Day-Brite

CFI by signify

Recessed

FluxGrid 2x2

2FG up to 5400 lumens

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: 2FGG38B840-2-D-UNV-DIM

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver	Options
2	FG	G				2				
2 2'	**FG** FluxGrid	**G** Grid NEMA G 15/16"	**Blank** Static **H** Air return	*Base Configurations* **38B** 3800 *Standard Configurations* **30L** 3000 **38L** 3800 **45L** 4500 **54L** 5400 Other lumen packages may be ordered in increments of 100lm from 3000 to 5400 lumens	**830** 80 CRI, 3000K **835** 80 CRI, 3500K **840** 80 CRI, 4000K **850** 80 CRI, 5000K	**2** 2'	**D** Diffuse (ribbed) **DS** Diffuse (smooth)	**UNV** Universal voltage 120-277V **120**[1] 120V **277**[1] 277V **347** 347V	**DIM**[2] Dimming **SDIM** Step dimming to 40% input power **XDIM**[1] 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 **F2/5W** 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 EMLED luminaires **GLR** Fusing, fast blow **CHIC** Chicago Plenum rated **EMLED**[3,7] Integral emergency battery pack **DSC** Quick driver disconnect **ER100**[5,6] UL924 listed sensor bypass relay, factory installed between driver & sensor **GTD/E**[5,7] UL924 listed Bodine GTD factory installed on driver input **GTD/SNSR**[5,6,7] UL924 listed Bodine GTD factory installed between driver and sensor **SWZCS**[4,8] Interact Pro scalable sensor with integral daylight & occupancy sensing, advanced grouping with dwell time **SWZDT**[4] SpaceWise only sensor, daylighting and occupancy, advanced grouping with dwell time **RADIO**[4] Interact Pro RF sensor, enables wireless connected lighting control **IAOSB**[4,8] Interact Office advanced wireless sensor bundle, integral SC1500 w/IoT capabilities for enterprise scale projects **AG** Antimicrobial finish **NFG** Narrow Grid (NEMA "NFG") ceiling brackets **BAC**[9] Meets the requirements of the Buy American Act of 1933 (BAA)

Ordering guide – PoE controls

example: 2FGG38L840-2-D-LV-POE-IAO

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver	Options
2	FG	G				2		LV	POE	
2 2'	**FG** FluxGrid	**G** Grid	**Blank** Static **H** Air return	**30L** 3000 **38L** 3800 **45L** 4500	**830** 80 CRI, 3000K **835** 80 CRI, 3500K **840** 80 CRI, 4000K **850** 80 CRI, 5000K	**2** 2'	**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 **EMPOE** 600lm integral emergency driver and battery pack **IAOSB** Interact Office advanced wired sensor bundle, integral SC2000 w/IoT capabilities for enterprise scale projects

1 XDIM requires 120V or 277V specification.
2 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.
3 Philips Bodine BSL310, 1100lm nominal delivered.
4 Specify DIM driver option only.
5 Must be installed in conjunction with a UL1008 device.
6 Must be ordered with an integral controls option.
7 Not available with 347V option.
8 Must order IRT9015 Interact commissioning remote with each system order.
9 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.
10 Consult Signify to confirm whether specific accessories are BAA-compliant.

Accessories[10] (order separately)

- **FMA22 –** 2'x2' "F" mounting frame for NEMA "F" mounting
- **FGD2L –** FG 2' ribbed replacement lens
- **FGDS2L –** FG 2' smooth replacement lens
- **FGHD2L –** FG 2' air return ribbed replacement lens
- **FGHDS2L –** FG 2' air return smooth replacement lens
- **FSK22 –** 2'x2' surface mount field installation kit (factory welded seams)
- **FSF22 –** 2'x2' surface mount field assembly kit (field assembled)

SWZCS accessories[10] (order separately)

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

Not all product variations listed on this page are DLC qualified. To ensure that a specific model is qualified, visit www.designlights.org/search

interact ready.

