

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
5000	5610	50 W
4000	4446	40 W
3000	3080	30 W

Based on 4000K, 85+ CRI. Actual wattage may vary +/- 5%

**FEATURES**

This fully luminous LED flat panel delivers exceptional performance and aesthetically pleasing optics, optimizing shallow plenum spaces. Perfect for new construction applications or retrofitting existing fluorescent troffer luminaires. It offers a range of dimming, lumen and CCT options. Perfect for either recessed or surface mounted installations, it's an ideal choice for commercial office space, retail merchandising, educational, and healthcare facilities.

LUMENS	3000, 4000, 5000
CCT	30K, 35K, 40K, 50K
CRI	85+
COLOR QUALITY	3 Step MacAdam Ellipse
SIZE	2'x4', 2'x2', 1'x4'
MOUNTING	Recessed
DIMMING & CONTROL	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUTFTB, LUT2W, DIMST, ELDO10.1, ELDODMX.1, DALI.1
EMERGENCY	10W - Up to 1000L output (Bodine BSL310) 20W - Up to 2000L output (Bodine BSL20)
LIFETIME	L70 at 83,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21



**MAINTENANCE**

LED engines and drivers are removable and upgradable even after luminaire installation. Luminaire can be regularly and safely wiped down to ensure optimal performance.

**OPTICAL SYSTEM**

The proprietary optical system utilizes a unique combination of reflective and refractive optical components to achieve a uniform, aesthetically pleasing appearance. Use of a guide plate laser allows high density pixels to shine, creating an even illumination with no glare, while maintaining a high efficiency.

**CONSTRUCTION**

Body is constructed of heavy-duty 20-gauge cold rolled steel, post-painted and engineered for maximum strength and extended life. All corners interlock to prevent aesthetic damage to the luminaire, with sides and corners uniformly turned in and hemmed to remove sharp edges for safe handling and easy installation. Luminaire is supplied with multiple wiring entrances for easy daisy chain of luminaires, to add power packs, whips, or other accessories in the field, or for continuous row mounting.

**FINISH**

Post-painted with a 93% reflective white coat to improve luminaire efficacy, with all body components seamlessly interlocked for added structural strength.

**MOUNTING**

Luminaires accommodate lay-in ceilings, Slot T, and T-bar suspension systems for 5/8" and 3/8" ceiling thicknesses. Four corner tie points are standard for safety wire support when required, with built-in earthquake clips, standard. Luminaires may be available with flange kits, surface mounted kits, and other options.

**OPTIONS**

Luminaires can be shipped pre-installed with whips, modular wiring systems, daylight harvesting controls, occupancy sensors, and/or power packs for individual or room control applications.

**DRIVER ELECTRICAL INFORMATION**

Powered by high-quality constant-current power LED drivers which are rated for 50 to 60Hz at 120/277V input. Available in 347V., produce less than 20% THD, and have a power factor of .90 to 1.00.

**DIMMING & DRIVER INFORMATION**

**DIM10** - Flicker Free 1% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277 or 347V.

**LUT2W** - Lutron LTEA2W Hi-Lume 1%. 2-wire LED Driver Forward Phase Control, 1% dimming in 120V only. Available on all luminaires up to 40 watts.

**LUTH** - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology.

**ELDO10.1** - EldoLED SoloDrive 0-10V. Dimming down to 0.1%. Available on all luminaires up to 100 watts.

**DALI** - DALI DT6, DT8 dimming down to 1%. Available on all luminaires up to 100 watts.

**ELDODMX** - EldoLED PowerDrive dimming down to 0.1%. Available on all luminaires up to 100 watts.

Please see EldoLED website for wiring diagrams and a list of compatible DMX and DALI control systems.

**DIMST** - Step Dimming

**WARRANTY**

Five-year warranty for parts and components. (Labor not included)

**LISTINGS**

c-UL-us - Listed for Feed Through Wiring.

Listed for DLC, California Title 24 compliant.

