



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	Blank Static H Air return	Standard Configurations 30L 3000 38L 3800 45L 4500  Base Configurations 38B 3800	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' 120V 277' 277V 347 347V	DIM <sup>2</sup> Dimming SDIM Step dimming to 40% input power XDIM <sup>1</sup> MarkX phase dimming LDE Lutron LDE5 5% dimming 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 EMLD luminaires GLR Fusing, fast blow GTD/E <sup>5</sup> UL924 listed Bodine GTD factory installed on driver input GTD/SNSR <sup>5,6</sup> UL924 listed Bodine GTD factory installed between driver and sensor EMLED <sup>3</sup> Integral emergency battery pack IAP <sup>4</sup> Integral Interact Pro RF sensor, enables wireless connected lighting control IAO <sup>4</sup> Integral Interact Office daylighting and occupancy sensor, enables wireless connected lighting control SWZDT <sup>4</sup> Integral sensor, daylighting and occupancy, advanced grouping with dwell time CHIC Chicago Plenum rated

### 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

### Footnotes:

- XDIM requires 120V or 277V specification.
- 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.
- Philips 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 sensing option.

### Accessories (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)



# 2FG FluxGrid recessed 2x2

up to 4500 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

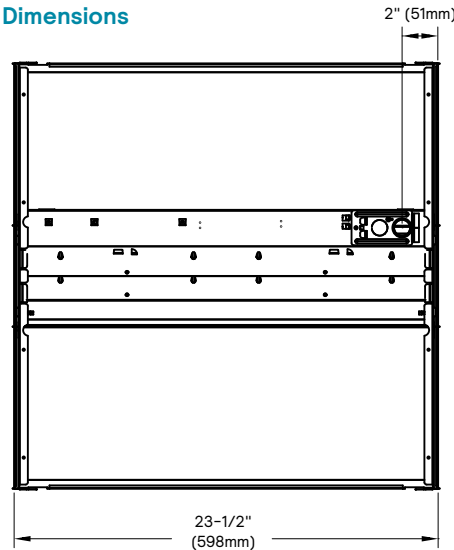
## Enclosure

- 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

## 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

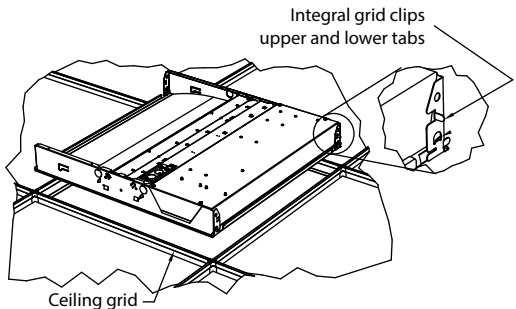
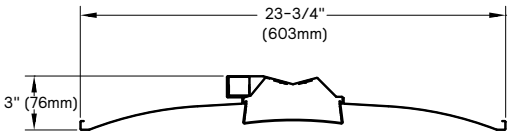
## Electrical

- 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](http://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
- FluxGrid luminaires are DesignLights Consortium qualified. Please see the DLC QPL list for exact catalog numbers, [www.designlights.org/QPL](http://www.designlights.org/QPL)

## Energy data

Luminaire	Catalog Number	Input Power	Efficacy
2x2 Standard	2FGG30L840	27.1	112
	2FGG38L840	33.4	110
	2FGG45L840	44.6	106
2x2 Base	2FGG38B840	33.6	114



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## Wireless Controls Options

### SpaceWise DT (SWZDT)

- Standalone daylight and occupancy sensing with advanced grouping 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](http://www.usa.lighting.philips.com/systems/lighting-systems/spacewise)

### FluxGrid shown with integral sensor



### Interact Pro (IAP)

- Interact Pro brings the power of connected lighting to **small and medium businesses** without the complexity usually associated with connected lighting.
- Interact Pro includes an app, a portal and a broad portfolio of wireless Luminaires, lamps and retrofit kits all working on the same system.
- Commissioning via Interact Pro App (Android or iPhone)
- Prepare commissioning remotely via Interact Pro portal
- Requires compatible Interact Pro Gateway and internet connectivity for commissioning
- Compatible with UID8451/10 ZigBee Greenpower wireless dimmer switch
- Compatible with wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) or wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1)
- For more information on Interact Pro visit: [www.interact-lighting.com/pro](http://www.interact-lighting.com/pro)
- For more information on Interact Ready visit: [www.philips.com/interact-ready](http://www.philips.com/interact-ready)

