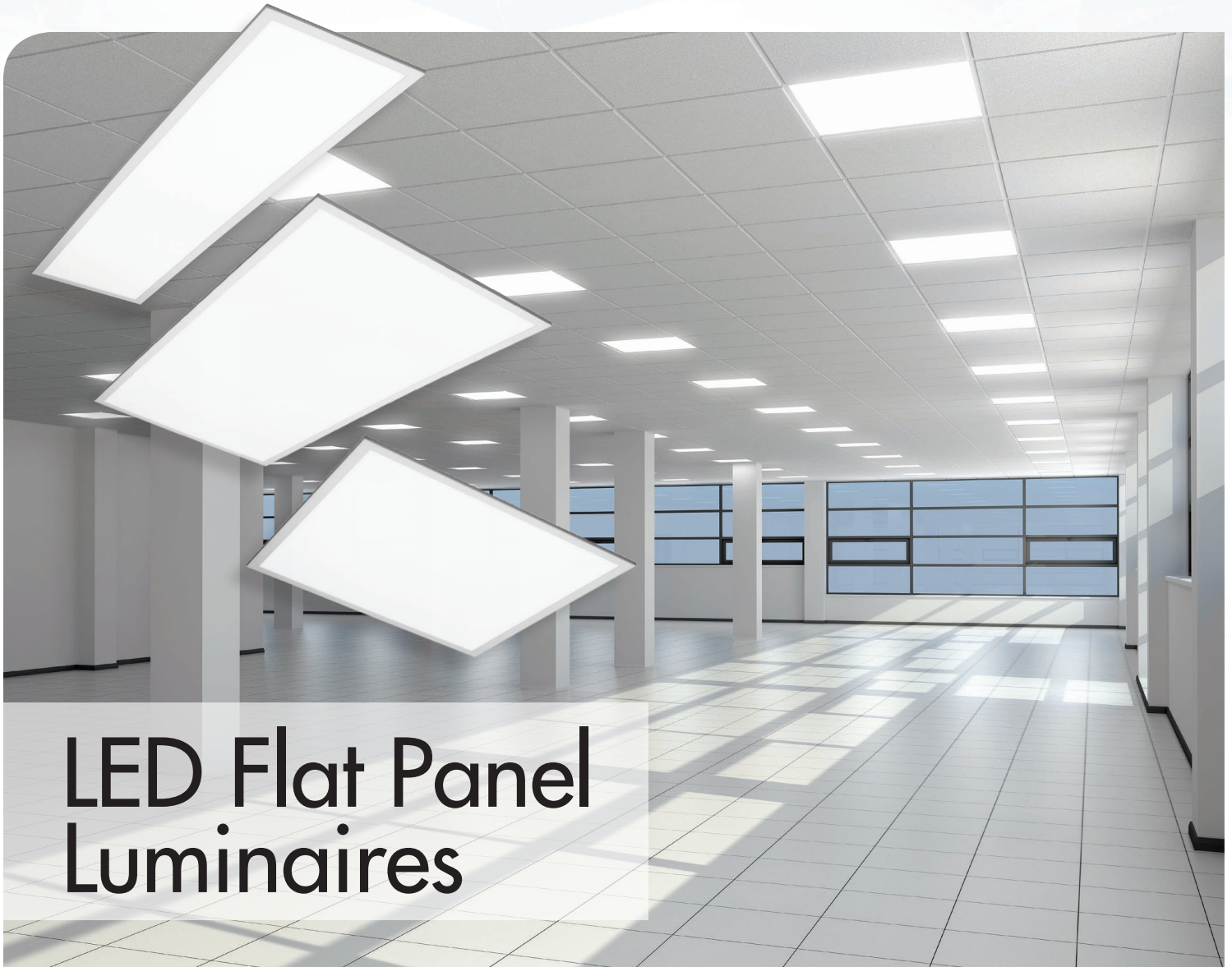




LED Flat Panel Luminaires

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

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

APPLICATIONS: Tbar Grid Ceilings

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)	1x4 & 2x2 = 36W 2x4 = 50W
Lumens (L)	1x4 & 2x2 = 3600L 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	>90%
THD	<20%
Ratings	UL/cUL damp location rated, DLC, IC rated, IP20
Controls	0-10V dimming (standard)

1x4

2x2

2x4



5 YEAR WARRANTY

To view our DLC qualified products, please consult the DLC Qualified Products List at www.designlights.org/qpl.

Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Flat Panel - 1x4		3600	36	
2 Lamp 28W T5	1.0	3968	64	44%
1 Lamp 54W T5HO	1.0	3395	61	41%
2 Lamp 32W T8 NBF	0.88	3827	54	33%
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%
TCP LED Flat Panel - 2x4	—	5000	50	—
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:

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

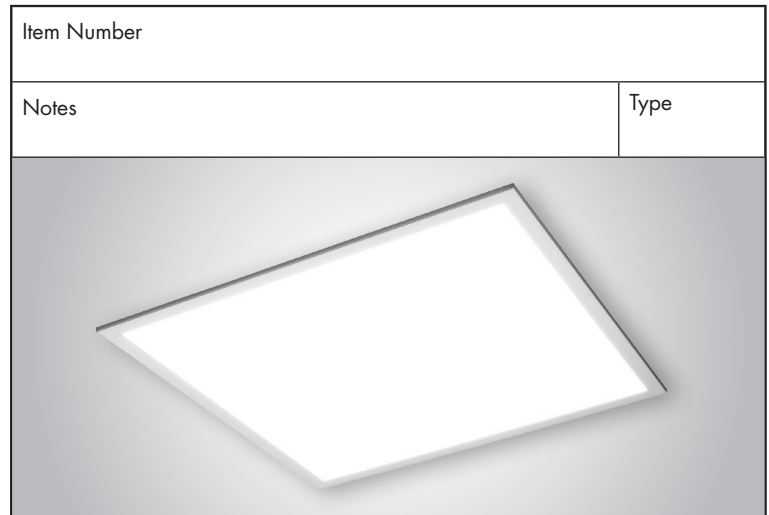
- Housing: metal back panel and wiring compartment
- Frame: aluminum, post-painted white
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

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 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) ¹			
25,000 Hour Projected LMF ²	50,000 Hour Projected LMF ²	75,000 Hour Calculated LMF ³	Reported L ₇₀ ²
91.17%	80.98%	71.93%	>60,000 Hours

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

² IESNA TM-21-11 projected value based on 6X IESNA LM-80-08 total test duration.

³ 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) ¹²	COLOR TEMPERATURE	OPTIONS
TCP	FP = Flat Panel	2 = 2' x 2'	U = 120V-277V	ZD = 0-10V Dimming	36 = 3600 Lumens (36W)	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	

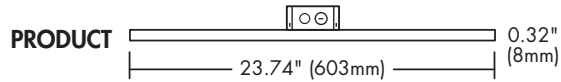
¹ Approximate lumen output. Actual performance may vary based on CCT, options selected and end user application.

² Actual wattage may differ by +/- 5%; when operating between 120-277V +/- 10%.

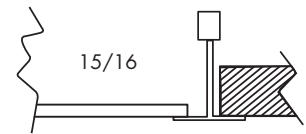
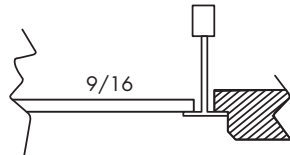
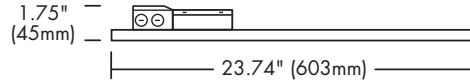
For the most up-to-date specs and warranty information, please visit www.tcp.com

2x2 LED Flat Panel Luminaire

Dimensions and Mounting Data



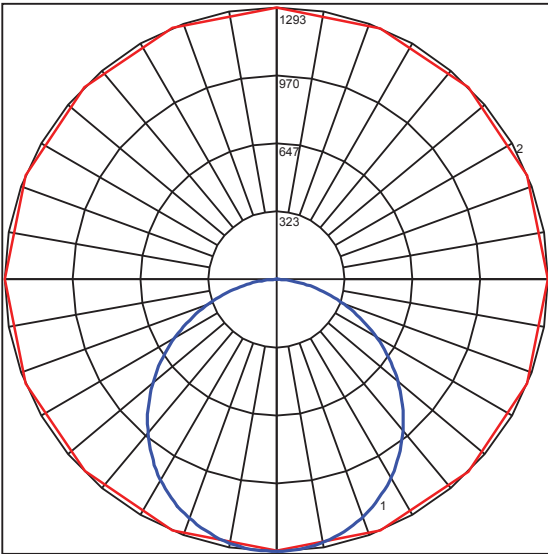
Length: 23.74" (603mm)
 Width: 23.74" (603mm)
 Depth: 0.32" (8mm)
 Weight: 6.61 lbs (3kg)



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
RW	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%

Specifications and dimensions subject to change without notice.

