



# DT Series Luminaires

## Product Specifications

TCP's LED Direct Troffer Luminaires feature backlit technology with a robust construction that still offers a slim, low-profile with beautiful full-panel diffusion and superior uniformity.

These energy efficient troffers offer a cost-effective solution to maximize energy savings and take advantage of potential utility rebates where applicable.

Applications: T-bar Grid Ceilings

### Reasons to choose the LED Direct Troffer Luminaires from TCP

- Superior energy efficiency compared to fluorescent alternatives, providing instant energy savings and potential rebate ability
- Long 50,000 hour rated life significantly reduces maintenance labor and material costs
- Excellent color consistency and high CRI enhance color of focal point while maintaining uniformity throughout lighting installation
- Mercury-free construction is great for all environments
- Fits standard 1" and 9/16" T-bar grid ceilings
- Utilizes backlit technology for full diffusion with excellent uniformity
- Slim, low-profile design and lightweight for easy handling

### Ideal Applications

- Office
- Retail Stores
- Schools
- Hospitality
- Restaurants
- Healthcare

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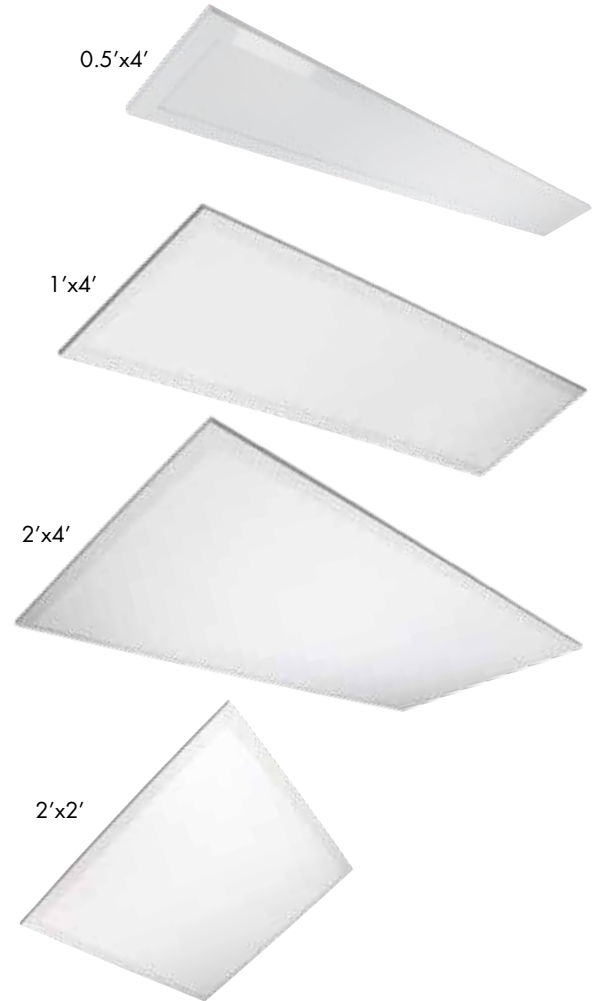


5 YEAR  
WARRANTY

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).

## Specifications

Input Line Voltage .....	120-277 VAC
Input Line Frequency (Hz) .....	50/60Hz
Wattage (W)	
0.5'x4' .....	23W
1'x4' .....	23W/29W/38W
2'x2' .....	23W/29W/38W
2'x4' .....	29W/39W/46W
Lumens (L)	
0.5'x4' .....	2100L
1'x4' .....	2600L/3200L/4200L
2'x2' .....	2600L/3200L/4200L
2'x4' .....	3300L/4400L/5100L
Lumens per Watt (LPW) .....	>110 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, IC rated, IP20, DLC Standard 5.1
Controls .....	0-10V dimming (standard)



## Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
<b>TCP LED Direct Troffer - 1x4, 2x2</b>	—	<b>3200</b>	<b>29</b>	—
2 Lamp 34W T12 U-Bend	0.88	4420	72	60%
2 Lamp 32W T8 U-Bend	0.88	4275	59	51%
2 Lamp 24W T5HO	1.0	3145	64	55%
<b>TCP LED Direct Troffer - 2x4</b>	—	<b>5100</b>	<b>46</b>	—
4 Lamp 32W T8	-	9251	112	59%
3 Lamp 32W T8 HBF	1.18	6938	89	48%
3 Lamp 32W T8 NBF	0.88	5174	89	48%
2 Lamp 32W T8 HBF	1.18	4626	59	22%
2 Lamp 28W T5	1.0	4060	64	28%
2 Lamp 32W T8 NBF	0.88	3450	59	22%

