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ECRA/ESA Licence # 7003195

UTILITIES & SITE SERVICES LTD.

Enterprise Car Rental Ottawa, Ont

ELECTRICAL SHOP DRAWINGS

General Contractor: **Tal-Co Building Innovations**
Electrical Contractor: **JWK Utilities & Site Services Ltd.**
Supplier / Distributor: **Daltco Electric**

Type	MFG	Part
B	CFI by Signify	1FGG30L835-4-D-347-DIM
B-1	CFI by Signify	1FGG30L835-4-D-UNV-DIM

REVIEWED

By Sandra at 9:18 am, Mar 05, 2020

REVIEWED

By Pat Newton at 11:26 am, Mar 05, 2020

Please note that Types B, B-1 were specified as Lithonia strips so if these 1x4's are accepted there may be a cost difference

Type C was specified as suspended fixture. If the fixtures are to be wall mounted they will require an additional bracket that will be an extra to the contract.



Transmittal

Aland Enterprises
1479 Laperriere Ave.
Ottawa ON K1Z 7S8
Phone: (613) 761-1188
From: Shelley Miller

Project Enterprise Car Rental - Kanata
Quote# ALAND20-5296
Location Kanata On
To JWK Utilities
1555 Donald B Munro Dr
Kanata ON K0A 1L0
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|--|---|--------|
| <input checked="" type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|--|---------------------------------|
| <input type="checkbox"/> Prior Approval | <input checked="" type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
B	CFI by Signify	1FGG30L835-4-D-347-DIM
B-1	CFI by Signify	1FGG30L835-4-D-UNV-DIM



Job Name:
Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:
1FGG30L835-4-D-347-DIM

Notes:

Type:

B

ALAND20-5296

Day-Brite



by Signify

Recessed

FluxGrid 1x4

1FG up to 4500 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: 1FGG41B840-4-D-UNV-DIM

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver ⁴	Options
1	FG	G				4				
1 1'	FG FluxGrid	G Grid	Blank Static H Air return	Standard Configurations 30L 3000 38L 3800 45L 4500 Base Configurations 41B 4100	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 ⁵ Dimming SDIM Step dimming to 40% input power XDIM ³ MarkX phase dimming LDE Lutron LDE5 5% dimming DALI DALI	AG Antimicrobial finish 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 GTD/E ² UL924 listed Bodine GTD factory installed on driver input GTD/SNSR ⁶ UL924 listed Bodine GTD factory installed between driver and sensor EMLED ³ Integral emergency battery pack DSC Quick driver disconnect IAP ⁴ Integral Interact Pro RF sensor, enables wireless connected lighting control IAO ⁴ Integral Interact Office daylighting and occupancy sensor, enables wireless connected lighting control SWZDT ⁴ Integral sensor, daylighting and occupancy, advanced grouping with dwell time CHIC Chicago Plenum rated

NO COMMENT COMMENT AS NOTED
 REJECTED REVISE AND RESUBMIT
 SUBMIT SPECIFIED PRODUCT

CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH DRAWINGS AND SPECIFICATION REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES, CAPACITIES AND DIMENSIONS, SELECTING FABRICATION, CO-ORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

ANTARES ENGINEERING GROUP INC.
DATE 11-03-2020 PERS S.S.

Ordering guide - PoE controls

example: 1FGG38L840-4-D-LV-POE-IAO

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver	Options
1	FG	G				4		LV	POE	
1 1'	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	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 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 controls option.

Accessories (order separately)

- FMA14 – 1'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
- FSK14 – 1'x4' surface mount field installation kit (factory welded seams)
- FSF14 – 1'x4' surface mount field assembly kit (field assembled)



interact ready.

