LIGHTOLIER
by signify

Downlighting

LyteCaster LED 6"

L6S Square Downlight

Lightolier LyteCaster LED downlights feature a 3.5" luminaire height that conserves plenum space without compromising the 70° physical and reflected cutoff. The modular and interchangeable light engine allows for an easy future upgrade and the luminaire is wet location listed. Square trims are compatible with the round new construction frame-in kit and high lumen light engines.

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

Complete product = Frame-in kit + Light engine + Trim Order each separately

Frame-In kit

example: L6R20AE1VA

Series	Lumens	Frame type	Dimming / Voltage	Version[2]
L6R				VA
L6R LyteCaster LED 6" Round	**20** 2000lm (Delivers 1500lm)[1]	**A** AirSeal IC, New Construction, Screw **AN** AirSeal IC, New Construction, Nail	**E1** ELV/Triac dimming, 120V **Z10U** 0-10V, Universal 120V-277V	**VA** Version A
	15 1500lm (must be used with 1500lm light engine)	**R** AirSeal IC, Remodeler		

Light engine

Series	Lumens	CRI / CCT	Version[2]
L6R			VA
L6R LyteCaster LED 6" Round	**20** 2000lm (Delivers 1500lm)[1]	**827** 80CRI / 2700K **830** 80CRI / 3000K **835** 80CRI / 3500K **840** 80CRI / 4000K **927** 90CRI / 2700K	**VA** Version A
	15 1500lm (must be used with 1500lm frame-in kit)		

Trim

Series	Luminaire type	Finish
L6S		
L6S LyteCaster LED 6" Square	**D** Open Downlight	**D** Clear diffuse (with white flange) **W** White (with white flange)
	B Baffle Downlight	**W** White (with white flange)

1. Version A (VA) frames and light engines are not compatible with previous versions.
2. Tested at 80CRI 3500lm.

Open Downlight (white)

Baffle Downlight (white)

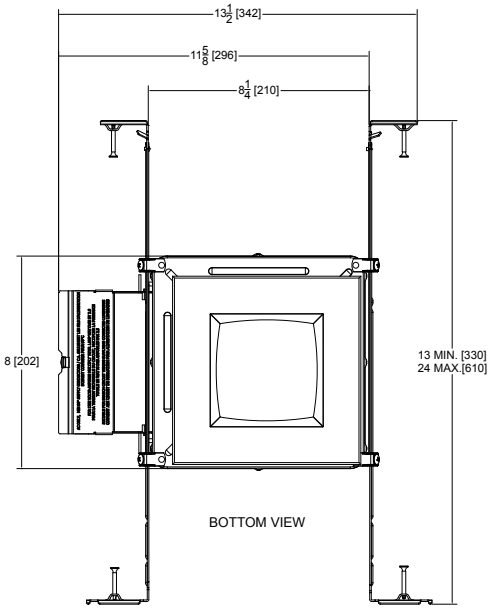
Open Downlight (clear diffuse)

L6S LyteCaster LED 6"

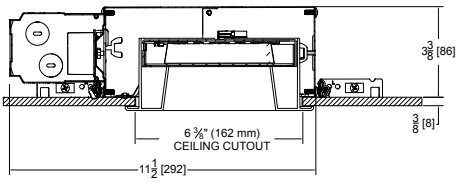
Square Downlight

Frame-in kit dimensions

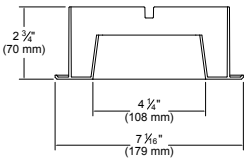
Bottom view



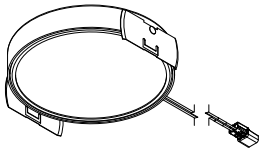
Side view

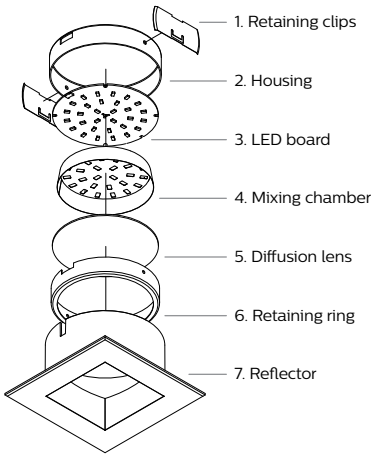


Trim



Side view





Features

Housing: .026" galvanized steel. UL listed for direct contact with thermal insulation. Airseal® housing minimizes air leakage to less than 2 CFM at 1.57PSF (or 75PA), which complies with the International Energy Conservation Code, and Washington State Energy Code (Section 502.4). This reduces heat loss and condensation in ceiling. Access door for inspection of junction box.

Lower frame and top cover: .026" galvanized steel. Accommodates ceilings up to 1" (25mm) thick. Deep integral lip is 3/8" (9.5mm) with four notches at 90˚ apart to simplify alignment. Locks into position along length of mounting bars with locking screws.

Junction Box: 2.5" X 5 3/8" X 2" (27 cu. in) .032" galvanized steel. UL listed 90 ˚ supply conductors. Rated for branch circuit wiring supplying connected luminaires (daisy chaining).