\*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**

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## Applications

TCP LED Direct Troffer Luminaires are cost-effective, high-efficiency alternatives to traditional T5, T8 and T12 linear fluorescent troffers. Featuring a slim, low-profile design, our LED Direct Troffers use backlit technology to deliver full panel diffusion and superior uniformity that meets or exceeds the output from edge-lit panels. Applications include offices, schools, retail locations, healthcare, hospitality and other T-grid and commercial ceilings.

## Construction

- Rectangular white frame
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

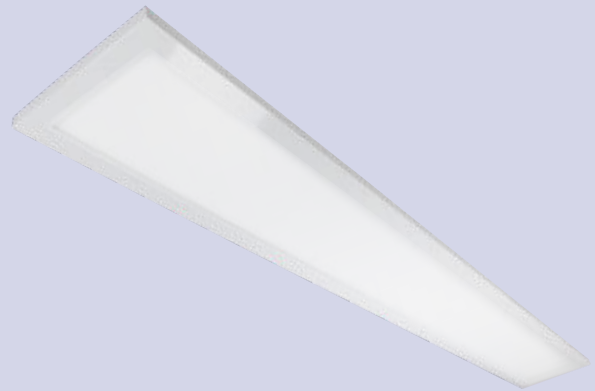
## Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- LED driver with integrated junction box
- System rated for long 50,000 hour life

## Optics

- Backlit technology provides even, uniform lighting
- 120° beam angle
- Frosted diffuser for reduced glare and aesthetic appeal
- Meets or exceeds the look and performance of edge-lit panels

Item Number	
Notes	Type



### Listings

UL/cUL Listed  
IC Rated  
RoHS Compliant  
DLC 5.1 Standard

### Lumen Maintenance

L70 > 54,000 hours

### Warranty

Five year limited warranty against defects in manufacturing.

## Catalog Ordering Matrix

Example: DTF405UZD2341K

FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE <sup>1,2</sup>	COLOR TEMPERATURE	OPTIONS
DT = Direct Backlit Troffer	F = Frosted	405 = 0.5' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 2100 Lumens	27K = 2700K*** 30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K 65K = 6500K***	BLK = Black Frame
			H = 120V-347V	ZD = 0-10V Dimming			

<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 +/- 5%; when operating between 120-277V +/- 10%.

\*\*\*2700K and 6500K are special order. Please contact your TCP representative for lead times.\*\*\*

### Accessories:

Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK (HANGS 3 UNITS)

For the most up-to-date specs and warranty information, please visit [www.tcp.com](http://www.tcp.com)

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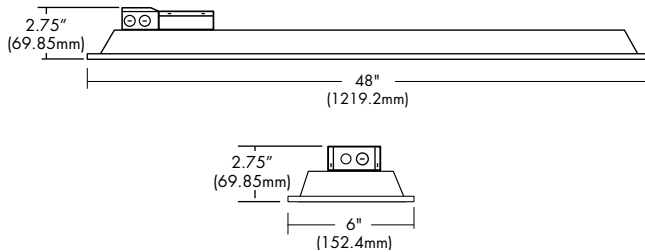


5 YEAR WARRANTY

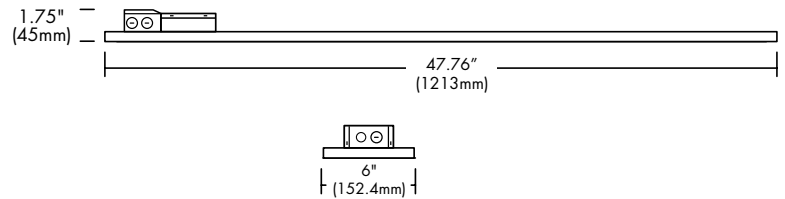
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## Dimensions and Mounting Data