Job Name:

Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:

1FGG30L835-4-D-347-DIM

Notes:**Type:****B**

ALAND20-5296

1FG FluxGrid recessed 1x4

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 FMA14 "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 battery 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

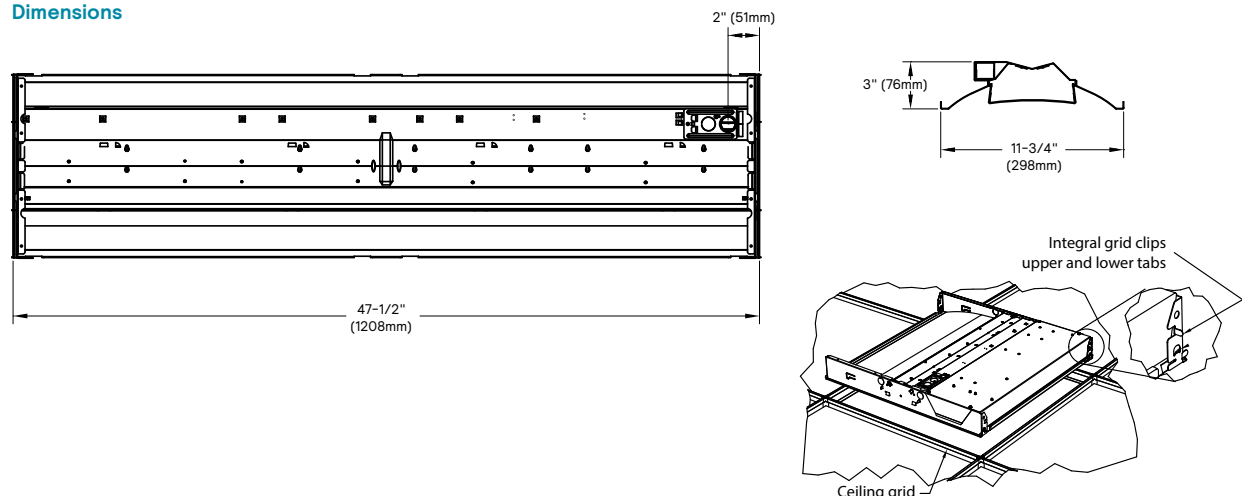
- Integral sensor options for occupancy sensing and/or daylight harvesting are available for additional energy savings with no reduction of life or increase in installation labor
- Standard configurations provide up to 121 lumens per watt and are available with 5 lumen packages and 3000, 3500, 4000, and 5000K color temperatures

- Base configurations provide up to 124 lumens per watt and are available in 4100 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
- FluxGrid luminaires are DesignLights Consortium qualified. Please see the DLC QPL list for exact catalog numbers, www.designlights.org/QPL

Energy data

Luminaire	Catalog Number	Input Power	Efficacy
1x4 Standard	1FGG30L840	24.5	121
	1FGG38L840	31.9	120
	1FGG45L840	38.6	116
1x4 Base	1FGG41B840	33.6	124

Dimensions



Job Name:

Enterprise Car Rental - Kanata
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Catalog Number:

1FGG30L835-4-D-347-DIM

Notes:

Type:**B**

ALAND20-5296

1FG FluxGrid recessed 1x4

up to 4500 lumens

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 (SWZDT, IAP) may not be combined
- For more information including recommended switches, refer to the following: -
SWZDT – 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
- For more information on Interact Ready visit: 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 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 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 or www.usa.lighting.philips.com/systems/system-areas/offices

Energy data

Catalog Number	CCT	Flux (lm)	DC Power (W)	DC Efficacy (lm/W)
1FGG30L840-4-D-LV-POE	4000K	3130	24	130
1FGG38L840-4-D-LV-POE	4000K	3843	30	128
1FGG45L840-4-D-LV-POE	4000K	4532	36	125

Job Name:

Enterprise Car Rental - Kanata
 Architect: Flynn Architect (Ottawa)
 Contractor: JWK Utilities (Kanata)

Catalog Number:

1FGG30L835-4-D-347-DIM

Notes:

