO*</td>
<td>28W</td>
<td>3,500lm</td>
</tr>
<tr>
<td>28W T5**</td>
<td>11W</td>
<td>1,300lm</td>
</tr>
</tbody>
</table>

* Performance with Sunpark 154T5HO
** Performance with Sylvania 2x28T5/UNV - 11W, 1300lm

Application Notes

The LUNERA T5HO LED 4FT may be used in open and enclosed fixtures, indoors or outdoors.
This lamp supports Shunted and Non-Shunted tombstones.

Product warranty will be voided if the lamp is installed:
- with incompatible ballasts
- in a fully enclosed fixtures
- in broken, cracked, dusty or rusty tombstones
- in fixtures with improper ballast wiring
- while the fixture is energized (hot plug-in)

* Total Power equals lamp power + ballast power.
** This lamp has integrated Thermal Fuse Switch protection to eliminate failures caused by overdriving the lamp or thermal/overheating issues as may occur when the lamp is installed in fully gasketed (sealed) fixtures, if the ballast-socket wiring is incorrect, or if the lamp is hot plugged that may lead to arcing. The Thermal Fuse Switch will disable the lamp until the temperature conditions are nominal, at which time the lamp will restart.

CAUTION

TURN POWER OFF WHEN INSTALLING THE LAMP.

CAUTION - IF THE LAMP OR LUMINAIRE EXHIBITS UNDESIRABLE OPERATION (BUZZING, FLICKERING, ETC.), IMMEDIATELY TURN OFF POWER, REMOVE LAMP FROM LUMINAIRE AND CONTACT MANUFACTURER.

www.ecoled.mx  e-mail: ventas@ecoled.mx  Tel: (664) 609-4943
LUNERA T5HO LED 4FT UTT
25W LED Replacement for 4FT T5HO Fluorescent Lamps
Type B - Double-Ended with UTT, Ballast Bypassed

Description
The LUNERA T5HO LED 4FT UTT is a 25W line driven, (Type B, double-ended, ballast bypassed), linear LED replacement for a 4FT bi-pin T5HO fluorescent lamp up to 54W. Its built-in universal driver allows lamp operation at 120V-277V. Lunera’s integrated Universal Tombstone Technology (UTT) makes this double-ended lamp faster and safer to install into either Shunted or Non-Shunted mini-G5 sockets. UTT lamps are certified by UL Classified for safe handling and can reduce installation time by half.

This lamp emits beautiful LED light with a 330° Beam Angle, it has a Color Rendering Index (CRI) of >80 and delivers up to 3,500 (25W) lumens of usable light. The LUNERA T5HO LED 4FT UTT features a glass tube for improved optics and is available in 3000K, 3500K, 4000K and 5000K color temperatures.

The LUNERA T5HO LED 4FT UTT is rated at 50,000 hours and is backed by a five-year warranty. This lamp does not contain mercury, allowing for non-hazardous waste disposal.

This Type B (ballast bypassed) lamp and does not support fluorescent T5HO/T5 ballasts or LED drivers. The fixture can have either Shunted or Non-Shunted G13 (Tombstone) sockets wired into AC line voltage.

Features
- Directly replaces 54W 4FT T5HO fluorescent lamps with a 25W LED
- Line Driven (Type B, double-ended, ballast bypassed) Installation - supports line driven 120V-277V
- Universal Tombstone Technology supports lamp installation in Shunted and Non-Shunted mini-G5 tombstones
- Delivers up to 3,500 (25W/T5HO) lumens
- >80 CRI
- CCT 3000K, 3500K, 4000K and 5000K
- 50,000 hours life to L70
- 5 Year Warranty

Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th>Socket Type</th>
<th>Power Supply</th>
<th>Dimension</th>
<th>Lamp Wattage</th>
<th>CCT</th>
<th>Feature</th>
</tr>
</thead>
</table>
| HN Lunera T5 LED | T5 Bi-pin G5 Shunted and Non-Shunted sockets | L - Ballast Bypassed Supports 120V-277V | 48 46 inch tube | 25W Replaces: 25W T5HO @ 3,500lm | 830: 3000K  
835: 3500K  
840: 4000K  
850: 5000K | UT Universal Tombstone Technology (supports Shunted and Non-Shunted tombstones) |

