Day-Brite CFI
by Signify

Recessed
FormFlex 2x4
2FFX up to 7400 lumens

DS diffuse
DSPF perforated center
DSOP opaque center
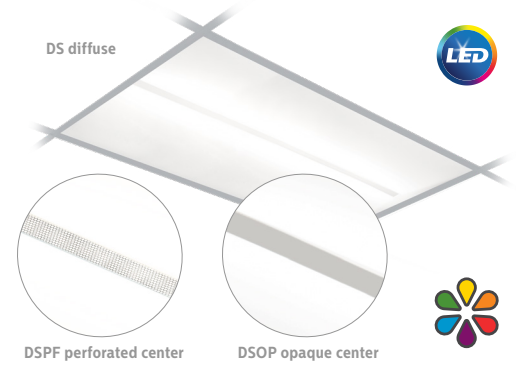
Day-Brite / CFI FormFlex recessed is a fully luminous aperture luminaire offering a diffuse, perforated, opaque, or linear prism center channel accent for unique aesthetic flexibility. FormFlex delivers high performing even illumination and high visual comfort. Its architectural style, coupled with controls 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.

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: 2FFX43L840-4-DS-UNV-DIM-SWZCS

Width	Family	Ceiling Type	Lumens (nominal delivered)	Efficacy	Color	Length	Center Diffuser	Voltage	Driver	Options
2	FFX	G				4	—	—	—	
						—				
2 2'	FFX FormFlex	G Grid	**Base configuration** **42B** 4200 **Standard configurations** **38L** 3800 **43L** 4300 **48L** 4800 **54L** 5400 **74L** 7400 Other lumen packages may be ordered in increments of 100lm from 3800 to 7400 lumens	**Blank** Standard **H**[5] 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	**4** 4'	**DS** Diffuse (smooth) **DSPF** Diffuse perforated **DSOP** Diffuse opaque **DSLP** Diffuse linear prism	**UNV** Universal Voltage, 120-277 volt **347** 347V	**DIM**[1] **SDIM** Step dimming to 40% input power **LDE** Lutron LDE5, 5% dimming **LDEH** 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: 2FFXG48L840-4-D-LV-POE-IAO

Width	Family	Ceiling Type	Lumens (nominal delivered)	Efficacy	Color	Length	Center Diffuser
2	FFX	G				4	—
					—	—	
2 2'	FFX FormFlex	G Grid	**Standard configurations** **38L** 3800 **43L** 4300 **48L** 4800	**Blank** Standard	**830** 80 CRI, 3000K **835** 80 CRI, 3500K **840** 80 CRI, 4000K **850** 80 CRI, 5000K	**4** 4'	**DS** Diffuse (smooth) **DSPF** Diffuse perforated **DSOP** Diffuse opaque **DSLP** 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_9>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)

- **FSF424** – 2'x4' surface mount field installation kit (field assembled)
- **FMA24** – 2'x4' "F" mounting frame for NEMA "F" ceiling
- **FFXDSPF24L** – 2'x4' FormFlex replacement lens w/white perforated channel
- **FFXDSOP24L** – 2'x4' FormFlex replacement lens w/opaque channel
- **FFXDSLP24L** – 2'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).

2FFX FormFlex recessed 2x4

up to 7400 lumens

Application

- Ideal for modern offices, institutional, retail, and healthcare applications.
- Modern architectural styling to complementany 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 FMA24 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
2FFXG42B835	3500K/80	4100	34	121	Standard
2FFXG42B840	4000K/80	4227	34	123	Standard
2FFXG38L835	3500K/80	3774	29	130	Premium
2FFXG38L840	4000K/80	3891	29	135	Premium
2FFXG43L835	3500K/80	4288	33	130	Premium
2FFXG43L840	4000K/80	4421	33	134	Premium
2FFXG48L835	3500K/80	4758	37	129	Premium
2FFXG48L840	4000K/80	4905	37	134	Premium
2FFXG54L835	3500K/80	5327	42	127	Premium
2FFXG54L840	4000K/80	5492	42	131	Premium
2FFXG74L835	3500K/80	7285	58	126	Premium
2FFXG74L840	4000K/80	7510	58	129	Premium

