



Fluorescent Tube Light Comparison with 17 Watt ETL/UL 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: .13 cents**
- **96 watts x 24 hours = 2304 watts divided by 1000: 2.3 KWH**
- **2.3kWh X .13 cents =: .30 cents per day**
- **.30 cents x 365 days in a year =: \$109.50 per year (to operate 3 bulb fixture)**
- **\$109.50 x 11 years=: \$1204.50 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 \$25.00 each x 7= \$175.00**
- **Labor to change 7 ballast @ 1hour per ballast estimated at \$50.00 p/h x 7 ballasts = \$350.00**
- **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 x 30 lamps = \$18.00**
- **Labor to change 30 lamps @ \$20.00 per year x 11 years =\$220.00**

Total Operational Cost over 11 years \$1975.00
Total Operational Cost per year \$179.55



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UL/ETL Approved 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 17 watts x 3=: 51 watts
- 1000 watts=: 1 kWh
- 1KWH from DWP cost=: .13 cents
- 51 watts x 24 hours= 1224 watts divided by 1000=: 1.22
- 1.22 kWh x .16cents=: .20 cents per day
- .20 cents x 365 days in a year =: \$73.00 per year (to operate 3 lamp fixture)
- \$73.00 x 11 years=: \$803.00 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 \$986.00

Total Cost per year \$89.64

***Total savings annually utilizing LED vs. Fluorescent is \$89.91
per fixture***

ROI for LED T8 17W Tube Lights = 24 months or Less