

Luxterior

by TCP

LED Premium Flat Panel Luminaires with Fixed Wattage

Product Specifications



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: T-bar Grid Ceilings

Reasons to choose the LED Direct Troffer Luminaires from TCP

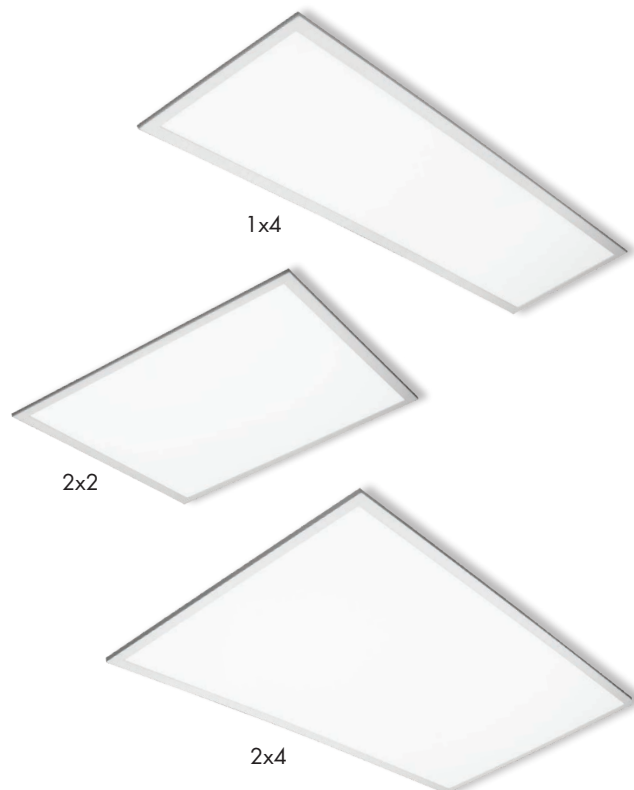
- Up to 51% less energy than fluorescent alternatives
- Long 50,000 hour rated life
- Excellent color consistency & CRI
- Mercury free
- Fits standard 1" and 9/16" T-bar grid ceilings
- Utilizes edge-lit technology
- Slim, low-profile design

Ideal Applications

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

Specifications

Input Line Voltage	120-277 VAC
Input Line Frequency (Hz)	50/60HZ
Wattage (W)	
1x4	23W/29W/38W
2x2	23W/29W/38W
2x4	23W/29W/38W/46W
Lumens (L)	
1x4	3000L/3650L/4600L
2x2	3000L/3800L/4800L
2x4	3250L/4000L/5200L/6000L
Lumens per Watt (LPW).....	>130 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 Premium 4.4
Controls.....	0-10V dimming (standard)



Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Flat Panel - 1x4	—	4600	38	—
2 Lamp 28W T5	1.0	3968	64	41%
1 Lamp 54W T5HO	1.0	3395	61	38%
2 Lamp 32W T8 NBF	0.88	3827	54	30%
TCP LED Flat Panel - 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	52%
TCP LED Flat Panel - 2x4	—	5200	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:

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

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 use 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

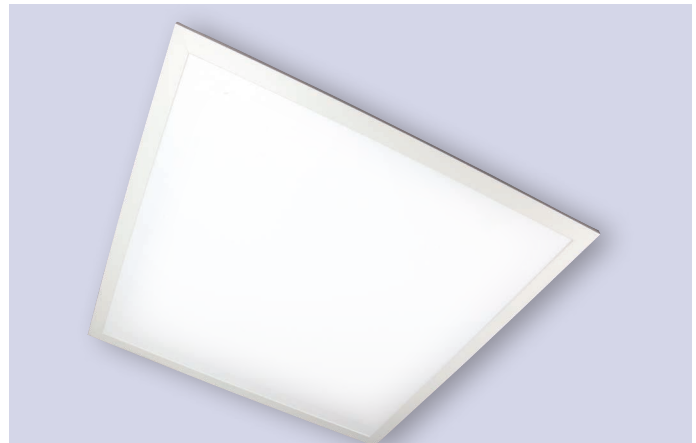
- Rectangular white frame
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

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
- Optional emergency back-up
- PMMA Light Guide

Optics

- Innovative edge-lit 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
IC Rated
RoHS Compliant
DLC 4.4 Premium

Lumen Maintenance

L90 > 42000 hours
L70 > 54000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: HFP2UZDA141K

FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
HFP = High Efficiency Flat Panel	2 = 2' x 2'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3000 Lumens 29 = 3800 Lumens 38 = 4800 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB = Emergency Battery Backup

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%.

