

PHILIPS LIGHTOLIER

Downlighting

LyteCaster

4" Round downlight
650 Lumens



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

Philips 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. The downlight is wet location listed and comes in 3 standard options.

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

Ordering guide: Frame-In kit

Example: L4RAE1

Series	Frame type	Dimming	Input voltage
<input type="text" value="L4R"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L4R LyteCaster 4" Round	A AirSeal IC, New Construction, Screw	E ELV/Triac dimming	1 120V
	AN AirSeal IC, New Construction, Nail	Z10 0-10V	U Universal

Ordering guide: Light engine

Example: L4R06827

Series	Lumens	CRI	CCT
<input type="text" value="L4R"/>	<input type="text" value="06"/>	<input type="text"/>	<input type="text"/>
L4R LyteCaster 4" Round	06 650	8 80	27 2700K 30 3000K 35 3500K
		9 90	27 2700K

Note: Lumen output is calculated based on 80 CRI and 3500K CCT. Please consult adjustment factors table on page 4 for other lumen outputs.

Ordering guide: Trim

Example: L4RDW

Series	Luminaire type	Finish
<input type="text" value="L4R"/>	<input type="text"/>	<input type="text"/>
L4R LyteCaster 4" Round	D Open Downlight	D Clear diffuse (with white flange) W White (with white flange)
	B Baffle Downlight	W White (with white flange)

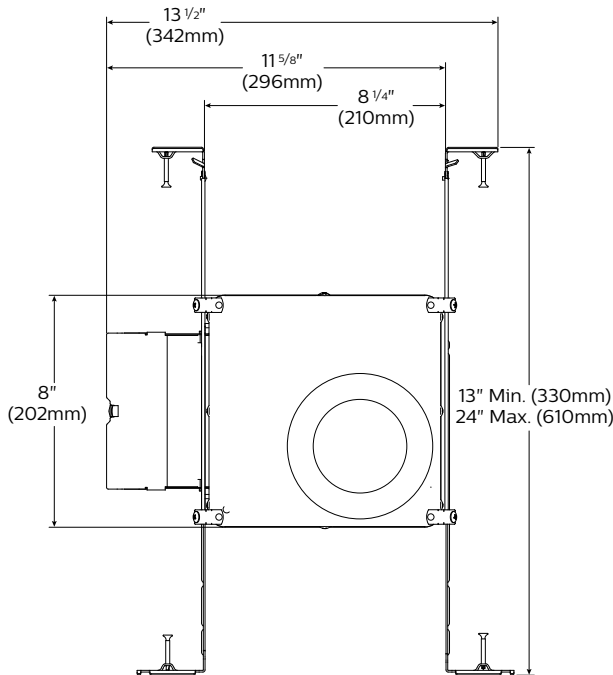


L4R LyteCaster 4" Round

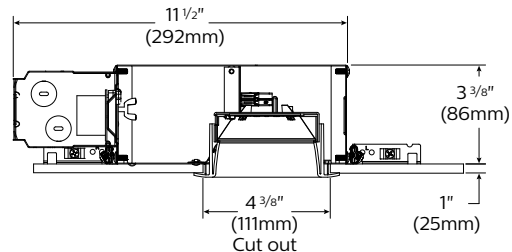
General purpose downlight, 650 lumens

Frame-in kit

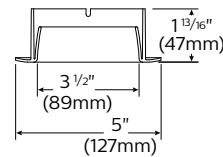
Bottom view



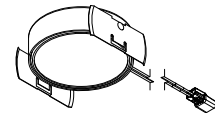
Side view



Downlight trim



Light engine



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 Title 24, the International Energy Conservation Code, and Washington State Energy Code (Section 502.4). This helps to reduce 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. 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 / 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:** 4 3/8" (111mm).

Electrical

Lifetime: Expected lifetime 36,000 hours at L70 and backed by a 5-year limited warranty. (see Philips.com/warranties for details)

Recommended dimmers

See LED-DIM Specification Sheet.