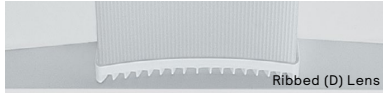
Type:**B**

ALAND20-5296

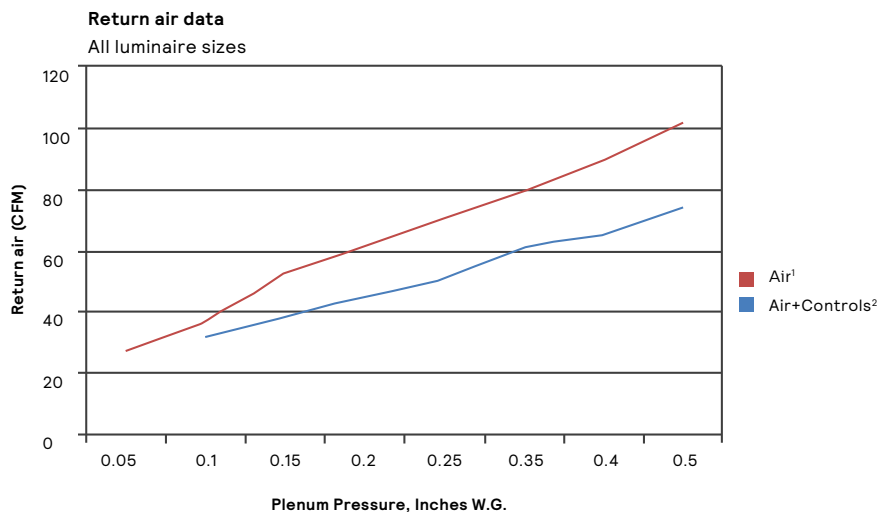
1FG FluxGrid recessed 1x4

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 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

- Air-only option includes air return lens retainers and pattern control blades on both ends of luminaire.
- 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.



Job Name:
Enterprise Car Rental - Kanata
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Catalog Number:
1FGG30L835-4-D-347-DIM

Notes:

Type:

B

ALAND20-5296

1FG FluxGrid recessed 1x4

up to 4500 lumens

Photometry

1x4 FluxGrid recessed LED, base configuration, 4100 nominal delivered lumens

LER - 124

Catalog No. 1FGG41B840-4-D-UNV-DIM
Test No. 36798
S/MH 1.2
Lamp Type LED
Lumens 4157
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	1595	1595	1595	1595
5	1569	1584	1590	1584
15	1497	1505	1509	1505
25	1352	1363	1372	1363
35	1150	1177	1196	1177
45	921	980	1005	980
55	684	757	782	757
65	421	523	516	523
75	214	245	233	245
85	41	42	36	42

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1203	28.9
0-40	1939	46.6
0-60	3354	80.6
0-90	4150	99.8
0-180	4160	100

Average Luminance

Zone	End	45°	Cross
45	7833	8328	8541
55	7163	7932	8196
65	5994	7436	7342
75	4961	5697	5418
85	2807	2924	2469

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pfc =	20	80			70			50	
Ceil									
Wall	70	50	30	70	50	30	50	30	
RCR									
0	118	118	118	115	115	115	111	111	
1	109	105	100	106	102	97	97	94	
2	98	91	84	96	89	82	85	81	
3	91	80	71	88	79	70	76	68	
4	82	70	63	81	69	61	68	60	
5	77	64	55	73	63	54	60	53	
6	70	57	48	68	56	47	55	46	
7	66	52	44	64	51	42	50	41	
8	60	47	39	59	46	39	46	38	
9	56	44	35	56	42	34	41	34	
10	54	40	33	52	40	32	39	32	

1x4 FluxGrid recessed LED, standard configuration, 3000 nominal delivered lumens

LER - 121

Catalog No. 1FGG30L840-4-D-UNV-DIM
Test No. 36797
S/MH 1.2
Lamp Type LED
Lumens 2975
Input Watts 24

Comparative yearly lighting energy cost per 1000 lumens – **\$1.97** 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	1156	1156	1156	1156
5	1137	1148	1152	1148
15	1084	1090	1094	1090
25	979	987	994	987
35	833	854	867	854
45	667	711	727	711
55	462	521	548	521
65	305	353	349	353
75	154	177	168	177
85	29	30	26	30

