



Day-Brite / CFI FluxGrid LED recessed offers architectural appeal with “must have” features. Two different lens styles, discrete air handling, integral emergency, and access to the boards and driver from below make FluxGrid an ideal solution for a wide range of applications.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lamps: _____ Qty: _____
 Notes: _____

Ordering guide – standard & wireless controls

Standard configurations available with all choices, unless otherwise noted. Base configurations selections indicated by blue.

example: 2FGG42B840-4-D-UNV-DIM

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver	Options
2	FG	G				4				
2 2'	FG FluxGrid	G Grid NEMA G 15/16"	Blank Static H Air return	Base Configurations 42B 4200 Standard Configurations 30L 3000 38L 3800 43L 4300 48L 4800 54L 5400 74L 7400 85L 8000 90L 9000 Other lumen packages may be ordered in increments of 100lm from 3000 to 9000 lumens	830 80 CRI, 3000K 835 80 CRI, 3500K 840 80 CRI, 4000K 850 80 CRI, 5000K	4 4'	D Diffuse (ribbed) DS Diffuse (smooth)	UNV Universal voltage 120-277V 120' 120V 277' 277V 347 347V	DIM ² Dimming SDIM ³ Step dimming to 40% input power XDIM ⁴ MarkX phase dimming LDE Lutron LDE5 5% dimming DALI DALI	F1 3/8" flex, 3 wire 18 gauge 6' F2 3/8" flex, 4 wire 18 gauge 6' F1/D 3/8" twin flex, 3 wire 18 gauge 6' for dimmable luminaires F2/SW 3/8" single flex, 5 wire 18 gauge 6' for dimmable luminaires F2/6W 3/8" single flex, 6 wire 18 gauge 6' for dimmable and EMLD luminaires GLR Fusing, fast blow EMLED ^{4,8} Integral emergency battery pack DSC Quick driver disconnect CHIC Chicago Plenum rated ER100 ^{6,7} UL924 listed sensor bypass relay, factory installed between driver & sensor GTD/E ^{5,8} UL924 listed Bodine GTD factory installed on driver input GTD/SNSR ^{6,7,8} UL924 listed Bodine GTD factory installed between driver and sensor SWZCS ^{5,9} Interact Pro scalable sensor with integral daylight & occupancy sensing, advanced grouping with dwell time SWZDT ⁵ SpaceWise only sensor, daylighting and occupancy, advanced grouping with dwell time RADIO ⁵ Interact Pro RF sensor, enables wireless connected lighting control IAOSB ^{5,9} Interact Office advanced wireless sensor bundle, integral SC1500 w/loT capabilities for enterprise scale projects AG Antimicrobial finish NFG Narrow Grid (NEMA "NFG") ceiling brackets BAC ¹⁰ Meets the requirements of the Buy American Act of 1933 (BAA)

Ordering guide – PoE controls

example: 2FGG43L840-4-D-LV-POE-IAO

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver	Options
2	FG	G				4		LV	POE	
2 2'	FG FluxGrid	G Grid	Blank Static H Air return	38L 3800 43L 4300 48L 4800 54L 5400	830 80 CRI, 3000K 835 80 CRI, 3500K 840 80 CRI, 4000K 850 80 CRI, 5000K	4 4'	D Diffuse (ribbed) DS Diffuse (smooth)	LV Low voltage	POE Power over ethernet	IAO Integral Interact Office daylighting and occupancy sensor, enables wired connected lighting control EMLED 600lm integral emergency driver and battery pack IAOSB Interact Office advanced wired sensor bundle, integral SC2000 w/loT capabilities for enterprise scale projects

- XDIM requires 120V or 277V specification. Not available on 30L package.
- Integral controls options dimmable to 5% via wireless wall switch. Non-controls options are 0-10v dimmable to 1% for Standard configurations, and to 10% for Base configurations.
- Consult factory for SDIM on 74L package.
- Bodine BSL310, 1100lm nominal delivered.
- Specify DIM driver option only.
- Must be installed in conjunction with a UL1008 device.
- Must be ordered with an integral controls option.
- Not available with 347V option.
- Must order IRT9015 Interact commissioning remote with each system order.
- Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
- Consult Signify to confirm whether specific accessories are BAA-compliant.

Accessories¹¹ (order separately)

- FMA24 – 2'x4' "F" mounting frame for NEMA "F" mounting
- FGD4L – FG 4' ribbed replacement lens
- FGDS4L – FG 4' smooth replacement lens
- FGHD4L – FG 4' air return ribbed replacement lens
- FGHDS4L – FG 4' air return smooth replacement lens
- FSK24 – 2'x4' surface mount field installation kit (factory welded seams)
- FSF24 – 2'x4' surface mount field assembly kit (field assembled)

SWZCS accessories¹¹ (order separately)

- IRT9015 – handheld remote for grouping and configuration(at least one remote required for any SWZCS installation).