Labels

IC/AirSeal Complies with Air Leakage.

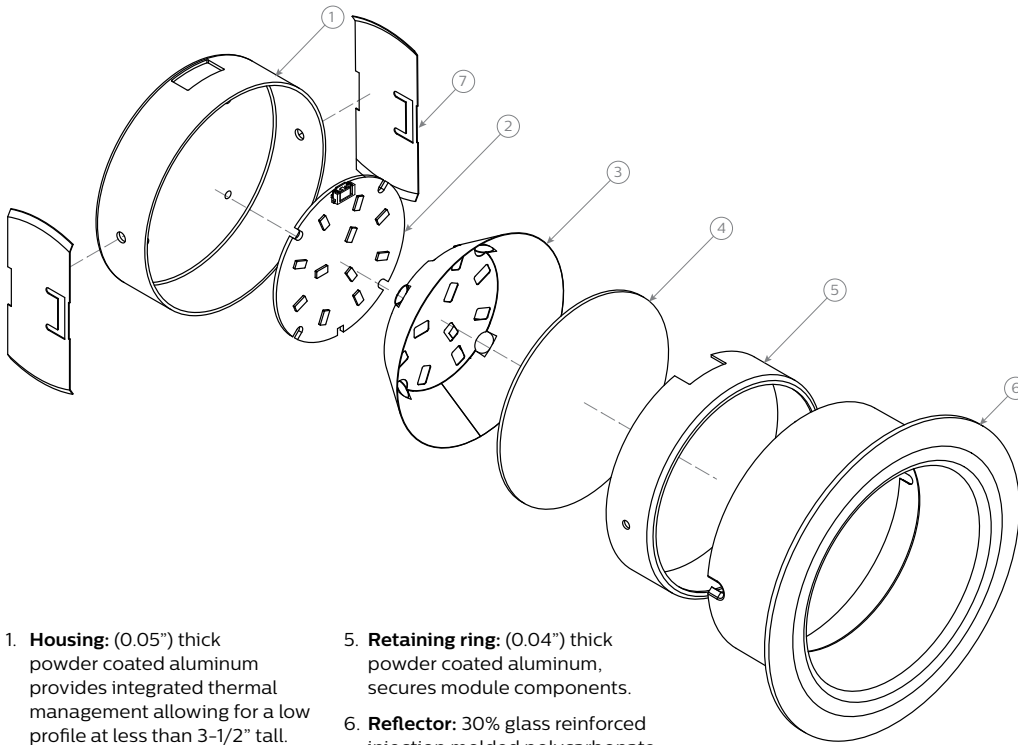
cULus Listed for ceiling or wall installation. Suitable for wet locations, covered ceiling mount only. Suitable for damp locations when wall mounted. Nonconductive flange suitable for shower light application.

This product complies with the requirements of the California Energy Commission regulated under Title 24, and has been listed in the Title 20 database.

L4R LyteCaster 4" Round

General purpose downlight, 650 lumens

Reflector: Round downlight



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.

Electrical

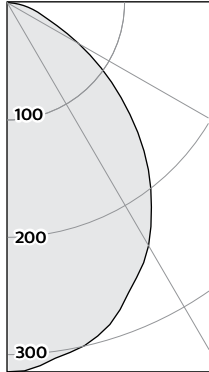
Screw / Nail Frame-in kit Electrical specifications	Input volts	Input freq.	Input current	LED drive current	Input power	LED power	THD factor	Power factor
L4RAE1	120V	50/60Hz	0.06A	190mA	8W	6W	<20%	>0.9
L4RAZ10U	120V	50/60Hz	0.07A	190mA	9W	6W	<10%	>0.9
	277V	50/60Hz	0.04A	190mA	9W	6W	<10%	>0.9

