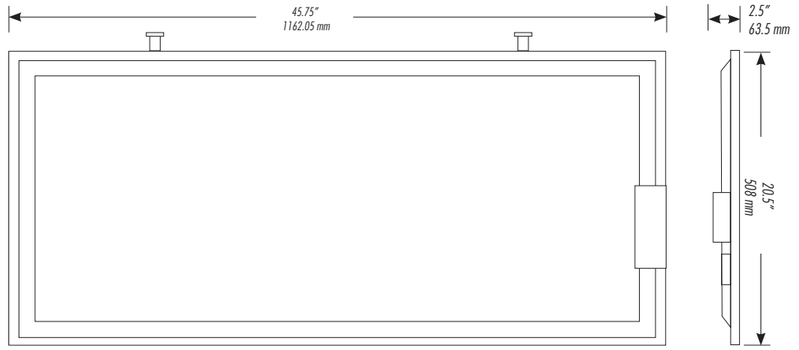
Luxterior by TCP

2x4 LED Flat Panel Troffer Retrofit Kit

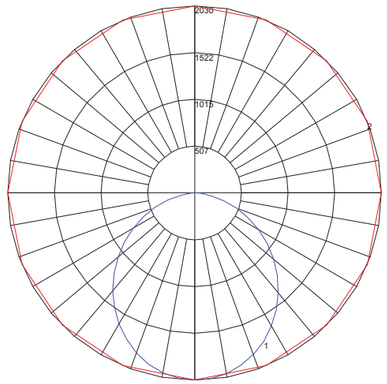
Dimensions and Mounting Data



Photometric Report

Based on photometric data for
TCP Item # FRK4UZDA1CCT

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	2411	2600	2825
55	2261	2257	2917
65	2048	2582	3137
75	1703	2774	3595
85	987	2767	2730

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	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	67	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	741.86	N.A.	12.10
0-30	1575.01	N.A.	25.80
0-40	2581.26	N.A.	42.20
0-60	4607.58	N.A.	75.40
0-80	5937.37	N.A.	97.10
0-90	6112.53	N.A.	100.00
10-90	5920.5	N.A.	96.80
20-40	1839.41	N.A.	30.10
20-50	2891.24	N.A.	47.30
40-70	2821.12	N.A.	46.10
60-80	1329.79	N.A.	21.70
70-80	534.99	N.A.	8.70
80-90	175.16	N.A.	2.90
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	0.00	N.A.	0.00
90-180	1.65	N.A.	0.00
110-180	1.65	N.A.	0.00
0-180	6114.17	N.A.	100.00

Total Luminaire Efficiency = N.A.%

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Luxterior by TCP

LED Flat Panel Troffer Retrofit Kit

Product Specifications



TCP's LED Flat Panel Troffer Retrofit Kit offers a high-efficiency alternative to T5, T8, and T12 linear fluorescent systems. It provides long-life with consistent color and superior lumen maintenance. The rugged, cold-rolled steel housing is post-painted with a matte white finish. The acrylic diffuser provides a low-glare, wide-light distribution.

The LED Flat Panel Troffer Retrofit Kit offers a cost-effective solution to maximize savings and take advantage of potential utility rebates without sacrificing performance.

Reasons to choose the LED Flat Panel Troffer Retrofit Kit from TCP

- Uses up to 61% less energy than fluorescent alternatives
- Long 50,000 hour rated life
- Excellent color consistency and CRI
- Mercury free
- Frosted acrylic diffuser
- Slim, low-profile design

Ideal Applications

- Offices
- Retail Stores
- Schools
- Hospitality
- Restaurants
- Healthcare

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Luxterior by TCP

LED Flat Panel Troffer Retrofit Kit

Specifications

Input Line Voltage ..... 120-277 VAC
Input Line Frequency (Hz) 50/60Hz
Wattage (W)
- 1x4 ..... 38W/29W/23W
- 2x2 ..... 38W/29W/23W
- 2x4 ..... 38W/29W/23W
- 2x4 ..... 46W/38W/29W