2FG FluxGrid recessed 2x4

up to 9000 lumens

Application

- 3" deep low profile configuration provides minimal penetration into the plenum space.
- Acrylic diffuser available in ribbed and smooth configurations provides even illumination with comfortable appeal.
- Standard and base configurations available in multiple lumen packages to suit the needs of various applications.
- Lambertian distribution creates uniform horizontal and vertical illuminance on the work plane and reduces scalloping on the walls.
- CRI 80 minimum color rendering with balanced spectrum.
- LEDs coupled with standard dimming provide prolonged lumen maintenance. Optional integral sensors contribute further to LED lumen maintenance.
- Designed for use with standard 15/16" wide Grid (NEMA "G") T-bars. Drywall or plaster applications require use with the FMA24 "F" mounting frame accessory (sold and shipped separately).
- Continuous row mounting is possible with a 1" gap between fixtures accommodated by others.

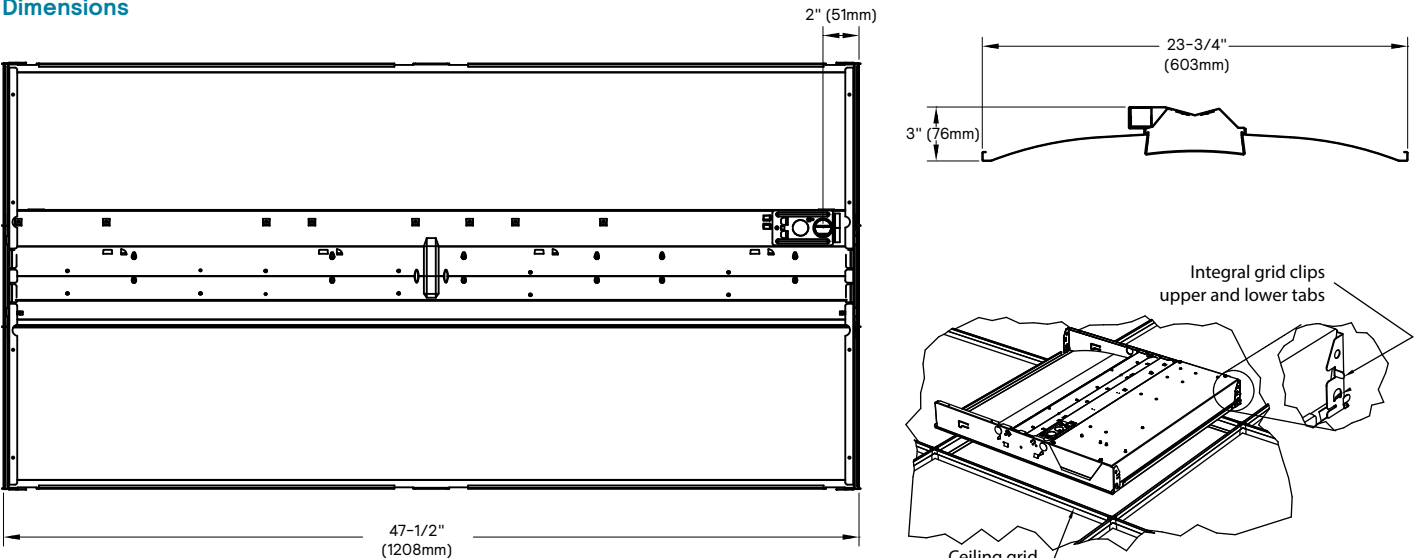
Enclosure

- Opal acrylic diffuser provides visually comfortable lumenance without compromise to luminaire efficacy.
- Diffuser requires no frames or fasteners and can be easily removed from below without the use of tools.

Construction/Finish

- Uncomplicated design is 3" deep with minimal material overlap creating several benefits:
 - Less material required
 - Less packaging required
 - Reduced weight for ease of handling and transit
 - Less energy required for construction and assembly
 - More luminaires can be shipped per truck to reduce fuel consumption

Dimensions



- Metal side covers are die formed with a conical shape to enhance light distribution and visual aesthetic.
- Injection molded lens retainers allow for easy, tool-free access to the LED boards and driver from below, and provide positive lens retention.
- Luminaire finish is matte white polyester powder coat for high quality, durable finish.
- T-bar grid clips are integral to the body.
- Air return option provides air flow through a unique lens retainer design. Air passes through architectural forms in the lens retainers (each end), and through the end plate of the luminaire. A cover plate is provided to control air flow through the luminaire, or make it static as required.
- Integral controls options include sensor mounted in one lens retainer.
- EMLED option requires the emergency battery pack be installed with a top side cover. Access from above.
- To estimate lumen output in emergency mode, multiply emergency pack wattage by efficacy, then by 1.10.

