



# 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



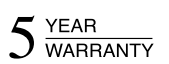
2x4 LED  
Volumetric Luminaire

## Specifications

|                               |                                     |
|-------------------------------|-------------------------------------|
| Input Line Voltage            | 120-277 VAC                         |
| Input Power                   | 2x2: 20W, 30W, 40W<br>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.

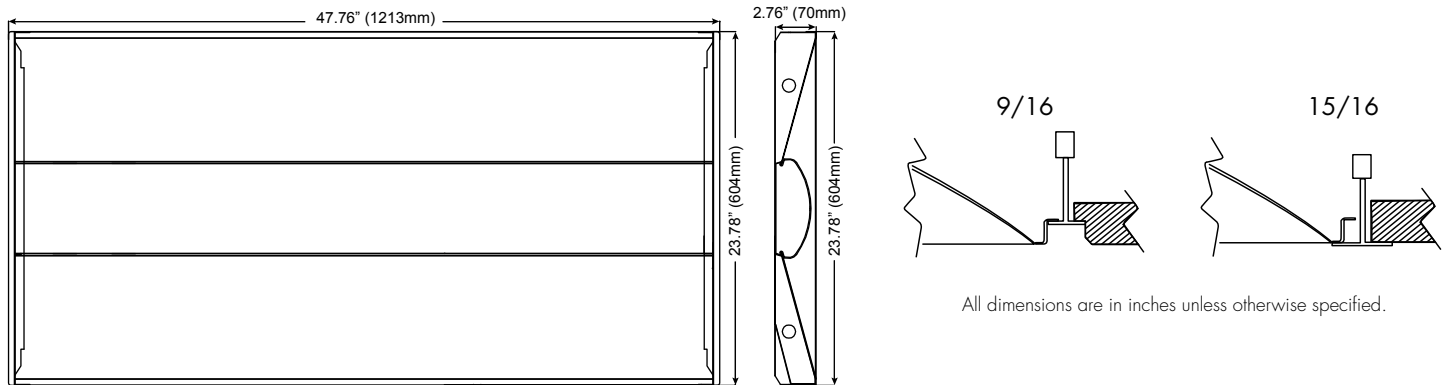
| LUMENS            |
|-------------------|
| TR24D3035K – 3600 |
| TR24D3041K – 3750 |
| TR24D3050K – 3800 |
| TR24D4035K – 4600 |
| TR24D4041K – 5000 |
| TR24D4050K – 5100 |

Catalog Ordering Matrix Example: TR24D4050K

| FAMILY       | SIZE         | DIMMING           | WATTAGE <sup>1</sup> | COLOR TEMPERATURE                         |
|--------------|--------------|-------------------|----------------------|-------------------------------------------|
| TR – Troffer | 24 – 2' x 4' | D – 0-10V Dimming | 30 – 30W<br>40 – 40W | 35K – 3500K<br>41K – 4100K<br>50K – 5000K |

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

## Dimensions and Mounting Data



## Photometric Report

### Luminous Intensity Distribution Diagram TR24D3041K

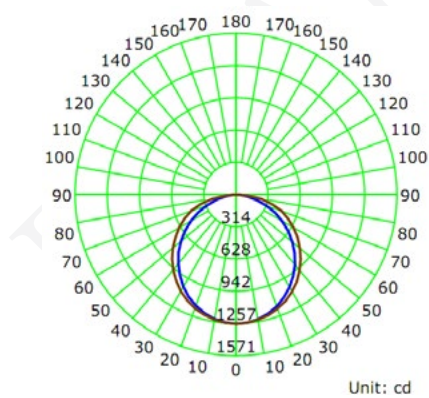
#### Electrical Measurement

| Input Voltage (V) | Frequency (Hz) | Input Current (A) | Power (W) | Power Factor |
|-------------------|----------------|-------------------|-----------|--------------|
| 120.0             | 60             | 0.2440            | 29.05     | 0.9930       |

#### Photometric Measurement

| Luminous Flux (lm) | Efficacy (lm/W) | $I_{max}$ (cd) | S/MH (C0/180) | S/MH (C90/270) |
|--------------------|-----------------|----------------|---------------|----------------|
| 3756.1             | 129.35          | 1257.1         | 1.23          | 1.29           |