Lumens (L)
- 1x4 ..... 2500L/3200L/4200L
- 2x2 ..... 2500L/3200L/4200L
- 2x4 ..... 2500L/3200L/4200L
- 2x4 ..... 3200L/4200L/5100L

Lumens per Watt (LPW) ..... >110LPW
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 5.1 Standard
Controls ..... 0-10V dimming (standard)



Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Flat Panel Troffer - 2x2	**—**	**3800**	**29**	**—**
2 Lamp 34W T12 U-Bend	0.88	4420	74	61%
2 Lamp 32W T8 U-Bend	0.88	4275	58	50%
2 Lamp 24W T5HO	1.0	3145	54	46%
TCP LED Flat Panel Troffer - 2x4	**—**	**5000**	**38**	**—**
3 Lamp 32W T8 HBF	1.18	6960	93	59%
3 Lamp 32W T8 NBF	0.88	6681	89	57%
2 Lamp 32W T8 HBF	1.18	4658	65	42%
2 Lamp 28W T5	1.0	4675	63	40%
2 Lamp 32W T8 NBF	0.88	4468	59	36%

*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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Luxterior by TCP

2x4 LED Flat Panel Troffer Retrofit Kit

Applications

The TCP LED Flat Panel Troffer Retrofit Kit is a high-efficiency alternative to T5, T8, and T12 linear fluorescent troffers. Their intelligent high-performance LED light engines and drivers deliver long-life, consistent color, and superior lumen maintenance. Applications include offices, schools, retail and hospital locations.

Construction

The TCP LED Flat Panel Troffer Retrofit Kit is constructed of rugged cold-rolled steel, post painted with a matte white finish, and an acrylic diffuser.

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 wattage selectable and is paired with a high-quality LED light engine to deliver long-life and high-quality light. Full range 0-10V dimming is optional.

Optics

The acrylic diffuser conceals the LEDs while providing a highly-diffused, low-glare light. The smooth white reflector integrates into the diffuser creating soft illumination while distributing the light evenly in a wide pattern.

Item Number	
Notes	Type

Listings
UL/cUL Listed
RoHS Compliant
DLC 5.1 Standard

Lumen Maintenance
L90> 36,000 hours

Warranty
Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: FRK4UZDA1CCT

FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE[1,2]	COLOR TEMPERATURE
FRK = Flat Panel Retrofit Kit	**4** = 2' x 4'	**U** = 120V-277V	**ZD** = 0-10V Dimming	**A1** = 38W/29W/23W Selectable **A2** = 46W/39W/29W Selectable	**CCT** = 3500K/4100K/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.tcpi.com

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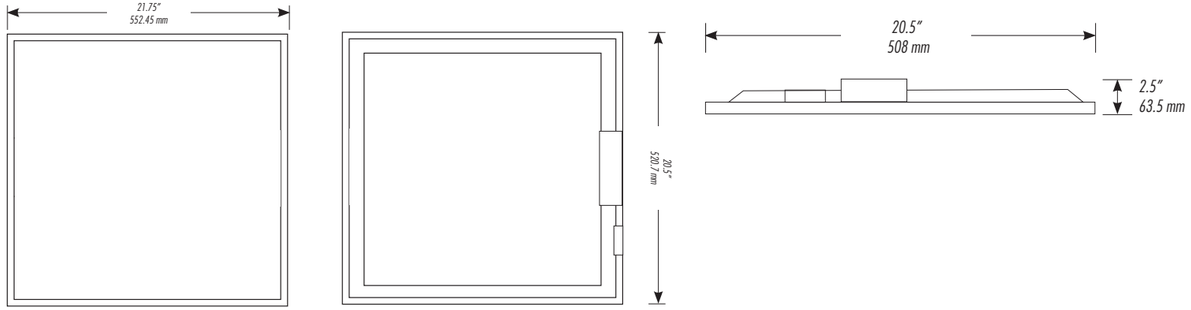
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Luxterior by TCP