2x4 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

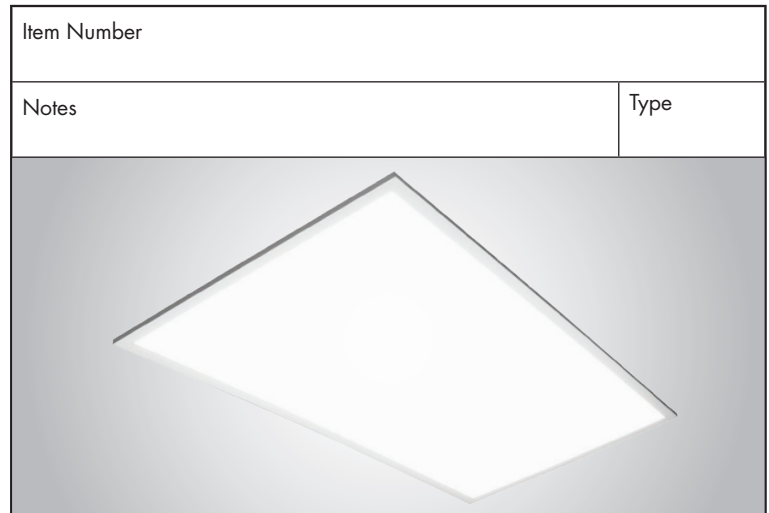
- Housing: metal back panel and wiring compartment
- Frame: aluminum, post-painted white
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

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 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) ¹			
25,000 Hour Projected LMF ²	50,000 Hour Projected LMF ²	75,000 Hour Calculated LMF ³	Reported L ₇₀ ²
91.21%	81.05%	72.02%	>60,000 Hours

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

² IESNA TM-21-11 projected value based on 6X IESNA LM-80-08 total test duration.

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

Catalog Ordering Matrix

Example: TCPFP4UZD5030K

TCP	FP	4	U	ZD	50		
BRAND	FAMILY	SIZE	VOLTAGE	CONTROLS/DIMMING	LUMEN PACKAGE (Power) ¹²	COLOR TEMPERATURE	OPTIONS
TCP	FP = Flat Panel	4 = 2' x 4'	U = 120V-277V	ZD = 0-10V Dimming	50 = 5000 Lumens (50W)	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	

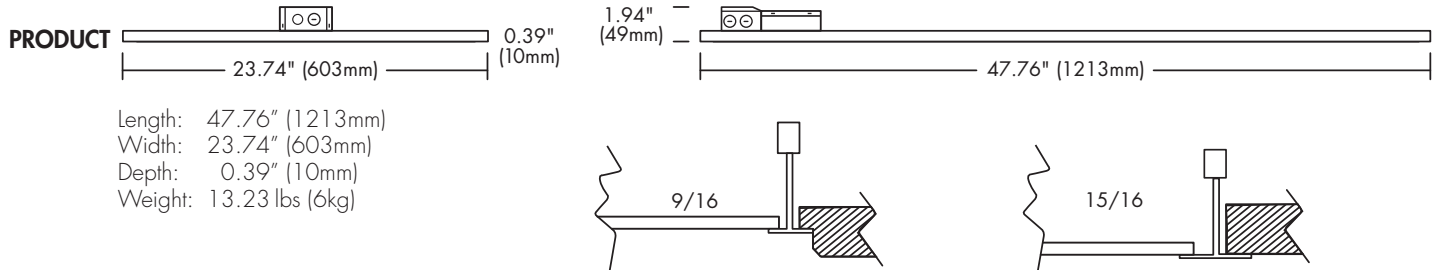
¹ Approximate lumen output. Actual performance may vary based on CCT, options selected and end user application.

