

Day-Brite

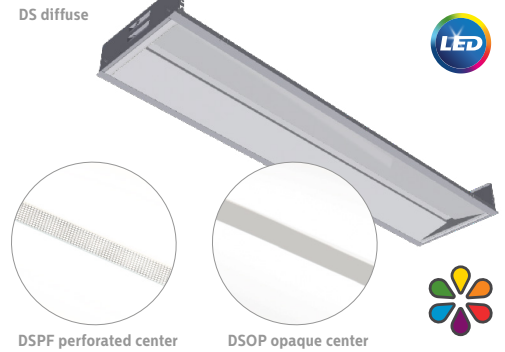


by @signify

Recessed

FormFlex 1x4

1FFX up to 4500 lumens



Day-Brite / CFI FormFlex recessed is a fully luminous aperture luminaire offering a diffuse, perforated, opaque, or linear prism center channel accent for unique aesthetic flexibility. FormFlex delivers high performing even illumination and high visual comfort. Its architectural style, coupled with controls options, makes FormFlex an ideal choice for applications such as office, institutional, and healthcare, where energy savings and customized effect are desired.

FormFlex now offers AccuRender technology for the highest color quality at the highest efficacy.

Ordering guide - standard & wireless controls

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

example: 1FFXG38L840-4-DS-UNV-DIM-SWZCS

Width	Family	Ceiling Type	Lumens (nominal delivered)	Efficacy	Color	Length	Center Diffuser	Voltage	Driver	Options
1	FFX	G			-	4	-	-	-	
1	1'	FFX FormFlex	G Grid	Base configuration 38B 3800	Blank Standard H ³ High	830 80 CRI, 3000K 835 80 CRI, 3500K 840 80 CRI, 4000K 850 80 CRI, 5000K AccuRender ^{8,9} 930 90 CRI, 3000K 935 90 CRI, 3500K 940 90 CRI, 4000K	DS Diffuse (smooth) DSPF Diffuse perforated DSOP Diffuse opaque DSLPL Diffuse linear prism	UNV Universal Voltage, 120-277 volt 347 347V	DIM ¹ Dimming Step dimming to 40% input power SDIM Lutron LDE5, 5% dimming LDE Lutron LDE1, 1% dimming DALI DALI dimming	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 emergency luminaires GLR Fusing, fast blow BSL10LST ⁴ Bodine 10W selftesting battery pack BSL6LST ⁴ Bodine 6W selftesting battery pack DSC Quick driver disconnect CHIC ³ Chicago Plenum rated ER100 ^{4,6,7} UL924 listed sensor bypass relay, factory installed between driver & sensor GTD/E ^{4,6} UL924 listed Bodine GTD factory installed on driver input GTD/SNSR ^{4,6,7} UL924 listed Bodine GTD factory installed between driver and sensor SWZCS ^{2,10} Interact Pro scalable sensor with integral daylight & occupancy sensing, advanced grouping with dwell time SWZDT ² SpaceWise only sensor, daylighting and occupancy, advanced grouping with dwell time RADIO ² Interact Pro RF sensor, enables wireless connected lighting control IAOSB ^{2,10} Interact Office advanced wireless sensor bundle, integral SC1500 w/ IoT capabilities for enterprise scale projects AG Antimicrobial Finish WL Wet location listed

Ordering guide - PoE controls

example: 1FFXG38L840-4-DS-LV-POE-IAO

Width	Family	Ceiling Type	Lumens (nominal delivered)	Efficacy	Color	Length	Center Diffuser
1	FFX	G			-	4	-
1	1'	FFX FormFlex	G Grid	Standard configurations 30L 3000 38L 3800 45L 4500	Blank Standard	830 80 CRI, 3000K 835 80 CRI, 3500K 840 80 CRI, 4000K 850 80 CRI, 5000K	DS Diffuse (smooth) DSPF Diffuse perforated DSOP Diffuse opaque DSLPL Diffuse linear prism
Voltage		Driver		Options			
LV -		POE -					
LV Low voltage		POE Power over ethernet		EMPOE 600lm integral emergency driver and battery pack IAO Integral Interact Office daylighting and occupancy sensor, enables wireless connected lighting control IAOSB Interact Office advanced wired sensor bundle, integral SC2000 w/IoT capabilities for enterprise scale projects			