Example: HN-T5-L-48-25W-830-UT

www.ecoled.mx  
email:ventas@ecoled.mx  
Tel: (664) 609 4943
### Product Specifications

<table>
<thead>
<tr>
<th>Illumination</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Illumination</strong></td>
<td><a href="image">Diagram</a></td>
</tr>
<tr>
<td>Color Temperatures</td>
<td><strong>Application Notes</strong></td>
</tr>
<tr>
<td>3000K, 3500K, 4000K, 5000K</td>
<td>Lunera Universal Tombstone Technology allows lamp installation into Shunted and Non-Shunted mini G5 tombstones.</td>
</tr>
<tr>
<td>Delivered Lumens:</td>
<td>Lamp installation in the following conditions and applications <strong>voids the product warranty</strong>:</td>
</tr>
<tr>
<td>Up to 3,500lm</td>
<td>- Line voltage above 277VAC</td>
</tr>
<tr>
<td>CRI</td>
<td>- LED Drivers or with a ballast</td>
</tr>
<tr>
<td>&gt;80</td>
<td>- Gasketed (sealed), fully enclosed fixtures</td>
</tr>
<tr>
<td>Color Consistency</td>
<td>- Installation in wet environments</td>
</tr>
<tr>
<td>Lunera TruColor LED Selection</td>
<td>- Installation in broken, cracked, dirty or rusted tombstones</td>
</tr>
<tr>
<td>Lumen Maintenance (L70)</td>
<td>- Improper wiring to the tombstones/lamp</td>
</tr>
<tr>
<td>50,000+ hours life</td>
<td><strong>Physical</strong></td>
</tr>
<tr>
<td></td>
<td>Weight</td>
</tr>
<tr>
<td></td>
<td>0.25 lbs</td>
</tr>
<tr>
<td>Electrical System</td>
<td>Housing and Finish</td>
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<tr>
<td>Power Factor</td>
<td>Glass, White</td>
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<tr>
<td>&gt; 90%</td>
<td><strong>Optics</strong></td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>Optical Glass Diffusion</td>
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<tr>
<td>&lt; 20%</td>
<td>Beam Spread / Beam Angle</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>330° / 230°</td>
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<tr>
<td>120V ~ 277V</td>
<td><strong>Environment</strong></td>
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<tr>
<td>50/60Hz AC Line Voltage</td>
<td><strong>Ambient Operating Temp</strong></td>
</tr>
<tr>
<td>Total Power*</td>
<td>-40°F to 104°F (-40°C to 40°C)</td>
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<tr>
<td>25W</td>
<td><strong>Ambient Operating Humidity</strong></td>
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<tr>
<td>Lamp Wattage Replaced</td>
<td>Dry and Damp Certified</td>
</tr>
<tr>
<td>54W</td>
<td><strong>Installation</strong></td>
</tr>
<tr>
<td>Dimming</td>
<td><strong>Socket Type</strong></td>
</tr>
<tr>
<td>No</td>
<td>G5 bi-pin socket (Shunted or Non-Shunted Tombstones)</td>
</tr>
<tr>
<td>Universal Tombstone Technology** Yes</td>
<td><strong>Line Voltage</strong></td>
</tr>
<tr>
<td></td>
<td>Yes (120V-277V). Not for use with ballasts or LED drivers</td>
</tr>
<tr>
<td></td>
<td><strong>Certifications &amp; Qualifications</strong></td>
</tr>
<tr>
<td>UL (US and Canada)</td>
<td>Classified (UL1598-C)</td>
</tr>
<tr>
<td>RoHS Compliant</td>
<td>Contains no lead or mercury</td>
</tr>
<tr>
<td>FCC***</td>
<td>Compliant with Parts 15A/B</td>
</tr>
<tr>
<td>LM79, LM80, IES Files</td>
<td>Available. Contact Lunera.</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td><strong>CAUTION</strong></td>
</tr>
<tr>
<td>Warranty</td>
<td>Turn power OFF when installing the lamp.</td>
</tr>
<tr>
<td>5 years</td>
<td><strong>CAUTION - IF THE LAMP OR LUMINAIRE EXHIBITS UNDESIRABLE OPERATION (BUZZING, FLICKERING, ETC.), IMMEDIATELY TURN OFF POWER, REMOVE LAMP FROM LUMINAIRE AND CONTACT MANUFACTURER.</strong></td>
</tr>
</tbody>
</table>
Double-Ended Electrical Connection

The LUNERA T5HO LED 4FT UTT is driven by 120V/277V 60Hz AC.