² Actual wattage may differ by +/- 5%; when operating between 120-277V +/- 10%.

For the most up-to-date specs and warranty information, please visit www.tcp.com

2x4 LED Flat Panel Luminaire

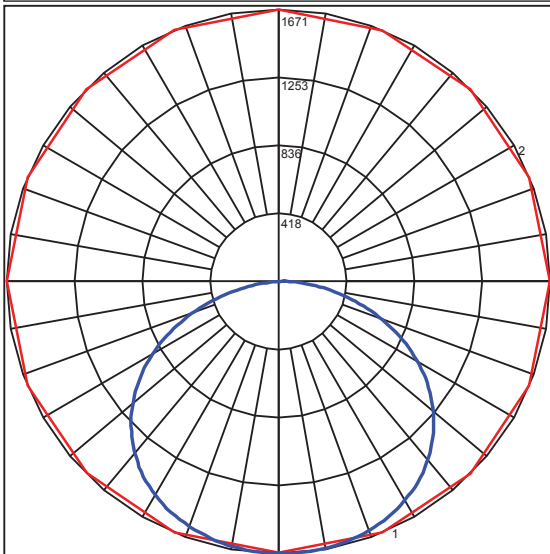
Dimensions and Mounting Data



Photometric Report

Based on photometric data for
 TCP Item # TCPFP4UZD5030K

Polar Graph



Maximum Candela = 1671.01 Located At Horizontal Angle = 10, Vertical Angle = 5
 # 1 - Vertical Plane Through Horizontal Angles (0 - 190) (Through Max. Cd.)
 # 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6675	6374	5773
55	6442	6200	5563
65	6001	5775	5155
75	5091	4888	4329
85	3113	3077	2764

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	36
7	64	50	41	35	62	49	41	35	48	40	35	46	40	34	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	619.00	11.90	11.90
0-30	1334.47	25.60	25.60
0-40	2224.17	42.70	42.70
0-60	4046.01	77.70	77.60
0-80	5102.2	98.00	97.90
0-90	5207.95	100.00	99.90
10-90	5049.38	97.00	96.90
20-40	1605.16	30.80	30.80
20-50	2553.85	49.10	49.00
40-70	2493.74	47.90	47.80
60-80	1056.19	20.30	20.30
70-80	384.29	7.40	7.40
80-90	105.75	2.00	2.00
90-110	2.01	0.00	0.00
90-120	2.59	0.00	0.00
90-130	3.05	0.10	0.10
90-150	3.66	0.10	0.10
90-180	4.06	0.10	0.10
110-180	2.05	0.00	0.00
0-180	5212.01	100.10	100.00

Total Luminaire Efficiency = 100.10%

Specifications and dimensions subject to change without notice.

1x4 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

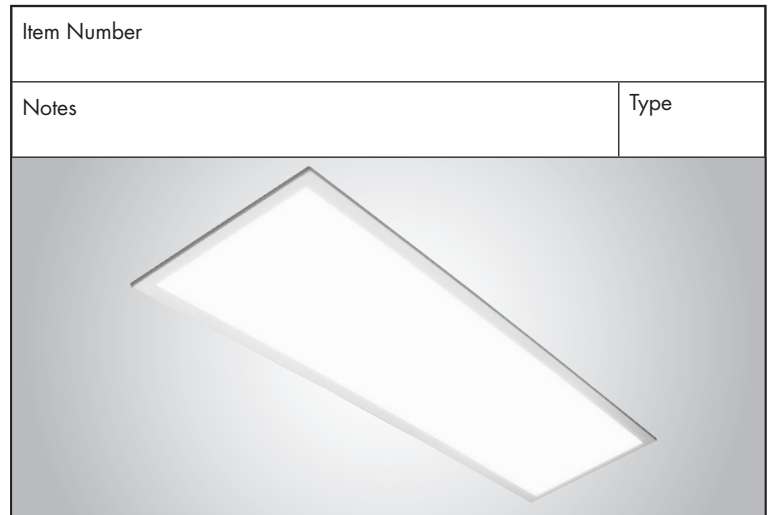
- Housing: metal back panel and wiring compartment
- Frame: aluminum, post-painted white
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

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 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) ¹			
25,000 Hour Projected LMF ²	50,000 Hour Projected LMF ²	75,000 Hour Calculated LMF ³	Reported L ₇₀ ²
91.19%	81.01%	71.97%	>60,000 Hours

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

² IESNA TM-21-11 projected value based on 6X IESNA LM-80-08 total test duration.