³ 23W and 29W are permanently fixed; 38W is adjustable

Accessories:

Item Number	Description
FPSK2	2X2 FLAT PANEL SUR MOUNT KIT (WHITE)
DTFLK2	RECESS MOUNT FLANGE KIT FOR 2X2 TROFFERS AND PANELS
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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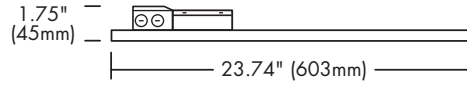
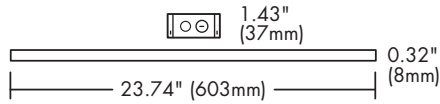
For the most up-to-date specs and warranty information, please visit www.tcp.com



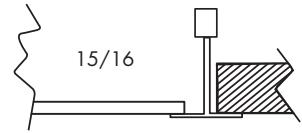
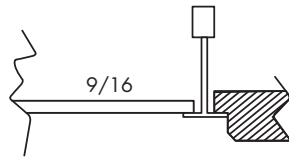
7 YEAR WARRANTY

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Dimensions and Mounting Data



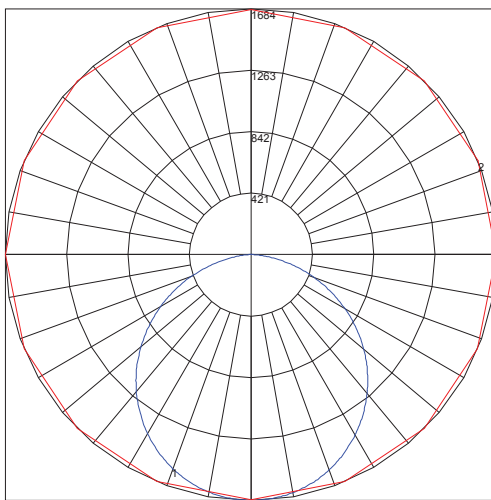
Length: 23.74" (603mm)
 Width: 23.74" (603mm)
 Depth: 0.32" (8mm)
 Weight: 6.61 lbs (3kg)



Photometric Report

Based on photometric data for
 TCP Item # HFP2UZDA130K

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.)

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	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	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	47	58	51	46	56	50	46	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	42	36	48	41	36	46	40	36	34
8	60	47	38	33	59	46	38	32	44	37	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	35	29	40	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	26	37	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	614.45	N.A.	13.00
0-30	1302.92	N.A.	27.50
0-40	2130.68	N.A.	45.00
0-60	3754.61	N.A.	79.30
0-80	4653.74	N.A.	98.30
0-90	4727.51	N.A.	99.90
10-90	4568.37	N.A.	96.50
20-40	1516.23	N.A.	32.00
20-50	2371.74	N.A.	50.10
40-70	2203.45	N.A.	46.60
60-80	899.13	N.A.	19.00
70-80	319.61	N.A.	6.80
80-90	73.78	N.A.	1.60
90-110	0.34	N.A.	0.00
90-120	1.00	N.A.	0.00
90-130	1.98	N.A.	0.00
90-150	3.81	N.A.	0.10
90-180	4.71	N.A.	0.10
110-180	4.38	N.A.	0.10
0-180	4732.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4293	4228	4186
55	4133	4060	3986
65	3860	3772	3692
75	3324	3220	3108
85	2153	2035	1860

Specifications and dimensions subject to change without notice.

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 use 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

- 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
- Optional emergency back-up
- PMMA Light Guide

Optics

- Innovative edge-lit 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
IC Rated
RoHS Compliant
DLC 4.4 Premium

Lumen Maintenance

L90 > 42000 hours
L70 > 54000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: HFP4UZDA141K

HFP	4	U	ZD			
FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
HFP = High Efficiency Flat Panel	4 = 2' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3250 Lumens 29 = 4000 Lumens 38 = 5200 Lumens 46 = 6000 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB = Emergency Battery Backup

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%.