Light Distribution

Degrees	Lumens	% Luminaire
0-30	871	29.3
0-40	1405	47.2
0-60	2411	81
0-90	2970	99.8
0-180	2977	100

Average Luminance

Zone	End	45°	Cross
45	5667	6042	6184
55	4839	5455	5743
65	4332	5022	4960
75	3579	4111	3906
85	2028	2069	1766

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pfc =	20	80			70			50	
Ceil									
Wall	70	50	30	70	50	30	50	30	
RCR									
0	118	118	118	115	115	115	111	111	
1	109	105	100	106	102	98	97	94	
2	100	92	84	96	90	83	85	81	
3	91	81	72	88	79	71	76	69	
4	82	71	63	81	69	61	68	60	
5	77	64	55	75	63	55	60	54	
6	70	57	48	68	56	48	55	47	
7	66	53	44	64	52	44	50	42	
8	60	47	40	59	46	39	46	39	
9	56	44	35	56	44	35	41	34	
10	54	40	33	53	40	33	39	32	

**Job Name:**

Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:

1FGG30L835-4-D-347-DIM

Notes:

Type:**B**

ALAND20-5296

1FG FluxGrid recessed 1x4

up to 4500 lumens

Photometry

1x4 FluxGrid recessed LED, standard configuration, 3800 nominal delivered lumens

LER - 120

Catalog No. 1FGG38L840-4-D-UNV-DIM
Test No. 36796
S/MH 1.2
Lamp Type LED
Lumens 3830
Input Watts 32

Comparative yearly lighting energy cost per 1000 lumens - **\$2.00** 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	1480	1480	1480	1480
5	1456	1470	1475	1470
15	1388	1396	1401	1396
25	1254	1264	1274	1264
35	1067	1093	1111	1093
45	853	911	932	911
55	633	705	725	705
65	391	454	447	454
75	198	227	216	227
85	38	39	33	39

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1116	29.1
0-40	1798	46.9
0-60	3111	81.2
0-90	3831	100
0-180	3832	100

Average Luminance

Zone	End	45°	Cross
45	7255	7742	7919
55	6636	7383	7595
65	5554	6453	6355
75	4592	5281	5019
85	2586	2683	2297

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)										
pfc =	20	80			70			50		
Ceil										
Wall	70	50	30	70	50	30	50	30		
RCR										
0	118	118	118	115	115	111	111			
1	109	105	100	106	102	98	97	94		
2	100	92	84	96	90	83	85	81		
3	91	81	72	88	79	71	76	69		
4	82	71	63	81	69	61	68	60		
5	77	64	55	75	63	55	60	53		
6	70	57	48	68	56	47	55	47		
7	66	52	44	64	52	42	50	42		
8	60	47	39	59	46	39	46	39		
9	56	44	35	56	42	35	41	34		
10	54	40	33	52	40	33	39	32		

1x4 FluxGrid recessed LED, standard configuration, 4500 nominal delivered lumens

LER - 116

Catalog No. 1FGG45L840-4-D-UNV-DIM
Test No. 36795
S/MH 1.2
Lamp Type LED
Lumens 4546
Input Watts 39

Comparative yearly lighting energy cost per 1000 lumens - **\$2.03** 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	1751	1751	1751	1751
5	1723	1739	1746	1739
15	1643	1652	1658	1652
25	1484	1495	1507	1495
35	1263	1293	1314	1293
45	1010	1077	1103	1077
55	750	833	859	833
65	462	558	551	558
75	235	269	257	269
85	45	46	40	46

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1320	29
0-40	2129	46.8
0-60	3683	81
0-90	4548	100
0-180	4548	100

Average Luminance

Zone	End	45°	Cross
45	8587	9155	9376
55	7860	8728	9001
65	6577	7931	7834
75	5446	6254	5957
85	3069	3193	2773