2FG FluxGrid recessed 2x2

up to 5400 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 FMA22 "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
- 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, pertroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility

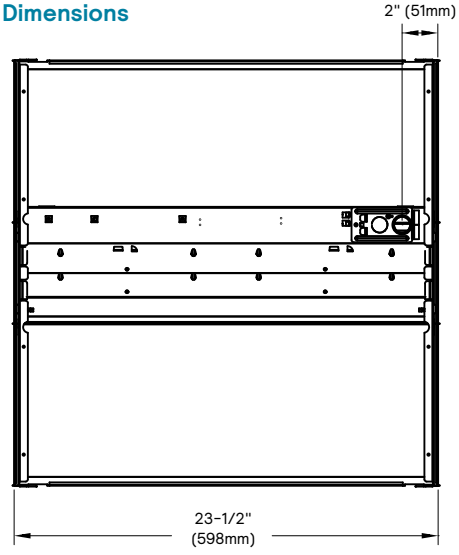
Electrical

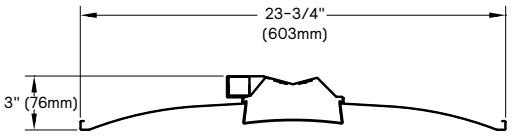
- Integral sensor options for occupancy sensing and/or daylight harvesting are available for additional energy savings with no reduction of life or increase in installation labor
- Standard configurations provide up to 120 lumens per watt and are available with 5 lumen packages and 3000, 3500, 4000, 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 85,000 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

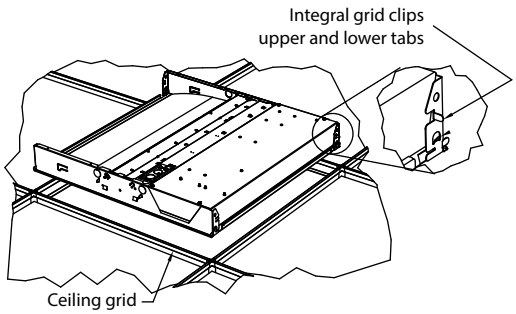
Energy data

Luminaire	Catalog Number	Input Power	Efficacy
2x2 Standard	2FGG30L840	24.3	124
	2FGG38L840	31.3	121
	2FGG45L840	37.7	124
2x2 Base	2FGG38B840	34.3	121

Dimensions







2FG FluxGrid recessed 2x2

up to 5400 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)

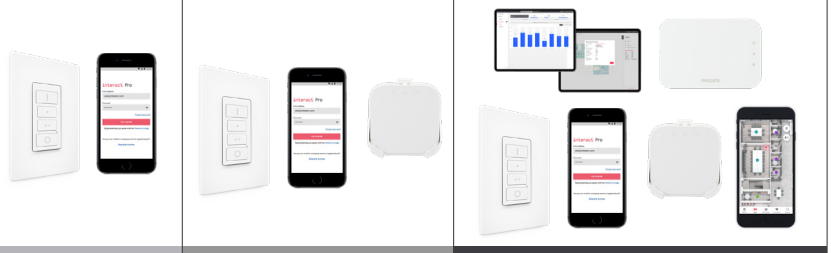
- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- IAOSB 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)
2FGG30L840-2-D-LV-POE	4000K	2980	24	125
2FGG38L840-2-D-LV-POE	4000K	3910	33	120
2FGG45L840-2-D-LV-POE	4000K	4529	39	116

