



## LED Direct Back-Lit Flat Panel Luminaires

### Great Features/Benefits

TCP's LED Direct Flat Panel Luminaires feature a slim, low-profile design with full panel diffusion and superior uniformity.

These DLC Listed flat panels offer a cost effective solution to maximize savings and take advantage of utility rebates without sacrificing performance.

- Up to 58% less energy than fluorescent alternatives
- Long 50,000 hour rated life
- Excellent color consistency & CRI
- Mercury free
- Fits standard 1" and 9/16" T-bar grid ceilings
- Utilizes back-lit technology
- Slim, low-profile design
- Ideal for:
  - Offices
  - Retail Stores
  - Schools
  - Hospitality
  - Restaurants
  - Healthcare



5 YEAR WARRANTY

# LED Direct Back-Lit Flat Panel Luminaires

## Features/Benefits

|   |  |
|---|--|
| Up to 51% less energy than fluorescent alternatives | Instant energy savings; potential rebate eligibility   |
| Long 50,000 hour rated life                         | Significantly reduce maintenance labor & material costs                                      |
| 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 grid ceilings      | Easy installation and retrofit application   |
| Utilizes back-lit technology                        | Full diffusion with excellent uniformity   |
| Slim, low-profile design                            | Lightweight for easy handling. Fit more per pallet to reduce shipping cost and storage space |

## Specifications

|                               |   |
|-------------------------------|---|
| Input Line Voltage            | 120-277 VAC                               |
| Input Line Frequency (Hz)     | 50/60HZ                                   |
| Wattage (W)                   | 2x2 = 36W<br>2x4 = 50W                    |
| Lumens (L)                    | 2x2 = 3600L<br>2x4 = 5000L                |
| Lumens per Watt (LPW)         | 100 LPW                                   |
| Rated Life                    | 50,000 hours                              |
| Minimum Starting Temperature  | -20°C                                     |
| Maximum Operating Temperature | 40°C                                      |
| CRI                           | >80                                       |
| Power Factor                  | >0.9                                      |
| THD                           | <20%                                      |
| Ratings                       | UL/cUL damp location rated, DLC, IC rated |
| Controls                      | Non dimming                               |



2x2



2x4



5 YEAR WARRANTY

To view our DLC qualified products, please consult the DLC Qualified Products List.

## Replacement Strategy

| SYSTEM                          | BALLAST FACTOR | LUMENS      | INPUT WATTS* | LED ENERGY SAVINGS |
|---------------------------------|----------------|-------------|--------------|--------------------|
| <b>TCP LED Flat Panel - 2x2</b> | —              | <b>3600</b> | <b>36</b>    | —                  |
| 2 Lamp 34W T12 U-Bend           | 0.88           | 4420        | 74           | 51%                |
| 2 Lamp 32W T8 U-Bend            | 0.88           | 4275        | 58           | 38%                |
| 2 Lamp 24W T5HO                 | 1.0            | 3145        | 54           | 33%                |
| <b>TCP LED Flat Panel - 2x4</b> | —              | <b>5000</b> | <b>50</b>    | —                  |
| 3 Lamp 32W T8 HBF               | 1.18           | 6960        | 93           | 46%                |
| 3 Lamp 32W T8 NBF               | 0.88           | 6681        | 89           | 44%                |
| 2 Lamp 32W T8 HBF               | 1.18           | 4658        | 65           | 23%                |
| 2 Lamp 28W T5                   | 1.0            | 4675        | 63           | 21%                |
| 2 Lamp 32W T8 NBF               | 0.88           | 4468        | 59           | 15%                |

\*Actual wattage may differ by +/- 5%, when operating between 120-277V +/- 10%.

**NOTE:** Charts show system lumens (delivered lumens), NOT straight lamp lumen output. This is calculated as follows:

$$\text{System lumens} = \text{mean lumens} \times \# \text{ lamps} \times \text{ballast factor} \times \text{luminaire efficiency factor}$$

### Applications

TCP LED Direct Flat Panel luminaires are cost-effective, high-efficiency alternatives to traditional T5, T8 and T12 linear fluorescent troffers. Featuring a slim, low-profile design, our LED flat panels use back-lit technology to deliver full panel diffusion and superior uniformity. Applications include offices, schools, retail locations, healthcare, hospitality and other T-grid and commercial ceilings.