Correct Wiring

Incorrect Wiring
LUNERA T8 LED 4FT UTT
12W/14W/17W LED Replacement for 4FT T8 Fluorescent Lamp Type B
Double-Ended with UTT, Ballast Bypassed

Description
The LUNERA T8 LED 4FT UTT is a 12W, 14W or 17W line driven, (Type B, double-ended, ballast bypassed), linear LED replacement for a 4FT bi-pin T8 fluorescent lamp up to 32W. Its built-in universal driver allows lamp operation at 120V ~ 277V. Lunera’s integrated Universal Tombstone Technology (UTT) makes this a double-ended lamp, allowing installation into both Shunted and Non-Shunted G13 tombstones. UTT lamps are certified by UL Classified for safe handling and can reduce installation time by half.

This lamp emits beautiful LED light with a 330° Beam Angle, it has a Color Rendering Index (CRI) of >80 and delivers up to 1,800 lumens (12W or 14W) or 2,200 lumens (17W) of usable light. The LUNERA T8 LED 4FT UTT features a glass tube for improved optics and is available in 3000K, 3500K, 4000K and 5000K color temperatures.

The LUNERA T8 LED 4FT UTT is rated at 50,000 hours and is backed by a five-year warranty. This lamp does not contain mercury, allowing for non-hazardous waste disposal.

This Type B (ballast bypassed) lamp and does not support fluorescent T8 ballasts or LED drivers. The fixture can have either Shunted or Non-Shunted G13 (Tombstone) sockets wired into AC line voltage.

Features
- Directly replaces 32W/30W/28W/25W 4FT T8 fluorescent lamps with a 12W, 14W or 17W LED
- Quick Bypass (Type B, double-ended, ballast bypassed) Installation - supports line driven 120V-277V
- Universal Tombstone Technology supports lamp installation in Shunted and Non-Shunted G13 tombstones
- Delivers up to 1,800 (12W or 14W) or 2,200 (17W) lumens
- >80 CRI
- CCT 3000K, 3500K, 4000K and 5000K
- 50,000 hours life to L70
- 5 Year Warranty

Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th>Socket Type</th>
<th>Power Supply</th>
<th>Dimension</th>
<th>Lamp Wattage</th>
<th>CCT</th>
<th>Generation</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN Lunera T8 LED</td>
<td>T8 Bi-pin G13</td>
<td>L Ballast Bypassed Supports 120V-277V</td>
<td>48 48 inch tube</td>
<td>Replaces up to 32W with:</td>
<td>830: 3000K 835: 3500K 840: 4000K 850: 5000K</td>
<td>G1</td>
<td>UT Universal Tombstone Technology (supports Shunted and Non-Shunted tombstones)</td>
</tr>
<tr>
<td></td>
<td>Shunted and Non-Shunted sockets</td>
<td></td>
<td></td>
<td>12W @ 1,800lm</td>
<td></td>
<td>G1P 1st Gen with NSF Certified P.E.T. ShatterGuard***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14W @ 1,800lm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17W @ 2,200lm</td>
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</tr>
</tbody>
</table>

ecoled.mx
### Product Specifications

**Illumination**
- **Color Temperatures**: 3000K, 3500K, 4000K, 5000K
- **Delivered Lumens**: Up to 1,800lm (12W, 14W), Up to 2,200lm (17W)
- **CRI**: >80
- **Color Consistency**: Lunera TruColor LED Selection
- **Lumen Maintenance (L70)**: 50,000+ hours life

**Electrical System**
- **Power Factor**: > 90%
- **Total Harmonic Distortion**: < 20%
- **Input Voltage**: 120V ~ 277V, 50/60Hz AC Line Voltage
- **Total Power**: 12W, 14W, 17W
- **Lamp Wattage Replaced**: Up to 32W (T8)
- **Dimming**: No
- **Universal Tombstone Technology****: Yes