### Interact Office (IAO)

- A wireless IoT connected lighting solution for **large enterprises** that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible Zigbee Green Power wall dimmer and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on wayfinding, room/desk reservation and offers open APIs
- Requires compatible Interact Office Gateway and internet connectivity for commissioning.
- For more information on Interact Office Wireless, visit: [www.interact-lighting.com/office](http://www.interact-lighting.com/office) or [www.usa.lighting.philips.com/systems/system-areas/offices](http://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 Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- 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 on Interact Office Wired, visit: [www.interact-lighting.com/office](http://www.interact-lighting.com/office) or [www.usa.lighting.philips.com/systems/system-areas/offices](http://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

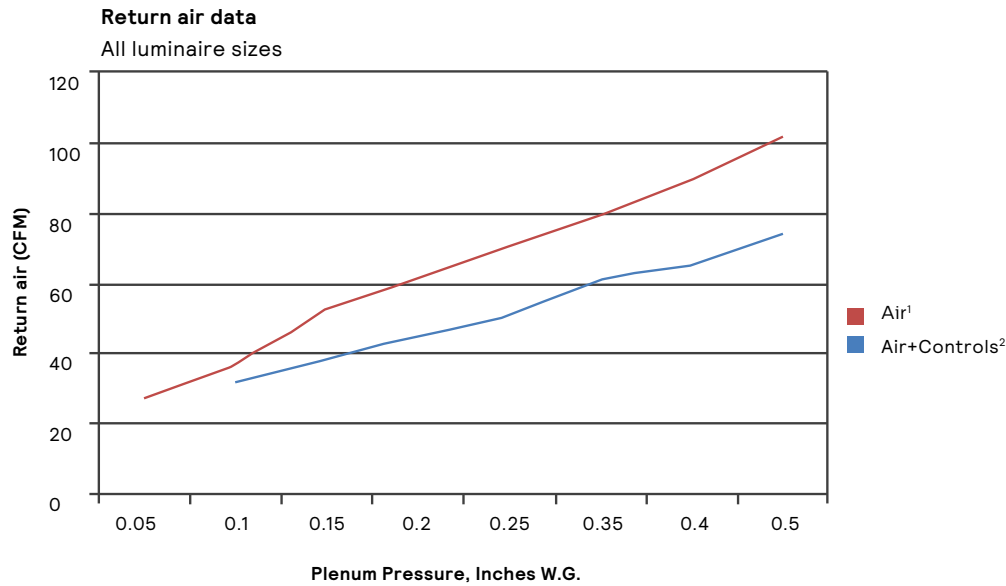
# 2FG FluxGrid recessed 2x2

up to 4500 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 <sup>1</sup>	NC (dB)	<15	24	25	29	33	35	38	40

CFM									
Mode			31	38	45	51	61	65	74
Air+Controls <sup>2</sup>	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 4500 lumens

## Photometry

### 2x2 FluxGrid recessed LED, base configuration, 3800 nominal delivered lumens

LER - 114

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

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

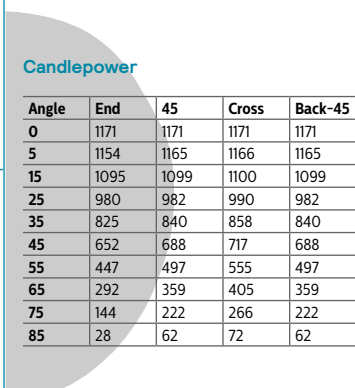
Light Distribution			
Degrees	Lumens	% Luminaire	
0-30	1092	28.5	
0-40	1750	45.7	
0-60	3005	78.5	
0-90	3830	100	
0-180	3830	100	

