

## LED Flat Panel Luminaires

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

They offer a cost effective solution to maximize savings and take advantage of utility rebates without sacrificing performance.

## Great Features/Benefits

- Up to 51% 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 edge-lit technology
- Slim, low-profile design
- Ideal for:
  - Offices
  - Retail Stores
  - Schools
  - Hospitality
  - Restaurants
  - Healthcare



## 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 edge-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 (39.5W for EB option)
Lumens (L)	2x2 = 3600L
Lumens per Watt (LPW)	100 LPW
Rated Life	50,000 hours
Minimum Starting Temperature	-20°C (0°C for EB option)
Maximum Operating Temperature	40°C
CRI	>80
Power Factor	>0.9
THD	<20%
Ratings	UL/cUL damp location rated, DLC, IC rated, IP20
Controls	0-10V dimming (standard)



5 YEAR WARRANTY

Not all versions of this product are qualified on the DLC QPL. To view our DLC qualified products, please consult the DLC Qualified Products List at [www.designlights.org/qpl](http://www.designlights.org/qpl).

## Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Flat Panel - 2x2	—	3600	36	—
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%

\*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:  
**System lumens = mean lumens x # lamps x ballast factor x luminaire efficiency factor**

### 2x2 LED Flat Panel Luminaire

#### Applications

TCP LED 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 uses edge-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

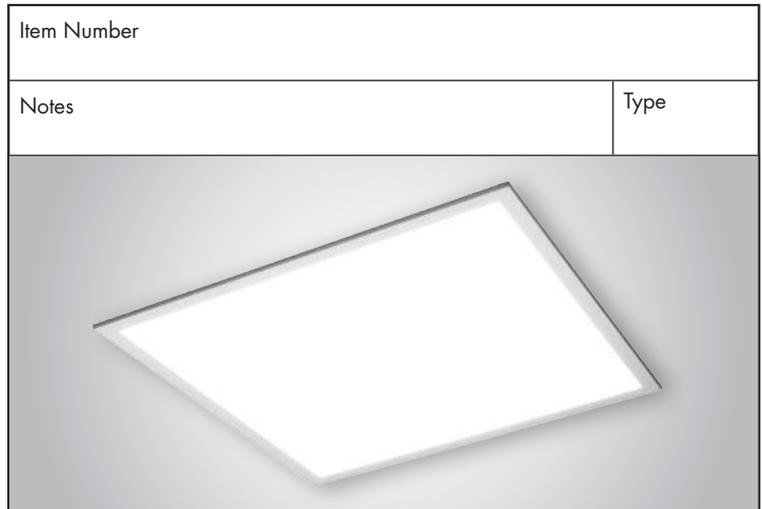
- Housing: metal back panel and wiring compartment
- Frame: aluminum, post-painted white
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

#### Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- Easy-to-access wiring compartment on back of fixture
- System rated for long 50,000 hour life

#### Optics

- Innovative edgelit technology paired with acrylic light guide and thin frosted white polypropylene diffuser
- 120° beam angle
- Delivers full panel diffusion and excellent uniformity



#### Listings

UL/cUL Listed    DLC v4.0 Standard    IC Rated    RoHS Compliant

#### Warranty

Five year limited warranty against defects in manufacturing.

#### Lumen Maintenance

Lumen Maintenance Factor (LMF) <sup>1</sup>			
25,000 Hour Projected LMF <sup>2</sup>	50,000 Hour Projected LMF <sup>2</sup>	75,000 Hour Calculated LMF <sup>3</sup>	Reported L <sub>70</sub> <sup>2</sup>
91.17%	80.98%	71.93%	>60,000 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 based on 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: TCPFP2UZD3630K

TCP	FP	2	U	ZD	36		
BRAND	FAMILY	SIZE	VOLTAGE	CONTROLS/DIMMING	LUMEN PACKAGE (Power) <sup>1,2</sup>	COLOR TEMPERATURE	OPTIONS
TCP	FP – Flat Panel	2 – 2' x 2'	U – 120V-277V	ZD – 0-10V Dimming	36 – 3600 Lumens (36W) <sup>3</sup>	30K – 3000K 35K – 3500K 41K – 4100K 50K – 5000K	EB – Emergency Back-Up

<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%.

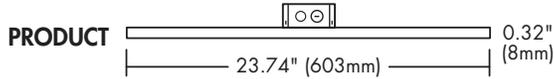
<sup>3</sup> 39.5W when emergency back-up (EB) option selected.

#### Installation Kit (ordered separately)

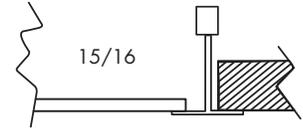
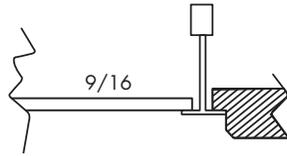
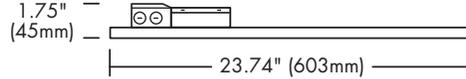
FPSK2 – 2x2 Surface Mount Kit

# 2x2 LED Flat Panel Luminaire

## Dimensions and Mounting Data



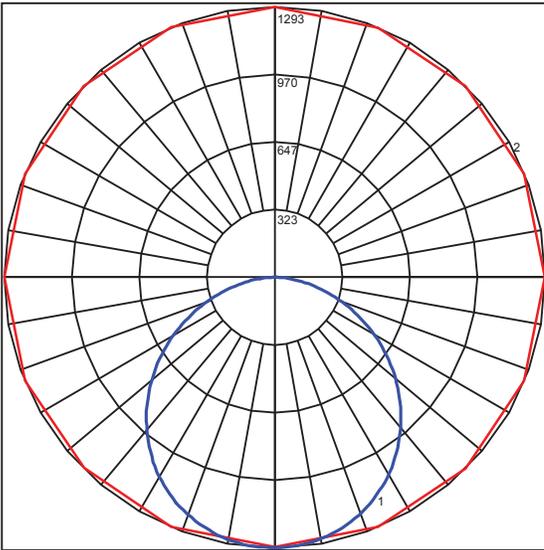
Length: 23.74" (603mm)  
 Width: 23.74" (603mm)  
 Depth: 0.32" (8mm)  
 Weight: 6.61 lbs (3kg)  
 12.50 lbs (5.7kg) for EB option



## Photometric Report

Based on photometric data for  
 TCP Item # TCPFP2UZD3630K

Polar Graph



Maximum Candela = 1293.063 Located At Horizontal Angle = 0, Vertical Angle = 0  
 # 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
 # 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

Average Luminance candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4412	4513	4581
55	4251	4376	4450
65	3986	4136	4196
75	3419	3623	3671
85	2294	2610	2618

## Coefficients of Utilization – Zonal Cavity Method

### Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	61	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

## Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	473.40	12.70	12.70
0-30	1006.83	27.00	26.90
0-40	1652.48	44.30	44.20
0-60	2934.73	78.60	78.50
0-80	3663.99	98.20	98.00
0-90	3734.11	100.00	99.90
10-90	3611.73	96.80	96.60
20-40	1179.08	31.60	31.50
20-50	1851.48	49.60	49.50
40-70	1747.94	46.80	46.80
60-80	729.26	19.50	19.50
70-80	263.57	7.10	7.10
80-90	70.13	1.90	1.90
90-110	0.88	0.00	0.00
90-120	1.31	0.00	0.00
90-130	1.85	0.00	0.00
90-150	2.95	0.10	0.10
90-180	3.70	0.10	0.10
110-180	2.83	0.10	0.10
0-180	3737.82	100.10	100.00

Total Luminaire Efficiency = 100.10%