### Construction

- Housing: low profile design
- Frame: white
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

### Electrical

- UL/cUL damp location rated
- Access plate for easy wiring connections
- System rated for long 50,000 hour life

### Optics

- Back-lit design provides excellent light distribution
- 120° beam angle
- Delivers full panel diffusion and excellent uniformity



### Listings

UL/cUL Listed    DLC v4.4 Standard    IC Rated    RoHS Compliant

### Warranty

Five year limited warranty against defects in manufacturing.

### Lumen Maintenance

| Reported L <sub>90</sub> <sup>2</sup> | Reported L <sub>70</sub> <sup>2</sup> |
|---------------------------------------|---------------------------------------|
| >22,000 hours                         | >54,000 hours                         |

<sup>1</sup> Lumen Maintenance calculated per TM-21-11 at 25°C based on LM-80-08 data and in-situ luminaire testing.

<sup>2</sup> IESNA TM-21-11 projected value within 6X IESNA LM-80-08 total test duration.

<sup>3</sup> IESNA TM-21-11 calculated value exceeds 6X IESNA LM-80-08 total test duration.

## Catalog Ordering Matrix

Example: DFF2UZD3635K

| DF                     | F                | 2           | UZD                           | 36                                  | 41K  |
|------------------------|------------------|-------------|-------------------------------|-------------------------------------|--|
| FAMILY                 | LENS TYPE        | SIZE        | VOLTAGE                       | LUMEN PACKAGE (Power) <sup>12</sup> | COLOR TEMPERATURE  |
| DF – Direct Flat Panel | F – Frosted Lens | 2 – 2' x 2' | UZD – 120V-277V (Non Dimming) | 36 – 3600 Lumens                    | 30K – 3000K<br>35K – 3500K<br>41K – 4100K<br>50K – 5000K |

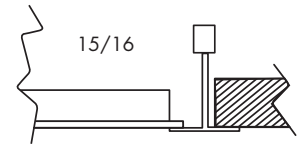
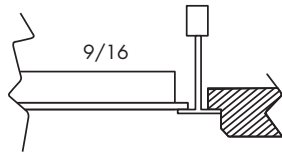
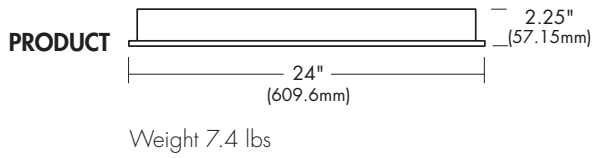
<sup>1</sup> Approximate lumen output. Actual performance may vary based on CCT, options selected and end user application.

<sup>2</sup> Actual wattage may differ by +/- 10%.

# 2x2 LED Direct Back-Lit Flat Panel Luminaire

## LED TECHNICAL DATA

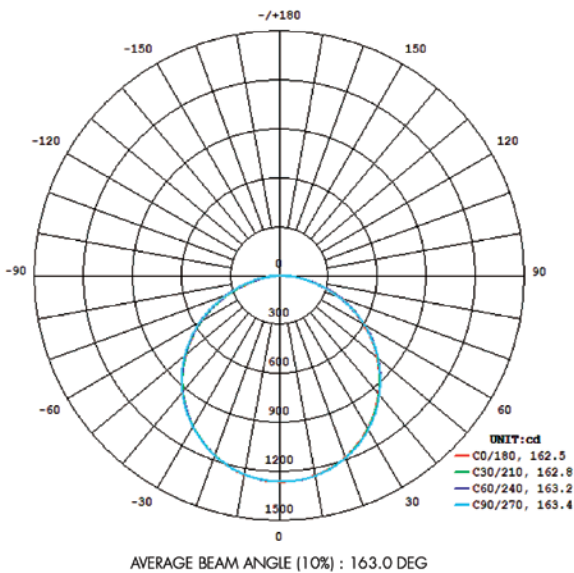
### Dimensions and Mounting Data



### Photometric Report

Based on photometric data for  
TCP Item #DFF2UZD3635K

#### Light Distribution Curve



#### Isolux Plot

