# **Day-Brite**

# Recessed

# FormFlex 2x4

FFZ up to 7400 lumens



Day-Brite/CFI FormFlex LED recessed is a fully luminous aperture luminaire offering a diffuse or opaque 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.

Project:
Location:
Cat.No:
Туре:
Qty:
Notes:

Base configurations are indicated in blue. Standard configurations are available with all choices, unless otherwise noted.

## Ordering guide (standard & wireless controls)

example: 2FFZG45L840-4-DS-UNV-DIM-DAYOCC-EM06

Series	Ceiling Type	Lumens (nominal delivered)	Colo (CRI/		Length	Cent	er Diffuser	Volt	age	Drive	г	Options	
2FFZ	G			-	4 -		_		-		-		
2FFZ FormFlex	<b>G</b> Grid	Base configs 42B 4200	835	80 CRI, 3500K	<b>4</b> 4ft	DS	Diffuse (smooth)	UNV	Universal Voltage,		Dimming Step dimming	F1	3/8" flex, 18ga. 6'; 3 leads include hot, neutral, ground
2x4' gen 2		<b>48B</b> 4800	840	80 CRI, 4000K		DSOF	P Diffuse (opaque)	347	120-277V 347V		to 40% input power	F2	3/8" flex, 18ga. 6'; 4 leads include 2 hots, neutral, ground
		Standard configs	850	80 CRI, 5000K						LDE1	Lutron LDE1, 1% dimming	F2/5W <sup>8</sup>	3/8" single flex, 18ga. 6' (for dimmable); 5 leads include hot, neutral, ground, Dim+ / Dim-
		38L 3800 43L 4300 48L 4800								DALI	DALI dimming	F2/6W <sup>8</sup>	3/8" single flex, 18ga. 6' (for dim & EM); 6 leads include 2 hot, neutral, ground, Dim+ / Dim-
		54L 5400										GLR	Fusing, fast blow
		<b>60L</b> 6000										DSC	Quick driver disconnect
		<b>74L</b> 7400										CHIC	Chicago Plenum rated
		011										EM064	Bodine BSL06T3 6W battery pack
		Other options may be ordered										EM104	Bodine BSL10T3 10W battery pack
		in increments of 100lm from 3800										ER1004.5,6	UL924 listed sensor bypass relay, factory installed between driver & sensor
		to 7400lm									GTD/E <sup>3,5</sup>	UL924 listed Bodine GTD factory installed on driver input	
Accesso	ries (o	rder separately)										GTD/SNSR <sup>3,4,5,6</sup>	UL924 listed Bodine GTD factory installed between driver & sensor
		ace mount field ins	tallati	on kit (fie	ald accom	hlad)						DAYOCC8	Basic sensor with daylighting & occupancy
• FMA24 - 2	2'x4' "F" n	nounting frame for I	NEMA	"F" ceilir		ibieuj						SWZCS <sup>1,7,8</sup>	Interact wireless sensor with integral daylight & occupancy sensing, advanced grouping with dwell time
· IRT9015 -	handheld	ories (order se d remote for groupi	ng an	d configu								RADIO <sup>1,7,8</sup>	Interact RF sensor for wireless connectivity only, no sensing
•		te required for any	SWZ	CS install	ation).							IAOSB <sup>1,7,8</sup>	Interact Pro wireless sensor with occupancy, daylight, & environmental sensing capabilities
Replace		.ens										AG	Antimicrobial Finish

## **Footnotes**

· FFZGDS24L - Replacement Lens · FFZGDS24LC - Replacement Control Lens · FFZGDSOP24L - Replacement Lens • FFZGDSOP24LC - Replacement Control Lens

- 1. Integral controls option dimmable to 5% via wireless wall switch (non-controls). 0-10v dimmable to 1% for Standard configurations, and to 10% for Base configurations.
- 2. Specify only with -DIM driver option (Integrated sensor options).
- 3. Not available with 347V.(BSL6/10/14, GTD, nor GLR).
- 4. ER100 not available with Bodine EM battery packs. ER100 only available with sensor options.
- 5. Must be installed in conjunction with a UL1008 device.
- 6. Must be ordered with an integral sensing option.
- 7. Must order IRT9015 Interact commissioning remote with each system order.
- 8. Flex with dimming not available with sensors.
- 9. Third party sensors also available, please enquire about options for Lutron Athena, Vive, or others.









# 2000 to 7400 lumens

# **Application**

- Ideal for modern offices, institutional, retail, and healthcare applications.
- Modern architectural styling to complementary 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.
- 80 CRI minimum source provides a balanced spectral power distribution.
- 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).

#### **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.

#### Construction/Finish

- Robust and durable die-formed embossed steel housing and end caps.
- Molded one-piece acrylic diffuser may be removed without tools for easy replacement.
- T-bar grid clips are built into luminaire end caps for quick and easy installation, no extra parts.
- Sheet metal components are multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance basked white enamel.