Footnotes

- 1 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.
- 2 Specify only with -DIM driver option.
- 3 CHIC option not provided with air return functionality.
- 4 Not available with 347V.
- 5 High efficacy option may only be ordered with Standard lumen configurations.
- 6 Must be installed in conjunction with a UL1008 device.
- 7 Must be ordered with an integral sensing option.
- 8 AccuRender is 90CRI with R_a>50.
- 9 Option is qualified as Engineered-to-Order (ETO) ready. Lead times and minimum order quantities may vary, please consult factory. (DLC Standard efficacy only)
- 10 Must order IRT9015 Interact commissioning remote with each system order.

Accessories (order separately)

- FSF414 - 1'x4' surface mount installation kit (field assembled)
- FMA14 - 1'x4' "F" mounting frame for NEMA "F" ceiling
- FFXDSPF14L - 1'x4' FormFlex replacement lens w/white perforated channel
- FFXDSOP14L - 1'x4' FormFlex replacement lens w/opaque channel
- FFXDSLPL14L - 1'x4' FormFlex replacement lens w/linear prism channel

SWZCS accessories (order separately)

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



interact ready.

1FFX FormFlex recessed 1x4

up to 4500 lumens

Application

- Ideal for modern offices, institutional, retail, and healthcare applications.
- Modern architectural styling to complement any space.
- Full width luminous lens provides smooth brightness and high visual comfort.
- Directs a controlled amount of light to higher angles to eliminate "cave effect" without creating glare.
- Available in standard efficacy and high efficacy (H) configurations up to 130lm/W.
- 80 CRI minimum source provides a balanced spectral power distribution.
- AccuRender 90 CRI source provides preferred color quality.
- Suitable for use with NEMA G (15/16") and NFG (9/16") suspended t-grid ceilings. NEMA F flange ceilings require the FMA14 accessory (ordered separately).
- Lens center channel provides aesthetic options that allow for unique visual elements in the space.

Construction/Finish

- Robust and durable dieformed embossed steel housing and end caps.
- Molded one-piece acrylic diffuser may be removed without tools for access to LED boards and driver(s).
- Unique spring retainers ensure the diffuser is centered in the housing opening at all times.
- T-bar grid clips are built into luminaire end caps for quick and easy installation, no extra parts.

Energy data

Configuration	Nominal CCT/ CRI	Flux (lm)	Input Power (W)	Efficacy (LPW)	DLC
1FFXG30L835	3500K/80	3086	26	119	Standard
1FFXG30L840	4000K/80	3181	26	120	Standard
1FFXG30LH835	3500K/80	3069	24	128	Standard
1FFXG30LH840	4000K/80	3164	24	134	Premium
1FFXG38B835	3500K/80	3929	34	116	Standard
1FFXG38B840	4000K/80	4051	34	118	Standard
1FFXG38L835	3500K/80	3916	33	119	Standard
1FFXG38L840	4000K/80	4037	33	121	Standard
1FFXG38LH835	3500K/80	3710	29	128	Premium
1FFXG38LH840	4000K/80	3825	29	134	Premium
1FFXG45L835	3500K/80	4585	40	115	Standard
1FFXG45L840	4000K/80	4727	40	117	Standard
1FFXG45LH835	3500K/80	4554	35	130	Premium
1FFXG45LH840	4000K/80	4695	35	133	Premium

- Air return functionality is standard for all configurations. See air flow and noise data on page 4.
- Sheetmetal components are multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance baked white enamel.
- Integral louvers on housing ends allow air from the heated space to return to a pressurized plenum.

Electrical

- Driver and LED board are accessible from below by easy removal of lens.
- Non-controls Base configurations 0-10V dimmable to 10%.
- Non-controls Standard configurations 0-10V dimmable to 1%.
- Standard configurations with controls options dimmable via wireless switches (see below).
- Predicted L70 lumen maintenance up to 80,000 hours at 25°C ambient for all configurations.
- Emergency battery packs accessible from above. To estimate lumen output in emergency mode, multiply emergency pack wattage by luminaire efficacy, then by 1.10.
- The GTD/E option is used to bypass wall switches and allow luminaire operation on auxiliary power. Generator transfer requires installation in conjunction with a UL1008 listed device.
- The GTD/SNSR option is used to bypass integrated sensor control in the event of utility power loss. Generator transfer requires installation in conjunction with a UL1008 listed device.
- Compliance to CAN ICES-005-A/ NEB-005-A and FCC Part 15-A.