**Example: 24-FPL1-LED-3000L-DIM10-MVOLT-30K-85**

24	FPL1	LED								
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	OTHER OPTIONS	
24 - 2' X 4'	FPL1 - LED Flat Panel	LED	3000L - 3000 lumens 4000L - 4000 lumens 5000L - 5000 lumens	DIM10 - 0-10V Dimming DIMST - Step Dimming LUTH - Lutron HiLume LUT2W - Lutron 2Wire LUTFB - Lutron Fade to Black ELDO10.1 - EldoLED 0-10V ELDODALI - EldoLED DALI ELDODMX - EldoLED DMX	MVOLT 347* <small>*Consult factory for details</small>	30K 35K 40K 50K	85	0-EMG-LED-10W 0-EMG-LED-20W	24FK - 2'x4' Flange Kit FBF - Internal Fast Blow Fuse SBF - Internal Slow Blow Fuse RIS - Radio Interference Suppressor USA - Made in America Compliance FS-PPV2 - Fixture Sensor Power Pack FD-301 - Daylight Dimming Photosensor FS-305RC - Low Voltage Motion Sensor FS-355 - Line Voltage Motion Sensor LMFC-011 - Digital Lighting Manager	

**24-FPL1-LED-3000L-DIM10-MVOLT-40K-85**

TEST NO.: **EL101864**

INPUT WATTS: **30.1**

LUMENS: **3080**

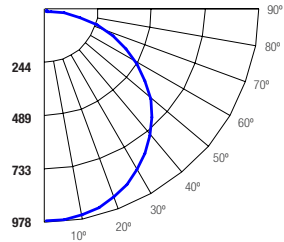
CRI: **85**

EFFICACY: **102**

CCT: **4000K**

SPACING CRITERIA: **1.42**

**Candle Power Distribution (Candelas)**



Cone of Light		
4.0	3.38 fc	58.9 ft
8.0	0.85 fc	117.8 ft
12.0	0.38 fc	176.7 ft
16.0	0.21 fc	235.6 ft
20.0	0.14 fc	294.5 ft
24.0	0.09 fc	353.4 ft

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

Zone	Lumens	%Lamp	%Fixt
0-20	359.28	N.A.	11.70
0-30	769.08	N.A.	25.00
0-40	1275.14	N.A.	41.40
0-60	2315.12	N.A.	75.20
0-80	2963.34	N.A.	96.20
0-90	3051.59	N.A.	99.10

**Luminance (Average candela/M<sup>2</sup>)**

Angle in Degrees	Average		
	0°	45°	90°
45	1334	1302	1287
55	1330	1287	1266
65	1307	1248	1219
75	1266	1173	1128
85	1296	1089	991

**Lumens Per Zone**

Zone	Lumens
0-10	92.59
10-20	266.69
20-30	409.80
30-40	506.06
40-50	538.17
50-60	501.81
60-70	399.64
70-80	248.58
80-90	88.25

**Candela Tabulation**

Candela Tabulation		0	90
0	977.585	0	977.585
5	974.446	5	974.446
15	946.722	15	946.722
25	892.019	25	892.019
35	809.766	35	809.766
45	701.491	45	701.491
55	567.494	55	567.494
65	410.791	65	410.791
75	243.732	75	243.732
85	84.003	85	84.003
90	20.907	90	20.907

**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%		
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99	99	99	99		
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	86	86	86	86	84	84	84	81		
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	69	67	67	67	67	67		
3	89	78	69	62	86	76	68	62	73	66	60	70	64	59	67	62	58	56	56	56	56	56		
4	81	69	59	52	79	67	59	52	64	57	51	62	56	50	60	54	50	47	47	47	47	47		
5	74	61	52	45	72	60	51	45	58	50	44	55	49	43	53	48	43	41	41	41	41	41		
6	69	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42	38	35	35	35	35	35		
7	63	50	41	34	62	49	40	34	47	39	34	46	39	33	44	38	33	31	31	31	31	31		
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28	28	28	28	28		
9	55	41	33	27	54	41	33	27	40	32	27	38	32	27	37	31	27	25	25	25	25	25		
10	52	38	30	25	50	38	30	25	37	29	24	35	29	24	35	29	24	22	22	22	22	22		

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**24-FPL1-LED-4000L-DIM10-MVOLT-40K-85**

