PHILIPS

Day-Brite

CFI

Recessed

DuaLED 2x2

2100, 2700, 3000, 3400, 3800, or 4400lm

Project:

Location:

Cat.No:

Type:

Lamps: Qty:

Notes:

Philips Day-Brite / Philips 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.

Ordering guide

example: 2DLG27L840-2-D-UNV-DIM

Width	Family	Ceiling Type	Lumen Package	Color	Length	Diffusers	Voltage	Driver
2	DL	G		–	2 –	D –	–	–
2 2'	**DL** DuaLED	**G** Grid	**21L** 2100 nominal delivered lumens **27L** 2700 nominal delivered lumens **30L**[1] 3000 nominal delivered lumens **34L** 3400 nominal delivered lumens **38L** 3800 nominal delivered lumens **44L** 4400 nominal delivered lumens	**830** 80 CRI, 3000K **835** 80 CRI, 3500K **840** 80 CRI, 4000K **850** 80 CRI, 5000K	**2** 2'	**D** Diffuse (Opal)	**UNV** Universal voltage 120-277V **347** 347V **24VDC**[1] 24V DC (EMerge Registered)	**DIM** 0-10v dimming **L3D**[2] Lutron Hi-Lume A, 1% Dimming **LDE**[3] Lutron EcoSystem Series 5, 5% Dimming **DALI** DALI dimming **SDIM** Step dimming to 40% power

Options

F1[4]	3/8" Flex, 3 Wire 18 gauge 6'
F2[4]	3/8" Flex, 4 Wire 18 gauge 6'
F1/D[4]	3/8" Twin Flex, 3 Wire 18 gauge 6' for dimmable luminaires
F2/5W[4]	3/8" Single Flex, 5 Wire 18 gauge 6' for dimmable luminaires
GLR[4]	Fusing, Fast Blow
EMLED[4]	Integral emergency battery pack, 1100lm nominal (ballast enclosure on top of luminaire)
DAYOCC[5,6,7]	Integral sensor, daylighting and occupancy, Philips EasySense SNS102
SWZG2[5,7,8]	SpaceWise automated wireless technology for integrated occupancy and daylight harvesting, requires –DIM
CHIC	Chicago Plenum rated

Footnotes

1 24VDC only available in 30L lumen package. Do not specify a driver option.
2 L3D option available only on 27L and 34L lumen packages.
3 LDE option available only on 27L, 34L, 38L, and 44L lumen packages.
4 Not available in 24VDC.
5 Specify only with -DIM driver option.
6 Dimming via wall switch only. See page 2 for details.
7 Integral sensing options (DAYOCC, SWZG2) may not be combined.
8 Must order SWZ-REMOTE SpaceWise handheld remote with each system order.

SpaceWise accessories (order separately)

- **LRM1743** – External sensor to increase occupancy coverage area of SpaceWise luminaire groups
- **SWZ-REMOTE** – SpaceWise handheld remote for grouping and configuration (at least one remote required for any SpaceWise installation)
- **UID8451/10** – Wireless Dimmer Switch Selector
- **UID8461/10** – Wireless Scene Selector

Other accessories (order separately)

- **FMA22** – 2'x2' "F" mounting frame for NEMA "F" mounting

DuaLED recessed 2x2

2100, 2700, 3000, 3400, 3800, or 4400lumens

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 offers a fresh variation on the popular dual chamber theme and provides architectural styling compatible with virtually any area.
- Soft opal diffusers with large luminous area minimize apparent brightness and provide 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.
- High efficiency source and luminaire design create significant energy savings over conventional solutions. Recommended light levels can frequently be achieved with lighting power densities of 0.5 to 0.85 Watts per square foot, complying with any known energy code.
- 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.
- 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. Integral or 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 FMA22 "F" mounting frame (sold separately.)
- Listed for use in non-insulated ceilings (Type Non-IC).
- Some DuaLED luminaires are DesignLights Consortium® qualified. Please see the DLC QPL list for exact catalog numbers. (www.designlights.org/QPL)
- EMLED and 24VDC are NOT DLC qualified.

