

PHILIPS LIGHTOLIER

Downlighting

LyteCaster

6" Round adjustable



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

Philips Lightolier LyteCaster LED Adjustable Downlight is a low cost solution for slope ceiling and wall washing applications that features 30° tilt. Available in shallow new construction frame and IC remodeler. The downlight is damp location listed and interchangeable light engine/trim is available in 2 lumen packages.

Complete product = Frame-in kit + Adjustable light engine / Trim Order each separately

Ordering guide: Frame-In kit

Example: L6RAE1VA

Series	Lumens ¹	Frame type	Dimming	Input voltage	Version
L6R					VA
L6R LyteCaster 6" Round	blank 1500 20 2000	A AirSeal IC, New Construction, Screw AN AirSeal IC, New Construction, Nail	E ELV dimming Z10 0-10V	1 120V U Universal	VA Version A ²
	15 1500 20 2000	R AirSeal IC, Remodeler			

Ordering guide: Adjustable light engine / Trim

Example: L6RA15827WVA

Series	Lumens ¹	CRI	CCT	Finish	Version
L6RA				W	VA
L6RA LyteCaster 6" Round adjustable	15 1500 20 2000	8 80	27 2700K 30 3000K 35 3500K 40 4000K	W White (with white flange)	VA Version A ²
			9 90	27 2700K	

Note: Lumen output is calculated based on 80 CRI and 3500K CCT. Please consult adjustment factors table on page 5 for other lumen outputs.

1. When ordering a Frame-in kit and a Light engine, the lumen package code must match.
2. Version A (VA) frames and light engines are not compatible with previous versions.

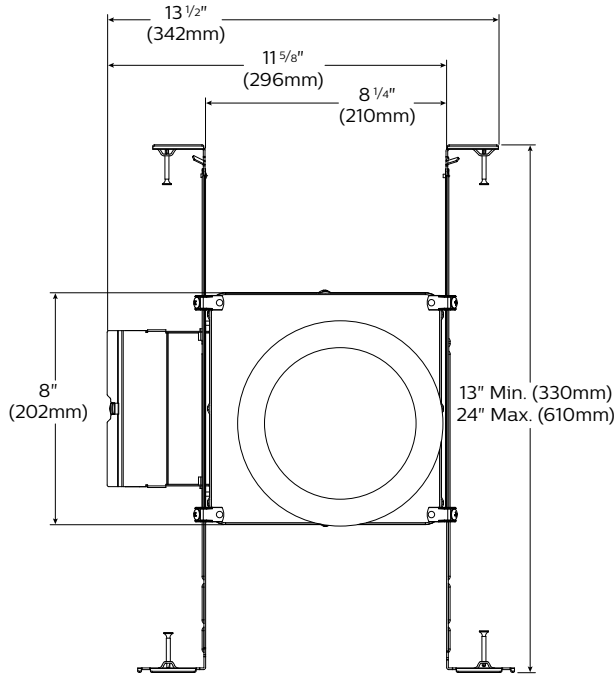


L6RA LyteCaster 6" Round adjustable

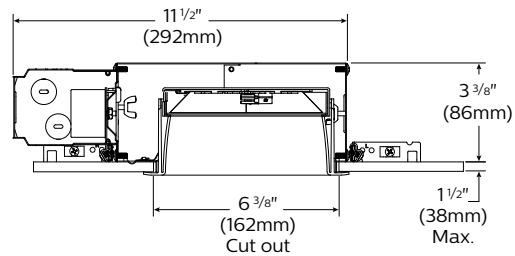
General purpose downlight

New construction frame-in kit

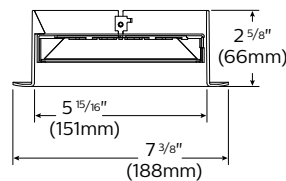
Bottom view



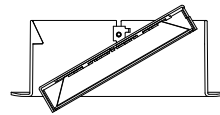
Side view



Adjustable light engine/trim



Maximum tilt: 30°



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 1/2" (38mm) thick. 3/8" (9.5mm) deep integral lip 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).
- 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 degrees from original position.
- Driver:** ELV: 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 3/8" (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

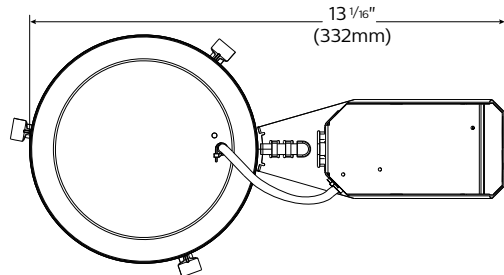
cULus Listed Type I.C., frames are suitable for damp location. Trims are cULus suitable for damp location. Complies with Air Leakage. Energy Star certified.