**Physical**
- **Weight**: 0.45 lbs
- **Housing and Finish*****: Glass, White
- **Optics**: Optical Glass Diffusion
- **Beam Spread / Beam Angle**: 330° / 230°

**Environment**
- **Ambient Operating Temp**: -40°F to 104°F (-40°C to 40°C)
- **Ambient Operating Humidity**: Dry and Damp Certified

**Installation**
- **Socket Type**: G13 socket (Shunted or Non-Shunted Tombstones)
- **Line Voltage**: Yes (120V ~ 277V), Not for use with ballasts or LED drivers

**Certifications & Qualifications**
- **UL (US and Canada)**: Classified (UL1598-C)
- **RoHS Compliant**: Contains no lead or mercury
- **FCC*****: Compliant with Parts 15A/B
- **LM79, LM80, IES Files**: Available. Contact Lunera.
- **DesignLights Consortium Listed**: Yes, DLC 4.2

**Warranty**
- **Warranty**: 5 years

### Dimensions

**Application Notes**

Lunera Universal Tombstone Technology allows lamp installation into Shunted and Non-Shunted G13 tombstones.

Lamp installation in the following conditions and applications **voids the product warranty**:
- Line voltage above 277VAC
- LED Drivers or with a ballast
- Gasketed (sealed), fully enclosed fixtures
- Installation in wet environments
- Installation in broken, cracked, dirty or rusted tombstones
- Improper wiring to the tombstones/lamp

* Total Power equals lamp power because the ballast has been bypassed or removed.

** Universal Tombstone Technology (UTT) is integrated electronics that makes a ballast bypassed T-LED double-ended. UTT T-LEDs are safe to handle and install about 50% faster because they are compatible with both Shunted and Non-Shunted G13 sockets.

*** P.E.T. ShatterGuard version of the Lunera T8 LED is NSF Certified (shatter resistant).

**** Operation is subject to the following conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operations.

**CAUTION**

Turn power OFF when installing the lamp.

**CAUTION - IF THE LAMP OR LUMINAIRE EXHIBITS UNDESIRABLE OPERATION (BUZZING, FLICKERING, ETC.), IMMEDIATELY TURN OFF POWER, REMOVE LAMP FROM LUMINAIRE AND CONTACT MANUFACTURER.**
Double-Ended Electrical Connection

The LUNERA T8 LED 4FT UTT is driven by 120V/277V 60Hz AC.

Correct Wiring

Incorrect Wiring
LUNERA T8 LED 8FT
43W-24W LED Replacement for 8FT T8 or T12 Fluorescent Lamps
Type B - Double-Ended, Ballast Bypassed (Fa8 Connector)

Description
The LUNERA T8 LED 8FT is a line driven (Type B, double-ended (non-UTT), ballast bypassed) linear T-LED replacement for an 8FT single pin (Fa8) T8 or T12 fluorescent lamp up to 75W. Its built-in universal driver allows lamp operation at 120V ~ 277V.

This lamp emits beautiful LED light over 330° of its surface. It has a Color Rendering Index (CRI) of >80 and delivers up to 5,500 lumens of usable light. The LUNERA T8 LED 8FT features a glass tube for improved optics and is available in 3000K, 3500K, 4000K and 5000K color temperatures.

The LUNERA T8 LED 8FT is rated at 50,000 hours and is backed by a five-year warranty. It contains no mercury, allowing for non-hazardous waste disposal.

This is a Type B (ballast bypassed) lamp and does not support fluorescent ballasts or LED drivers. All sockets are wired into AC line voltage.