**Backlit Direct Troffer**



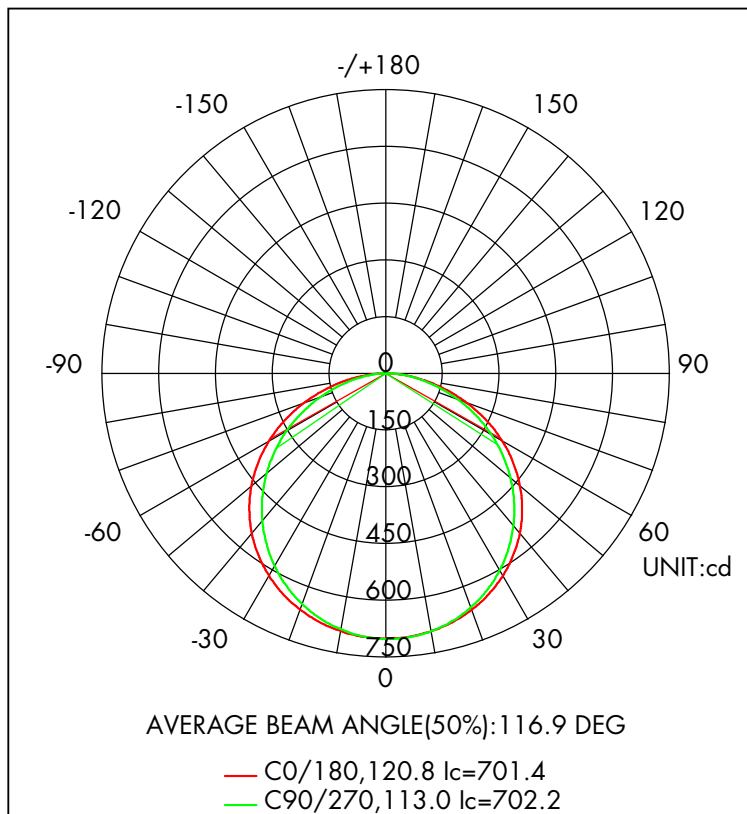
**Edge-lit Flat Panel**



## Photometric Report

Based on photometric data for  
TCP Item # DTF405UZD2341K

### Polar Graph



Maximum Candela = 1407.6 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.)

Specifications and dimensions subject to change without notice.

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- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

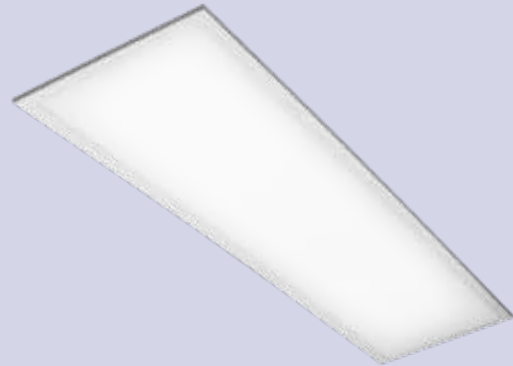
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- 0-10V dimming driver (standard)
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## Optics

- Backlit technology provides even, uniform lighting
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Item Number	
Notes	Type



### Listings

UL/cUL Listed  
IC Rated  
RoHS Compliant  
DLC 5.1 Standard

### Lumen Maintenance

L70 > 54,000 hours

### Warranty

Five year limited warranty against defects in manufacturing.

## Catalog Ordering Matrix

Example: DTF1UZD2341K

FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE <sup>1,2,3</sup>	COLOR TEMPERATURE	OPTIONS	FRAME OPTIONS
DT = Direct Backlit Troffer	F = Frosted	1 = 1' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 2600 Lumens 29 = 3200 Lumens 38 = 4200 Lumens (Wattage Selectable to 38W/29W/23W)	27K = 2700K*** 30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K 65K = 6500K***	BLANK = None EB = Battery Backup CP = Chicago Plenum IS = Integrated Microwave Sensor SM = SmartBox with sensor NLS = Network Lighting PIR Sensor	BLANK = White Frame BLK = Black Frame
			H = 120V-347V	ZD = 0-10V Dimming				

<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 +/- 5%; when operating between 120-277V +/- 10%.

<sup>3</sup> 23W and 29W are permanently fixed; 38W is adjustable to 29W or 23W.