Validation

- cETLus listed for use in damp locations
- When ordered with -WL option code, suitable for use in wet locations with covered ceilings
- Rated for direct contact with insulation (IC)
- CCEA Chicago Plenum listed
- FormFlex luminaires are Designlights Consortium® qualified. Please see the DLC QPL list for exact catalog numbers, www.designlights.org/QPL

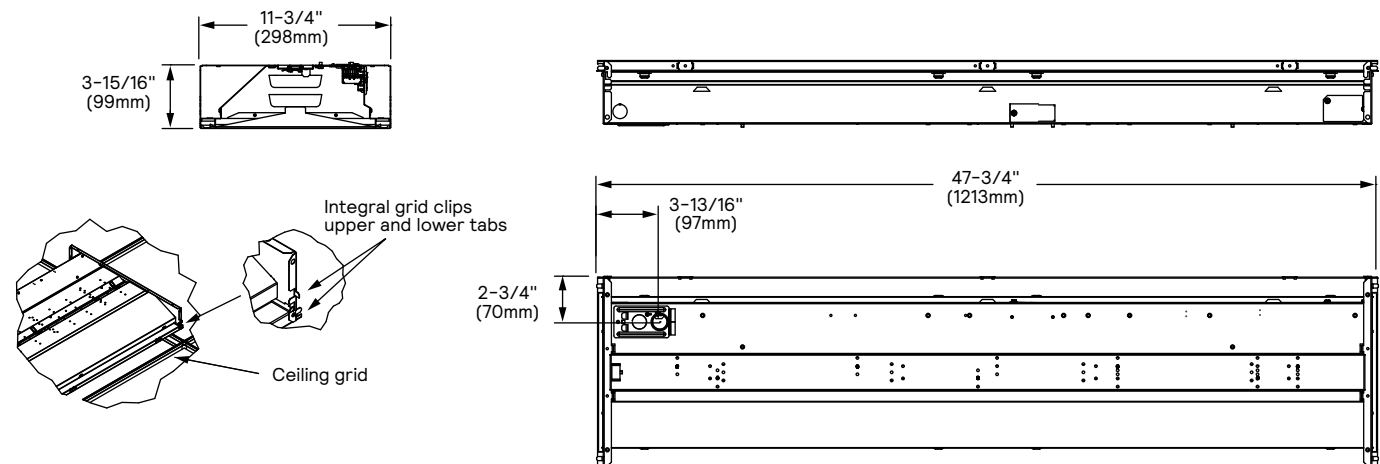
Environment

- Rated for dry or damp locations in operating ambient temperatures 0-30°C (32-86°F). 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. Not suitable for natatorium environments.

Warranty

- 5 year manufacturer's limited warranty.
- Visit signify.com/warranties for complete warranty information.

Dimensions



1FFX FormFlex recessed 1x4

up to 4500 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

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 (PoE)

Configuration	Nominal CCT/CRI	Flux (lm)	DC Power (W)*	Efficacy (LPW)
1FFXG30L840	4000K/80	3059	25	125
1FFXG38L840	4000K/80	3902	32	122
1FFXG45L840	4000K/80	4637	40	117