L6RA LyteCaster 6" Round adjustable

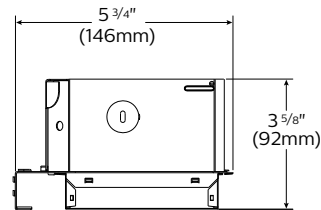
General purpose downlight

Remodeler kit

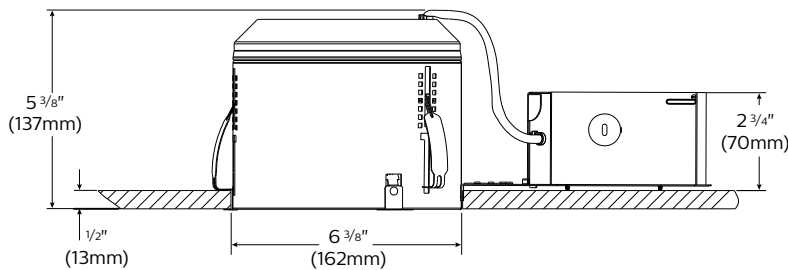
Bottom view



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 1/2" 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 1/2" x 2 1/2" x 4 7/8" (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 3/8" (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.

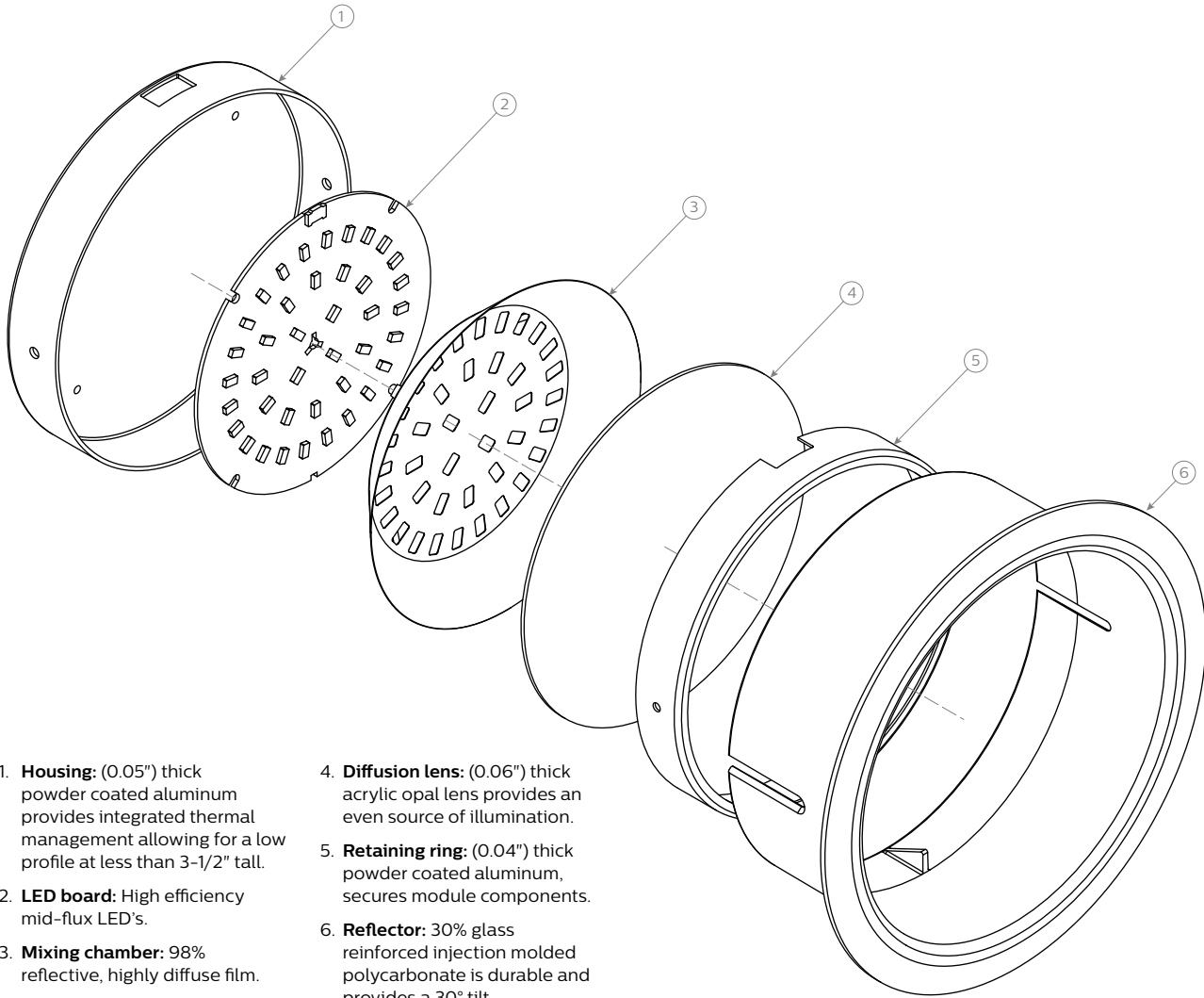
Labels

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.

L6RA LyteCaster 6" Round adjustable

General purpose downlight

Reflector: Round adjustable



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 30° tilt.