2FG FluxGrid recessed 2x2

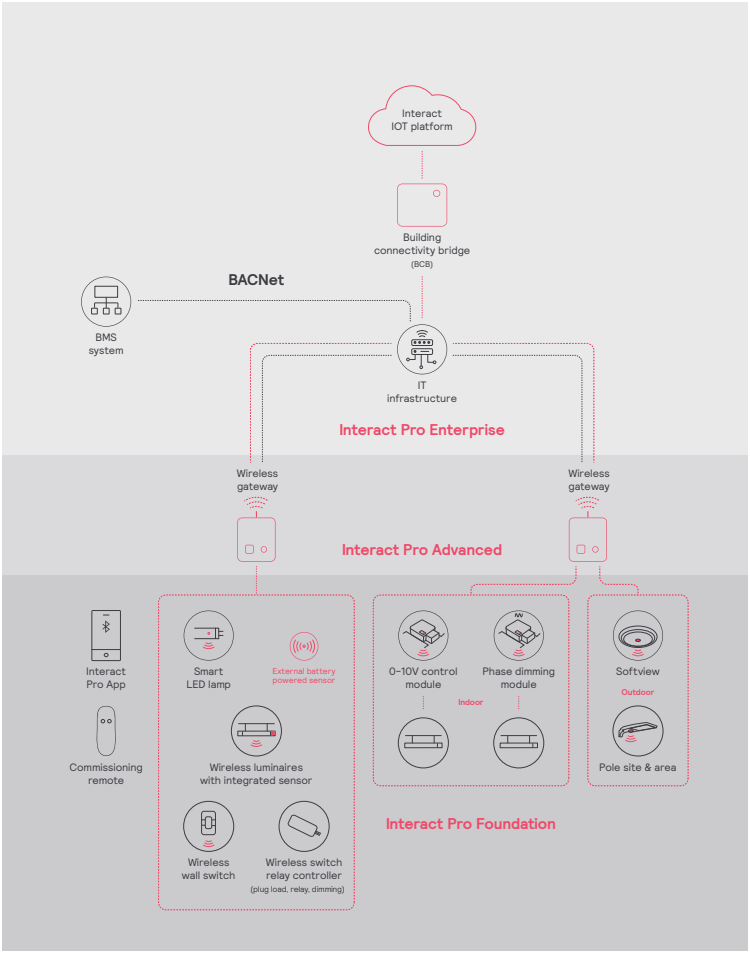
up to 5400 lumens

	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.

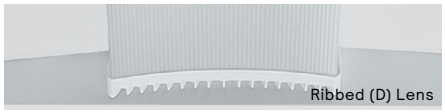
System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• luminaires with integrated sensors	150
• smart TLEDS	150
Total number of ZGP devices (sensors and switches)	50
• sensors	30
• switches	50
• zones and groups	64
Group level	
Recommended number of lights	40 (recommended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



2FG FluxGrid recessed 2x2

up to 5400 lumens

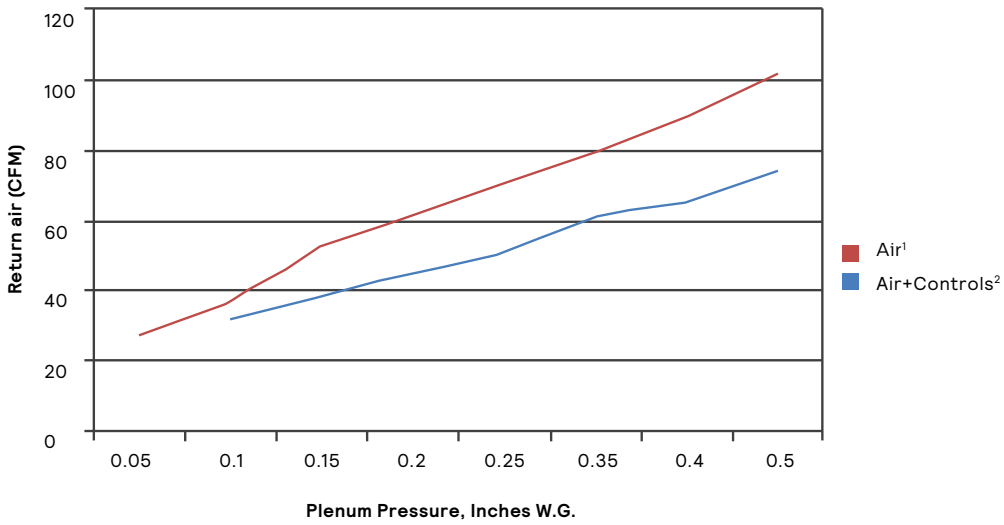
Air return option



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 data

All luminaire sizes



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 2x2

up to 5400 lumens

Photometry

2x2 FluxGrid recessed LED, base configuration, 3800 nominal delivered lumens — LER – 114

Catalog No. 2FGG38B840-2-D-UNV-DIM
Test No. 36779
S/MH 1.2
Lamp Type LED
Lumens 3828
Input Watts 34

Comparative yearly lighting energy cost per 1000 lumens – **$2.11** 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	1465	1465	1465	1465
5	1444	1458	1460	1458
15	1371	1377	1376	1377
25	1227	1229	1240	1229
35	1033	1052	1073	1052
45	816	861	896	861
55	599	666	718	666
65	364	481	542	481
75	181	277	332	277
85	35	77	89	77

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1092	28.5
0-40	1750	45.7
0-60	3005	78.5
0-90	3830	100
0-180	3830	100

Average Luminance

Zone	End	45°	Cross
45	14765	15577	16218
55	13366	14854	16007
65	11026	14550	16415
75	8928	13683	16392
85	5123	11304	13036

