



LED Volumetric Luminaires

Limitless Options
for the following applications:

When appearance is most important, TCP's LED Volumetric Luminaires turn any location into something truly exceptional. The precision-formed diffuser produces comfortable and pleasant illumination, enhancing productive spaces in various applications—providing architectural aesthetics for retail, schools, offices, healthcare, and other various commercial applications.

- Offices
- Restaurants
- Retail Stores
- Lobbies
- Schools
- Healthcare
- Grid Ceilings

 US LISTED **5** YEAR WARRANTY

we know light.™

LED Volumetric Luminaires

Features/Benefits

| | |
|--|---|
| Up to 50% less energy than fluorescent alternatives | Instant energy savings |
| Long 50,000 hour rated life | Minimizes replacements & maintenance costs |
| Very low heat generation | Less energy wasted as heat |
| Excellent color consistency & CRI | Enhances color of focal point while maintaining uniformity throughout lighting installation |
| Mercury free | Great for all environments |
| Fits standard 1" and 9/16" T-bar grids | Easy installation and retrofit application |
| TCP LED drivers are specifically designed for high efficient LED combination | Optimal performance and efficiency |



2x2 LED
Volumetric Luminaire



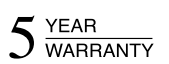
2x4 LED
Volumetric Luminaire

Specifications

| | |
|-------------------------------|-------------------------------------|
| Input Line Voltage | 120-277 VAC |
| Input Power | 2x2: 20W, 30W, 40W 2x4: 20W, 30W |
| Input Line Frequency | 50Hz/60Hz |
| Luminaire Life (Rated) | 50,000 hours |
| Minimum Starting Temperature | -30°C |
| Maximum Operating Temperature | 45°C |
| CRI | 85 |
| Power Factor | >90% |
| THD | <20% |

Warranty

Five year limited warranty against defects in manufacturing





Applications

The TCP LED Volumetric Luminaires are high efficiency alternatives to T5, T8 and T12 linear fluorescent troffers. Our intelligent high performance LED light engines and drivers deliver long life, consistent color, and superior lumen maintenance. Applications include offices, schools, retail locations, hospitals, and other grid ceilings.

Construction

The TCP LED volumetric luminaire is constructed of rugged cold-rolled steel, post painted with a highly diffuse white finish, and an impact resistant acrylic diffuser. The housing is designed to mount in a variety of grid ceiling types.

Electrical

All electrical components are cULus listed. TCP high efficiency drivers provide consistent power to ensure even lighting from the long life LEDs. Each driver is matched to a light engine to deliver 50,000 hours life. Full range dimming is optional.

Optics

The impact resistant acrylic diffuser conceals the LEDs while providing even light distribution across the luminaire. The smooth white reflector curves into the diffuser, creating volumetric illumination by softening and distributing the light evenly in a wide pattern. The curved design also softens the contrast between the luminaire and ceiling.



Listings

cULus Listed – damp location rated
RoHS Compliant

Warranty

Five year limited warranty against defects in manufacturing.

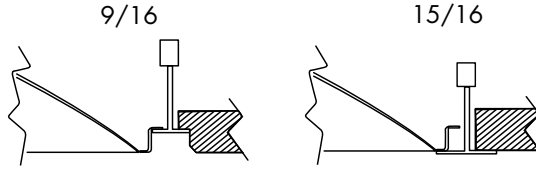
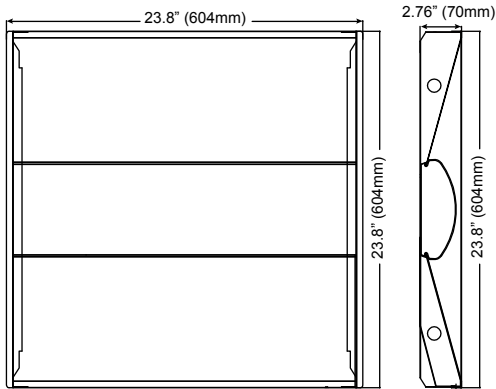
| LUMENS | |
|------------|--------|
| TR22D2035K | – 2300 |
| TR22D2041K | – 2400 |
| TR22D2050K | – 2450 |
| TR22D3035K | – 3450 |
| TR22D3041K | – 3500 |
| TR22D3050K | – 3550 |
| TR22D4035K | – 4450 |
| TR22D4041K | – 4700 |
| TR22D4050K | – 4800 |

Catalog Ordering Matrix Example: TR22D3035K

| FAMILY | SIZE | DIMMING | WATTAGE ¹ | COLOR TEMPERATURE |
|--------------|--------------|-------------------|----------------------------------|---|
| TR – Troffer | 22 – 2' x 2' | D – 0-10V Dimming | 20 – 20W 30 – 30W 40 – 40W | 35K – 3500K 41K – 4100K 50K – 5000K |

¹ Actual wattage may differ by +/- 5%; when operating between 120-277V +/- 10%.

Dimensions and Mounting Data



All dimensions are in inches unless otherwise specified.