Ceiling cutout: 6 3/8" (162mm).

Driver: ELV /Triac: 120V, 50/60Hz. RoHS compliant, Class 2 power supply. Complies with FCC rules per Title 47 Part 15 (Class B) for EMI / RFI (conducted & radiated). Class A sound rating.

0-10V: 120/277V, 50/60Hz. RoHS compliant, Class 2 power supply. Complies with FCC rules per Title 47 Part 15 (Class A) for EMI / RFI (conducted & radiated). Class A sound rating.

Retaining clips: Permit easy and fast installation of light engine/trim.

Mounting bars: .059" galvanized steel. Bars pivot for easy attachment and wire-in below ceiling line. Bars extend to accommodate 16" (406mm) to 24" (610mm) O.C. joist spacing. Bars can accommodate 12" (305mm) O.C. joist spacing after a slight field modification (see Instruction sheet). Features integral self tapping phillips/square drive screws for secure attachment to wood or metal construction. Also available with integral nails. Attaches to T-bar ceilings without the need of accessories. Bars installed on shortest dimension of frame,but can be easily repositioned 90˚ from original position.

Energy Star

Product family has Energy Star certification with all new construction frame and 80CRI option with remodeler frame.

Electrical

Lifetime: Expected lifetime 50,000 hours and backed by a 5-year warranty. (see Philips.com/warranties for details)

Recommended dimmers

See LED-DIM Specification Sheet.

Labels

cULus Listed Type I.C., frames are suitable for damp location.

Trims are cULus suitable for wet location.

Complies with Air Leakage.

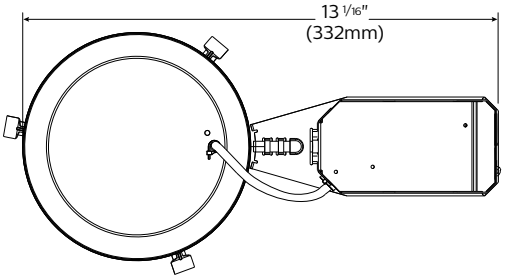
1. **Housing:** (0.05") thick powder coated aluminum provides integrated thermal management allowing for a low profile at less than 3-1/2" tall.
2. **LED board:** High efficiency mid-flux LED's.
3. **Mixing chamber:** 98% reflective, highly diffuse film.
4. **Diffusion lens:** (0.06") thick acrylic opal lens provides an even source of illumination.
5. **Retaining ring:** (0.04") thick powder coated aluminum, secures module components.
6. **Reflector:** 30% glass reinforced injection molded polycarbonate is durable and provides a 70˚ cutoff to the source.
7. **Retaining clips:** 29 gauge Stainless Steel, allows tool-less installation of light engine to trim.

L6S LyteCaster LED 6"

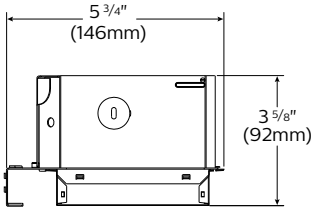
Square Downlight

Remodeler kit dimensions

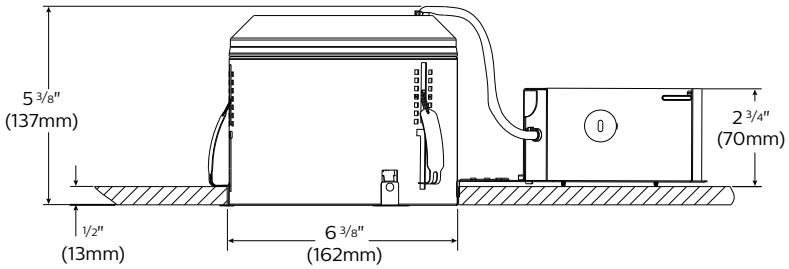
Bottom view



Side view



Side view



Features

Housing: .032 Aluminum. UL listed for direct contact with thermal insulation. Integral retaining spring secures housing to ceilings up to 2" thick. Removable for access to junction box and ceiling plenum. 5.5" maximum for use in 2" x 6" joist construction and shallow plenum applications. Airseal® housing minimizes air leakage to less than 2 CFM at 1.57PSF (or 75PA), which complies with the International Energy Conservation Code, and Washington State Energy Code (Section 502.4). This reduces heat loss and condensation in ceiling.

Junction Box: 2.5" x 2.5" x 4.875" (29 cu in.) .031" galvanized steel. UL listed for 90°C supply conductors. Rated for branch circuit wiring supplying connected fixtures.

Retaining clips: Permit easy and fast installation of light engine/trim.

Driver: ELV / Triac: 120V, 50/60Hz. RoHS compliant, Class 2 power supply. Complies with FCC rules per Title 47 Part 15 (Class B) for EMI / RFI (conducted & radiated). Class A sound rating.

0-10V: 120/277V, 50/60Hz. RoHS compliant, Class 2 power supply. Complies with FCC rules per Title 47 Part 15 (Class A) for EMI / RFI (conducted & radiated). Class A sound rating.