TEST NO.: **EL101862**

INPUT WATTS: **40**

LUMENS: **4446**

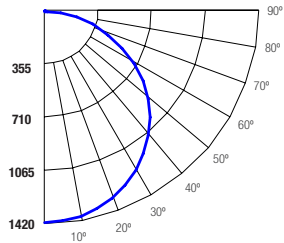
CRI: **85**

EFFICACY: **111**

CCT: **4000K**

SPACING CRITERIA: **1.42**

**Candle Power Distribution (Candelas)**



Cone of Light		
4.0	4.91 fc	58.6 ft
8.0	1.23 fc	117.3 ft
12.0	0.55 fc	175.9 ft
16.0	0.31 fc	234.5 ft
20.0	0.2 fc	293.1 ft
24.0	0.14 fc	351.8 ft

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

Zone	Lumens	%Lamp	%Fixt
0-20	521.45	N.A.	11.70
0-30	1114.68	N.A.	25.10
0-40	1842.71	N.A.	41.40
0-60	3344.14	N.A.	75.20
0-80	4278.97	N.A.	96.20
0-90	4404.7	N.A.	99.10

**Luminance (Average candela/M<sup>2</sup>)**

Angle in Degrees	Average		
	0°	45°	90°
45	1911	1879	1875
55	1895	1851	1848
65	1844	1786	1788
75	1748	1659	1671
85	1664	1481	1525

**Lumens Per Zone**

Zone	Lumens
0-10	134.46
10-20	386.99
20-30	593.23
30-40	728.03
40-50	774.97
50-60	726.47
60-70	577.25
70-80	357.58
80-90	125.73

**Candela Tabulation**

Candela Tabulation		0	90
0	1419.980	0	1419.980
5	1414.161	5	1414.161
15	1370.294	15	1370.294
25	1287.426	25	1287.426
35	1165.185	35	1165.185
45	1005.285	45	1005.285
55	808.714	55	808.714
65	579.686	65	579.686
75	336.482	75	336.482
85	107.900	85	107.900
90	18.699	90	18.699

**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%		
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99	99	99	99		
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	86	86	86	84	84	84	84	81		
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	69	67	67	67	67	67		
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	67	62	58	56	56	56	56	56		
4	81	69	59	52	79	67	59	52	64	57	51	62	56	50	60	54	50	47	47	47	47	47		
5	74	61	52	45	72	60	51	45	58	50	44	56	49	43	54	48	43	41	41	41	41	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	48	42	38	35	35	35	35	35		
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31	31	31		
8	59	45	37	31	57	44	36	30	43	36	30	42	35	30	40	34	30	28	28	28	28	28		
9	55	41	33	27	54	41	33	27	40	32	27	38	32	27	37	31	27	25	25	25	25	25		
10	52	38	30	25	50	38	30	25	37	29	25	36	29	24	35	29	24	22	22	22	22	22		

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**24-FPL1-LED-5000L-DIM10-MVOLT-40K-85**

TEST NO.: **EL101861**

INPUT WATTS: **50**

LUMENS: **5610**

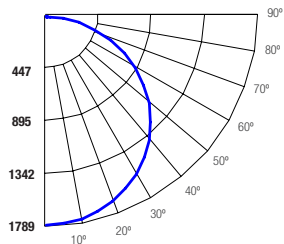
CRI: **85**

EFFICACY: **112**

CCT: **4000K**

SPACING CRITERIA: **1.42**

**Candle Power Distribution (Candelas)**



Cone of Light		
4.0	6.19 fc	59.2 ft
8.0	1.55 fc	118.5 ft
12.0	0.69 fc	177.7 ft
16.0	0.39 fc	236.9 ft
20.0	0.25 fc	296.2 ft
24.0	0.17 fc	355.4 ft

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

Zone	Lumens	%Lamp	%Fixt
0-20	657.28	N.A.	11.70
0-30	1405.31	N.A.	25.10
0-40	2323.66	N.A.	41.40
0-60	4212.26	N.A.	75.10
0-80	5396.04	N.A.	96.20
0-90	5557.2	N.A.	99.10

**Luminance (Average candela/M<sup>2</sup>)**

Angle in Degrees	Average		
	0°	45°	90°
45	2421	2381	2372
55	2409	2357	2344
65	2356	2285	2271
75	2268	2140	2125
85	2225	2007	1974

**Lumens Per Zone**

Zone	Lumens
0-10	169.44
10-20	487.85
20-30	748.03
30-40	918.35
40-50	976.27
50-60	912.33
60-70	730.48
70-80	453.29
80-90	161.16

**Candela Tabulation**