What are stairwell fixture solutions?

Stairwell fixture solutions are a family of fixtures that automatically adjusts light output based on stairwell occupancy. These solutions:

- Utilize a Lutron digital dimming ballast/driver and concealed wireless control (PowPak® stairwell controller) to program occupied and unoccupied light levels that are field-adjustable and specific to a project’s code requirements
- Receive signals from Radio Powr Savr™ occupancy sensors (sold separately) via Lutron reliable Clear Connect® RF technology
- Provide the flexibility to determine occupancy sensor quantities, mounting configuration, and placement requirements per the stairwell design
- Meet building codes and standards
- Save up to 80%+ of lighting energy*

We offer two different types of stairwell fixture solutions:

<table>
<thead>
<tr>
<th>Stairwell fluorescent fixture</th>
<th>Stairwell LED fixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>The architecturally-designed stairwell fluorescent fixture utilizes T5 or T8 lamps with a concealed wireless control.</td>
<td>The stairwell LED fixture utilizes the same energy-saving solution as the fluorescent fixture, but with integral LEDs as the light source, which significantly lowers power usage and maintenance.</td>
</tr>
</tbody>
</table>

We also offer a stairwell retrofit kit solution:

The stairwell retrofit kit solution is an easy, cost-effective way to add Lutron wireless stairwell solutions technology to your existing stairwell fluorescent fixture. This solution contains Lutron dimming ballasts with pre-wired leads, wireless custom control with wallplate, and optional rapid start sockets.

* See back cover for sources
Why choose Lutron’s stairwell solutions?

Because stairwells are often empty, the lighting in them is constantly being wasted. This is a hard issue to address, because codes require stairwells to be lit in case of emergencies.

You can cut down on the cost of lighting stairwells with Lutron’s stairwell solutions. These occupancy-sensing light fixtures dim the lights in stairwells when they are unoccupied so that stairwells maintain enough light to meet all regional and ASHRAE codes, but lights are not always full-on.

Stairwell solutions are also easy to retrofit, reducing installation time and labor costs. Each solution includes a Lutron dimming ballast and an integrated Lutron wireless control.

The stairwell retrofit kit solution is ideal if you want to keep your existing fixture and stairwell layout, but want to cut down on the cost of lighting stairwells. The kit converts any T12, T8, or T5 fluorescent fixture.

Radio Powr Savr™ occupancy sensors (required)

- Ceiling-, wall-, hall-, and corner-mount configurations available
- Customize timeout of 1, 5, 15, or 30 minutes
- Exclusive Lutron XCT™ technology – enhanced passive infrared (PIR) sensing
- Control up to nine fixtures with one sensor*
- 10-year battery life

* Go to lutron.com/rps for required RF range from fixture to sensor
How do these solutions work?

The easy-to-install stairwell fixture includes a pre-programmed Lutron digital dimming ballast/driver and wireless control (PowPak® stairwell controller). The PowPak stairwell controller receives a radio frequency (wireless) signal from the Radio Powr Savr™ wireless occupancy sensor, via Lutron’s reliable Clear Connect® RF technology. The dimming ballast/driver then adjusts lights to a preset level based on stairwell occupancy.

Unoccupied: 20% light level

Occupied: 80% light level

Stairwell fixture

Radio Powr Savr occupancy sensor (wall mount)
Flexible design for various applications

Wireless communication between devices allows the occupancy sensor(s) to be mounted in the location that provides the maximum area of coverage with no need for additional wiring. Assign multiple fixtures to a single occupancy sensor; fixtures will adjust to the occupied light level.

Utilize stairwell solutions in various applications such as corridors, storage rooms, and library stacks.

Key

Stairwell fixture

Radio Power Savr™ wireless occupancy sensor (wall mount)

Radio Power Savr wireless occupancy sensor (ceiling mount)
Benefits

Meets codes and standards

- **ASHRAE 90.1 2010 Additional Control (9.4.1.6)**
  Lighting in stairwells shall have one or more control devices to automatically reduce lighting power in any one controlled zone by at least 50% within 30 minutes of all occupants leaving that controlled zone.

- **IgCC (International Green Construction Code) Interior Light Reduction Controls (609.3)**
  Occupant sensor controls shall be provided to automatically reduce connected lighting power by not less than 45 percent during periods when occupants are not present in all of the following locations.
  1. Corridors and enclosed stairwells.
  2. Storage and stack areas not open to the public.

- **ADA (Americans with Disabilities Act)**
  All Lutron stairwell fixtures are ADA compliant.