Features
- Replacement for T8 or T12 lamps up to 75W with a 25W/34W/43W LED
- Ballast Bypassed (Type B, double-ended) Installation - supports line driven 120V-277V
- Single-pin (Fa8) socket compatible
- Delivers up to 5,500 (43W) / 4,400 (34W) / 3,500 (25W) lumens at > 80 CRI
- CCT 3000K, 3500K, 4000K and 5000K
- 50,000 hours life to L70 / 5-Year Warranty
- P.E.T. ShatterGuard included for added safety

Ordering Information
Example: HN-T8S-L-96-43W-830-G1

<table>
<thead>
<tr>
<th>Series</th>
<th>Socket Type</th>
<th>Power Supply</th>
<th>Dimension</th>
<th>Lamp Wattage</th>
<th>CCT</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN</td>
<td>T8S Single-Pin (Fa8)</td>
<td>L BALLAST BYPASSED SUPPORTS (120V-277V)</td>
<td>96 96 inch tube</td>
<td>43W: Replaces up to 75W (T8 or T12) with 5,500lm</td>
<td>830: 80+ CRI / 3000K</td>
<td>G1 1st Generation</td>
</tr>
<tr>
<td>HN Lunera T8 LED</td>
<td>T8S Single-Pin (Fa8)</td>
<td>L BALLAST BYPASSED SUPPORTS (120V-277V)</td>
<td>96 96 inch tube</td>
<td>34W: Replaces up to 75W (T8 or T12) with 4,400lm</td>
<td>835: 80+ CRI / 3500K</td>
<td></td>
</tr>
<tr>
<td>HN Lunera T8 LED</td>
<td>T8S Single-Pin (Fa8)</td>
<td>L BALLAST BYPASSED SUPPORTS (120V-277V)</td>
<td>96 96 inch tube</td>
<td>25W: Replaces up to 75W (T8 or T12) with 3,500lm</td>
<td>840: 80+ CRI / 4000K</td>
<td></td>
</tr>
<tr>
<td>HN Lunera T8 LED</td>
<td>T8S Single-Pin (Fa8)</td>
<td>L BALLAST BYPASSED SUPPORTS (120V-277V)</td>
<td>96 96 inch tube</td>
<td>25W: Replaces up to 75W (T8 or T12) with 3,500lm</td>
<td>850: 80+ CRI / 5000K</td>
<td></td>
</tr>
</tbody>
</table>
## Product Specifications

