

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
6000	5877	49.9W
5000	5213	52.6 W
4000	4275	41.4 W
3500	3795	36 W
3000	3185	30.2 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, 3500, 4000, 5000, 6000
CCT	30K, 35K, 40K, 50K
CRI	85+
COLOR QUALITY	3 Step MacAdam Ellipse
SIZE	2'x4', 2'x2', 1'x4'
MOUNTING	Recessed, Suspended, Surface Mount
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 60,000 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 light guide plate creates even, glare-free illumination, while maintaining high efficiency.

**CONSTRUCTION**

Heavy duty 20-gauge cold rolled steel back panel and aluminum frame, 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-6000L-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 3500L - 3500 lumens 4000L - 4000 lumens 5000L - 5000 lumens 6000L - 6000 lumens	DIM10 - 0-10V Dimming DIMST - Step Dimming LUTH - Lutron HiLume LUT2W - Lutron 2Wire LUTFTB - 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 24-FPL1-LED-SMK - 2'x4' Surface Mount Kit FBF - Internal Slow Blow Fuse SBF - Radio Interference RIS - Suppressor USA - Made in America Compliance LMFC-011 - Digital Lighting Manager



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

TEST NO.: **EL101861**

INPUT WATTS: **52.6**

LUMENS: **5213**

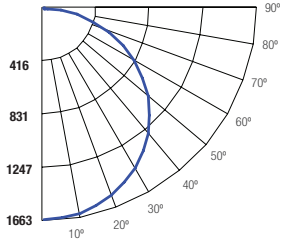
CRI: **85**

EFFICACY: **99**

CCT: **4000K**

SPACING CRITERIA: **1.42**

#### Candle Power Distribution (Candelas)



#### Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	610.86	11.70	11.70
0-30	1306.05	25.10	25.10
0-40	2159.53	41.50	41.40
0-60	3914.74	75.20	75.10
0-80	5014.9	96.30	96.20
0-90	5164.68	99.20	99.10

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

Angle in Degrees	Average		
	0°	45°	90°
45	2250	2213	2204
55	2239	2191	2179
65	2190	2124	2111
75	2108	1989	1975
85	2068	1865	1835

#### Lumens Per Zone

Zone	Lumens
0-10	157.47
10-20	453.39
20-30	695.19
30-40	853.49
40-50	907.32
50-60	847.89
60-70	678.89
70-80	421.27
80-90	149.78

#### Candela Tabulation

0	1	2	3	4	5	6	7	8	9
0	1662.749	1656.500	1607.220	1511.290	1369.590	1183.350	955.240	688.460	405.820
10	134.060	85	28.290						

#### 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	101	99				
1	108	103	98	94	105	100	96	92	96	93	89	92	89	86	88	86	84	81	81	81				
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	69	67	67	67				
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	67	62	58	56	56	56				
4	81	69	60	53	79	67	59	52	65	57	51	62	56	50	60	54	50	47	47	47				
5	74	61	52	45	72	60	51	45	58	50	44	56	49	43	54	48	43	41	41	41				
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	48	42	38	35	35	35				
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31				
8	59	45	37	31	57	44	36	30	43	36	30	42	35	30	40	34	30	28	28	28				
9	55	41	33	27	54	41	33	27	40	32	27	38	32	27	37	31	27	25	25	25				
10	52	38	30	25	50	38	30	25	37	29	25	36	29	24	35	29	24	22	22	22				

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

#### 24-FPL1-LED-6000L-DIM10-MVOLT-35K-85

TEST NO.: **EL07221986**

INPUT WATTS: **49.9**

LUMENS: **5877**

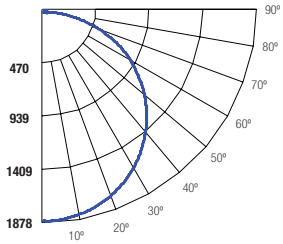
CRI: **85**

EFFICACY: **118**

CCT: **3500K**

SPACING CRITERIA: **1.42**

#### Candle Power Distribution (Candelas)



#### Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	688.19	11.70	11.70
0-30	1470.75	25.00	25.00
0-40	2431.07	41.40	41.40
0-60	4406.98	75.00	75.00
0-80	5654.16	96.20	96.20
0-90	5824.5	99.10	99.10

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

Angle in Degrees	Average		
	0°	45°	90°
45	2477	2509	2550
55	2454	2496	2547
65	2385	2442	2509
75	2224	2300	2402
85	2105	2266	2451

#### Lumens Per Zone

Zone	Lumens
0-10	177.42
10-20	510.77
20-30	782.56
30-40	960.32
40-50	1021.4
50-60	954.50
60-70	768.45
70-80	478.74
80-90	170.33

#### Candela Tabulation

0	1	2	3	4	5	6	7	8	9
0	1873.486	1865.940	1803.960	1685.490	1517.590	1302.840	1047.190	749.680	428.270
10	136.500	85	32.060						