³ 23W, 29W and 38W are permanently fixed; 46W is adjustable

Accessories:

Item Number	Description
FPSK4	2X2 FLAT PANEL SUR MOUNT KIT (WHITE)
DTFLK4	RECESS MOUNT FLANGE KIT FOR 2X4 TROFFERS AND PANELS
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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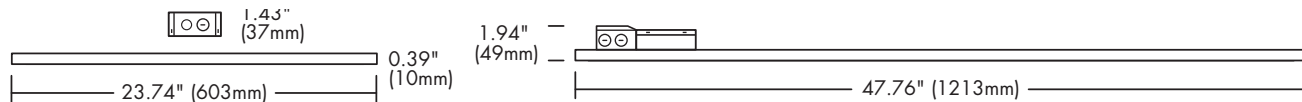
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7 YEAR WARRANTY

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Dimensions and Mounting Data



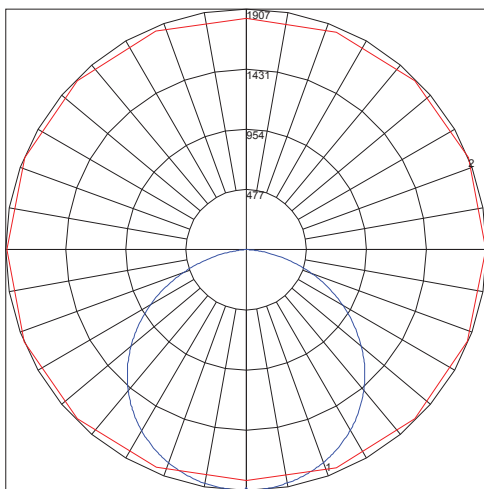
Length: 47.76" (1213mm)
 Width: 23.74" (603mm)
 Depth: 0.39" (10mm)
 Weight: 13.23 lbs (6kg)



Photometric Report

Based on photometric data for
 TCP Item # HFP4UZDA130K

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.)

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	111	111	111	50	30	10	106	106	106		50	30	10	102	102	102
0	119	119	119	119	116	116	116	116	111	111	111	111	111	111	106	106	106	106	106	106	102	102	102	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	88	85	82	93	91	88	85	82	79	90	88	86	83	80	77	83
2	99	90	83	77	96	88	82	76	85	79	75	71	67	63	81	77	73	69	65	61	78	75	71	67	63	59	69
3	90	79	71	64	87	77	70	63	74	68	62	57	53	49	71	66	61	57	52	48	69	64	60	56	51	47	58
4	82	70	61	54	80	68	60	53	66	58	53	48	44	40	63	57	52	48	43	39	61	56	51	47	42	38	49
5	75	62	53	46	73	61	52	46	59	51	45	40	36	32	57	50	45	41	37	33	55	49	44	40	36	32	42
6	69	56	47	40	67	55	46	40	53	45	39	34	30	26	51	44	39	35	31	27	50	43	39	35	31	27	37
7	64	50	41	35	62	50	41	35	48	40	35	30	26	22	46	40	35	31	27	23	45	39	34	30	26	22	32
8	60	46	37	31	58	45	37	31	44	36	31	26	22	18	43	36	31	27	23	19	41	35	31	27	23	19	29
9	56	42	34	28	54	41	33	28	40	33	28	23	19	15	39	32	28	24	20	16	38	32	27	23	19	15	26
10	52	39	31	25	51	38	30	25	37	30	25	20	16	12	36	30	25	21	17	13	35	29	25	21	17	13	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	699.46	N.A.	11.90
0-30	1511.06	N.A.	25.70
0-40	2524.18	N.A.	42.90
0-60	4605.42	N.A.	78.20
0-80	5789.41	N.A.	98.30
0-90	5884.05	N.A.	99.90
10-90	5705.14	N.A.	96.90
20-40	1824.72	N.A.	31.00
20-50	2908.85	N.A.	49.40
40-70	2843.88	N.A.	48.30
60-80	1183.99	N.A.	20.10
70-80	421.35	N.A.	7.30
80-90	94.64	N.A.	1.60
90-110	1.11	N.A.	0.00
90-120	1.85	N.A.	0.00
90-130	2.31	N.A.	0.00
90-150	2.89	N.A.	0.00
90-180	3.18	N.A.	0.10
110-180	2.07	N.A.	0.00
0-180	5887.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2498	2636	2901
55	2432	2579	2888
65	2296	2432	2705
75	1989	2067	2256
85	1271	1212	1247