- Air return functionality is standard for all configurations. See air flow and noise data on page 4.
- Sheetmetal componets are multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance basked 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 85,000 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
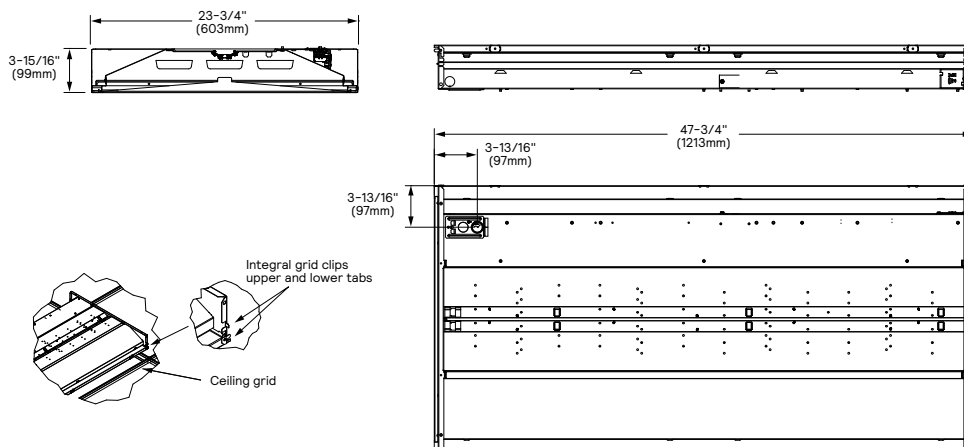
Environment

- 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

23-3/4" (603mm)

3-15/16" (99mm)

47-3/4" (1213mm)

3-13/16" (97mm)

3-13/16" (97mm)

Integral grid clips upper and lower tabs

Ceiling grid

2FFX FormFlex recessed 2x4

up to 7400 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, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1) and wireless Occupancy or Daylight & Occupancy sensors available.

- 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

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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)
2FFXG38L840	4000K/80	3864	30	128
2FFXG43L840	4000K/80	4381	34	127
2FFXG48L840	4000K/80	4853	40	123

*DC power supply

2FFX   FormFlex recessed 2x4

up to 7400 lumens

	Foundation	Advanced	Enterprise
Interact Pro scalable system			
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
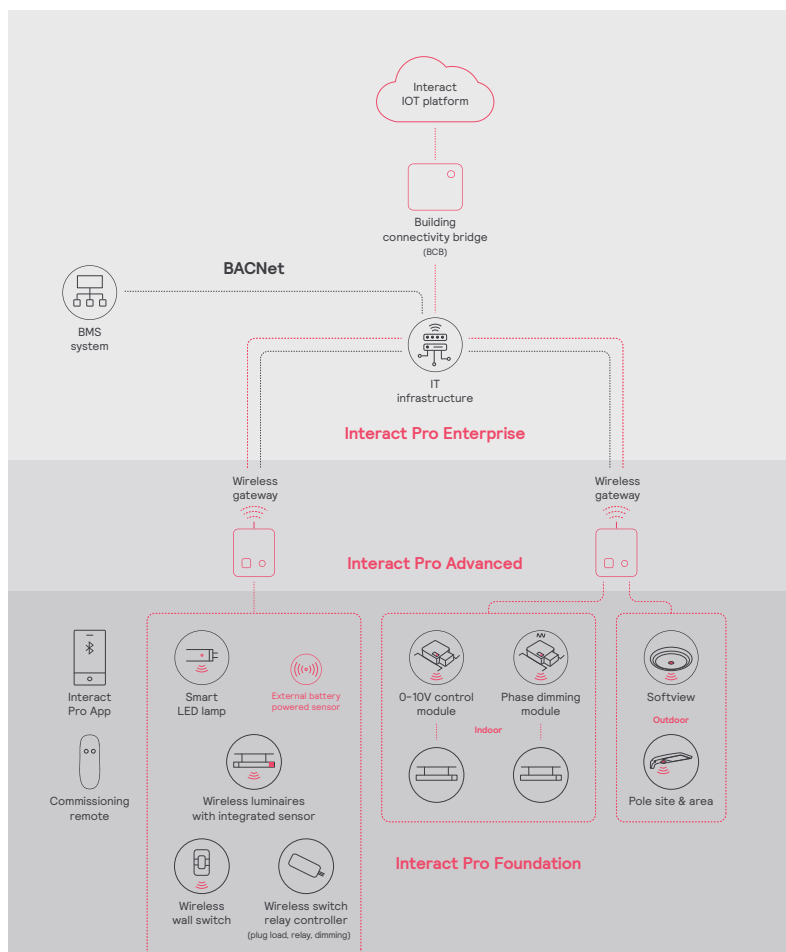
2FFX   FormFlex recessed 2x4