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)										
pfc =	20	80			70			50		
Ceil										
Wall	70	50	30	70	50	30	50	30		
RCR										
0	118	118	118	115	115	111	111			
1	109	105	100	106	102	98	97	94		
2	98	91	84	96	90	82	85	81		
3	91	81	72	88	79	71	76	69		
4	82	70	63	81	69	61	68	60		
5	77	64	55	75	63	55	60	53		
6	70	57	48	68	56	47	55	46		
7	66	52	44	64	52	42	50	42		
8	60	47	39	59	46	39	46	39		
9	56	44	35	56	42	35	41	34		
10	54	40	33	52	40	33	39	32		

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FluxGrid_LED_1x4 08/19 page 6 of 6

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Markham, ON, Canada L6C 2S3
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www.day-brite.com



Job Name:
Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:
1FGG30L835-4-D-UNV-DIM

Notes:

Type:
B-1

ALAND20-5296

Day-Brite
CFI
by **Signify**

Recessed

FluxGrid 1x4

1FG up to 4500 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: 1FGG41B840-4-D-UNV-DIM

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver ⁶	Options
1	FG	G				4				
1	FG FluxGrid	G Grid	Blank Static H Air return	Standard Configurations 30L 3000 38L 3800 45L 4500 Base Configurations 41B 4100	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 ³ Dimming SDIM Step dimming to 40% input power XDIM ³ MarkX phase dimming LDE Lutron LDE5 5% dimming DALI DALI	AG Antimicrobial finish 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 GTD/E ⁵ UL924 listed Bodine GTD factory installed on driver input GTD/SNSR ^{5,6} UL924 listed Bodine GTD factory installed between driver and sensor EMLED ³ Integral emergency battery pack DSC Quick driver disconnect IAP ⁴ Integral Interact Pro RF sensor, enables wireless connected lighting control IAO ⁴ Integral Interact Office daylighting and occupancy sensor, enables wireless connected lighting control SWZDT ⁴ Integral sensor, daylighting and occupancy, advanced grouping with dwell time CHIC Chicago Plenum rated

Ordering guide - PoE controls

example: 1FGG38L840-4-D-LV-POE-IAO

Width	Family	Ceiling Type	Air Function	Lumens (nominal delivered)	Color	Length	Center Diffuser	Voltage	Driver	Options
1	FG	G				4		LV	POE	
1	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	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 EMPOE 600lm integral emergency driver and battery pack

Footnotes:

- 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.

Accessories (order separately)

- FMA14 – 1'x4' "F" mounting frame for NEMA "F" mounting
- FGD4L – FG 4' ribbed replacement lens
- FGD54L – FG 4' smooth replacement lens
- FGH4L – FG 4' air return ribbed replacement lens
- FGH54L – FG 4' air return smooth replacement lens
- FSK14 – 1'x4' surface mount field installation kit (factory welded seams)
- FSP14 – 1'x4' surface mount field assembly kit (field assembled)



interact ready.

1FG FluxGrid recessed 1x4

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 FMA14 "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 battery 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