\*\*\*2700K and 6500K are special order. Please contact your TCP representative for lead times.\*\*\*

### Accessories:

Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK (HANGS 3 UNITS)
DTSK1	SURFACE MOUNT KIT FOR 1X4 TROFFERS AND PANELS
DTFLK1	RECESS MOUNT FLANGE KIT FOR 1X4 TROFFERS AND PANELS

For the most up-to-date specs and warranty information, please visit [www.tcp.com](http://www.tcp.com)

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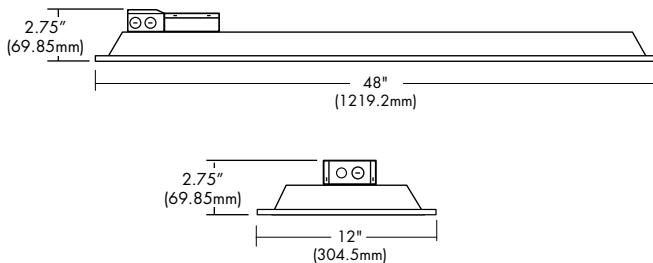


5 YEAR WARRANTY

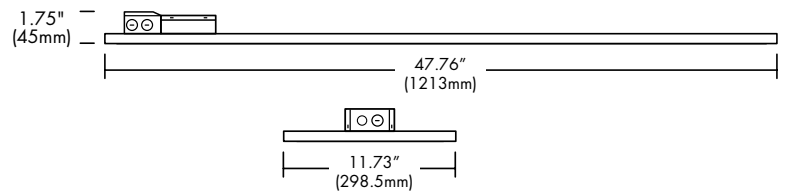
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## Dimensions and Mounting Data

**Backlit Direct Troffer**



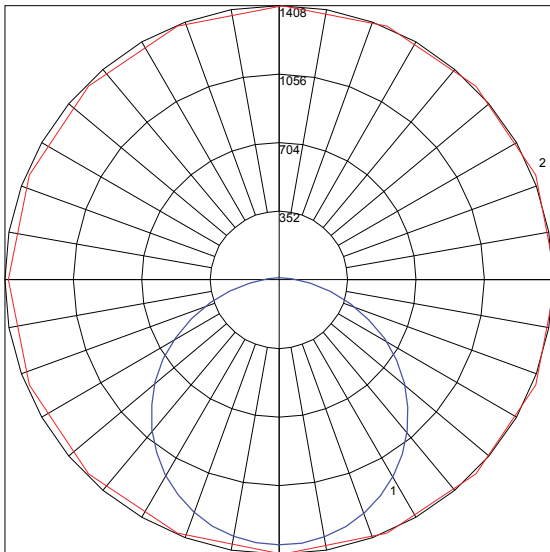
**Edge-lit Flat Panel**



## Photometric Report

Based on photometric data for  
TCP Item # DTF1UZD3830K (38W)

### Polar Graph



Maximum Candela = 1407.6 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	3631	3602	3585
55	3506	3474	3437
65	3292	3239	3179
75	2892	2795	2680
85	2165	1983	1746

## Spacing Criterion

(0-180): 1.28, (90-270): 1.28

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

## Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	493.60	N.A.	12.71
0-30	1095.31	N.A.	27.02
0-40	1722.30	N.A.	44.34
0-60	3056.50	N.A.	78.68
0-80	3808.40	N.A.	98.04
0-90	3881.50	N.A.	99.92
10-90	3910.96	N.A.	96.70
20-40	1281.49	N.A.	31.70
20-50	2010.58	N.A.	49.70
40-70	1887.56	N.A.	46.70
60-80	782.93	N.A.	19.40
70-80	283.30	N.A.	7.00
80-90	76.63	N.A.	1.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.76	N.A.	0.00
110-180	0.76	N.A.	0.00
0-180	3884.70	N.A.	100.00

Total Luminaire Efficiency = N.A.%

## Applications

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## Construction

- Rectangular white frame
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- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