Energy Data

Luminaire	Catalog Number	Input Power	Efficacy
2x2	2DLG27L840	22.5	118
	2DLG34L840	29.3	117
	2DLG38L840	32.9	117
	2DLG44L840	39.0	114

Contruction/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

- 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.
- Total luminaire efficacy as high as 118 LPW (lumens per Watt) significantly reduces energy usage compared to conventional 2x2 sources.
- 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 is standard. Emergency options are available to add even more application flexibility. Emergency models require a top mounted driver enclosure or a metal can emergency driver mounted to the housing/top 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.
- High efficiency LEDs have a minimum 70,000 hour rated life (L70). Predicted L70 lifetime based on LED manufacturer's supplied LM-80 data and in-situ laboratory testing
- cETLus listed to UL and CSA standards. Standard DuaLED suitable for damp locations.

Enclosure

- Dual chamber configuration utilizes two diffusers with large surface area for brightness control.
- Opal diffusers provide soft, comfortable lighting while maintaining high efficiency.
- Diffusers require no frames or fasteners and can be easily removed from below without tools if needed.

SpaceWise Technology (SWZG2)

- Optional SpaceWise automated wireless technology provides integrated occupancy sensing and daylight harvesting for additional control and energy savings.
- Requiring no system re-wiring, SpaceWise technology is appropriate for retrofit or new design and is an ideal replacement system for typical office layouts.
- Occupancy sensors are integral to each luminaire, with embedded automatic dimming behaviors appropriate to multiple office applications. Applications modes are selected using the handheld remote control, including open plan office, private office, conference room, and corridor.
- Daylight sensors are integral to each luminaire, eliminating the need for daylight zoning. Daylight sensing is automatic and re-calibration occurs daily when luminaires turn on.
- Open plan office mode offers occupant friendly granular dimming for maximum energy savings with no compromise to light levels or visual quality. Luminaires in large rooms and open plan areas are grouped together up to a maximum of 50 using a handheld remote, and max light output can be tuned. Granular dimming then provides full light output for occupied workstations, and non-occupied workstations stay at a background level to ensure visual quality. Grouped luminaires will dim to off when no presence is detected in the group.
- SpaceWise remote control must be purchased separately. Other peripherals include code compliant, wireless, batteryless switches and external sensors.
- Visit **philips.com/spacewise** for more information about SpaceWise technology.

DAYOCC

- Integrated fixture mount Philips EasySense sensor featuring daylight and PIR occupancy sensing.
- Compatibility with Philips Advance Xitanium SR Sensor Ready LED drivers.
- Features automatic or manual on/off scenarios for code compliance and to realize full energy savings potential.
- Basic grouping to a wireless switch via an IR interface with the Philips Field App.
- Self-powered single rocker switch Illumra #ZBT-S1AWH (sourced by others), up to 40 luminaires may be grouped to a single switch.
- Register for the commissioning app at http://registration.componentcloud.philips.com/appregistration/
- For more information visit www.philips.com/EasySense

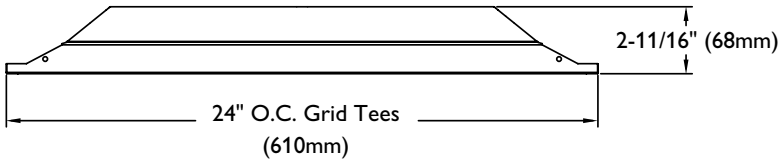
General Notes

- 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.