*DC power supply

1FFX FormFlex recessed 1x4

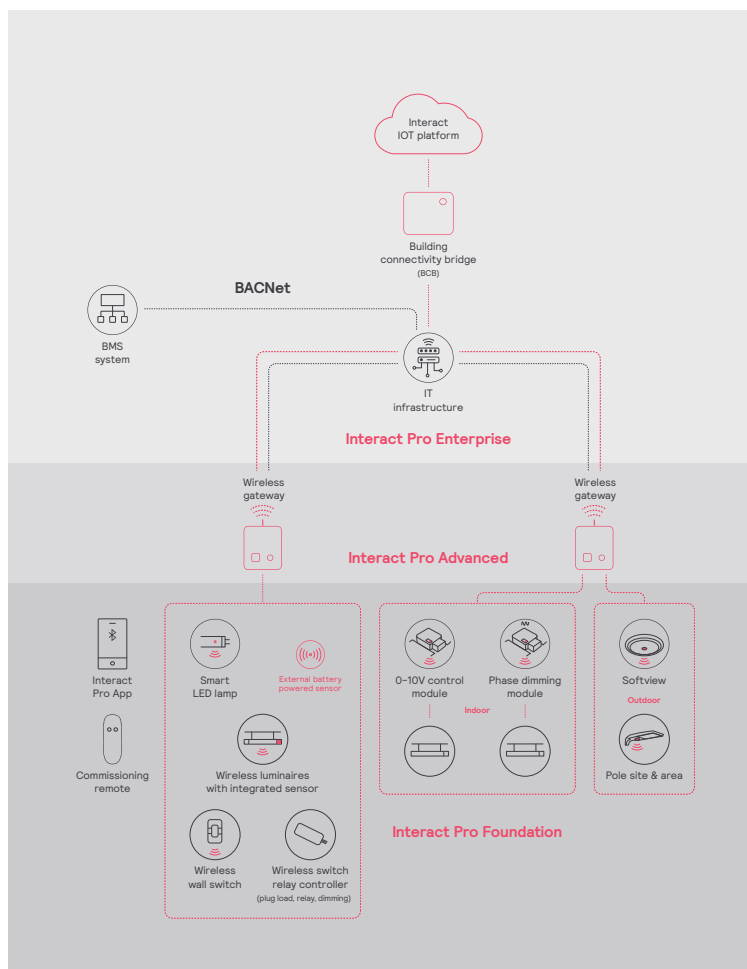
up to 4500 lumens

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



1FFX FormFlex recessed 1x4

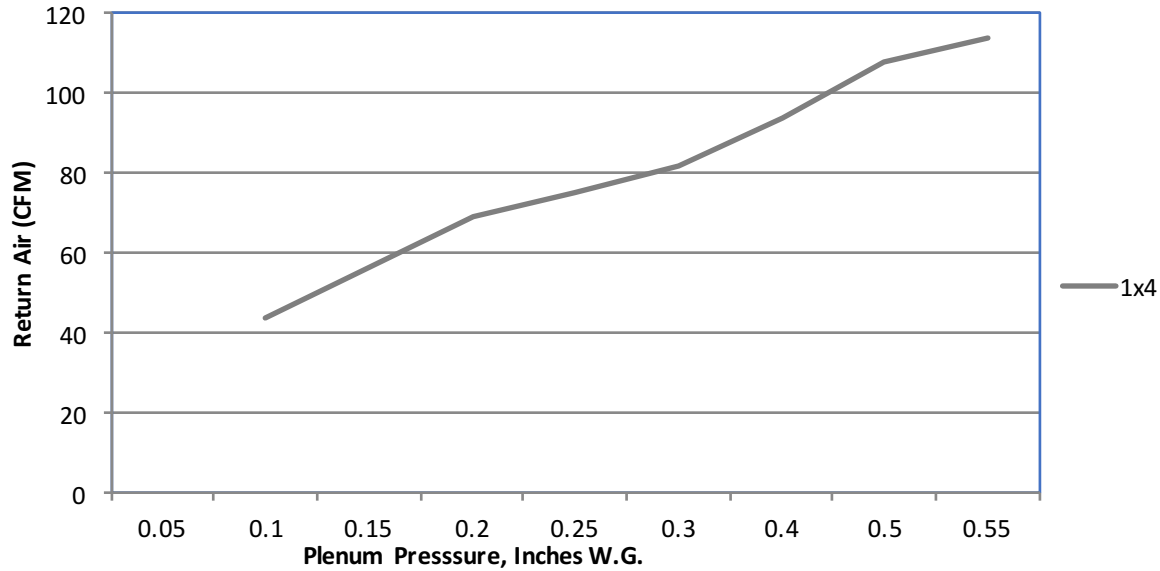
up to 4500 lumens

Air return



Integral louvers on housing ends allow air from the heated space to return to a pressurized plenum.

