

#### Recessed

DuaLED 1x4

**1DLG** up to 4700 lumens



Day-Brite / CFI DuaLED recessed is a highly efficient, visually comfortable, architecturally styled recessed LED luminaire, designed with a minimalistic strategy to achieve sustainable objectives. Its clean, modern design offers a fresh variation on the popular dual chamber theme and provides architectural styling compatible with virtually any area. SpaceWise Technology for selected applications is optional for additional energy savings and control.

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

example: 1DLG41L840-4-D-UNV-DIM

#### Ordering guide - standard & wireless controls

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

Width	Family	Ceiling Type	Lumen Package	Colo	r	Lengt	th	Center Diffuser						Volta		Driver		Options	
1	DL	G			-	4	]-	D			_		_						
1 1'	DL DuaLED	<b>G</b> Grid	Base configuration 37B 3700 nominal delivered lumens 27L 2700 nominal delivered lumens 36L 3600 nominal delivered lumens 41L 4100 nominal delivered lumens 47L 4700 nominal delivered lumens 47L 4700 nominal delivered lumens 0 ther lumen packages may be ordered in increments of 1001m from 2700 to 4700 lumens	850	80 CRI, 3000K 80 CRI, 3500K 80 CRI, 4000K 80 CRI, 5000K	4 4'		D	Diffuse (opal)	347	Universal Voltage. 120-277 volt 347V	DIM¹ SDIM  LDE² DALI	0-10V dimming Step dimming to 40% input power Lutron LDE5, 5% dimming DALI dimming	F1 F2 F1/D F2/5W GLR EMLED EMLED7 DSC CHIC ER100 <sup>4,5,9,10</sup> GTD/E <sup>5,9</sup> SWZCSRM <sup>1,4,8</sup> SWZDTRM <sup>1,4</sup> RADIO <sup>1,4,6</sup>	3/8" Flex, 3 Wire 18 gauge 6' 3/8" Flex, 4 Wire 18 gauge 6' 3/8" Twin Flex, 3 Wire 18 gauge 6' for dimmable luminaires 3/8" Single Flex, 5 Wire 18 gauge 6' for dimmable luminaires Fusing, Fast Blow Bodine BSL310 10W battery pack (requires driver enclosure on top of luminaire) Bodine BSL37 TW battery pack (requires driver enclosure on top of luminaire) Quick driver disconnect Chicago Plenum rated UL.924 listed sensor bypass relay, factory installed between driver & sensor UL.924 listed Bodine GTD factory installed on driver input Remote Interact Pro scalable sensor with integral daylight & occupancy sensing, advanced grouping with dwell time Remote SpaceWise only sensor, daylighting and occupancy, advanced grouping with dwell time Interact Pro RF sensor, enables wireless connected lighting control				
														AG	Antimicrobial paint				

#### **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 10% for Base configurations.
- 2 Specify LDE option only for 27L and 36L lumen packages.
- 3 Available only with Base configurations.4 Specify DIM driver option only.
- 5 Not available with 347V option.
- 6 Not available with surface or suspended accessories.
- 7 Maximum of 4 luminaires per controller.
- 8 Must order IRT9015 Interact commissioning remote with each system order.
- 9 Must be installed in conjunction with a UL1008 device.
- 10 Must be ordered with an integral controls option.

#### Accessories (order separately)

- FMA14 1'x4' "F" mounting frame for NEMA "F" mounting
- FSK14 1'x4' surface mount field installation kit (welded seams, not available with emergency options)
- FSF14 1'x4' surface mount field assembly kit (field assembled, not available with emergency options)
- SWZDT<sup>1,4,7,8</sup> SpaceWise wireless controller with daylighting and occupancy, advanced grouping with dwell time functionality (compatible with all 0-10V options, see SWZDT spec sheet)
- SBAZ10-CS<sup>1,4,7,8</sup> Interact Ready System Bridge Accessory, refer to Philips System Bridge Accessory specification sheet for options and ordering details
- IRT9015 handheld remote for grouping and configuration (at least one remote required for any SWZCS installation).