Ceiling cutout: 6.375" (162mm).

Electrical

Lifetime: Expected lifetime 50,000 hours and backed by a 5-year warranty. (see Philips.com/warranties for details)

Recommended dimmers

See LED-DIM specification sheet.

Labels

cULus Listed Type I.C., frames are suitable for damp location.

Trims are cULus suitable for wet location (no shower lens unit required).

Complies with Air Leakage.

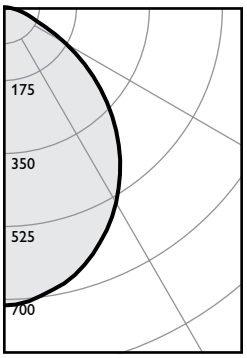
ENERGY STAR® certified.

L6S LyteCaster LED 6"

Square Downlight

2000lm Engine, 83.6 lm/w

Candela Curve



Frame: **L6R20AE1VA**
Engine: **L6R20835VA**
Trim: **L6SDW**

Output lumens:	1504.7 lms
Input watts:	18 W
CRI:	80 min
CCT[1]:	3500K
Spacing Crit.:	1.2
Beam Angle:	92°

Zonal summary

Zone	Lumens	%Luminaire
0-30	523	34.7%
0-40	825	54.8%
0-60	1317	87.5%
0-90	1505	100.0%

Angle	0°	45°	Lumens
0	715	715	
5	707	707	67
10	688	688	
15	665	664	187
20	630	625	
25	589	582	269
30	542	534	
35	489	480	302
40	432	422	
45	370	361	281
50	305	297	
55	239	235	211
60	173	175	
65	112	119	117
70	74	77	
75	51	51	55
80	31	32	
85	14	14	16
90	0	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	29	6.0'
6'	20	7.2'
7'	15	8.4'
8'	11	9.6'
9'	9	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	62.8	0.80
6'	41.2	0.52
7'	29.4	0.37
8'	24.5	0.31
9'	19.6	0.25

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 83.6 lm/w
Report[2]: 1133GFR

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	86	78	75
3	93	84	77	71	82	70	80	69	77	68	65
4	86	75	67	61	74	61	72	60	69	59	56
5	80	68	60	54	67	53	65	53	63	52	50
6	74	62	53	47	61	47	59	47	57	46	44
7	69	56	48	42	55	42	54	42	53	42	39
8	64	52	44	38	51	38	50	38	48	38	36
9	60	48	40	35	47	35	46	34	45	34	32
10	57	44	37	32	44	32	43	31	42	31	29

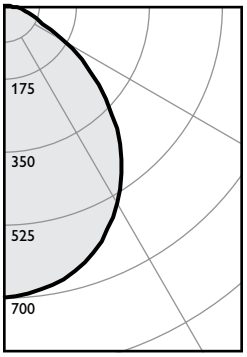
Room Cavity Ratio

Adjustment factors

90CRI 2700K = 71%
90CRI 3000K = 81%
80CRI 2700K = 89%
80CRI 3000K = 97%
80CRI 3500K = 100%
80CRI 4000K = 102%

1500lm Engine, 91.3 lm/w

Candela Curve



Frame: **L6R15RE1VA**
Engine: **L6R15835VA**
Trim: **L6SDW**

Output lumens:	1506 lms
Input watts:	16.5 W
CRI:	80 min
CCT[1]:	3500K
Spacing Crit.:	1.2
Beam Angle:	93°

Zonal summary

Zone	Lumens	%Luminaire
0-30	521	34.6%
0-40	828	55.0%
0-60	1320	87.6%
0-90	1506	100.0%

Angle	0°	45°	Lumens
0	695	695	
5	689	689	65
10	676	676	
15	656	656	185
20	626	626	
25	589	589	271
30	544	545	
35	491	493	307
40	431	434	
45	366	370	284
50	296	302	
55	227	234	208
60	159	168	
65	104	111	113
70	75	76	
75	53	54	57
80	32	33	
85	15	15	17
90	0	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	28	6.0'
6'	19	7.2'
7'	14	8.4'
8'	11	9.6'
9'	9	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	62.8	0.73
6'	41.2	0.48
7'	29.5	0.34
8'	24.6	0.29
9'	19.6	0.23

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 91.3 lm/w
Report[2]: 1260GFR

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	86	78	75
3	93	84	77	71	82	70	80	69	77	68	65
4	86	75	67	61	74	61	72	60	69	59	56
5	80	68	60	54	67	53	65	53	63	52	50
6	74	62	53	47	61	47	59	47	57	46	44
7	69	56	48	42	55	42	54	42	53	42	39
8	64	52	44	38	51	38	50	38	48	38	36
9	60	48	40	35	47	34	46	34	45	34	32
10	57	44	37	32	44	31	43	31	42	31	29

Room Cavity Ratio

Adjustment factors

90CRI 2700K = 71%
90CRI 3000K = 81%
80CRI 2700K = 89%
80CRI 3000K = 97%
80CRI 3500K = 100%
80CRI 4000K = 102%

1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008