General notes

- All options are factory installed.
- All accessories are field installed.
- Many luminaire components, such as reflectors, refractors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility.

Electrical

- Integral sensor options for occupancy sensing and/or daylight harvesting are available for additional energy savings with no reduction of life or increase in installation labor.
- Standard configurations provide up to 120 lumens per watt and are available with 5 lumen packages and 3000, 3500, 4000, and 5000K color temperatures.

- Base configurations provide up to 124 lumens per watt and are available in 4200 lumen flux and 3500K and 4000K color temperatures.
- LED boards are accessible from below by removal of the lens. Lens removal is tool-free by compressing the sides and pushing to one end.
- LED driver is accessible from below by removal of the lens and integral wireway cover. The wireway cover is easily removed with a flat head screwdriver.
- Other driver options including step dimming (SDIM, 100%/40%), DALI, phase dimming (XDIM), and Lutron are available.
- 5 year manufacturer's limited warranty. Visit signify.com/warranties for complete warranty information.
- TM-21 predicted L70 lumen maintenance up to 70,000 hours.
- cETLus listed to UL and CSA standards, suitable for damp locations.
- Not all product variations listed on this page are DLC qualified. To ensure that a specific model is qualified, visit www.designlights.org/search

Energy data

Luminaire	Catalog Number	Input Power	Efficacy
2x4 Standard	2FGG38L840	31.8	120
	2FGG43L840	36.2	119
	2FGG48L840	41.5	116
	2FGG54L840	46.0	120
	2FGG74L840	65.2	113
2x4 Base	2FGG42B840	33.9	124

2FG FluxGrid recessed 2x4

up to 9000 lumens

Wireless Controls Options

SpaceWise DT (SWZDT)

- Standalone daylight and occupancy sensing with advanced grouping, wireless mesh networking and dwell time.
- Commissioning via compatible Android phone and Philips Field App
- Dimming via compatible Zigbee wireless wall switch only (see link below for details)
- Register for the commissioning app at <http://registration.componentcloud.philips.com/appregistration/>
- Integral sensing options may not be combined
- For more information including recommended switches, refer to the following: –

SWZDT – www.usa.lighting.philips.com/systems/lighting-systems/spacewise

Emergency Options (ER100)

- Power Sensing (Factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output
- Power Interruption Detection (Field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output

FluxGrid shown with integral sensor



Interact Pro scalable sensor for Foundation, Advanced & Enterprise tiers (SWZCS and an evolution of SpaceWise)

- SWZCS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & BlueTooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote onsite to identify and group devices together.
- Compatible with:
 - SWS200 wireless scene switch
 - Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
 - Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
 - LCN3110: Battery powered IP65 presence sensor, OCC sensor IA CM IP65WH
 - LCN3120: Battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit: www.interact-lighting.com/interactproscalablesystem

Radio only sensor (RADIO)

- Integral RADIO only sensor simply enables wireless mesh connectivity to the luminaire without any occupancy or daylight sensing.
- Ideal for applications where sensing functionality is managed by other Interact devices and the luminaire only needs to have wireless connectivity.

Interact Pro scalable sensor bundles for Enterprise tier

- IAOSB option in addition to occupancy and daylight sensing supports advanced IoT capabilities such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Compatible with SWS200 wireless scene switch and Interact Ready wireless battery powered sensors.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices

Wired Controls Options

Interact Office Wired (PoE)

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- IAOSB option in addition to occupancy and daylight sensing supports advanced IoT capabilities such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- PoE lighting controller is accessible from below.
- Integral sensor option for occupancy sensing (PIR) and/or daylight harvesting available for additional energy savings.
- Optional integral emergency controller and battery pack provides 600lm nominal output. Test switch and indicator light mounted on side of chassis on one end.
- Emergency battery has a 3 month pre-installed shelf life, and must be stored and installed in environments of 20C to 30C (-4F to 86F) ambient, and 45-85% relative humidity.
- For more information, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices

Energy data

Catalog Number	CCT	Flux (lm)	DC Power (W)	DC Efficacy (lm/W)
2FGG38L840-4-D-LV-POE	4000K	3857	30	129
2FGG43L840-4-D-LV-POE	4000K	4394	35	127
2FGG48L840-4-D-LV-POE	4000K	4908	40	124
2FGG54L840-4-D-LV-POE	4000K	5612	47	120