- **NFPA (National Fire Protection Association)**
  Lutron stairwell fixtures can be applied in accordance with NFPA 101 requirements for the illumination of the means of egress. Product must be applied and installed properly including foot-candle measurements to meet requirements of NFPA 101.

- **DLC (DesignLights Consortium®) Qualified**
  Lutron Stairwell LED fixtures are now listed on the DesignLights Consortium Qualified Product List (see pg 7).

- **TAA (Trade Agreements Act)**
  All Lutron stairwell fixtures are designed and assembled in the the U.S. compliant with the Trade Agreements Act.

- **BAA (Buy America Act)**
  Lutron stairwell fixtures comply with the Buy American Act.
Benefits

**Under 4 Year Payback** – equipment payback under 4 years where utility rebates are available in many locations

**Energy savings** – ability to save up to 80% of lighting energy usage
  - high-end trim reduces light levels when occupied
  - occupancy sensing lowers light levels when unoccupied

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**Example: Implementing stairwell fixture solutions in a 4-story building**

<table>
<thead>
<tr>
<th>Energy Consumption kWh/yr</th>
<th>T12</th>
<th>T8 (without Lutron solution)</th>
<th>LED (with Lutron solution)</th>
<th>Energy savings compared to T12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4905 kWh/yr</td>
<td>3924 kWh/yr</td>
<td>871 kWh/yr</td>
<td>80%</td>
</tr>
</tbody>
</table>

* See back cover for sources
Improve your ROI with rebates and incentives!

Lutron's LED stairwell fixtures are now DLC qualified.* DLC is a collaboration of utility companies and regional energy efficiency organizations committed to raising awareness of the benefits of efficient lighting in commercial applications. Many rebates and incentives are offered by utilities in most states for LED lighting. To qualify, utilities often require DLC-listed products.

Fixture and sensor incentives are available up to $75/fixture and $50/sensor, providing an opportunity to significantly improve your ROI.

Two types of rebates are available:

- **Prescriptive rebates** provide a specific predetermined dollar amount for each fixture replaced.
- **Custom rebates** are based on the total energy savings for a specific project and are intended for approved fixtures not covered by a prescriptive program.

**Try our online Lutron Rebate and Incentives Locator for more information.†**

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† Online Lutron Rebate and Incentives Locator at www.lutron.com/incentives

email: incentives@lutron.com

* DLC Qualified Product List

www.designlights.org/qpl
Stairwell fixtures and Energi TriPak®

Stairwell fixtures are also a part of another Lutron energy-saving solution: Energi TriPak. Energi TriPak consists of transmitting devices that send out radio frequency (RF) commands to load controllers. The load controllers receive the RF command and perform the appropriate action based on the information received.

Energi TriPak provides the opportunity to use energy-saving solutions in areas other than stairwells, such as conference rooms, private offices, and classrooms.

*S Stairwell fixtures and retrofit kits are not compatible with Radio Powr Savr™ daylight sensors or Pico® wireless controls.
The stairwell LED fixture provides an energy-saving solution with a concealed wireless control and architectural design. Utilizing integral LEDs as the light source lowers power usage and maintenance, saving up to 80% of lighting energy while meeting building codes and standards.

**Features and capacities**
- Lutron dimming driver standard
- Concealed wireless control (PowPak® stairwell controller)
- Frosted acrylic lens
- 80% occupied, 20% unoccupied default
- Integral 4000K color temperature LED module
- Up to 120 lumens per Watt
- 120-277 V~ universal input voltage
- Vandal resistant option available
- Optional emergency driver backup available
- 10 year/50,000 hour warranty

**Related components - choose one**
( required for the solution to work)

Radio Powr Savr™
- occupancy sensors
  - (LRF2-OWLB-P-WH) wall
  - (LRF2-OKLB-P-WH) corner
  - (LRF2-OCR2B-P-WH) ceiling
  - (LRF2-OHLB-P-WH) hall

**Typical applications**
- Stairwells, corridors, hallways

**Dimensions and mounting**
- 4' fixture (standard; shown above)
  - Length: 52.25 in (1327 mm)
  - Height: 3.75 in (95 mm)
  - Width: 3.25 in (83 mm)
  - Can be mounted to wall or ceiling; surface mount
  - 2' also available

**Communications**
- Fixture communicates with Radio Powr Savr occupancy sensors via Clear Connect® RF technology
How to order a stairwell LED fixture