#### 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	101	99				
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	81	81	81				
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	69	67	67	67				
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	67	62	58	56	56	56				
4	81	68	59	52	79	67	59	52	64	57	51	62	56	50	60	54	50	47	47	47				
5	74	61	52	45	72	60	51	45	58	50	44	55	49	43	53	48	43	41	41	41				
6	68	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35	35	35				
7	63	50	41	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31	31	31				
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28	28	28				
9	55	41	33	27	54	41	33	27	40	32	27	38	32	27	37	31	27	25	25	25				
10	52	38	30	25	50	38	30	25	37	29	24	35	29	24	35	29	24	22	22	22				

RC - Ceiling Cavity Reflectance








RW - Wall Reflectance

2' x 4' Architectural LED Flat Panel with multiple lumen package

1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated control systems

2- Luminaire will be shipped with Sensors installed on the luminaire, allowing for individual luminaire control. Luminaires will be ready to be integrated with designated control systems

3- Luminaire will be shipped with Sensors to be remotely installed on the ceiling. Luminaires will be ready to be integrated with designated control systems

BRAND	 <b>EASYFIT</b> <small>by EnOcean</small>	 <b>LUTRON</b>	 <b>enlighted</b>	 <b>LEVITON</b>	 <b>OSRAM</b>	 <b>PHILIPS</b> <small>EasySense</small>	 <b>legrand</b>
<b>CONTROL UNIT</b>	<input type="checkbox"/> LEDRU LED Relay Zone Controller 0-10V <sup>1</sup>  <input type="checkbox"/> LEDDU LED Zone Controller 0-10V <sup>1</sup>	<input type="checkbox"/> FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminare is shipped Vive Enabled) <sup>14</sup>  <input type="checkbox"/> FCJS-ECO Lutron Vive Eco-system Pow Pak (Luminare is shipped Vive Enabled) <sup>14</sup>	<input type="checkbox"/> CU-4E-FMH Fixture Mount Control Unit <sup>15</sup>	<input type="checkbox"/> ZL027 -NOW Intellect Power Control Module <sup>16</sup>  <input type="checkbox"/> ZL027 -NOW Intellect Power Control Module <sup>16</sup>	<input type="checkbox"/> EN-WCM2-ZB-DR Wireless Control Module <sup>17</sup>  <input type="checkbox"/> EN- ALC-ZB-BK-DR Wireless Area Lighting Control Module <sup>17</sup>  <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM <sup>17</sup>	<input type="checkbox"/> SBR -BS Xitanium SR Bridge <sup>18</sup>	<input type="checkbox"/> LMFC-011 ON/OFF/0-10V dimming fixture controller <sup>19</sup>
<b>INTEGRAT SENSOR</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>*WIRELESS OCCUPANCY SENSOR</b>	<input type="checkbox"/> EOSCU-W-EO Occupancy Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMDC-100 Dual technology PIR Ceiling Mount Occupancy Sensor <sup>3</sup>
<b>*WIRELESS DAYLIGHT SENSOR</b>	<input type="checkbox"/> ELLSU-W-EO Light Level Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMLS-400 Single zone switching and dimming digital photosensor <sup>3</sup>
<b>*WIRELESS OCCUPANCY &amp; DAYLIGHT SENSOR</b>	N/A	N/A	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor <sup>3</sup> <input type="checkbox"/> SU-5E-CL Connected Lighting Micro Sensor <sup>3</sup> <input type="checkbox"/> SU-5E-IL Independent Lighting / Enlighted One Micro Sensor <sup>3</sup> <input type="checkbox"/> SU-5S-H-(IoT/CL/IL) Surface Mount Sensor <sup>3</sup>  <b>(Must be specified with CU-4E-FMH Control Unit)</b>	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System <sup>3</sup>  <b>(Must be specified with ZL027 -NOW Control Unit)</b>	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensiLUM™ Wireless Integrated Sensor <input type="checkbox"/> EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors <sup>3</sup>  <b>(Must be specified with EN-WCM2-ZB-DR or EN-ALC-ZB-BK-DR Control Unit)</b>	<input type="checkbox"/> SNS200-CMP SNS200 for grouping <sup>3</sup>	N/A
<b>ACCESORIES</b>	N/A	N/A	<input type="checkbox"/> TMC-SU-5E Tile Mount Carrier <input type="checkbox"/> CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4 and IoT Ready™ drivers <input type="checkbox"/> CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4 and IoT Ready™ drivers	N/A	N/A	N/A	N/A
<b>NOTES</b>	N/A	4- Luminaire will be compatible with Lutron LRF2-OCR2B-P-WH Ceiling mount 360° occupancy/vacancy sensor & LRF2-DCRB-WH Ceiling-mount daylight sensor. Sensors must be ordered through Lutron.	5- Luminaire will be compatible with ENLIGHTED SU-5E-IoT, SU-5E-CL, SU-5E-IL, SU-5S-H, Sensors.	6-Luminaire will be compatible with Leviton Intellect App & Keypad Room Controller	7-Luminaire will be compatible with EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors	8-Luminaire will be compatible with Philips field and wireless switch.	9-Luminaire will be compatible with DLM Room control system LMPB-100. DLM control system must be order through Legrand.