



Fluorescent Tube Light Comparison with LED T8 Retrofit Tubes from Creative Lighting Solutions

This test is conducted utilizing a 3 Tube fixture that is operating for 24 hours per day, 365 days for 11 years (100,000 hours).

- **Fluorescent T8 tube life: 10,000 hours**
- **Tubes required over 11 years for single fixture: 30**
- **Fluorescent Tube Cost at \$1.50 x 30 bulbs: \$45.00 cost**
- **Bulbs are 32 watts x 3 bulbs: 96 watts**
- **1000 watts =: 1 kWh**
- **1KWH from DWP cost: .12 cents**
- **96 watts x 24 hours = 2304 watts divided by 1000: 2.3 KWH**
- **2.3kWh X .12 cents =: .27 cents per day**
- **.27cent x365 days in a year =: \$98.55 per year (to operate 3 bulb fixture)**
- **\$98.55 x 11years=: \$1084.05 per 3-bulb fixture**

In addition to energy costs used in operating the Fluorescent fixture, there are also the following associated costs:

- **Ballast replacement life 14,000 hours divided into 100,000 hours = 7 ballasts.**
- **Ballast cost is \$22.46 each x 7= \$157.22**
- **Labor to change 7 ballast @ 1hour per ballast estimated at \$30.00 p/h x 7 ballasts = \$210.00**
- **Lens replacement due to yellowing and cracking from heat (\$8.00 each)**
- **Cost to dispose of Fluorescent lamps: Estimated @ .15cents per linear foot, 4 foot T8 x.15= .60 cents x30**
- **Lamp costs = \$18.00**
- **Labor to change 30 lamps @ \$10.00 per year x 11 years =\$110.00**

***Total Operational Cost over 11 years \$1624.26 - Total
Operational Cost per year \$147.66***



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LED T8 Retrofit Tube Lights

This test is conducted utilizing a 3 Tube fixture that is operating for 24 hours per day, 365 days for 11 years (100,000 hours).

- LED T8 tube life: 100,000 hours
- Tubes required over 11 years for single fixture: 3
- LED Cost at \$61.00 x 3 units: \$183.00
- Bulbs are 15 watts x 3: 45 watts
- 1000 watts =: 1 kWh
- 1KWH from DWP cost: .12 cents
- 45 watts x24 hours= 1080 watts divided by 1000: 1.08
- 1.08 kWh x.12cents=: .12 cents per day
- .12 cents x 365 days in a year =: \$43.80 per year (to operate 3 lamp fixture)
- \$43.80 x 11 years=: \$481.80 per 3-bulb fixture

In addition to energy costs used in operating the LED fixture, there are also the following associated costs:

Ballast: **NONE**
Replacement labor: **NONE**
Lens replacement: **NONE**
Disposal: **LED bulb can be Recycled**

Total cost over 11 years \$664.80

Total Cost per year \$60.44

***Total savings annually utilizing LED vs. Fluorescent is \$87.22
per fixture***

ROI for LED T8 Tube Lights = 20 months