Example model number
(4ft Low Power 20W LED fixture with 80% occupied and 20% unoccupied preset)

<table>
<thead>
<tr>
<th>FX</th>
<th>SW</th>
<th>LX</th>
<th>4L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Fixture Options

1. **Product**
   FX = Fixtures

2. **Family**
   SW = Stairwell

3. **Fixture type**
   LX = LED, 4000K
   LE = LED, 4000K w/ Emergency Driver

4. **Size**
   2L = 2ft Low Power 16W, 1900 lm
   2H = 2ft High Power 32W, 3500 lm
   4L = 4ft Low Power 22W, 2800 lm
   4H = 4ft High Power 42W, 5100 lm

8ft, Vandal Resistant, 347V, 3000K, 3500 K, or 5000K CCT, and custom options available. Contact fixtures customer service at fixtures@lutron.com.
The stairwell fluorescent fixture is a T5 or T8 fixture available in 2’, 4’, and 8’ models. This solution can save up to 70% of lighting energy and meet building codes and standards.

**Features and capacities**
- Lutron dimming ballast standard
- Integral wireless control (PowPak® stairwell controller)
- Frosted acrylic lens
- 80% occupied, 20% unoccupied default
- 1, 2, or 4 lamps
- T8, reduced wattage T8, T5HE, or T5HO
- 120-277 V~ universal input voltage
- Vandal resistant option available
- Optional emergency ballast backup available

**Typical applications**
- Stairwells, corridors, hallways

**Dimensions and mounting**

4’ fixture (standard; shown above)
- Length: 52.25 in (1327 mm)
- Height: 3.75 in (95 mm)
- Width: 3.25 in (83 mm)
- Can be mounted to wall or ceiling; surface mount
- 2’ and 8’ also available

**Communications**
- Fixture communicates with Radio Powr Savr occupancy sensors via Clear Connect® RF technology

**Related components - choose one**
(required for the solution to work)

Radio Powr Savr™ occupancy sensors
(LRF2-OWLB-P-WH) wall
(LRF2-OKLB-P-WH) corner
(LRF2-OCR2B-P-WH) ceiling
(LRF2-OHLB-P-WH) hall
How to order a stairwell fluorescent fixture

Example model number
(4ft 2 lamp 32W fluorescent fixture with 80% occupied and 20% unoccupied preset)

<table>
<thead>
<tr>
<th>FX</th>
<th>SW</th>
<th>XX</th>
<th>14</th>
<th>SL</th>
<th>2</th>
<th>32</th>
<th>U</th>
<th>82</th>
<th>SM</th>
<th>XX</th>
<th>WH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

Fixture Options

1. **Product**
   - FX = Fixtures

2. **Family**
   - SW = Stairwell

3. **Fixture type**
   - XX = Standard
   - VR = Vandal Resistant

4. **Size**
   - 12 = 1’x2’
   - 14 = 1’x4’
   - 18 = 1’x8’

5. **Lens options**
   - SL = Standard Lens

6. **Lamps**
   - 1 = 1 Lamp
   - 2 = 2 Lamps
   - 4 = 4 Lamps, 8’

7. **Lamp type**
   - 14 = 14W T5HE, 2’
   - 17 = 17W T8, 2’
   - 24 = 24W T5HO, 2’
   - 28 = 28W T5HE, 4’
   - 32 = 32W T8, 4’
   - 54 = 54W T5HO, 4’ (1 lamp only)
   - RW = 25, 28, 30W T8, Reduced Wattage, 4’

8. **Region**
   - U = UL – North America

9. **Control options**
   - 82 = 80% Occupied, 20% Unoccupied

10. **Mounting type**
    - SM = Surface Mount

11. **Options**
    - XX = None
    - E1 = T8 Emergency Ballast
    - E3 = T5HE Emergency Ballast
    - E5 = T5HO Emergency Ballast

12. **Color Finish**
    - WH = Matte White

347 V and custom options available—contact fixtures@lutron.com.
Lutron stairwell fluorescent retrofit kit solution

The stairwell retrofit kit solution allows you to transform high-cost/high-maintenance fluorescent fixtures into energy efficient solutions through the addition of dimming/occupancy sensing capabilities and updating your fixture with more efficient lamps (i.e. T12 to T5). We also group the components you need—per fixture—together, instead of shipping everything in separate boxes.