up to 7400 lumens

Air return

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

Return Air Data
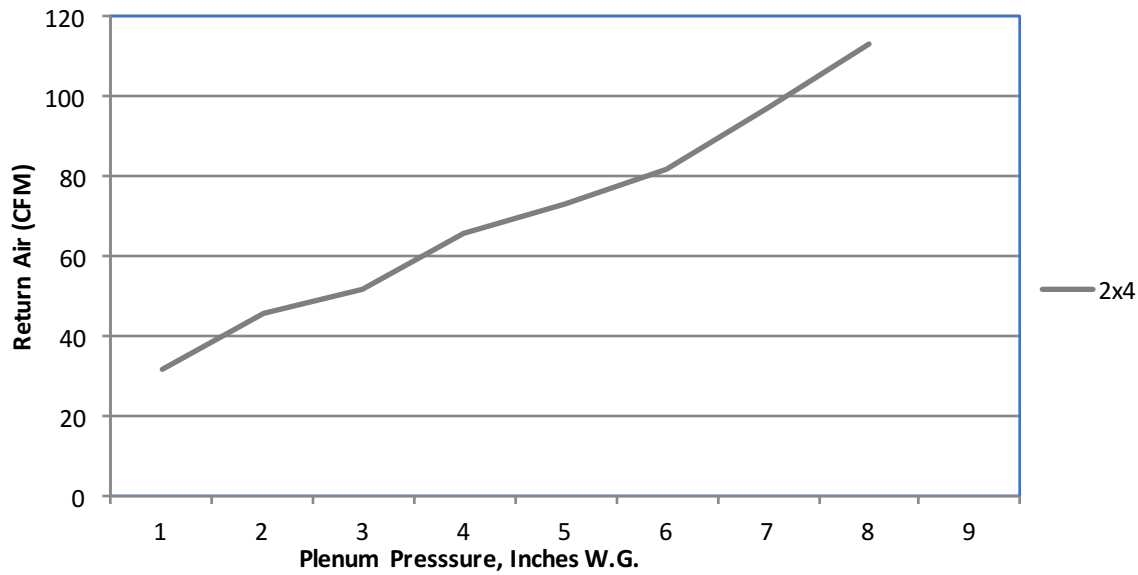
	2x4 Return Air – noise criteria							
CFM	27	37	53	62	71	80	90	102
NC (dB)	<15	24	25	29	33	35	38	40

2FFX FormFlex recessed 2x4

up to 7400 lumens

Photometry

2FFXG42B840-4-DS-UNV-DIM

Luminaire Lumens	4228
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	34.5
Spacing Criterion (0-180)	1.24
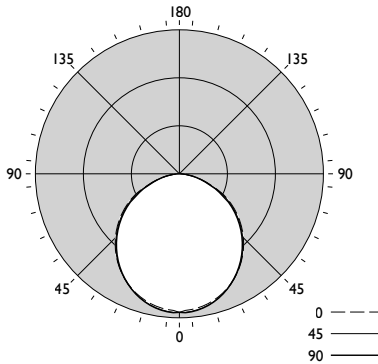
Candela Distribution						Flux
	0	22.5	45	67.5	90	Lumens
0	1539	1539	1539	1539	1539	
5	1514	1524	1534	1540	1539	146
15	1457	1465	1472	1476	1475	415
25	1349	1354	1354	1354	1351	623
35	1197	1198	1192	1187	1184	745
45	1006	1004	995	986	982	767
55	784	780	767	756	752	686
65	537	532	520	493	491	505
75	261	257	249	246	247	268
85	54	56	62	61	67	73
90	4	3	6	11	19	

Zonal Lumen Summary			
Zone	Lumens	%Fixture	%Lamp
0-30	1184	28.0%	28.0%
0-40	1929	45.6%	45.6%
0-60	3382	80.0%	80.0%
0-90	4227	100.0%	100.0%
0-180	4228	100.0%	100.0%