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

Catalog Ordering Matrix

Example: TCPFP1UZD3630K

TCP	FP	1	U	ZD	36		
BRAND	FAMILY	SIZE	VOLTAGE	CONTROLS/DIMMING	LUMEN PACKAGE (Power) ¹²	COLOR TEMPERATURE	OPTIONS
TCP	FP = Flat Panel	1 = 1' x 4'	U = 120V-277V	ZD = 0-10V Dimming	36 = 3600 Lumens (36W)	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	

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

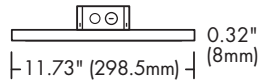
² Actual wattage may differ by +/- 5%; when operating between 120-277V +/- 10%.

For the most up-to-date specs and warranty information, please visit www.tcp.com

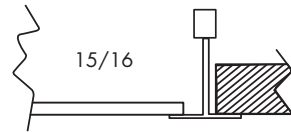
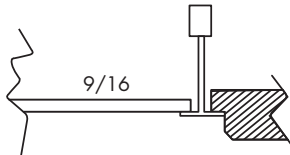
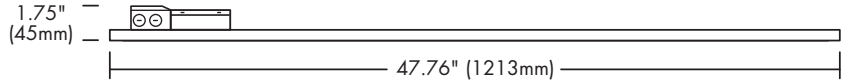
1x4 LED Flat Panel Luminaire

Dimensions and Mounting Data

PRODUCT



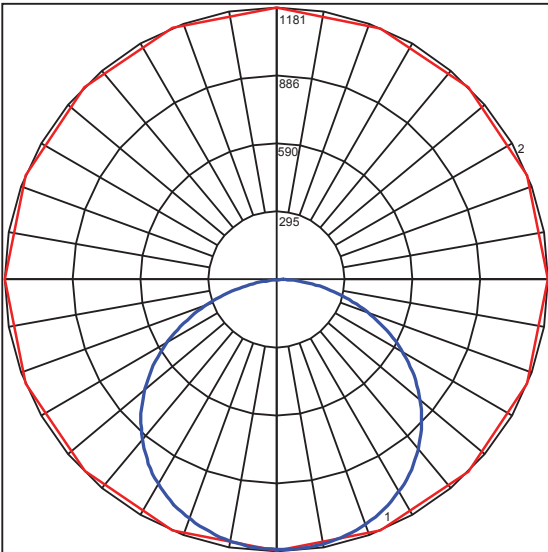
Length: 47.76" (1213mm)
Width: 11.73" (298.5mm)
Depth: 0.32" (8mm)
Weight: 6.61 lbs (3kg)



Photometric Report

Based on photometric data for
TCP Item # TCPFP1UZD3630K

Polar Graph



Maximum Candela = 1180.97 Located At Horizontal Angle = 310, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (310 - 130) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4527	4319	3862
55	4346	4165	3702
65	3992	3813	3434
75	3284	3098	2942
85	1765	1634	2081

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	57
4	82	70	61	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	49	41	35	48	40	35	46	40	34	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	29
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	435.36	12.00	11.90
0-3	937.31	25.70	25.70
0-40	1559.07	42.80	42.80
0-60	2827.75	77.70	77.60
0-80	3564.55	97.90	97.80
0-90	3640.63	100.00	99.90
10-90	3528.99	96.90	96.80
20-40	1123.72	30.90	30.80
20-50	1784.7	49.00	49.00
40-70	1736.7	47.70	47.60
60-80	736.81	20.20	20.20
70-80	268.78	7.40	7.40
80-90	76.08	2.10	2.10
90-110	2.03	0.10	0.10
90-120	2.43	0.1	0.10
90-130	2.84	0.10	0.10
90-150	3.74	0.10	0.10
90-180	4.56	0.10	0.10
110-180	2.53	0.10	0.10
0-180	3645.19	100.10	100.00

Total Luminaire Efficiency = 100.10%

Specifications and dimensions subject to change without notice.