Electrical specifications

Frame-in kit / Remodeler

	Lumens	Input volts	Input freq.	Input current	LED drive current	Input power	LED power	THD factor	Power factor
L6RAE1VA / L6R15RE1VA	1500	120V	50/60Hz	0.14A	350mA	16W	13W	<20%	>0.9
L6RAZ10UVA / L6R15RZ10UVA	1500	120V	50/60Hz	0.14A	350mA	17W	13W	<10%	>0.9
		277V	50/60Hz	0.07A	350mA	17W	15W	<15%	>0.9
L6R20AE1VA / L6R20RE1VA	2000	120V	50/60Hz	0.175A	470mA	19W	16W	<20%	>0.9
L6R20AZ10UVA / L6R20R10UVA	2000	120V	50/60Hz	0.26A	470mA	20W	16W	<10%	>0.95
		277V	50/60Hz	0.11A	470mA	20W	16W	<15%	>0.95

L6RA LyteCaster 6" Round adjustable

General purpose downlight

80 CRI, 1500 lumens (downlight photometry shown)

Candela Curves				Angle	Mean CP	Lumens	Single unit data			
	0	730					Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*	
	5	724	69	5'	29	6.0'	6'	20	7.2'	
	10	412		7'	15	8.4'	8'	11	9.6'	
	15	698	197	9'	9	10.8'	* Beam diameter is where foot-candles drop to 50% of maximum.			
	20	671		Multiple unit data - RCR 2						
	25	634	292	Spacing on center	Initial Center Beam Foot-Candles	Watts per Sq. Ft.				
	30	596		5'	66.8	0.71				
	35	538	336	6'	43.8	0.47				
	40	473		7'	31.3	0.33				
	45	397	304	8'	26.1	0.28				
	50	314		9'	20.9	0.22				
	55	235	210							
	60	161	111							
	65	107	62							
	70	80	18							
	75	59								
	80	37								
85	16									
90	0									

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%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	102	99	104	97	100	94	96	92	87
	2	102	94	88	83	92	82	89	80	86	79	75
	3	94	84	77	71	83	71	80	69	77	68	65
	4	86	76	68	62	74	61	72	60	70	60	57
	5	80	68	60	54	67	54	65	53	63	53	50
	6	74	62	54	48	61	48	59	47	58	47	45
	7	69	57	48	43	56	43	54	42	53	42	40
	8	65	52	44	38	51	38	50	38	49	38	36
	9	60	48	40	35	47	35	46	35	45	34	33
	10	57	44	37	32	44	32	43	32	42	31	30

Zonal lumens & percentages			CRI and CCT adjustment factors	
Zone	Lumens	%Luminaire		
0-30	5558	347.6%	90CRI 2700K: = 0.71	
0-40	893	55.9%	80CRI 2700K: = 0.89	
0-60	1408	88.1%	80CRI 3000K: = 0.97	
0-90	1599	100.0%	80CRI 3500K: = 1.00	

Frame: L6RAE1VA / L6RAZ10UVA / L6R15RE1VA / L6R15RZ10UVA	Report no ³ : 686GFR	38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances
Light engine: L6R15835VA		
Trim: L6RDW		
Output lumens: 1599lm	Efficacy: 99.9lm/W	
Input Watts: 16W	CCT ² : 3500K	
Spacing Criterion: 1.2	CRI: ≥80	

80 CRI, 2000 lumens (downlight photometry shown)

Candela Curves				Angle	Mean CP	Lumens	Single unit data			
	0	863					Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*	
	5	856	81	5'	35	5.5'	6'	24	6.6'	
	10	843		7'	18	7.7'	8'	13	8.8'	
	15	818	230	9'	11	9.9'	* Beam diameter is where foot-candles drop to 50% of maximum.			
	20	778		Multiple unit data - RCR 2						
	25	730	336	Spacing on center	Initial Center Beam Foot-Candles	Watts per Sq. Ft.				
	30	671		5'	77.5	0.88				
	35	604	377	6'	50.8	0.58				
	40	529		7'	36.3	0.41				
	45	448	345	8'	30.3	0.34				
	50	365	254	9'	24.2	0.27				
	55	284	141							
	60	205	74							
	65	137	22							
	70	98								
	75	70								
	80	43								
85	19									
90	0									

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%											
Room Cavity Ratio	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	79	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

Zonal lumens & percentages			CRI and CCT adjustment factors	
Zone	Lumens	%Luminaire		
0-30	647	34.8%	90CRI 2700K: = 0.71	
0-40	1023	55.1%	80CRI 2700K: = 0.89	
0-60	1622	87.3%	80CRI 3000K: = 0.97	
0-90	1859	100.0%	80CRI 3500K: = 1.00	

Frame: L6R20AZ20UVA/L6R20AE1VA / L6R20RZ10UVA/L6R20RE1VA	Report no ³ : 891GFR	38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances
Light engine: L6R20835VA		
Trim: L6RDW		
Output lumens: 1859lm	Efficacy: 93.9lm/W	
Input Watts: 19.8W	CCT ² : 3500K	
Spacing Criterion: 1.1	CRI: ≥80	

1. Wattage: controlled to within ± 5%
2. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

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