Avg. Luminance (cd/m²)			
	0	90	180
0	2335	2335	2335
5	2305	2336	2343
15	2288	2312	2315
25	2258	2266	2261
35	2216	2208	2192
45	2158	2133	2105
55	2074	2028	1988
65	1928	1865	1762
75	1532	1457	1448
85	941	1075	1173

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	95	92	84
2	99	91	84	79	97	89	83	86	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	63	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	39	32	38	31	27	25

2FFXG43L840-4-DS-UNV-DIM

Luminaire Lumens	4422
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	32.9
Spacing Criterion (0-180)	1.30
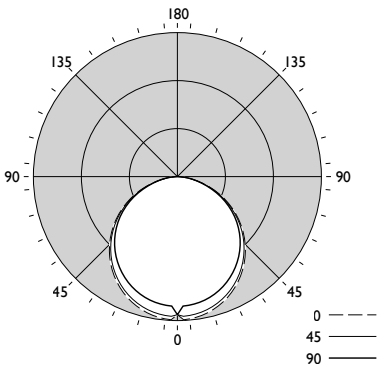
Candela Distribution						Flux
	0	22.5	45	67.5	90	Lumens
0	1534	1534	1534	1534	1534	
5	1587	1585	1549	1466	1436	145
15	1531	1529	1497	1420	1389	417
25	1422	1420	1392	1325	1295	633
35	1264	1261	1239	1187	1159	766
45	1066	1062	1045	1009	986	799
55	833	829	815	792	777	723
65	573	568	557	542	535	549
75	299	296	288	283	280	307
85	63	65	74	74	75	83
90	4	5	5	5	6	

Zonal Lumen Summary			
Zone	Lumens	%Fixture	%Lamp
0-30	1195	27.0%	27.0%
0-40	1961	44.4%	44.4%
0-60	3483	78.8%	78.8%
0-90	4421	100.0%	100.0%
0-180	4422	100.0%	100.0%

| Avg. Luminance (cd/m²)			
	0	90	180
0	2327	2327	2327
5	2415	2358	2185
15	2403	2350	2181
25	2379	2329	2167
35	2340	2295	2145
45	2285	2241	2114
55	2203	2154	2054
65	2057	1997	1918
75	1749	1687	1639
85	1104	1294	1301

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	90	84	78	96	89	82	85	80	75	69
3	90	79	71	65	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	62	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	26
10	53	39	31	26	51	39	31	38	31	26	24

2FFX   FormFlex recessed 2x4

up to 7400 lumens

2FFXG74L840-4-DS-UNV-DIM

Luminaire Lumens	7512
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	58.3
Spacing Criterion (0–180)	1.30
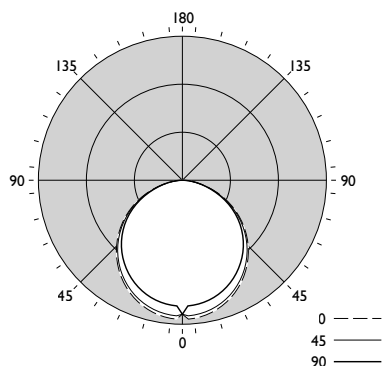
Candela Distribution

	0	22.5	45	67.5	90	Flux Lumens
0	2606	2606	2606	2606	2606	
5	2695	2692	2631	2491	2439	247
15	2600	2597	2543	2412	2360	708
25	2414	2411	2365	2250	2200	1075
35	2146	2143	2105	2016	1968	1301
45	1810	1806	1775	1714	1675	1356
55	1416	1408	1383	1345	1320	1229
65	973	964	944	919	907	931
75	507	504	490	480	476	522
85	108	112	128	126	127	142
90	7	9	9	10	10	

Zonal Lumen Summary

Zone	Lumens	%Fixture	%Lamp
0-30	2030	27.0%	27.0%
0-40	3331	44.3%	44.3%
0-60	5916	78.8%	78.8%
0-90	7511	100.0%	100.0%
0-180	7512	100.0%	100.0%

Avg. Luminance (cd/m²)

	0	90	180
0	3952	3952	3952
5	4103	4005	3712
15	4082	3992	3705
25	4040	3956	3681
35	3973	3898	3643
45	3882	3806	3592
55	3743	3656	3491
65	3492	3389	3256
75	2971	2869	2788
85	1883	2219	2207

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	90	84	78	96	89	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	62	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	26
10	53	39	31	26	51	39	31	38	31	26	24