Specifications and dimensions subject to change without notice.

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7 YEAR WARRANTY

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Applications

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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
- Optional emergency back-up
- PMMA Light Guide

Optics

- Innovative edge-lit 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
IC Rated
RoHS Compliant
DLC 4.4 Premium

Lumen Maintenance

L90 > 42000 hours
L70 > 54000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: HFP1UZD2941K

HFP	1	U	ZD			
FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
HFP = High Efficiency Flat Panel	1 = 1' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3000 Lumens 29 = 3650 Lumens 38 = 4600 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB = Emergency Battery Backup

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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Accessories:

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DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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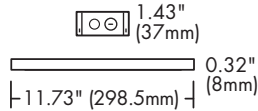
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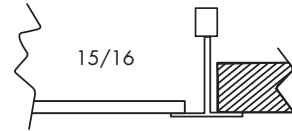
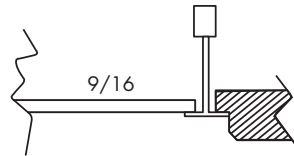
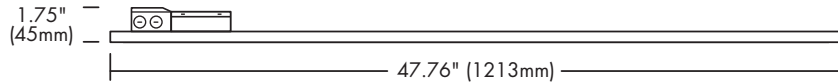
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Dimensions and Mounting Data



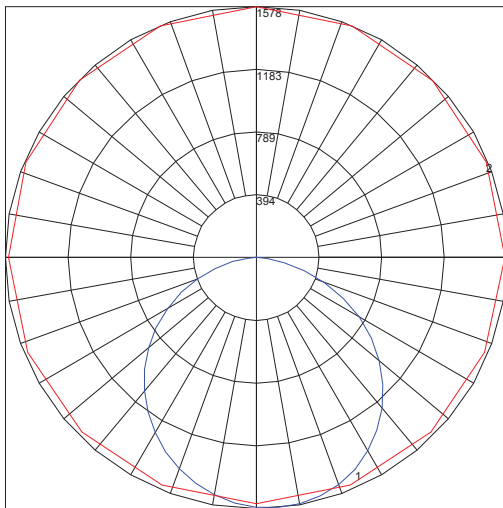
Length: 47.76" (1213mm)
 Width: 11.73" (298.5mm)
 Depth: 0.32" (8mm)
 Weight: 6.61 lbs (3kg)



Photometric Report

Based on photometric data for
 TCP Item # HFP1UZD3830K

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.)

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	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70	70	70	70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59	59	59	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50	50	50	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43	43	43	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38	38	38	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30	30	30	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27	27	27	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	574.05	N.A.	12.90
0-30	1219.25	N.A.	27.30
0-40	1997.45	N.A.	44.80
0-60	3532.47	N.A.	79.20
0-80	4384.06	N.A.	98.20
0-90	4460.44	N.A.	100.00
10-90	4311.93	N.A.	96.60
20-40	1423.41	N.A.	31.90
20-50	2230.55	N.A.	50.00
40-70	2083.77	N.A.	46.70
60-80	851.58	N.A.	19.10
70-80	302.83	N.A.	6.80
80-90	76.39	N.A.	1.70
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	0.34	N.A.	0.00
90-180	1.99	N.A.	0.00
110-180	1.99	N.A.	0.00
0-180	4462.43	N.A.	100.00

Total Luminaire Efficiency = 100.10%

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3972	4145	4286
55	3828	3986	4143
65	3548	3699	3831
75	2977	3103	3244
85	1771	2014	2150

Specifications and dimensions subject to change without notice.