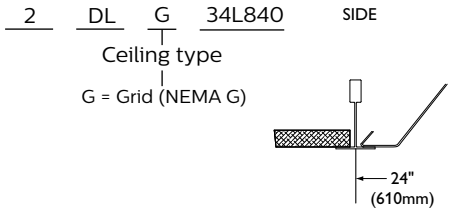
DuaLED recessed 2x2

2100, 2700, 3000, 3400, 3800, or 4400lumens

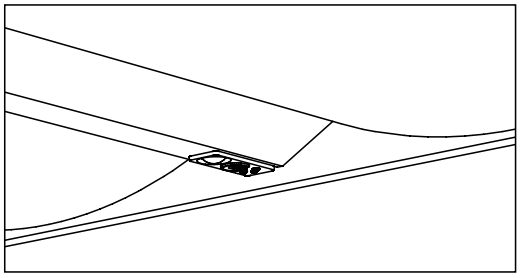
Dimensions



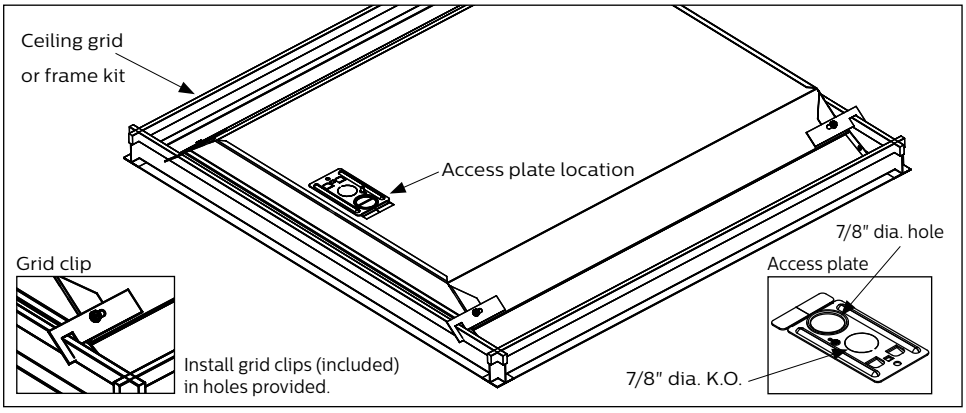
Ceiling Configuration



(NEMA Type G)
Lay-in acoustical ceilings using exposed gridsuspension, with tees for luminaires on 24" x 24" spacing.



SpaceWise (SWZ) automated wireless technology is available for integrated occupancy and daylight harvesting. Individual options for dimming, occupancy detection, and daylight harvesting are also available if SpaceWise option is not selected.



DuaLED recessed 2x2

2100, 2700, 3000, 3400, 3800, or 4400 lumens

Photometry

2x2 DuaLED, 2700 nominal delivered lumens

LER – 118

Catalog No.	2DLG27L840-2-D-UNV-DIM
Test No.	35426
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	2671
Input Watts	22.5

Comparative yearly lighting energy cost per 1000 lumens – **$2.02** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Philips 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 Angle	Horizontal Angle 0°	45°	90°	-45°
0	918	918	918	918
5	915	914	915	914
15	886	885	888	885
25	819	823	828	823
35	724	731	741	731
45	607	618	630	618
55	472	486	497	486
65	327	340	344	340
75	183	186	185	186
85	53	50	51	50

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	716	26.8
0- 40	1174	44.0
0- 60	2084	78.0
0- 90	2671	100.0

Average Luminance

Angle	End	45°	Cross
45	3118	3176	3236
55	2987	3076	3144
65	2811	2925	2952
75	2571	2603	2590
85	2213	2075	2108

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	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	108	104	98	106	101	96	96	93
2	97	90	82	95	88	81	84	79
3	90	79	70	86	77	69	73	68
4	81	69	60	80	68	59	66	58
5	75	61	53	72	60	53	58	52
6	69	56	46	68	55	46	53	46
7	64	51	41	63	50	41	47	40
8	59	46	38	57	46	36	44	36
9	56	42	34	55	41	34	40	33
10	53	39	30	51	39	30	38	30

Room Cavity Ratio

2x2 DuaLED, 3400 nominal delivered lumens

LER – 117

Catalog No.	2DLG34L840-2-D-UNV-DIM
Test No.	35427
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	3450
Input Watts	29.3

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 Philips 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 Angle	Horizontal Angle 0°	45°	90°	-45°
0	1186	1186	1186	1186
5	1182	1181	1182	1181
15	1145	1143	1147	1143
25	1058	1062	1069	1062
35	935	945	958	945
45	784	799	813	799
55	609	628	641	628
65	421	439	442	439
75	236	238	238	238
85	68	63	65	63