Kit includes:

- Pre-wired Lutron dimming ballast for T8, T5HE, or T5HO lamps
- Wireless control (PowPak® stairwell controller)
  - 80 % occupied, 20 % unoccupied default*
- Wallplate (Claro® single gang)
- Rapid-start sockets (optional)
- Compatible with 2’, 3’, 4’, or 8’ fixtures
- 1, 2, or 4 lamp options available
- 120-277 V~ universal input voltage

Typical applications
- Stairwells, corridors, hallways

Communications and wiring
- Fixture communicates via Clear Connect® RF technology with other wireless devices
- 3-wire control standard

Related components - choose one
(required for the solution to work)

Radio Powr Savr™ occupancy sensors
- (LRF2-OWLB-P-WH) wall
- (LRF2-OKLB-P-WH) corner
- (LRF2-OCHR2B-P-WH) ceiling
- (LRF2-OHLB-P-WH) hall
# How to order a stairwell retrofit kit solution

**Example model number**

(2’ 2 Lamp 17W fluorescent retrofit kit  with 80% occupied and 20% unoccupied preset)

<table>
<thead>
<tr>
<th>FXRS</th>
<th>SW</th>
<th>XX</th>
<th>12</th>
<th>2</th>
<th>17</th>
<th>U</th>
<th>82</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

## Fixture Options

1. **Product**
   
   FXRS = Fixtures Retrofit Kit Solution

2. **Family**
   
   SW = Stairwell

3. **Fixture type**
   
   XX = Standard

4. **Size**
   
   12 = 1’x2’
   13 = 1’x3’
   14 = 1’x4’
   18 = 1’x8’

5. **Lamps**
   
   1 = 1 Lamp
   2 = 2 Lamps
   3 = 3 Lamps, T8
   4 = 4 Lamps

6. **Lamp type**
   
   14 = 14W T5HE, 2’
   17 = 17W T8, 2’
   21 = 21W T5HE, 3’
   24 = 24W T5HO, 2’
   25 = 25W T8, 3’
   28 = 28W T5HE, 4’
   32 = 32W T8, 4’
   39 = 39W T5HO, 3’
   54 = 54W T5HO, 4’
   RW = 25, 28, 30W T8 Reduced Wattage, 4’

7. **Region**
   
   U = UL – North America

8. **Control options**
   
   82 = 80% Occupied, 20% Unoccupied

9. **Socket options**
   
   XX = None
   SK = Sockets*

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* Two rapid-start sockets per lamp; each lamp gets 18” of power leads (white, black) and 40” of lamp leads (yellow, blue) per lamp.

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Custom options available—contact fixtures@lutron.com.
Sources

1 Potential savings for different scenarios listed below. The savings are based on the proposed Lutron solution operating at high end (80%) for 6 hours a day and low end (20%) during the remaining hours. Actual savings may vary based on project. Ensure replacement fixture meets the required light levels.

<table>
<thead>
<tr>
<th>Proposed</th>
<th>Existing (24 hours of use)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED (80/20%) 40W</td>
<td>T12 – 80W</td>
</tr>
<tr>
<td></td>
<td>82%</td>
</tr>
<tr>
<td>LED (80/20%) 20W</td>
<td>T8 – 64W</td>
</tr>
<tr>
<td></td>
<td>82%</td>
</tr>
</tbody>
</table>

2 Payback based on replacing a 4ft T12 fixture (2-40W lamps at 100% output), with a 4ft LED Lutron stairwell solution (40W at 80% high-end output, 20% low-end output). Savings based on existing system operation of 8760 hours annually. Replacement system operation is based on 25% occupancy. Payback based on material cost with a 40% discount from list price, a rebate of $15 per fixture, and $0.15/kWh electricity rate. Actual savings may vary based on existing fixture wattage and stairwell occupancy. Note: Ensure replacement fixture meets the required light levels. Go to www.lutron.com/references for more information.

3 Example assumes seven landings in a 4-story building. Savings based on replacing a 4ft T12 fixture (2-40W lamps at 100% output), with a 4ft LED Lutron stairwell solution (40W at 80% high-end output, 20% low-end output). Existing system operation is based on 8760 hours of annual use. Replacement system operation is based on 25% occupancy. Actual savings may vary based on existing fixture wattage and stairwell occupancy. Note: Ensure replacement fixture meets the required light levels.

4 Lutron offers stairwell solutions that are assembled in the United States, making it easy for you to comply with the Buy American Act (BAA). BAA compliant stairwell fixtures are available in fluorescent models only.

5 Emergency ballast “option” not available if 2’ “lamp type” is chosen.

6 Emergency ballast “option” is determined by “lamp type.”