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
Wall	70	50	30	50
RCR				
0	118	118	118	115
1	109	104	98	101
2	98	90	83	89
3	90	79	70	78
4	82	69	61	68
5	76	63	54	61
6	69	56	47	56
7	65	52	42	51
8	60	46	39	46
9	56	42	34	42
10	53	40	32	40

### 2x2 FluxGrid recessed LED, standard configuration, 3000 nominal delivered lumens

LER - 112

<b>Catalog No.</b>	2FGG30L840-2-D-UNV-DIM		<b>Candlepower</b>					<b>Light Distribution</b>			<b>Average Luminance</b>			
<b>Test No.</b>	36780		<b>Angle</b>	<b>End</b>	<b>45</b>	<b>Cross</b>	<b>Back-45</b>	<b>Degrees</b>	<b>Lumens</b>	<b>% Luminaire</b>	<b>Zone</b>	<b>End</b>	<b>45°</b>	<b>Cross</b>
<b>S/MH</b>	1.2		<b>0</b>	1171	1171	1171	1171	<b>0-30</b>	873	28.9	<b>45</b>	11803	12452	12964
<b>Lamp Type</b>	LED		<b>5</b>	1154	1165	1166	1165	<b>0-40</b>	1398	46.2	<b>55</b>	9978	11082	12387
<b>Lumens</b>	3023		<b>15</b>	1095	1099	1100	1099	<b>0-60</b>	2381	78.7	<b>65</b>	8831	10868	12264
<b>Input Watts</b>	27		<b>25</b>	980	982	990	982	<b>0-90</b>	3024	100	<b>75</b>	7133	10950	13125
		<b>35</b>	825	840	858	840	<b>0-180</b>	3024	100	<b>85</b>	4081	9131	10540	
		<b>45</b>	652	688	717	688								
		<b>55</b>	447	497	555	497								
		<b>65</b>	292	359	405	359								
		<b>75</b>	144	222	266	222								
		<b>85</b>	28	62	72	62								
Comparative yearly lighting energy cost per 1000 lumens – <b>\$2.14</b> 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.														
		<b>Coefficients of Utilization</b>												
		<b>EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)</b>												
		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	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 4500 lumens

## Photometry

2x2 FluxGrid recessed LED, standard configuration, 3800 nominal delivered lumens

LER – 110

<b>Catalog No.</b>	2FGG38L840-2-D-UNV-DIM
<b>Test No.</b>	36781
<b>S/MH</b>	1.2
<b>Lamp Type</b>	LED
<b>Lumens</b>	3682
<b>Input Watts</b>	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
<b>0</b>	1419	1419	1419	1419
<b>5</b>	1398	1411	1414	1411
<b>15</b>	1326	1333	1333	1333
<b>25</b>	1187	1191	1200	1191
<b>35</b>	998	1019	1039	1019
<b>45</b>	790	834	868	834
<b>55</b>	580	644	695	644
<b>65</b>	353	434	491	434
<b>75</b>	174	268	321	268
<b>85</b>	33	76	85	76

### Light Distribution

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

### Average Luminance

Zone	End	45°	Cross
<b>45</b>	14277	15067	15691
<b>55</b>	12926	14350	15493
<b>65</b>	10671	13127	14839
<b>75</b>	8588	13231	15843
<b>85</b>	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

<b>Catalog No.</b>	2FGG45L840-2-D-UNV-DIM
<b>Test No.</b>	36782
<b>S/MH</b>	1.2
<b>Lamp Type</b>	LED
<b>Lumens</b>	4704
<b>Input Watts</b>	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
<b>0</b>	1800	1800	1800	1800
<b>5</b>	1774	1791	1794	1791
<b>15</b>	1684	1691	1692	1691
<b>25</b>	1507	1512	1523	1512
<b>35</b>	1268	1294	1319	1294
<b>45</b>	1003	1058	1103	1058
<b>55</b>	736	818	882	818
<b>65</b>	447	590	666	590
<b>75</b>	221	340	407	340
<b>85</b>	42	96	108	96

### Light Distribution

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

### Average Luminance

Zone	End	45°	Cross
<b>45</b>	18141	19143	19949
<b>55</b>	16417	18253	19674
<b>65</b>	13545	17871	20175
<b>75</b>	10900	16807	20115
<b>85</b>	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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