## up to 4700 lumens

#### **Application**

- A highly efficient, visually comfortable, architecturally styled recessed LED luminaire designed with a minimalistic strategy to achieve sustainable objectives.
- Low profile configuration is only 2–11/16" high and is compatible with virtually any plenum.
- Clean, modern design provides architectural styling compatible with virtually any area.
- Soft opal diffuser with large luminous area minimizes apparent brightness and provides high visual comfort perfect for a wide variety of general lighting applications like offices, schools, retail, or healthcare.
- Multiple lumen packages over a wide range provide significant application flexibility over light levels and/or luminaire spacing.
- A high lumen package can be used in conjunction with wide luminaire spacing to reduce luminaire quantities and overall cost while maintaining good uniformity.
- Directs a controlled amount of light to the higher angles in the room to balance the brightness of the surfaces and eliminate "cave effect" while creating the impression of a larger, brighter space without glare.
- $\boldsymbol{\cdot}$  Excellent color rendering with a CRI of 80.
- LEDs are an excellent source for use with controls since dimming or frequent switching does not degrade the performance or life of the source. External sensors are available for use.
- Designed for use with standard Grid (NEMA "G") or Narrow Grid (NEMA "NFG") ceiling T-bars. Drywall or plaster requirements can be accommodated by using an FMA14 "F" mounting frame (sold separately.)
- · Listed for use in non-insulated ceilings (Type Non-IC).
- DuaLED luminaires are DesignLights Consortium® qualified.
   Please see the DLC QPL list for exact catalog numbers.
   (www.designlights.org/QPL)

#### Construction/Finish

- Uncomplicated design is well under 3" in depth and only requires a few parts outside of the electrical system and hardware, creating several benefits:
  - Less material required
  - Less packaging required
  - Reduced weight
  - Less energy required for construction and assembly
  - More luminaires can be shipped per truck to reduce fuel use and emissions
- Luminaire is painted after fabrication with a matte white polyester powder coating for a high quality, durable finish with no unfinished edges to create an installation hazard or potential for corrosion.
- T-bar grid clips are included for easy installation.

#### Electrical

- Driver and LED boards are easily accessible from below without tools.
   Multiple LED boards are individually replaceable if needed via plug-in connectors to ensure long service life.
- 0-10v dimming to 1% for Standard configurations, and 5% for Base configurations
- Emergency options are available to add even more application flexibility. Emergency models require a taller driver enclosure that increases luminaire depth.
- Five year limited luminaire warranty includes LED boards and driver (emergency driver and batteries have a three year warranty in models so equipped). Visit www.philips.com/warranties for complete warranty information
- Predicted L70 lumen maintanance up to 70,000 hours for Standard configurations and 50,000 hours for Base configurations.
- To estimate lumen output in emergency mode, multiply emergency pack wattage by luminaire efficacy, then by 1.10. Typical lumen output is 1300lm for EMLED and 850lm for EMLED7.
- cETLus listed to UL and CSA standards, suitable for damp locations.

#### **Enclosure**

- · Diffuser has large surface area for brightness control.
- Opal diffuser provides soft, comfortable lighting while maintaining high efficiency.
- Diffuser requires no frames or fasteners and can be easily removed from below without tools if needed.

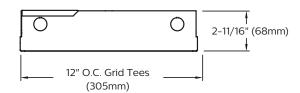
#### **General Notes**

- · All options 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.

#### **Energy Data**

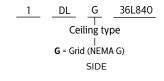
Luminaire	Catalog Number	Input Power	Efficacy
	1DLG27L840	22	127
4-4 64	1DLG36L840	29	123
1x4 Standard	1DLG41L840	34	121
	1DLG47L840	39	120
1x4 Base	1DLG37B840	33	121

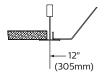
#### **Dimensions**



\* EMLED and EMLED7 are 1-3/4" (45mm) deeper

#### Ceiling configuration





(NEMA Type G) Lay-in acoustical ceilings using exposed grid suspension, with tees for luminaires on 12" x 48" spacing.

## up to 4700 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

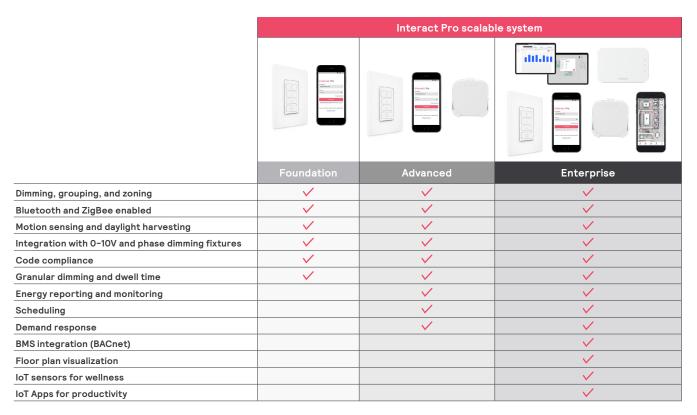
#### Interact Pro scalable sensor for Foundation, Advanced & Enterprise tiers (SWZCS and an evolution of SpaceWise)

- 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.