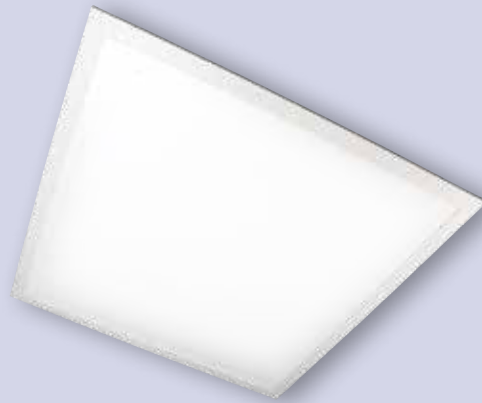
## Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- LED driver with integrated junction box
- System rated for long 50,000 hour life

## Optics

- Backlit technology provides even, uniform lighting
- 120° beam angle
- Frosted diffuser for reduced glare and aesthetic appeal
- Meets or exceeds the look and performance of edge-lit panels

Item Number	
Notes	Type



### Listings

UL/cUL Listed  
IC Rated  
RoHS Compliant  
DLC 5.1 Standard

### Lumen Maintenance

L70 > 54000 hours

### Warranty

Five year limited warranty against defects in manufacturing.

## Catalog Ordering Matrix Example: DTF2UZD2341K

FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE <sup>1,2,3</sup>	COLOR TEMPERATURE	OPTIONS	FRAME OPTIONS
DT = Direct Backlit Troffer	F = Frosted	2 = 2' x 2'	U = 120V-277V	ZD = 0-10V Dimming	23 = 2600 Lumens 29 = 3200 Lumens 38 = 4200 Lumens (Wattage Selectable to 38W/29W/23W)	27K = 2700K*** 30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K 65K = 6500K***	BLANK = None EB = Battery Backup CP = Chicago Plenum IS = Integrated Microwave Sensor SM = SmartBox with sensor NLS = Network Lighting PIR Sensor	BLANK = White Frame BLK = Black Frame
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### Accessories:

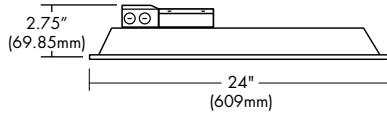
Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK (HANGS 3 UNITS)
DTSK2	SURFACE MOUNT KIT FOR 2X2 TROFFERS AND PANELS
DTFLK2	RECESS MOUNT FLANGE KIT FOR 2X2 TROFFERS AND PANELS

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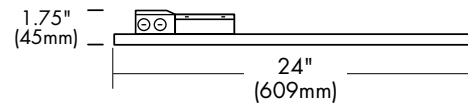


## Dimensions and Mounting Data

**Backlit Direct Troffer**



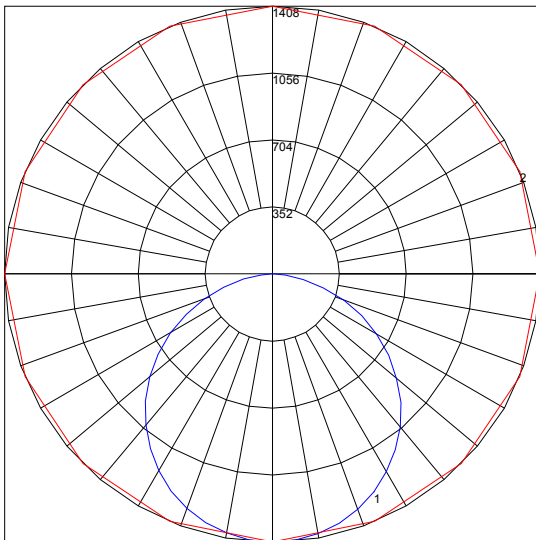
**Edge-lit Flat Panel**



## Photometric Report

Based on photometric data for  
TCP Item # DTF2UZD3830K (38W)

### Polar Graph



Maximum Candela = 1407.6 Located At Horizontal Angle = 0, Vertical Angle = 0  
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### Average Luminance candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
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55	3506	3474	3437
65	3292	3239	3179
75	2892	2795	2680
85	2165	1983	1746

## 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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50
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10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	24	24

## Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	515.20	N.A.	12.70
0-30	1095.31	N.A.	27.10
0-40	1796.69	N.A.	44.40
0-60	3184.62	N.A.	78.70
0-80	3967.55	N.A.	98.10
0-90	4044.17	N.A.	100.00
10-90	3910.96	N.A.	96.70
20-40	1281.49	N.A.	31.70
20-50	2010.58	N.A.	49.70
40-70	1887.56	N.A.	46.70
60-80	782.93	N.A.	19.40
70-80	283.30	N.A.	7.00
80-90	76.63	N.A.	1.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.76	N.A.	0.00
110-180	0.76	N.A.	0.00
0-180	4044.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

## Spacing Criterion

(0-180): 1.28, (90-270): 1.28

Specifications and dimensions subject to change without notice.