2FG FluxGrid recessed 2x4

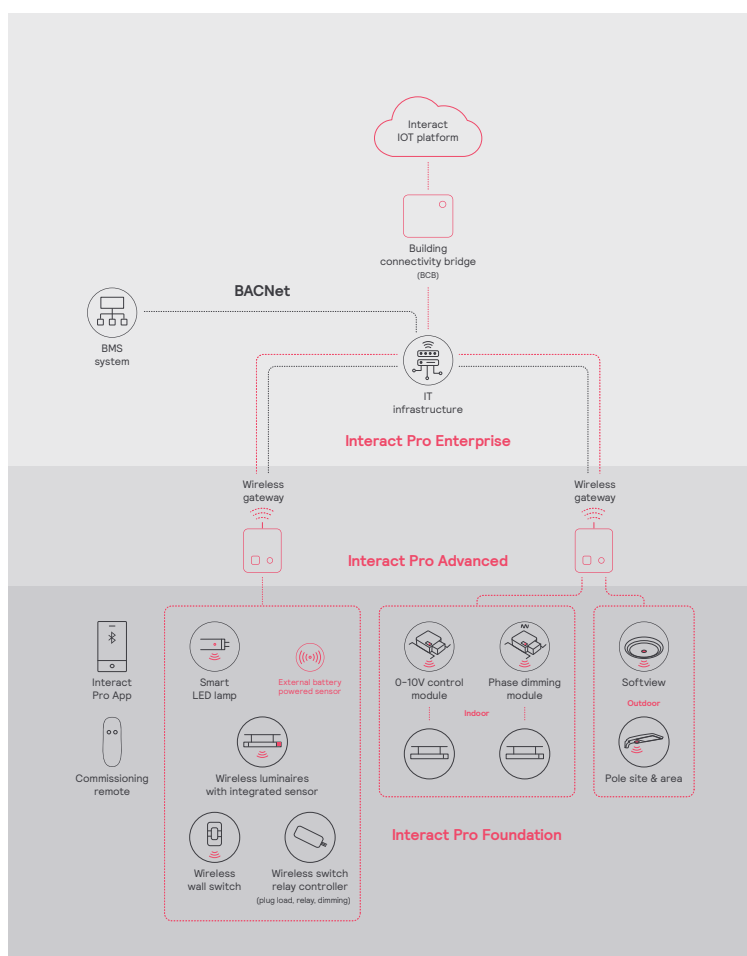
up to 9000 lumens

Interact Pro scalable system			
	Foundation	Advanced	Enterprise
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

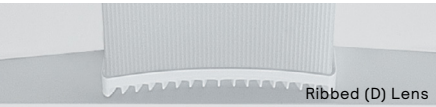
System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• luminaires with integrated sensors	150
• smart TLEDs	150
Total number of ZGP devices (sensors and switches)	50
• sensors	30
• switches	50
• zones and groups	64
Group level	
Recommended number of lights	40 (recommended 25)
Number of ZGP devices	5
Number of scenes	16



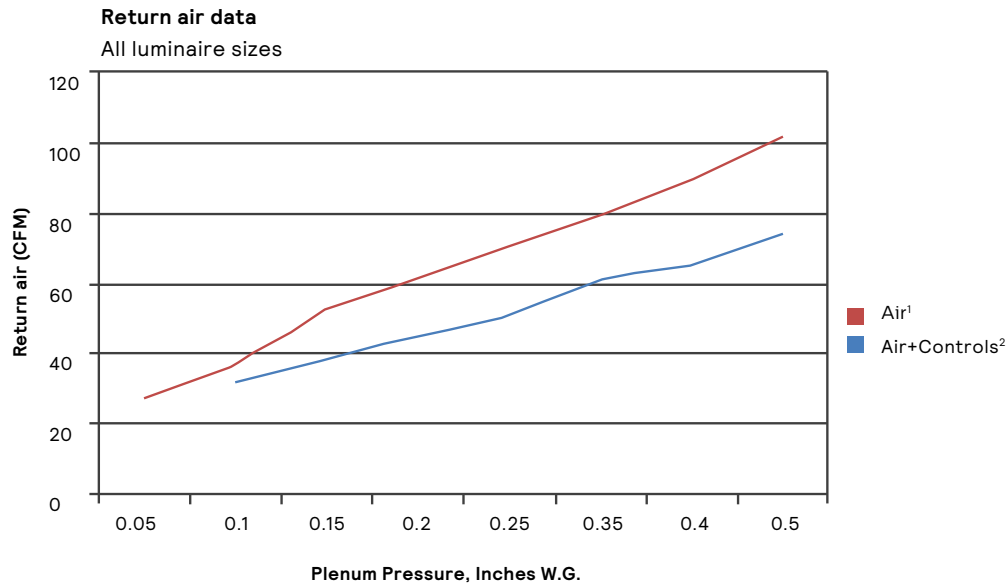
2FG FluxGrid recessed 2x4

up to 9000 lumens

Air return option



Allows air to flow through vents in the lens retainers on each end. Air blades are provided on each end of the luminaire to control air flow to the plenum.