2x2 LED Flat Panel Troffer Retrofit Kit

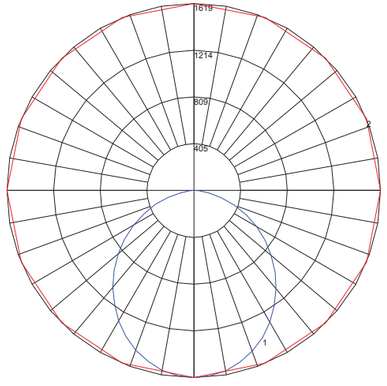
Dimensions and Mounting Data



Photometric Report

Based on photometric data for
TCP Item # FRK2UZDA1CCT

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	3788	4043	4385
55	3530	3930	4460
65	3190	3840	4691
75	2600	3900	5273
85	1462	3433	3393

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	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	94	105	101	97	93	96	93	90	92	90	87	89	87	85	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	74	70	68
3	89	78	70	63	86	76	69	62	73	67	61	71	65	60	68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	61	55	50	48
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48	44	42
6	69	55	46	40	67	54	46	39	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32
8	59	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	590.75	N.A.	12.30
0-30	1252.75	N.A.	26.10
0-40	2050.35	N.A.	42.80
0-60	3647.2	N.A.	76.00
0-80	4670.78	N.A.	97.40
0-90	4793.14	N.A.	99.90
10-90	4640.08	N.A.	96.70
20-40	1459.6	N.A.	30.40
20-50	2290.86	N.A.	47.80
40-70	2214.67	N.A.	46.20
60-80	1023.58	N.A.	21.30
70-80	405.76	N.A.	8.50
80-90	122.36	N.A.	2.60
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	0.73	N.A.	0.00
90-180	2.82	N.A.	0.10
110-180	2.82	N.A.	0.10
0-180	4795.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

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Luxterior by TCP

1x4 LED Flat Panel Troffer Retrofit Kit

Applications

The TCP LED Flat Panel Troffer Retrofit Kit is a high-efficiency alternative to T5, T8, and T12 linear fluorescent troffers. Their intelligent high-performance LED light engines and drivers deliver long-life, consistent color, and superior lumen maintenance. Applications include offices, schools, retail and hospital locations.

Construction

The TCP LED Flat Panel Troffer Retrofit Kit is constructed of rugged cold-rolled steel, post painted with a matte white finish, and an acrylic diffuser.

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 wattage selectable and is paired with a high-quality LED light engine to deliver long-life and high-quality light. Full range 0-10V dimming is optional.

Optics

The acrylic diffuser conceals the LEDs while providing a highly-diffused, low-glare light. The smooth white reflector integrates into the diffuser creating soft illumination while distributing the light evenly in a wide pattern.

Item Number	
Notes	Type

Listings
UL/cUL Listed
RoHS Compliant
DLC 5.1 Standard

Lumen Maintenance
L90> 36,000 hours

Warranty
Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix

Example: FRK1UZA1CCT

FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE[1,2]	COLOR TEMPERATURE
FRK = Flat Panel Retrofit Kit	**1** = 1' x 4'	**U** = 120V-277V	**ZD** = 0-10V Dimming	**A1**= 38W/29W/23W Selectable	**CCT** = 3500K/4100K/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%.