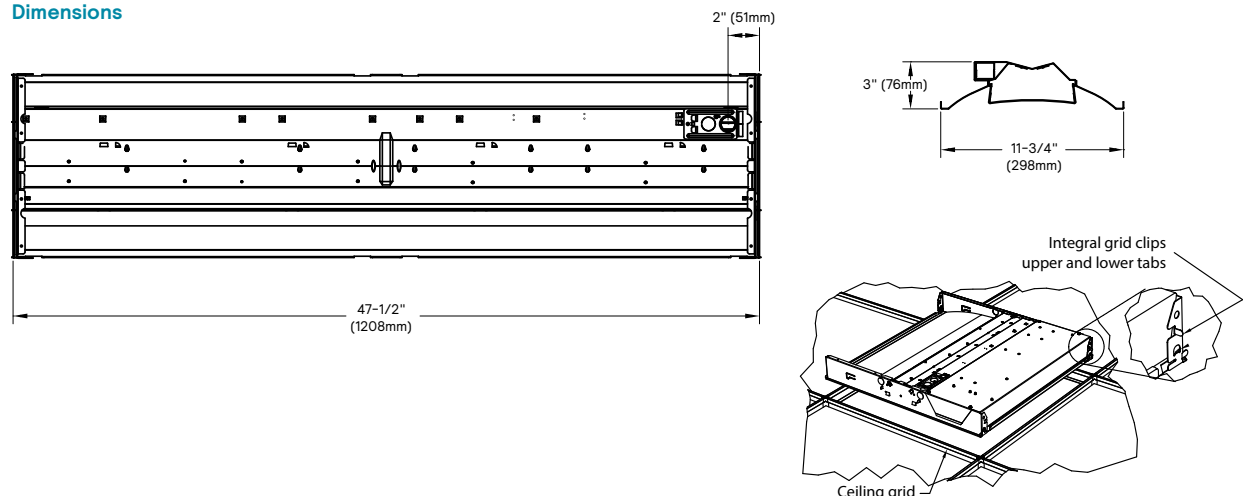
- Integral sensor options for occupancy sensing and/or daylight harvesting are available for additional energy savings with no reduction of life or increase in installation labor
- Standard configurations provide up to 121 lumens per watt and are available with 5 lumen packages and 3000, 3500, 4000, and 5000K color temperatures

- Base configurations provide up to 124 lumens per watt and are available in 4100 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
- FluxGrid luminaires are DesignLights Consortium qualified. Please see the DLC QPL list for exact catalog numbers, www.designlights.org/QPL

Energy data

Luminaire	Catalog Number	Input Power	Efficacy
1x4 Standard	1FGG30L840	24.5	121
	1FGG38L840	31.9	120
	1FGG45L840	38.6	116
1x4 Base	1FGG41B840	33.6	124

Dimensions



Job Name:

Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:

1FGG30L835-4-D-UNV-DIM

Notes:

Type:**B-1**

ALAND20-5296

1FG FluxGrid recessed 1x4

up to 4500 lumens

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 (SWZDT, IAP) may not be combined
- For more information including recommended switches, refer to the following: -
SWZDT – 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
- For more information on Interact Ready visit: 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 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 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 or www.usa.lighting.philips.com/systems/system-areas/offices

Energy data

Catalog Number	CCT	Flux (lm)	DC Power (W)	DC Efficacy (lm/W)
1FGG30L840-4-D-LV-POE	4000K	3130	24	130
1FGG38L840-4-D-LV-POE	4000K	3843	30	128
1FGG45L840-4-D-LV-POE	4000K	4532	36	125

Job Name:

Enterprise Car Rental - Kanata
 Architect: Flynn Architect (Ottawa)
 Contractor: JWK Utilities (Kanata)

Catalog Number:

1FGG30L835-4-D-UNV-DIM

Notes:

Type:**B-1**

ALAND20-5296

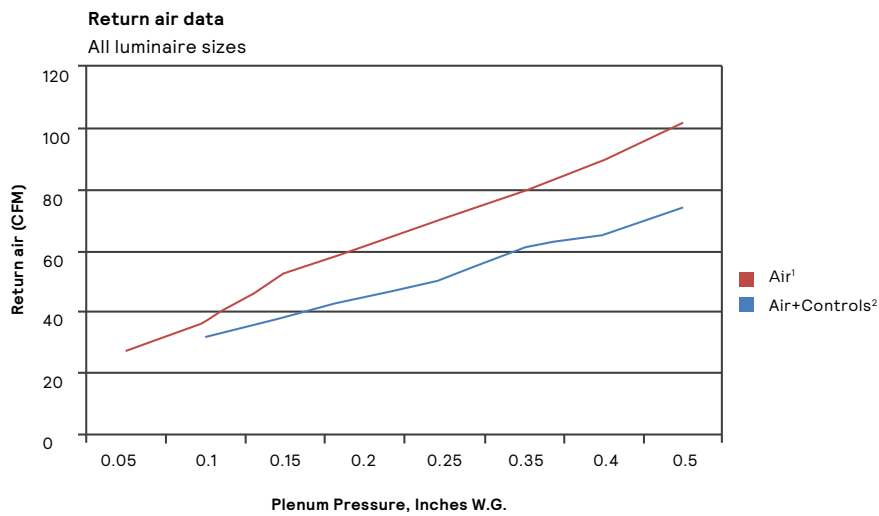
1FG FluxGrid recessed 1x4

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 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