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5 YEAR WARRANTY

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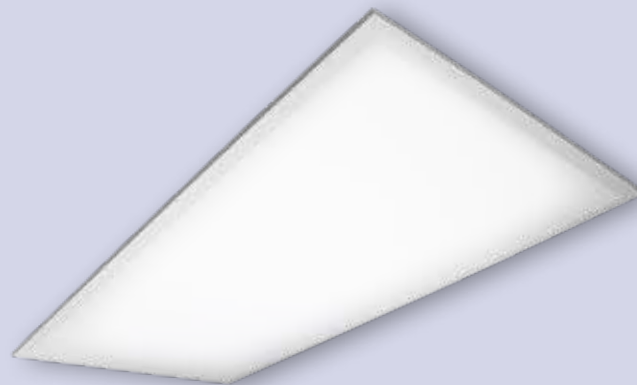
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## Catalog Ordering Matrix Example: DTF4UZD2941K

FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE <sup>1,2,3</sup>	COLOR TEMPERATURE	OPTIONS	FRAME OPTIONS
DT = Direct Backlit Troffer	F = Frosted	4 = 2' x 4'	U = 120V-277V	ZD = 0-10V Dimming	29 = 3300 Lumens 39 = 4400 Lumens 46 = 5100 Lumens (Wattage Selectable to 46W/39W/29W)	27K = 2700K*** 30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K 65K = 6500K***	BLANK = None EB = Battery Backup CP = Chicago Plenum IS = Integrated Microwave Sensor SM = SmartBox with sensor NLS = Network Lighting PIR Sensor	BLANK = White Frame BLK = Black Frame
			H = 120V-347V	ZD = 0-10V Dimming				

<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 +/- 5%; when operating between 120-277V +/- 10%.

<sup>3</sup>29W and 39W are permanently fixed; 46W is adjustable to 39W or 29W.

\*\*\*2700K and 6500K are special order. Please contact your TCP representative for lead times. \*\*\*

### Accessories:

Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK (HANGS 3 UNITS)
DTSK4	SURFACE MOUNT KIT FOR 2X4 TROFFERS AND PANELS
DTFLK4	RECESS MOUNT FLANGE KIT FOR 2X4 TROFFERS AND PANELS

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For the most up-to-date specs and warranty information, please visit [www.tcp.com](http://www.tcp.com)