<table>
<thead>
<tr>
<th></th>
<th>3,500 lumens (25W)</th>
<th>4,400 lumens (34W)</th>
<th>5,500 lumens (43W)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Illumination</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color Temperatures</td>
<td>3000K, 3500K, 4000K, 5000K</td>
<td>3000K, 3500K, 4000K, 5000K</td>
<td>3000K, 3500K, 4000K, 5000K</td>
</tr>
<tr>
<td>Delivered Lumens</td>
<td>Up to 3,500lm</td>
<td>Up to 4,400lm</td>
<td>Up to 5,500lm</td>
</tr>
<tr>
<td>CRI</td>
<td>&gt;80</td>
<td>&gt;80</td>
<td>&gt;80</td>
</tr>
<tr>
<td>Color Consistency</td>
<td>Lunera TruColor LED Selection</td>
<td>Lunera TruColor LED Selection</td>
<td>Lunera TruColor LED Selection</td>
</tr>
<tr>
<td>Lumen Maintenance (L70)</td>
<td>50,000+ hours life</td>
<td>50,000+ hours life</td>
<td>50,000+ hours life</td>
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<tr>
<td><strong>Electrical System</strong></td>
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</tr>
<tr>
<td>Power Factor</td>
<td>&gt; 90%</td>
<td>&gt; 90%</td>
<td>&gt; 90%</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>&lt; 20%</td>
<td>&lt; 20%</td>
<td>&lt; 20%</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>120V ~ 277V</td>
<td>120V ~ 277V</td>
<td>120V ~ 277V</td>
</tr>
<tr>
<td></td>
<td>50/60Hz AC Line Voltage</td>
<td>50/60Hz AC Line Voltage</td>
<td>50/60Hz AC Line Voltage</td>
</tr>
<tr>
<td>Total Power*</td>
<td>25W</td>
<td>34W</td>
<td>43W</td>
</tr>
<tr>
<td>Lamp Wattage Replaced</td>
<td>Up to 75W (T8 or T12)</td>
<td>Up to 75W (T8 or T12)</td>
<td>Up to 75W (T8 or T12)</td>
</tr>
<tr>
<td>Dimming</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Universal Tombstone Technology**</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Physical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.9 lbs</td>
<td>0.9 lbs</td>
<td>0.9 lbs</td>
</tr>
<tr>
<td>Housing and Finish***</td>
<td>Glass, White, with P.E.T. ShatterGuard</td>
<td>Glass, White, with P.E.T. ShatterGuard</td>
<td>Glass, White, with P.E.T. ShatterGuard</td>
</tr>
<tr>
<td>Optics</td>
<td>Optical Glass Diffusion</td>
<td>Optical Glass Diffusion</td>
<td>Optical Glass Diffusion</td>
</tr>
<tr>
<td>Beam Angle / Beam Spread</td>
<td>330° / 230°</td>
<td>330° / 230°</td>
<td>330° / 230°</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Operating Temp</td>
<td>-28°F to 113°F (-20°C to 45°C)</td>
<td>-28°F to 113°F (-20°C to 45°C)</td>
<td>-28°F to 113°F (-20°C to 45°C)</td>
</tr>
<tr>
<td>Ambient Operating Humidity</td>
<td>Dry and Damp Certified</td>
<td>Dry and Damp Certified</td>
<td>Dry and Damp Certified</td>
</tr>
<tr>
<td><strong>Installation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line Voltage</td>
<td>Yes, 120V-277V with Non-Shunted Fa8 socket</td>
<td>Yes, 120V-277V with Non-Shunted Fa8 socket</td>
<td>Yes, 120V-277V with Non-Shunted Fa8 socket</td>
</tr>
<tr>
<td>Ballast Installation</td>
<td>NOT for use with ballasts or LED drivers</td>
<td>NOT for use with ballasts or LED drivers</td>
<td>NOT for use with ballasts or LED drivers</td>
</tr>
<tr>
<td><strong>Certifications &amp; Qualifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UL (US and Canada)</td>
<td>Classified (UL1598-C)</td>
<td>Classified (UL1598-C)</td>
<td>Classified (UL1598-C)</td>
</tr>
<tr>
<td>RoHS Compliant</td>
<td>Contains no lead or mercury</td>
<td>Complies with Parts 15A/B</td>
<td>Complies with Parts 15A/B</td>
</tr>
<tr>
<td>FCC****</td>
<td>Complies with Parts 15A/B</td>
<td>Contains no lead or mercury</td>
<td>Contains no lead or mercury</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td>5 years</td>
<td>5 years</td>
<td>5 years</td>
</tr>
</tbody>
</table>
**Double-Ended (non-UTT) Electrical Connection**
Lunera T8 LED driven by 120V/277V 60Hz AC

**Product Dimensions**

**Application Notes**
Lamp installation in the following conditions and applications *voids the product warranty*:
- Line voltage above 277VAC
- LED Drivers or with a ballast
- Gasketed (sealed), fully enclosed fixtures
- Installation in wet environments
- Installation in broken, cracked, dirty or rusted tombstones
- Improper wiring to the tombstones/lamp

* Total Power equals lamp power because the ballast has been bypassed or removed.

** Universal Tombstone Technology (UTT) is integrated electronics that makes a ballast bypassed T-LED double-ended. UTT T-LEDs are safe to handle and install about 50% faster because they are compatible with both Shunted and Non-Shunted Double Recessed Contact R17d or Bi-pin G13 sockets.

*** P.E.T. ShatterGuard version of the Lunera T8 LED is NSF Certified (shatter proof / resistant).

**** Operation is subject to the following conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operations.

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**Socket Type**

Single Pin (Fa8)
Non-Shunted Sockets
(Double-Ended (non-UTT) Installation)

Please note that the socket pair should include a stationary socket and a spring loaded socket.

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**DISTRIBUIDOR AUTORIZADO**

**ECOLED Iluminación Ecológica**

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**CAUTION**

Turn power OFF when installing the lamp.

**CAUTION** - IF THE LAMP OR LUMINAIRE EXHIBITS UNDESIRABLE OPERATION (BUZZING, FLICKERING, ETC.), IMMEDIATELY TURN OFF POWER, REMOVE LAMP FROM LUMINAIRE AND CONTACT MANUFACTURER.