- Air-only option includes air return lens retainers and pattern control blades on both ends of luminaire.
- 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.



Job Name:
Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:
1FGG30L835-4-D-UNV-DIM

Notes:

Type:

B-1

ALAND20-5296

1FG FluxGrid recessed 1x4

up to 4500 lumens

Photometry

1x4 FluxGrid recessed LED, base configuration, 4100 nominal delivered lumens

LER - 124

Catalog No. 1FGG41B840-4-D-UNV-DIM
Test No. 36798
S/MH 1.2
Lamp Type LED
Lumens 4157
Input Watts 34

Candlepower

Angle	End	45	Cross	Back-45
0	1595	1595	1595	1595
5	1569	1584	1590	1584
15	1497	1505	1509	1505
25	1352	1363	1372	1363
35	1150	1177	1196	1177
45	921	980	1005	980
55	684	757	782	757
65	421	523	516	523
75	214	245	233	245
85	41	42	36	42

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.

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1203	28.9
0-40	1939	46.6
0-60	3354	80.6
0-90	4150	99.8
0-180	4160	100

Average Luminance

Zone	End	45°	Cross
45	7833	8328	8541
55	7163	7932	8196
65	5994	7436	7342
75	4961	5697	5418
85	2807	2924	2469

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pfc =	20	80			70			50	
Ceil									
Wall	70	50	30	70	50	30	50	30	
RCR									
0	118	118	118	115	115	115	111	111	
1	109	105	100	106	102	97	97	94	
2	98	91	84	96	89	82	85	81	
3	91	80	71	88	79	70	76	68	
4	82	70	63	81	69	61	68	60	
5	77	64	55	73	63	54	60	53	
6	70	57	48	68	56	47	55	46	
7	66	52	44	64	51	42	50	41	
8	60	47	39	59	46	39	46	38	
9	56	44	35	56	42	34	41	34	
10	54	40	33	52	40	32	39	32	

1x4 FluxGrid recessed LED, standard configuration, 3000 nominal delivered lumens

LER - 121

Catalog No. 1FGG30L840-4-D-UNV-DIM
Test No. 36797
S/MH 1.2
Lamp Type LED
Lumens 2975
Input Watts 24

Candlepower

Angle	End	45	Cross	Back-45
0	1156	1156	1156	1156
5	1137	1148	1152	1148
15	1084	1090	1094	1090
25	979	987	994	987
35	833	854	867	854
45	667	711	727	711
55	462	521	548	521
65	305	353	349	353
75	154	177	168	177
85	29	30	26	30

Comparative yearly lighting energy cost per 1000 lumens - \$1.97 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.

Light Distribution

Degrees	Lumens	% Luminaire
0-30	871	29.3
0-40	1405	47.2
0-60	2411	81
0-90	2970	99.8
0-180	2977	100

Average Luminance

Zone	End	45°	Cross
45	5667	6042	6184
55	4839	5455	5743
65	4332	5022	4960
75	3579	4111	3906
85	2028	2069	1766

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pfc =	20	80			70			50	
Ceil									
Wall	70	50	30	70	50	30	50	30	
RCR									
0	118	118	118	115	115	115	111	111	
1	109	105	100	106	102	98	97	94	
2	100	92	84	96	90	83	85	81	
3	91	81	72	88	79	71	76	69	
4	82	71	63	81	69	61	68	60	
5	77	64	55	75	63	55	60	54	
6	70	57	48	68	56	48	55	47	
7	66	53	44	64	52	44	50	42	
8	60	47	40	59	46	39	46	39	
9	56	44	35	56	44	35	41	34	
10	54	40	33	53	40	33	39	32	