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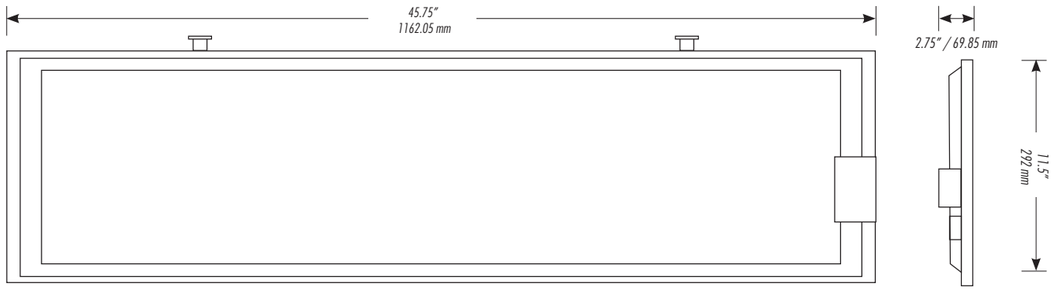
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Luxterior by TCP

1x4 LED Flat Panel Troffer Retrofit Kit

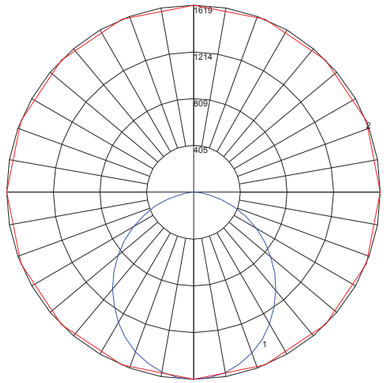
Dimensions and Mounting Data



Photometric Report

Based on photometric data for
TCP Item # FRK1UZDA1CCT

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	3788	4043	4385
55	3530	3930	4460
65	3190	3840	4691
75	2600	3900	5273
85	1462	3433	3393

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	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	94	105	101	97	93	96	93	90	92	90	87	89	87	85	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	74	70	68
3	89	78	70	63	86	76	69	62	73	67	61	71	65	60	68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	61	55	50	48
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48	44	42
6	69	55	46	40	67	54	46	39	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32
8	59	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	590.75	N.A.	12.30
0-30	1252.75	N.A.	26.10
0-40	2050.35	N.A.	42.80
0-60	3647.2	N.A.	76.00
0-80	4670.78	N.A.	97.40
0-90	4793.14	N.A.	99.90
10-90	4640.08	N.A.	96.70
20-40	1459.6	N.A.	30.40
20-50	2290.86	N.A.	47.80
40-70	2214.67	N.A.	46.20
60-80	1023.58	N.A.	21.30
70-80	405.76	N.A.	8.50
80-90	122.36	N.A.	2.60
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	0.73	N.A.	0.00
90-180	2.82	N.A.	0.10
110-180	2.82	N.A.	0.10
0-180	4795.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

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Luxterior by TCP

2x2 LED Flat Panel Troffer Retrofit Kit

Applications

The TCP LED Flat Panel Troffer Retrofit Kit is a high-efficiency alternative to T5, T8, and T12 linear fluorescent troffers. Their intelligent high-performance LED light engines and drivers deliver long-life, consistent color, and superior lumen maintenance. Applications include offices, schools, retail and hospital locations.

Construction

The TCP LED Flat Panel Troffer Retrofit Kit is constructed of rugged cold-rolled steel, post painted with a matte white finish, and an acrylic diffuser.

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 wattage selectable and is paired with a high-quality LED light engine to deliver long-life and high-quality light. Full range 0-10V dimming is optional.

Optics

The acrylic diffuser conceals the LEDs while providing a highly-diffused, low-glare light. The smooth white reflector integrates into the diffuser creating soft illumination while distributing the light evenly in a wide pattern.

Item Number	
Notes	Type

Listings
UL/cUL Listed
RoHS Compliant
DLC 5.1 Standard

Lumen Maintenance
L90> 36,000 hours

Warranty
Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix

Example: FRK2UZDA1CCT

FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE[1,2]	COLOR TEMPERATURE
FRK = Flat Panel Retrofit Kit	**2** = 2′ x 2′	**U** = 120V-277V	**ZD** = 0-10V Dimming	**A1**= 38W/29W/23W Selectable	**CCT** = 3500K/4100K/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.tcpi.com

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