## 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
- Declare label certified, ID SGY-0017 (View full Declare label)
- FormFlex luminaires are Designlights
   Consortium® qualified. Please see the
   DLC QPL list for exact catalog numbers,
   www.designlights.org/QPL

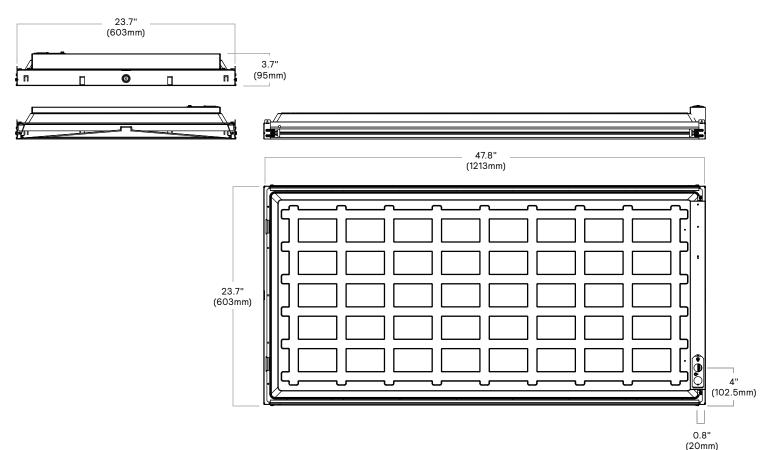
#### **Electrical**

- Non-controls Base configurations 0-10V dimmable to 5%.
- 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 100,000 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.

## Warranty

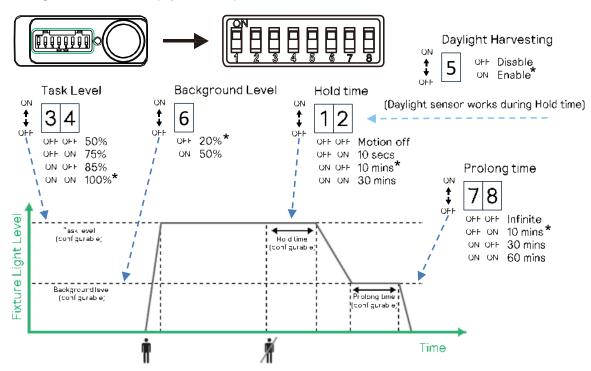
5 year manufacturer's limited warranty.
 Visit signify.com/warranties for complete warranty information.

## **Dimensions**

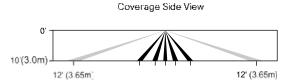


# 2000 to 7400 lumens

# **Configurable Parameters (Dip-switches)**



# **Occupancy Sensing Coverage (ft)**



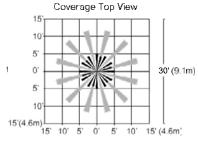
Maximum mounting height 12 ft (3.65 m)

Recommended mounting height 8 10 ft (2.5 3.0 m)

The detection areas for occupancy sensing are defined as:

Minor movement (person moving < 3.0 ft/s or 0.9 m/s)

Major movement (person moving ≥ 3.0 ft/s or 0.9 m/s)



# Configurable settings

- Brightness level: 100% ; 90% ; 80% ; 70%
- Daylight harvesting: Enable; Disable
- Hold time: infinite (continuous daylight harvesting)\*: 10 sec; 10min; 30 mins
- · Background level: 20%; 50%
- Prolong-time: 9 min; 30 min;
   60 min; infinite (light always on)
- \* Sensor working as "daylight harvesting only". No occupancy detection

# 2000 to 7400 lumens

# interact

Dimming, grouping, and zoning

Bluetooth and ZigBee enabled

Motion sensing and daylight harvesting

Granular dimming and dwell time

**Energy reporting and monitoring** 

Code compliance

Scheduling

Demand response

BMS integration (BACnet)

Floor plan visualization

IoT sensors for wellness

IoT Apps for productivity

Integration with 0-10V and phase dimming fixtures

Correlated color temperature (CCT) tuning by switch
Support for sensor-based Tunable White luminaires

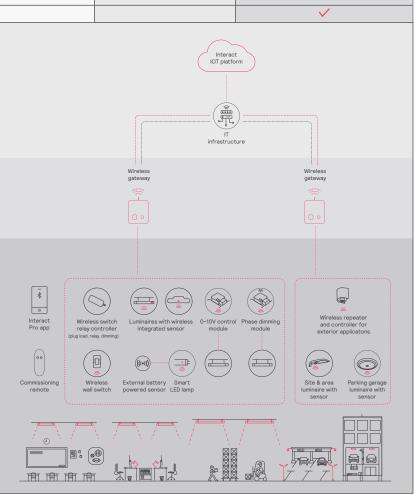


# Currently supported maximum system size

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
Zones + groups	64
Total number of ZGP devices (sensors and switches)	50
Sensors	30
Switches	50

Group level							
Recommended number of lights	40 (maximum 150)						
Number of ZGP devices	5						
Number of scenes	16						



# 2000 to 7400 lumens

# Wireless controls options

## Interact

- SWZCS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the standalone mode (similar to SpaceWise) when configured without a gateway or in a cloud connected mode if a compatible gateway is used.
- Interact 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 on-site to identify and group devices together.