Job Name:
Enterprise Car Rental - Kanata
Architect: Flynn Architect (Ottawa)
Contractor: JWK Utilities (Kanata)

Catalog Number:
1FGG30L835-4-D-UNV-DIM

Notes:

Type:

B-1

ALAND20-5296

1FG FluxGrid recessed 1x4

up to 4500 lumens

Photometry

1x4 FluxGrid recessed LED, standard configuration, 3800 nominal delivered lumens

LER - 120

Catalog No. 1FGG38L840-4-D-UNV-DIM
Test No. 36796
S/MH 1.2
Lamp Type LED
Lumens 3830
Input Watts 32

Candlepower

Angle	End	45	Cross	Back-45
0	1480	1480	1480	1480
5	1456	1470	1475	1470
15	1388	1396	1401	1396
25	1254	1264	1274	1264
35	1067	1093	1111	1093
45	853	911	932	911
55	633	705	725	705
65	391	454	447	454
75	198	227	216	227
85	38	39	33	39

Comparative yearly lighting energy cost per 1000 lumens - \$2.00 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.

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1116	29.1
0-40	1798	46.9
0-60	3111	81.2
0-90	3831	100
0-180	3832	100

Average Luminance

Zone	End	45°	Cross
45	7255	7742	7919
55	6636	7383	7595
65	5554	6453	6355
75	4592	5281	5019
85	2586	2683	2297

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)										
pfc =	20	80			70			50		
Ceil										
Wall	70	50	30	70	50	30	50	30		
RCR										
0	118	118	118	115	115	115	111	111		
1	109	105	100	106	102	98	97	94		
2	100	92	84	96	90	83	85	81		
3	91	81	72	88	79	71	76	69		
4	82	71	63	81	69	61	68	60		
5	77	64	55	75	63	55	60	53		
6	70	57	48	68	56	47	55	47		
7	66	52	44	64	52	42	50	42		
8	60	47	39	59	46	39	46	39		
9	56	44	35	56	42	35	41	34		
10	54	40	33	52	40	33	39	32		

1x4 FluxGrid recessed LED, standard configuration, 4500 nominal delivered lumens

LER - 116

Catalog No. 1FGG45L840-4-D-UNV-DIM
Test No. 36795
S/MH 1.2
Lamp Type LED
Lumens 4546
Input Watts 39

Candlepower

Angle	End	45	Cross	Back-45
0	1751	1751	1751	1751
5	1723	1739	1746	1739
15	1643	1652	1658	1652
25	1484	1495	1507	1495
35	1263	1293	1314	1293
45	1010	1077	1103	1077
55	750	833	859	833
65	462	558	551	558
75	235	269	257	269
85	45	46	40	46

Comparative yearly lighting energy cost per 1000 lumens - \$2.03 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.

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1320	29
0-40	2129	46.8
0-60	3683	81
0-90	4548	100
0-180	4548	100

Average Luminance

Zone	End	45°	Cross
45	8587	9155	9376
55	7860	8728	9001
65	6577	7931	7834
75	5446	6254	5957
85	3069	3193	2773

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)										
pfc =	20	80			70			50		
Ceil										
Wall	70	50	30	70	50	30	50	30		
RCR										
0	118	118	118	115	115	115	111	111		
1	109	105	100	106	102	98	97	94		
2	98	91	84	96	90	82	85	81		
3	91	81	72	88	79	71	76	69		
4	82	70	63	81	69	61	68	60		
5	77	64	55	75	63	55	60	53		
6	70	57	48	68	56	47	55	46		
7	66	52	44	64	52	42	50	42		
8	60	47	39	59	46	39	46	39		
9	56	44	35	56	42	35	41	34		
10	54	40	33	52	40	33	39	32		

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