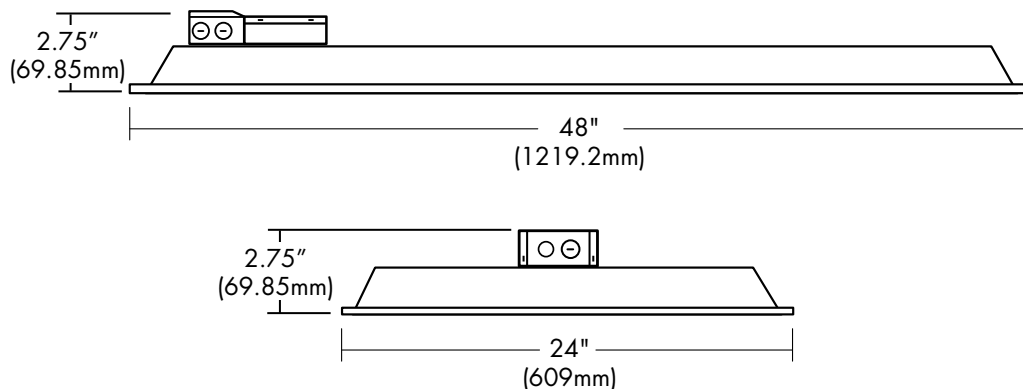


5 YEAR WARRANTY

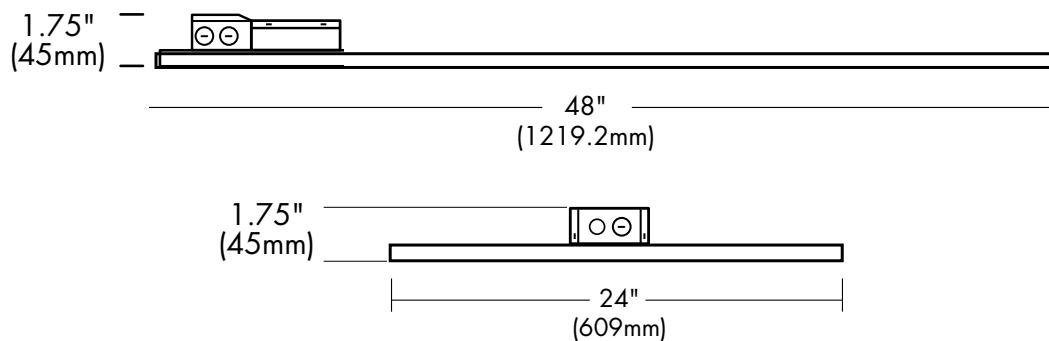
Not all versions of this product are qualified on the DLC QPL. To view our DLC qualified products, please consult the DLC Qualified Products List at [www.designlights.org/qpl](http://www.designlights.org/qpl).

## Dimensions and Mounting Data

### Backlit Direct Troffer



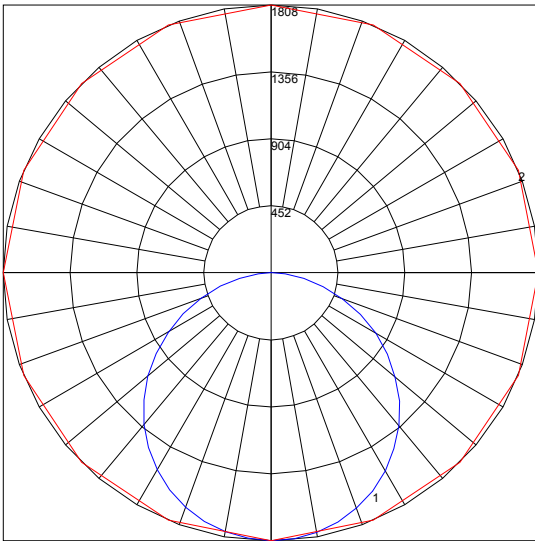
### Edge-lit Flat Panel



## Photometric Report

Based on photometric data for  
TCP Item # DTF4UZD4630K (46W)

### Polar Graph



Maximum Candela = 1808.2 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	2333	2317	2318
55	2254	2237	2229
65	2125	2092	2083
75	1904	1866	1822
85	1499	1470	1394

## Spacing Criterion

(0-180): 1.28, (90-270): 1.28

Specifications and dimensions subject to change without notice.

## 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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	0
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83	83	83	83
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	75	71	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50	50	50	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29	29	29	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	24	24

## Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	661.93	N.A.	12.70
0-30	1407.56	N.A.	26.90
0-40	2309.2	N.A.	44.20
0-60	4094.49	N.A.	78.40
0-80	5115.44	N.A.	97.90
0-90	5222.48	N.A.	100.00
10-90	5051.35	N.A.	96.70
20-40	1647.27	N.A.	31.50
20-50	2584.72	N.A.	49.50
40-70	2431.84	N.A.	46.60
60-80	1020.95	N.A.	19.50
70-80	374.40	N.A.	7.20
80-90	107.04	N.A.	2.00
90-110	0.62	N.A.	0.00
90-120	0.62	N.A.	0.00
90-130	0.62	N.A.	0.00
90-150	0.67	N.A.	0.00
90-180	1.55	N.A.	0.00
110-180	0.94	N.A.	0.00
0-180	5224.04	N.A.	100.00

Total Luminaire Efficiency = N.A.%

# TECHNOLOGY CAST IN A BEAUTIFUL LIGHT

For over 30 years, TCP has been designing, developing and delivering energy-efficient lighting into the market. Thanks to our cutting-edge technology and manufacturing expertise, we have shipped billions of high quality lighting products. With TCP, you can count on a lighting product that is designed to meet the needs of the market - that transforms your surroundings and envelopes you in warmth - lighting that generates beauty with every flip of the switch.

Sales:

Date:

Model:

Project:

Rep:

Catalog Number:

Type:

Notes:



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