Return air - noise criteria

All luminaire sizes

CFM									
Mode		27	37	53	62	71	80	90	102
Air ¹	NC (dB)	<15	24	25	29	33	35	38	40

CFM									
Mode			31	38	45	51	61	65	74
Air+Controls ²	NC (dB)		<15	19	21	25	28	30	34

1. Air-only option includes air return lens retainers and pattern control blades on both ends of luminaire.
2. Air+Controls includes the air return lens retainer and pattern control blade on one end of the luminaire.
Control lens retainer on the other with matching width.

2FG FluxGrid recessed 2x4

up to 9000 lumens

Photometry

2x4 FluxGrid recessed LED, base configuration, 4200 nominal delivered lumens

LER - 124

Catalog No.	2FGG42B840-4-D-UNV-DIM
Test No.	36564
S/MH	1.2
Lamp Type	LED
Lumens	4212
Input Watts	34

Comparative yearly lighting energy cost per 1000 lumens – **\$1.94** based on 3000 hrs. and \$.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candlepower

Angle	End	45	Cross	Back-45
0	1567	1567	1567	1567
5	1541	1556	1559	1556
15	1467	1473	1476	1473
25	1323	1330	1339	1330
35	1124	1147	1165	1147
45	896	949	978	949
55	659	737	779	737
65	404	534	587	534
75	203	323	365	323
85	43	104	108	104

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1176	27.9
0-40	1893	44.9
0-60	3273	77.6
0-90	4215	100
0-180	4216	100

Average Luminance

Zone	End	45°	Cross
45	8102	8584	8845
55	7349	8219	8685
65	6120	8077	8890
75	5025	7991	9014
85	3186	7597	7905

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pfc =	20								
Ceil		80			70			50	
Wall	70	50	30	70	50	30	50	30	
RCR									
0	118	118	118	115	115	115	111	111	
1	108	103	98	106	101	96	96	93	
2	97	90	82	95	88	81	84	79	
3	90	79	70	86	77	69	73	68	
4	81	69	60	80	68	59	66	58	
5	76	63	54	72	60	53	58	52	
6	69	56	46	68	55	46	54	46	
7	65	51	41	63	50	41	48	40	
8	59	46	38	58	46	38	45	36	
9	56	42	34	55	41	34	40	34	
10	53	40	32	52	39	32	38	30	

2x4 FluxGrid recessed LED, standard configuration, 4300 nominal delivered lumens

LER - 119

Catalog No.	2FGG43L840-4-D-UNV-DIM
Test No.	36563
S/MH	1.2
Lamp Type	LED
Lumens	4318
Input Watts	36

Comparative yearly lighting energy cost per 1000 lumens – **\$2.02** based on 3000 hrs. and \$.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candlepower

Angle	End	45	Cross	Back-45
0	1613	1613	1613	1613
5	1587	1602	1604	1602
15	1511	1517	1520	1517
25	1362	1369	1380	1369
35	1157	1182	1199	1182
45	922	978	1006	978
55	679	759	800	759
65	416	514	605	514
75	209	332	377	332
85	44	106	111	106

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1210	28.0
0-40	1948	45.1
0-60	3367	77.9
0-90	4320	100
0-180	4321	100

Average Luminance

Zone	End	45°	Cross
45	8341	8843	9099
55	7569	8460	8924
65	6302	7782	9152
75	5161	8208	9321
85	3259	7773	8155

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pfc =	20								
Ceil		80			70			50	
Wall	70	50	30	70	50	30	50	30	
RCR									
0	118	118	118	115	115	115	111	111	
1	108	103	98	106	101	96	96	93	
2	97	90	82	95	88	81	84	79	
3	90	79	70	86	78	69	75	68	
4	81	69	60	80	68	60	66	58	
5	76	63	54	73	61	53	58	52	
6	69	56	47	68	56	46	54	46	
7	65	51	42	63	51	41	48	40	
8	59	46	38	58	46	38	45	36	
9	56	42	34	55	41	34	40	34	
10	53	40	32	52	39	32	38	30	



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