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	925	26.8
0- 40	1516	43.9
0- 60	2692	78.0
0- 90	3451	100.0

Average Luminance

Angle	End	45°	Cross
45	4024	4101	4177
55	3856	3977	4058
65	3620	3774	3802
75	3309	3344	3337
85	2842	2621	2725

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	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	108	104	98	106	101	96	96	93
2	97	90	82	95	88	81	84	79
3	90	79	70	86	77	69	73	68
4	81	69	60	80	68	59	66	58
5	75	61	53	72	60	53	58	52
6	69	56	46	68	55	46	53	46
7	64	51	41	63	50	41	47	40
8	59	46	38	57	46	36	44	36
9	56	42	34	55	41	34	40	33
10	53	39	30	51	39	30	38	30

Room Cavity Ratio

DuaLED recessed 2x2

2100, 2700, 3000, 3400, 3800, or 4400 lumens

2x2 DuaLED, 3800 nominal delivered lumens

LER – 117

Catalog No.	2DLG38L840-2-D-UNV-DIM
Test No.	35428
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	3849
Input Watts	32.9

Comparative yearly lighting energy cost per 1000 lumens – **$2.05** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Philips 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 Angle	Horizontal Angle 0°	45°	90°	-45°
0	1323	1323	1323	1323
5	1319	1317	1319	1317
15	1277	1276	1279	1276
25	1181	1185	1192	1185
35	1044	1054	1068	1054
45	875	891	907	891
55	680	700	716	700
65	470	490	495	490
75	264	266	267	266
85	76	71	73	71

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	1032	26.8
0- 40	1692	43.9
0- 60	3003	78.0
0- 90	3850	100

Average Luminance

Angle	End	45°	Cross
45	4492	4574	4659
55	4302	4431	4532
65	4040	4206	4250
75	3699	3734	3742
85	3171	2958	3054

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	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	108	104	98	106	101	96	96	93
2	97	90	82	95	88	81	84	79
3	90	79	70	86	77	69	73	68
4	81	69	60	80	68	59	66	58
5	75	61	53	72	60	53	58	52
6	69	56	46	68	55	46	53	46
7	64	51	41	63	50	41	47	40
8	59	46	38	57	46	36	44	36
9	56	42	34	55	41	34	40	33
10	53	39	30	51	39	30	38	30

Room Cavity Ratio

2x2 DuaLED, 4400 nominal delivered lumens

LER – 114

Catalog No.	2DLG44L840-2-D-UNV-DIM
Test No.	35429
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	4670
Input Watts	40.9

Comparative yearly lighting energy cost per 1000 lumens – **$2.07** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Philips 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 Angle	Horizontal Angle 0°	45°	90°	-45°
0	1603	1603	1603	1603
5	1598	1598	1600	1598
15	1548	1548	1553	1548
25	1430	1438	1447	1438
35	1264	1278	1296	1278
45	1059	1081	1101	1081
55	824	850	870	850
65	571	596	601	596
75	319	325	324	325
85	93	87	90	87

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	1252	26.8
0- 40	2052	44.0
0- 60	3641	78.0
0- 90	4668	100.0

Average Luminance

Angle	End	45°	Cross
45	5436	5546	5651
55	5212	5377	5500
65	4901	5113	5161
75	4475	4553	4535
85	3880	3618	3730

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	Zonal cavity method - Effective floor reflectance = 20%							
0	119	119	119	116	116	116	111	111
1	108	104	99	106	101	97	97	94
2	98	90	83	96	88	82	85	79
3	90	79	71	87	77	70	74	68
4	82	70	61	80	69	60	66	59
5	75	62	53	73	61	53	59	52
6	70	56	47	68	55	47	53	46
7	64	51	42	63	50	42	48	41
8	60	46	38	58	46	37	44	37
9	56	43	34	55	42	34	41	33
10	53	39	31	51	39	31	38	31

Room Cavity Ratio

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philips.com/luminaires

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008