Return Air Data



2x4 Return Air - noise criteria

		44	56.5	69	75.5	82	94	108
CFM		44	56.5	69	75.5	82	94	108
NC (dB)	<15	19	21.5	24	27	30	35	39

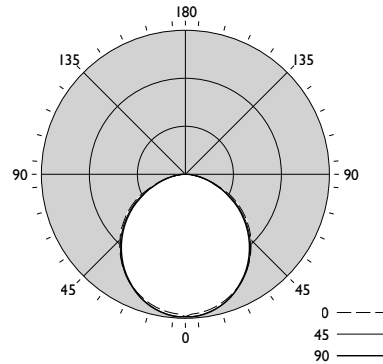
1FFX FormFlex recessed 1x4

up to 4500 lumens

Photometry

1FFXG38B840-4-DS-UNV-DIM

Luminaire Lumens	4053
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	34.4
Spacing Criterion (0-180)	1.23



	Candela Distribution					Flux
	0	22.5	45	67.5	90	Lumens
0	1483	1483	1483	1483	1483	
5	1453	1469	1480	1485	1482	140
15	1399	1411	1419	1422	1419	399
25	1295	1302	1303	1301	1297	599
35	1148	1150	1146	1138	1134	715
45	964	962	952	939	935	733
55	757	746	729	714	709	653
65	519	510	475	466	465	478
75	250	246	245	244	243	260
85	53	57	59	65	74	73
90	4	4	10	17	27	

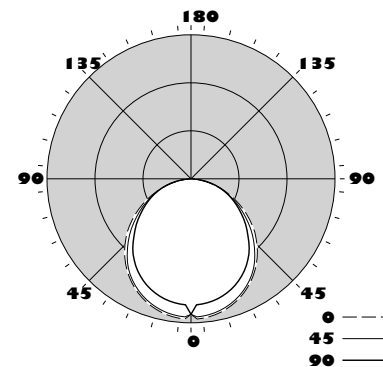
Zonal Lumen Summary			
Zone	Lumens	%Fixture	%Lamp
0-30	1139	28.1%	28.1%
0-40	1854	45.7%	45.7%
0-60	3240	79.9%	79.9%
0-90	4051	100.0%	100.0%
0-180	4053	100.0%	100.0%

Avg. Luminance (cd/m²)			
	0	90	180
0	5554	5554	5554
5	5464	5564	5572
15	5425	5502	5503
25	5354	5383	5361
35	5249	5240	5186
45	5104	5044	4951
55	4941	4763	4632
65	4598	4212	4125
75	3623	3539	3514
85	2280	2522	3175

Coefficients of Utilization %											
Pc---	80				70			50		0	
Pw---	70	50	30	10	70	50	30	50	30	10	0
RCR											
0	119	119	119	119	116	116	116	111	111	111	100
1	109	104	100	96	106	102	98	98	94	92	84
2	99	91	84	78	96	89	83	85	80	76	70
3	90	80	72	65	88	78	71	75	69	64	59
4	83	71	62	55	81	70	61	67	60	54	51
5	76	63	54	48	74	62	54	60	53	47	44
6	70	57	48	42	68	56	48	54	47	41	38
7	65	52	43	37	64	51	43	49	42	36	34
8	61	47	39	33	59	47	38	45	38	33	30
9	57	43	35	30	55	43	35	42	34	29	27
10	53	40	32	27	52	40	32	39	32	27	25

1FFXG38L840-4-DSL-UNV-DIM

Luminaire Lumens	3944
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	33.5
Spacing Criterion (0-180)	1.30



	Candela Distribution					Flux
	0	22.5	45	67.5	90	Lumens
0	1412	1412	1412	1412	1412	
5	1458	1467	1435	1338	1310	134
15	1407	1415	1386	1293	1265	383
25	1308	1311	1287	1203	1172	581
35	1162	1161	1137	1062	1032	696
45	973	958	924	869	839	706
55	749	728	692	663	643	622
65	501	489	468	462	457	470
75	258	253	266	268	265	277
85	58	66	63	60	59	75
90	4	4	5	6	6	