#### Luminous Intensity Distribution



|                               | C0/180 | C45/225 | C90/270 | C135/315 | AVG.  |
|-------------------------------|--------|---------|---------|----------|-------|
| Beam Angle (50% $I_{max}$ ):  | 108.7  | 115.1   | 121.9   | 115.3    | 115.3 |
| Field Angle (10% $I_{max}$ ): | 158.2  | 167.3   | 168.4   | 167.4    | 165.3 |

### Zonal Lumen Density Measurement

| Deg     | Flux (lm) | %    | Deg   | Flux (lm) | %      |
|---------|-----------|------|-------|-----------|--------|
| 0-5     | 30.0      | 0.80 | 0-5   | 30.0      | 0.80   |
| 5-10    | 88.9      | 2.37 | 0-10  | 118.9     | 3.17   |
| 10-15   | 144.8     | 3.86 | 0-15  | 263.8     | 7.02   |
| 15-20   | 195.8     | 5.21 | 0-20  | 459.6     | 12.24  |
| 20-25   | 240.1     | 6.39 | 0-25  | 699.7     | 18.63  |
| 25-30   | 276.5     | 7.36 | 0-30  | 976.2     | 25.99  |
| 30-35   | 303.7     | 8.09 | 0-35  | 1279.9    | 34.07  |
| 35-40   | 321.1     | 8.55 | 0-40  | 1601.0    | 42.62  |
| 40-45   | 328.2     | 8.74 | 0-45  | 1929.2    | 51.36  |
| 45-50   | 325.3     | 8.66 | 0-50  | 2254.5    | 60.02  |
| 50-55   | 312.7     | 8.33 | 0-55  | 2567.2    | 68.35  |
| 55-60   | 290.9     | 7.74 | 0-60  | 2858.1    | 76.09  |
| 60-65   | 261.2     | 6.96 | 0-65  | 3119.4    | 83.05  |
| 65-70   | 224.8     | 5.98 | 0-70  | 3344.2    | 89.03  |
| 70-75   | 181.7     | 4.84 | 0-75  | 3525.8    | 93.87  |
| 75-80   | 131.6     | 3.50 | 0-80  | 3657.4    | 97.37  |
| 80-85   | 75.5      | 2.01 | 0-85  | 3733.0    | 99.38  |
| 85-90   | 23.1      | 0.61 | 0-90  | 3756.1    | 100.00 |
| 90-95   | 0.0       | 0.00 | 0-95  | 3756.1    | 100.00 |
| 95-100  | 0.0       | 0.00 | 0-100 | 3756.1    | 100.00 |
| 100-105 | 0.0       | 0.00 | 0-105 | 3756.1    | 100.00 |
| 105-110 | 0.0       | 0.00 | 0-110 | 3756.1    | 100.00 |
| 110-115 | 0.0       | 0.00 | 0-115 | 3756.1    | 100.00 |
| 115-120 | 0.0       | 0.00 | 0-120 | 3756.1    | 100.00 |
| 120-125 | 0.0       | 0.00 | 0-125 | 3756.1    | 100.00 |
| 125-130 | 0.0       | 0.00 | 0-130 | 3756.1    | 100.00 |
| 130-135 | 0.0       | 0.00 | 0-135 | 3756.1    | 100.00 |
| 135-140 | 0.0       | 0.00 | 0-140 | 3756.1    | 100.00 |
| 140-145 | 0.0       | 0.00 | 0-145 | 3756.1    | 100.00 |
| 145-150 | 0.0       | 0.00 | 0-150 | 3756.1    | 100.00 |
| 150-155 | 0.0       | 0.00 | 0-155 | 3756.1    | 100.00 |
| 155-160 | 0.0       | 0.00 | 0-160 | 3756.1    | 100.00 |
| 160-165 | 0.0       | 0.00 | 0-165 | 3756.1    | 100.00 |
| 165-170 | 0.0       | 0.00 | 0-170 | 3756.1    | 100.00 |

Specifications and dimensions subject to change without notice.