Tfive Swing Up LED Retrofit Kit
RETROFITS T5HO/T8/T12 HIGH BAY FIXTURES
HYBRID MODELS

LED Living Technology's Tfive Swing Up LED Retrofit Kit is a revolutionary retrofit for all Linear Fluorescent High Bay Fixtures. It's lightweight design, and installation method can be handled and installed with ease by just one professional. Hybrid configurations produce up to 33,000 lumens, and provide customers with a more economic solution than Standard Tier retrofit kits, but with longer life, and better performance than Economy models. Hybrid system efficacies ranging from 152-164 lm/W, and features a 7 year warranty on LEDs and subcomponents, with a 5 year warranty on LED power supply.

KEY SPECIFICATIONS

- Housing For Upgrade LED Retrofit: 4’ Fluorescent High Bay
- Input Voltage: 120-277 VAC
- CRI: 82-86 CRI
- System Efficacy: Standard Model: 152-164lmW [includes power supply loss]
- Available CCT: 3500K, 4000K, 5000K
- System Lifetime: >70,000 hours Power Supply; >150,000 hours LEDs L70
- Controls: 1-10V; Resistance Dimming; Occupancy Sensor High/Low (See Page 3 for coverage); Wireless Controls Available
- Mounting: 1-2 Panel Retrofit Kits secure to 4’ fixtures with one mounting bracket per panel, with self-tapping screws.
- Environment: Dry location; operating temperature up to 40˚C
- Limited Warranty: 5 Years LED Power Supply, 7 Years all other components
- Certifications: All Models DLC Premium QPL Listed

RETROFIT COMPONENTS

- DC EXTENSION CABLE:
  - Y cable included for 2 Panel Install.
- LED POWER SUPPLY
- SINGLE PANEL KITS ONLY
  - MOUNTING BRACKET
  - ADAPTER BRACKET
  - Tfive SWING UP PANEL [QTY 1-2]
- DUAL PANEL KITS
  - MOUNTING BRACKET [QTY 2]
- SELF-TAPPING SCREWS
  - UL 1598C LABEL

INSTALLATION SNAPSHOTS

1. Remove lamps and replace ballast with new LED Power Supply. Connect DC Extension Cable.
2. Install Mounting Bracket with self-tapping screw(s), hook Tfive Swing Up Panel to mounting slots in bracket.
3. Plug in DC Extension Cable to Tfive Swing Up Panel DC Connector.
4. For single panel kits only install Adapter Bracket by snapping into Panel. Swing up the panel and secure with self-tapping screw(s).

DONE!
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SPECIFICATIONS NOTES

SAVINGS TIP
Because linear fluorescent high bay fixtures vary widely in fixture efficiency, LLT recommends referencing existing fixture data sheet for lumen output prior to selection of Tfive lumen package. It is important to note that fixture loss is eliminated with this retrofit design.

COMMON T8 FIXTURE SPECIFICATIONS

<table>
<thead>
<tr>
<th># OF LAMPS</th>
<th>AVG. INPUT WATTS</th>
<th>FIXTURE LUMEN RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 LAMPS</td>
<td>177W</td>
<td>9,500-12,400</td>
</tr>
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<td>4 LAMPS</td>
<td>234W</td>
<td>15,000-18,500</td>
</tr>
<tr>
<td>6 LAMPS</td>
<td>351W</td>
<td>18,000-28,300</td>
</tr>
<tr>
<td>8 LAMPS</td>
<td>468W</td>
<td>26,800-37,200</td>
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COMMON T5HO FIXTURE SPECIFICATIONS

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</tr>
</tbody>
</table>

HYBRID TIER PERFORMANCE

<table>
<thead>
<tr>
<th>OUTPUT LEVELS</th>
<th>LED CCT SPECIFICATIONS</th>
<th>INPUT WATTS (277V)</th>
<th>MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3500K</td>
<td>4000K</td>
<td>5000K</td>
</tr>
<tr>
<td>MEDIUM OUTPUT (MO)</td>
<td>15,500</td>
<td>155 lm/W</td>
<td>16,000</td>
</tr>
<tr>
<td>HIGH OUTPUT (HO)</td>
<td>24,400</td>
<td>152 lm/W</td>
<td>25,100</td>
</tr>
<tr>
<td>VERY HIGH OUTPUT (VHO)</td>
<td>31,000</td>
<td>152 lm/W</td>
<td>32,000</td>
</tr>
</tbody>
</table>