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	109	104	98	106	101	97	96	93
2	98	90	83	95	89	81	84	80
3	90	79	70	88	78	69	75	68
4	82	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	52	42	63	51	42	48	41
8	60	46	39	58	46	38	45	38
9	56	42	34	55	42	34	41	34
10	53	40	32	52	40	32	39	32

2x2 FluxGrid recessed LED, standard configuration, 3000 nominal delivered lumens — LER – 112

Catalog No. 2FGG30L840-2-D-UNV-DIM
Test No. 36780
S/MH 1.2
Lamp Type LED
Lumens 3023
Input Watts 27

Comparative yearly lighting energy cost per 1000 lumens – **$2.14** 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	1171	1171	1171	1171
5	1154	1165	1166	1165
15	1095	1099	1100	1099
25	980	982	990	982
35	825	840	858	840
45	652	688	717	688
55	447	497	555	497
65	292	359	405	359
75	144	222	266	222
85	28	62	72	62

Light Distribution

Degrees	Lumens	% Luminaire
0-30	873	28.9
0-40	1398	46.2
0-60	2381	78.7
0-90	3024	100
0-180	3024	100

Average Luminance

Zone	End	45°	Cross
45	11803	12452	12964
55	9978	11082	12387
65	8831	10868	12264
75	7133	10950	13125
85	4081	9131	10540

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	109	104	98	106	102	97	96	93
2	98	91	83	95	89	81	84	80
3	90	80	70	88	78	69	75	68
4	82	70	61	80	68	60	67	59
5	76	63	54	73	61	54	59	53
6	69	56	47	68	56	47	54	46
7	65	52	42	64	51	42	50	41
8	60	46	39	58	46	39	45	38
9	56	44	34	56	42	34	41	34
10	53	40	32	52	40	32	39	32

2FG FluxGrid recessed 2x2

up to 5400 lumens

Photometry

2x2 FluxGrid recessed LED, standard configuration, 3800 nominal delivered lumens — LER – 110

Catalog No. 2FGG38L840-2-D-UNV-DIM
Test No. 36781
S/MH 1.2
Lamp Type LED
Lumens 3682
Input Watts 33

Comparative yearly lighting energy cost per 1000 lumens – **$2.18** 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	1419	1419	1419	1419
5	1398	1411	1414	1411
15	1326	1333	1333	1333
25	1187	1191	1200	1191
35	998	1019	1039	1019
45	790	834	868	834
55	580	644	695	644
65	353	434	491	434
75	174	268	321	268
85	33	76	85	76

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1057	28.7
0-40	1694	46
0-60	2903	78.8
0-90	3683	100
0-180	3683	100

Average Luminance

Zone	End	45°	Cross
45	14277	15067	15691
55	12926	14350	15493
65	10671	13127	14839
75	8588	13231	15843
85	4840	11132	12452

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	109	104	98	106	102	97	96	93
2	98	91	83	95	89	81	84	80
3	90	80	70	88	78	69	75	68
4	82	70	61	80	68	60	67	59
5	76	63	54	73	61	54	59	53
6	69	56	47	68	56	47	54	46
7	65	52	42	64	51	42	48	41
8	60	46	39	58	46	39	45	38
9	56	44	34	55	42	34	41	34
10	53	40	32	52	40	32	39	32

2x2 FluxGrid recessed LED, standard configuration, 4500 nominal delivered lumens — LER – 106

Catalog No. 2FGG45L840-2-D-UNV-DIM
Test No. 36782
S/MH 1.2
Lamp Type LED
Lumens 4704
Input Watts 45

Comparative yearly lighting energy cost per 1000 lumens – **$2.26** 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	1800	1800	1800	1800
5	1774	1791	1794	1791
15	1684	1691	1692	1691
25	1507	1512	1523	1512
35	1268	1294	1319	1294
45	1003	1058	1103	1058
55	736	818	882	818
65	447	590	666	590
75	221	340	407	340
85	42	96	108	96

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1342	28.5
0-40	2150	45.7
0-60	3692	78.4
0-90	4706	100
0-180	4706	100

Average Luminance

Zone	End	45°	Cross
45	18141	19143	19949
55	16417	18253	19674
65	13545	17871	20175
75	10900	16807	20115
85	6210	14034	15825

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	109	104	98	106	101	97	96	93
2	98	90	83	95	89	81	84	80
3	90	79	70	88	78	69	75	68
4	82	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	52	42	63	51	42	48	41
8	60	46	39	58	46	38	45	38
9	56	42	34	55	42	34	41	34
10	53	40	32	52	40	32	39	32

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