#### Compatible with:

- SWS200 & UID8465 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 IP65W
- LCN3120: battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact visit: interact-lighting.com/interactproscalablesystem

# Radio only sensor (RA or RADIO)

- Integral RA or 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 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, identify and group devices together onsite.
- Compatible with SWS200 and UID8465 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).
- For more information on Interact visit: interact-lighting.com/interactproscalablesystem

## SofTrace shown with integral sensor



# Sensor bundle (IAOSB or SB)

- 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 with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSORIA 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.
- IAOSB or SB option in addition to occupancy and daylights sensing supports advanced IoT capabilities, such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit: interact-lighting.com/interactproscalablesystem

# **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 supported sensor option codes across Genlyte Solutions product lines

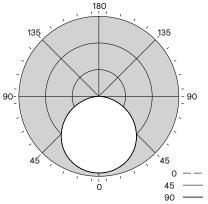
	Evokit	Day-Brite	Ledalite	Lightolier
ZigBee + Bluetooth + Sensing	SWZCS	SWZCS	CS	SBA accessory (external)
ZigBee + Bluetooth	RADIO	RADIO	RA	RA
ZigBee + Bluetooth + Sensing + Environmental data	IAOSB	IAOSB	SB	SB
ZigBee + Highbay + Sensing	-	SWZCSH	-	-

# 2000 to 7400 lumens

# **Photometry**

# 2FFZG48L840-4-DS-UNV-DIM

Luminaire Lumens	4832
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	37.1
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.30



Cande	Candela Distribution										
	0	45	90	135	180	Lumens					
0	1628	1628	1628	1628	1628						
5	1624	1621	1622	1623	1624	154					
15	1577	1577	1577	1576	1574	445					
25	1481	1479	1478	1477	1478	682					
35	1332	1330	1329	1329	1329	832					
45	1131	1131	1130	1129	1128	871					
55	887	889	889	888	889	794					
65	613	617	620	618	619	611					
75	322	339	332	330	331	350					
85	71	77	82	84	86	94					
90	0	0	0	0	0						

Со	effic	ients c	of Utiliz	ation	% (E	Based o	n a floor	reflect	ance of	0.2)		
Pc 80					70			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
ž	1	109	104	99	95	106	101	97	97	94	91	83
	2	99	90	83	77	96	88	82	85	79	75	69
	3	90	79	71	64	87	77	70	74	68	62	58
	4	82	70	61	54	80	68	60	66	59	53	49
	5	75	62	53	46	73	61	53	59	51	46	42
	6	70	56	47	40	68	55	46	53	46	40	37
	7	64	51	42	36	63	50	41	48	41	35	33
	8	60	46	38	32	58	46	37	44	37	31	29
	9	56	42	34	28	55	42	34	41	33	28	26
	10	52	39	31	26	51	39	31	38	30	26	24

<sup>\*</sup> Based on a floor reflectance of 0.2

Zonal Lumen Summary									
Zone	Lumens	%Fixture	%Lamp						
0-30	1281	26.5%	26.5%						
0-40	2113	43.7%	43.7%						
0-60	3778	78.2%	78.2%						
0-90	4832	100.0%	100.0%						
0-180	4832	100.0%	100.0%						

Avg. Luminance (cd/m²)								
	0	90	180					
45	2496	2494	2488					
55	2413	2419	2418					
65	2263	2287	2286					
75	1939	2002	1994					
85	1273	1461	1533					

# **Photometry Data**

Nominal CRI & CCT	c	RI 80, 3500	K	CRI 80, 4000K				
	Nominal Lumen Package (Im)	Watts (W)	Flux (lm)	Efficacy (LPW)	UGR	Flux (lm)	Efficacy (LPW)	UGR
2FXCG38LXXX-4-DS	3800	28.7	3,630	126.3	18.8	3,776	131.4	18.8
2FXCG43BXXX-4-DS	4300	32.6	4,115	126.1	19.2	4,261	130.6	19.3
2FXCG43LXXX-4-DS	4300	33.4	4,207	126.0	19.3	4,353	130.4	19.3
2FXCG48BXXX-4-DS	4800	37.1	4,662	125.7	19.8	4,809	129.7	19.9
2FXCG48LXXX-4-DS	4800	37.1	4,662	125.7	19.6	4,809	129.7	19.7
2FXCG54LXXX-4-DS	5400	41.7	5,224	125.2	19.9	5,370	128.7	19.9
2FXCG74LXXX-4-DS	7400	58.4	7,173	122.8	21.0	7,319	125.3	21.1