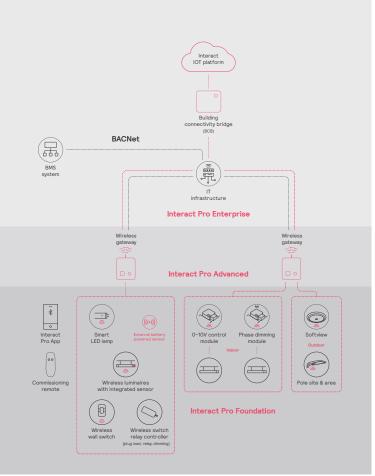
## up to 4700 lumens



#### 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					
<ul> <li>luminaires with integrated sensors</li> </ul>	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					



## up to 4700 lumens

#### **Photometry**

#### 1x4 DuaLED, 3700 nominal delivered lumens

 Catalog No.
 1DLG37B840-4-D-UNV

 Test No.
 37670

 S/MH
 1.3

 Lamp Type
 LED

 Lumens/Lamp
 3738

 Input Watts
 34

Comparative yearly lighting energy cost per 1000 lumens – \$2.16 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.

#### **LER - 111**

Light Distribution						
Degrees	Lumens	% Luminaire				
0-30	1000	26.7				
0- 40	1642	43.9				
0-60	2930	78.4				
0- 90	3738	100.0				

Average Luminance							
Angle	End	45°	Cross				
45	5378	5514	5559				
55	5194	5384	5434				
65	4911	4996	4960				
75	4198	4276	4207				
85	3662	3289	3223				

#### Coefficients of Utilization

#### EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)		80%		70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30
RCR	CR Zonal cavity method - Effective floor reflectance = 20%				6			
Room Cavity Ratio	118 109 98 90 81 75 69 65 59 56	118 104 90 79 69 61 56 51 46 42 39	118 98 82 70 60 53 46 41 38 34	115 106 95 86 80 72 68 63 57 55	115 101 88 77 68 60 55 50 46 41	115 96 81 69 59 53 46 41 36 34	111 96 84 73 66 58 53 47 44 40 38	111 93 79 68 58 52 46 40 36 33 30

#### 1x4 DuaLED, 3600 nominal delivered lumens

 Catalog No.
 IDLG36L840-4-D-UNV-DIM

 Test No.
 35432

 S/MH
 1.3

 Lamp Type
 LED

 Lumens/Lamp
 3567

 Input Watts
 29.0

Comparative yearly lighting energy cost per 1000 lumens - \$1.95 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.

#### Candela distribution

Candela distribution

1223

1138

1013

466

72

Horizontal Angle

90°

1284

1283

1239

1157

1035

883

700

471

245

63

-45°

1284

1277

1235

1149

1025

876

694

474

249

45°

1284

1277

1235

1149

1025

876

694

474

249

64

Vertical

Angle

o 1284

5 1266

15

25

35

**45** 854

**55** 669

65

**75** 244

85

/ertical	Horizontal Angle				
Angle	0°	45°	90°	-45°	
0	1218	1218	1218	1218	
5	1200	1214	1222	1214	
15	1159	1179	1186	1179	
25	1077	1095	1106	1095	
35	954	979	992	979	
45	802	831	845	831	
55	625	655	668	655	
65	433	459	461	459	
75	243	247	246	247	
85	73	62	66	62	

#### LER - 123

Light D	Ave		
Degrees	Lumens	% Luminaire	Ang
0-30	952	26.7	4
0- 40	1563	43.8	5
0-60	2782	78.0	6
0- 90	3568	100.0	7
			8