Photometric Report

Luminous Intensity Distribution Diagram

TR22D3041K

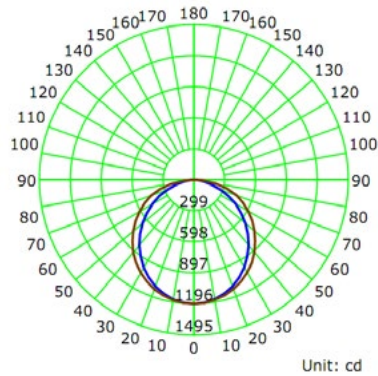
Electrical Measurement

| Input Voltage (V) | Frequency (Hz) | Input Current (A) | Power (W) | Power Factor |
|-------------------|----------------|-------------------|-----------|--------------|
| 120.0 | 60 | 0.2380 | 28.42 | 0.9930 |

Photometric Measurement

| Luminous Flux (lm) | Efficacy (lm/W) | I _{max} (cd) | S/MH (C0/180) | S/MH (C90/270) |
|--------------------|-----------------|-----------------------|---------------|----------------|
| 3497.6 | 123.12 | 1196.1 | 1.21 | 1.28 |

Luminous Intensity Distribution



| | C0/180 | C45/225 | C90/270 | C135/315 | AVG. |
|--------------------------------------|--------|---------|---------|----------|-------|
| Beam Angle (50% I _{max}): | 105.8 | 113.8 | 121.3 | 113.4 | 113.6 |
| Field Angle (10% I _{max}): | 157.1 | 165.5 | 167.3 | 165.7 | 163.9 |

Zonal Lumen Density Measurement

| Deg | Flux (lm) | % | Deg | Flux (lm) | % |
|---------|-----------|------|-------|-----------|-------|
| 0-5 | 28.5 | 0.82 | 0-5 | 28.5 | 0.82 |
| 5-10 | 84.6 | 2.42 | 0-10 | 113.1 | 3.23 |
| 10-15 | 137.5 | 3.93 | 0-15 | 250.6 | 7.17 |
| 15-20 | 185.6 | 5.31 | 0-20 | 436.2 | 12.47 |
| 20-25 | 227.2 | 6.50 | 0-25 | 663.4 | 18.97 |
| 25-30 | 261.0 | 7.46 | 0-30 | 924.5 | 26.43 |
| 30-35 | 286.2 | 8.18 | 0-35 | 1210.7 | 34.62 |
| 35-40 | 302.0 | 8.63 | 0-40 | 1512.7 | 43.25 |
| 40-45 | 308.0 | 8.80 | 0-45 | 1820.7 | 52.06 |
| 45-50 | 304.2 | 8.70 | 0-50 | 2124.9 | 60.75 |
| 50-55 | 291.3 | 8.33 | 0-55 | 2416.3 | 69.08 |
| 55-60 | 269.9 | 7.72 | 0-60 | 2686.1 | 76.80 |
| 60-65 | 241.0 | 6.89 | 0-65 | 2927.1 | 83.69 |
| 65-70 | 205.9 | 5.89 | 0-70 | 3133.0 | 89.57 |
| 70-75 | 164.5 | 4.70 | 0-75 | 3297.5 | 94.28 |
| 75-80 | 116.5 | 3.33 | 0-80 | 3414.0 | 97.61 |
| 80-85 | 63.2 | 1.81 | 0-85 | 3477.2 | 99.42 |
| 85-90 | 17.7 | 0.51 | 0-90 | 3494.9 | 99.92 |
| 90-95 | 0.0 | 0.00 | 0-95 | 3494.9 | 99.92 |
| 95-100 | 0.0 | 0.00 | 0-100 | 3494.9 | 99.92 |
| 100-105 | 0.0 | 0.00 | 0-105 | 3494.9 | 99.92 |
| 105-110 | 0.0 | 0.00 | 0-110 | 3494.9 | 99.92 |
| 110-115 | 0.0 | 0.00 | 0-115 | 3494.9 | 99.92 |
| 115-120 | 0.0 | 0.00 | 0-120 | 3494.9 | 99.92 |
| 120-125 | 0.0 | 0.00 | 0-125 | 3494.9 | 99.92 |
| 125-130 | 0.0 | 0.00 | 0-130 | 3494.9 | 99.92 |
| 130-135 | 0.1 | 0.00 | 0-135 | 3495.0 | 99.92 |
| 135-140 | 0.2 | 0.01 | 0-140 | 3495.2 | 99.93 |
| 140-145 | 0.3 | 0.01 | 0-145 | 3495.5 | 99.94 |
| 145-150 | 0.4 | 0.01 | 0-150 | 3495.9 | 99.95 |
| 150-155 | 0.4 | 0.01 | 0-155 | 3496.3 | 99.96 |
| 155-160 | 0.4 | 0.01 | 0-160 | 3496.7 | 99.97 |
| 160-165 | 0.4 | 0.01 | 0-165 | 3497.1 | 99.99 |
| 165-170 | 0.3 | 0.01 | 0-170 | 3497.4 | 99.99 |

Specifications and dimensions subject to change without notice.