ORDERING

Example: TFH-MO-40

<table>
<thead>
<tr>
<th>ROOT</th>
<th>OUTPUT LEVEL</th>
<th>LED COLOR (CCT)</th>
<th>WIRELESS DIMMING*</th>
<th>OCCUPANCY &amp; DAYLIGHTING SENSORS [Packaged Separately]</th>
<th>SENSOR LENS TYPE</th>
<th>SENSOR ENVIRONMENT</th>
<th>SENSOR LEAD LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-HO High Output, 1 Panels</td>
<td>-40 4000K LEDS</td>
<td>-LWM LUTRON 0-10V Wireless RF Fixture Module 1A 0-10V products by others.</td>
<td>-OCSD Field Programmable High/Low Occupancy Sensor</td>
<td>-HA Aisleway Coverage Pattern; 15-45ft Mounting Heights</td>
<td>[BLANK] 42L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-VHO Very High Output, 2 Panels</td>
<td>-50 5000K LEDS</td>
<td>[BLANK]</td>
<td>-OCSD50 Factory Preset High/Low Occupancy Sensor; 100%/50% **</td>
<td>-OCSD30 Factory Preset High/Low Occupancy Sensor; 100%/30% **</td>
<td>[BLANK] 42L</td>
<td></td>
</tr>
</tbody>
</table>

EMERGENCY BACKUP ORDERING*
Example: TF-EM-E12

<table>
<thead>
<tr>
<th>ROOT</th>
<th>WATTS &amp; OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF-EM</td>
<td>-E12 12W External Mount 2500 lumens</td>
</tr>
<tr>
<td></td>
<td>-E25 25W External Mount 5000 lumens</td>
</tr>
<tr>
<td></td>
<td>-I12 12W Internal Mount 2500 lumens</td>
</tr>
</tbody>
</table>

LUTRON ADDITIONAL ACCESSORIES*

Example: TF-LWH

LUTRON VIVE Wireless Hub programming accessory for Lutron 0-10V wireless RF fixture modules, Pico remote controls, and Radio Powr Savr occupancy and daylighting sensors.

* See page 3 for more information on sensors, wireless dimming accessories, and emergency battery back-up. Contact LLT for accessory specification sheets, programming and installation sheets.

** Occupancy sensors with this option come pre-programmed, however if the sensors are not installed immediately, the battery may lose power and the system will reset to default settings. If this occurs these sensors may be reprogrammed in the field.
**ACCESSORIES**

### OCCUPANCY SENSOR COVERAGE PATTERNS

**360° PATTERN**  

**[TF-OC/OCSD-H360]**  

15-45ft Mounting Heights Optimal  
15-20ft Radial Coverage for typical high bay coverage pattern  
Excellent detection of large motion up to 35 ft mounting height. Forklifts at 45ft.

### AISLEWAY PATTERN  

**[TF-OC/OCSD-HA]**  

Bi-Directional Coverage Pattern for warehouse racking.  
1.2x mounting height equals approximate detection range in either direction.

### CONTROLS ACCESSORIES

#### TF-OCSD (HIGH/LOW)

- Passive Infrared (PIR) Fixture Mount Occupancy Sensors with Options for High/Low Dimming Operation.  
  - Photocontrol Options Available for Dimming.  
  - 360 and Aisle coverage patterns available.  
  - 347-480VAC available.

#### TF-OC (ON/OFF)

- Passive Infrared (PIR) Fixture Mount Occupancy Sensors with Options for On/Off Operation.  
  - Photocontrol Options Available for On/Off.  
  - 360 and Aisle coverage patterns available.  
  - 347-480VAC available.

#### LUTRON WIRELESS

- **TF-LWH**: Vive Wireless Hub  
  Programming is quick and easy with the Vive Wireless Hub, a valuable accessory when grouping fixtures and controls.  
  - Integrates with BACnet when used with Lutron Vive.  
  - 0-10V Wireless RF Fixture Module for 1A 0-10V products by others

- **TF-LWM**: For pricing and availability for Lutron Pico remote controls, Radio Powr Savr sensors, and photocells, please contact your local Lutron representative.  
  More information is available at www.lutron.com/en-us-pages-SupportCenter/support.aspx

### ADDITIONAL LUTRON TF-LWH/TF-LWM COMPATIBLE ACCESSORIES

- TF-OCSD: 10 Maximum on TF-LWM  
- TF-OC: 1 Maximum on TF-LWM  
- TF-LWH: 10 Maximum on TF-LWM  
- TF-LWM: 10 Maximum on TF-LWM

### EMERGENCY BACKUP

**TF-EM-EXX/IXX**  

- 90-120 Minutes Emergency Operation.  
- Internal & External Options Available.  
- External units may be mounted to the backside of suspended fixtures remotely for surface mounted fixtures.  
- UL1598C when installed with all Tfive Retrofit Kit Models.

### PHOTOMETRICS

**TIP**: Because the Tfive Swing Up LED Retrofit Kit installs on below existing reflectors, lighting layouts are not affected by varying reflector configurations of fixtures. For the same reason, fixture loss should not be included in calculations.

**Polar Candela Distribution**  
Example Model: TF-VHO-50

**Illuminance at a Distance**  
Example Model: TF-VHO-50