# Average Luminance Angle End 45' Cross 45 5321 5512 5607 55 5111 5357 5465 65 4805 5099 5116 75 4402 4476 4462

#### Coefficients of Utilization

#### EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)		80%			70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30	
RCR	7	Zonal cav	ity meth	od - Effec	tive floo	r reflecta	nce = 209	6	
Room Cavity Ratio 0 6 8 4 9 5 7 8 6 7 1 0	118 108 97 90 81 75 69 64 59 56	118 104 90 79 69 61 56 51 46 41	118 98 82 70 60 53 46 41 38 34	115 106 95 86 80 72 68 63 57 55	115 101 88 77 68 60 55 50 46 41	115 96 81 69 59 53 46 41 36 34	111 96 84 73 66 58 53 47 44 40 38	111 93 79 68 58 51 46 40 36 33 30	

35

45

55

65

75

1129

948

739

513

287

1157

981

774

543

293

1173

1000

791

546

291

78

## up to 4700 lumens

#### 1x4 DuaLED, 4100 nominal delivered lumens

1DLG41L840-4-D-UNV-DIM Catalog No. Test No. 35433 1.3 S/MH LED Lamp Type 4220 Lumens/Lamp

347

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.

**Input Watts** 

#### **LER - 121**

#### Candela distribution **Light Distribution** Vertical Horizontal Angle Angle 45° 90° -45° 1440 1440 0 1440 1440 5 1418 1435 1445 1435 15 1371 1394 1402 1394 25 1273 1295 1308 1295

1157

981

774

543

293

•		
Degrees	Lumens	% Luminaire
0-30	1126	26.7
0- 40	1849	43.8
0-60	3292	78.0
0- 90	4222	100.0

Average Luminance							
Angle	End	45°	Cross				
45	6293	6508	6636				
55	6049	6329	6472				
65	5690	6033	6057				
75	5210	5303	5279				
85	4646	3957	4183				

#### Coefficients of Utilization

#### EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)	80%		70%			50%		
Wall (pw)	70	50	30	70	50	30	50	30
RCR	7	Zonal cav	ity metho	od - Effe	tive floo	r reflecta	nce = 209	%
Room Cavity Ratio	118 108 97 90 81 75 69 64 59 56	118 104 90 79 69 61 56 51 46 41	118 98 82 70 60 53 46 41 38 34	115 106 95 86 80 72 68 63 57 55	115 101 88 77 68 60 55 50 46 41	115 96 81 69 59 53 46 41 36 34	111 96 84 73 66 58 53 47 44 40 38	111 93 79 68 58 51 46 40 36 33 30

#### 1x4 DuaLED, 4700 nominal delivered lumens

Catalog No. 1DLG47L840-4-D-UNV-DIM Test No. 35436 S/MH LED Lamp Type 4706 Lumens/Lamp Input Watts 391

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.

### Candela distribution

Vertical	Horizontal Angle						
Angle	0°	45°	90°	-45°			
0	1606	1606	1606	1606			
5	1581	1603	1611	1603			
15	1528	1556	1564	1556			
25	1419	1447	1459	1447			
35	1257	1292	1307	1292			
45	1056	1096	1114	1096			
55	823	865	881	865			
65	571	606	606	606			
75	319	325	324	325			
85	96	81	86	81			

#### **LER - 120**

Light Distribution						
Degrees	Lumens	% Luminaire				
0-30	1256	26.7				
0-40	2062	43.8				
0-60	3671	78.0				
0- 90	4708	100.0				

#### Average Luminance Angle End 7394 7205 7007 45 55 65 6734 7075 6335 6732 6728 75 85 5785 5887 5878

#### Coefficients of Utilization

#### EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

RCR Zonal cavity method - Effective floor reflectance = 20%  0 118 118 118 115 115 115 111 111										
RCR Zonal cavity method - Effective floor reflectance = 20%  0 118 118 118 115 115 115 111 111	Ceiling (pcc)	80%		70%			50%			
0 118 118 118 115 115 111 111	Wall (pw)	70	50	30	70	50	30	50	30	
1 100 104 00 105 101 05 05 03	RCR	Z	Zonal cav	ity metho	od - Effec	tive floo	r reflecta	nce = 209	%	
9   56   41   34   55   41   34   40   33	Room Cavity Ratio	108 97 90 81 75 69 64 59	104 90 79 69 61 56 51 46 41	98 82 70 60 53 46 41 38 34	106 95 86 80 72 68 63 57	101 88 77 68 60 55 50 46 41	96 81 69 59 53 46 41 36 34	96 84 73 66 58 53 47 44 40	93 79 68 58 51 46 40 36	



not form part of any quotation or contract, unless otherwise agreed by Signify.

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