Zonal Lumen Summary			
Zone	Lumens	%Fixture	%Lamp
0-30	1098	27.8%	27.8%
0-40	1794	45.5%	45.5%
0-60	3121	79.1%	79.1%
0-90	3943	100.0%	100.0%
0-180	3944	100.0%	100.0%

Avg. Luminance (cd/m²)			
	0	90	180
0	5289	5289	5289
5	5481	5397	4924
15	5457	5377	4904
25	5407	5321	4846
35	5314	5200	4717
45	5156	4897	4444
55	4889	4521	4202
65	4440	4144	4046
75	3728	3846	3838
85	2489	2703	2552

Coefficients of Utilization %											
Pc---	80				70			50		0	
Pw---	70	50	30	10	70	50	30	50	30	10	0
RCR											
0	119	119	119	119	116	116	116	111	111	111	100
1	109	104	100	96	106	102	98	97	94	91	84
2	99	91	84	78	96	89	82	85	80	75	70
3	90	80	71	65	88	78	70	75	69	63	59
4	83	71	62	55	80	69	61	67	60	54	50
5	76	63	54	47	74	62	53	60	52	47	43
6	70	57	48	41	68	56	47	54	46	41	38
7	65	52	43	37	63	51	42	49	42	36	34
8	61	47	39	33	59	46	38	45	38	32	30
9	57	43	35	29	55	43	35	41	34	29	27
10	53	40	32	27	52	39	32	38	31	26	24

1FFX FormFlex recessed 1x4

up to 4500 lumens

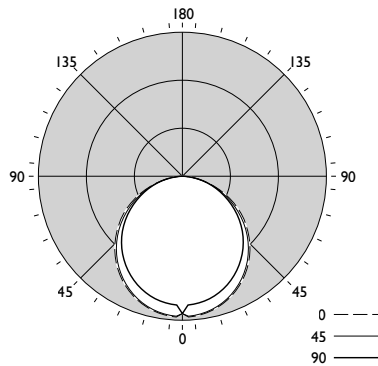
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Luminaire Lumens	3826
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	28.6
Spacing Criterion (0-180)	1.29

	Candela Distribution					Flux
	0	22.5	45	67.5	90	Lumens
0	1336	1336	1336	1336	1336	
5	1366	1375	1358	1278	1249	126
15	1320	1327	1310	1234	1205	362
25	1229	1231	1215	1146	1116	549
35	1096	1094	1078	1020	990	662
45	927	922	903	860	835	687
55	733	719	697	668	649	620
65	506	498	474	457	448	472
75	266	260	258	255	252	273
85	58	65	61	59	58	74
90	3	5	6	7	7	

Zonal Lumen Summary			
Zone	Lumens	%Fixture	%Lamp
0-30	1037	27.1%	27.1%
0-40	1700	44.4%	44.4%
0-60	3007	78.6%	78.6%
0-90	3825	100.0%	100.0%
0-180	3826	100.0%	100.0%

Avg. Luminance (cd/m ²)			
	0	90	180
0	5003	5003	5003
5	5137	5105	4696
15	5118	5081	4671
25	5079	5021	4612
35	5014	4928	4528
45	4911	4784	4420
55	4784	4553	4239
65	4483	4202	3971
75	3842	3735	3646
85	2479	2637	2504



Coefficients of Utilization %													
Pc---	80				70				50				0
Pw---	70	50	30	10	70	50	30	50	30	10	10	0	
RCR	0	119	119	119	116	116	116	111	111	111	100		
	1	109	104	99	96	106	102	98	97	94	91	83	
	2	99	90	83	78	96	88	82	85	80	75	69	
	3	90	79	71	64	87	78	70	75	68	63	58	
	4	82	70	61	55	80	69	61	66	59	53	50	
	5	76	63	54	47	73	61	53	59	52	46	43	
	6	70	56	47	41	68	55	47	54	46	40	37	
	7	65	51	42	36	63	50	42	49	41	36	33	
	8	60	47	38	32	59	46	38	45	37	32	29	
	9	56	43	34	29	55	42	34	41	34	29	27	
	10	53	39	31	26	51	39	31	38	31	26	24	



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