L4R LyteCaster 4" Round

General purpose downlight, 650 lumens

80 CRI, 650 lumens

Candela Curves



Angle	Mean CP	Lumens
0	315	
5	311	29
10	303	
15	294	83
20	279	
25	259	119
30	240	
35	213	133
40	187	
45	157	121
50	126	
55	98	87
60	70	
65	47	48
70	32	
75	23	24
80	14	
85	6	7
90	0	

Single unit data

Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*
5'	13	6.0'
6'	9	7.2'
7'	6	8.4'
8'	5	9.6'
9'	4	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'	27.3	0.35
6'	17.9	0.23
7'	12.8	0.16
8'	10.6	0.14
9'	8.5	0.11

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

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	1	2	3	4	5	6	7	8	9	10	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	102	99	104	98	100	94	96	92	87	87	86	83	83	82	89	81	86	79	75
	2	102	94	88	83	93	82	89	81	86	79	75	75	77	71	71	83	71	80	69	77	68
	3	94	84	77	71	83	71	80	69	77	68	65	65	67	62	62	74	61	72	60	70	60
	4	86	76	68	62	74	61	72	60	70	60	57	57	67	54	54	67	54	65	53	63	53
	5	80	68	60	54	67	54	65	53	63	53	50	50	74	62	54	61	48	59	47	58	47
	6	74	62	54	48	61	48	59	47	58	47	45	45	69	57	49	43	56	43	54	42	40
	7	69	57	49	43	56	43	54	42	53	42	40	40	65	52	44	39	51	39	50	38	36
	8	65	52	44	39	51	39	50	38	49	38	36	36	61	48	40	35	47	35	46	35	33
	9	61	48	40	35	47	35	46	35	45	35	33	33	57	45	37	32	44	32	43	32	30
	10	57	45	37	32	44	32	43	32	42	32	30	30									

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	232	35.5%
0-40	365	56.0%
0-60	573	87.9%
0-90	652	100.0%

Frame: L4RAE1
Light engine: L4R06835
Trim: L4RDW

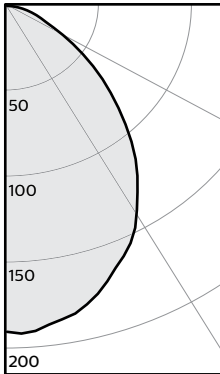
Report no³: 460GFR

Output lumens: 651.5lm
Input Watts: 7.9W
Spacing Criterion: 1.2

Efficacy: 82.5lm/W
CCT²: 3500K
CRI: ≥80

90 CRI, 405 lumens

Candela Curves



Angle	Mean CP	Lumens
0	189	
5	190	18
10	185	
15	180	51
20	170	
25	160	74
30	149	
35	132	83
40	116	
45	97	75
50	79	
55	61	55
60	44	
65	30	30
70	21	
75	15	16
80	9	
85	4	5
90	0	

Single unit data

Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*
5'	8	6.0'
6'	5	7.2'
7'	4	8.4'
8'	3	9.6'
9'	2	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'	16.9	0.33
6'	11.1	0.22
7'	7.9	0.15
8'	6.6	0.13
9'	5.3	0.10

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

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	1	2	3	4	5	6	7	8	9	10	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	102	99	104	98	100	94	96	92	87	87	86	83	83	82	89	80	86	79	75
	2	102	94	88	83	92	82	89	80	86	79	75	75	77	71	71	83	70	80	69	77	68
	3	94	84	77	71	83	70	80	69	77	68	65	65	67	62	62	74	61	72	60	70	59
	4	86	76	68	62	74	61	72	60	70	59	57	57	67	54	54	67	54	65	53	63	52
	5	80	68	60	54	67	54	65	53	63	52	50	50	74	62	54	48	61	47	59	47	44
	6	74	62	54	48	61	48	59	47	58	47	45	45	69	57	48	43	56	42	54	42	40
	7	69	57	49	43	56	43	54	42	53	42	40	40	65	52	44	38	51	38	50	38	36
	8	65	52	44	38	51	38	50	38	49	38	36	36	61	48	40	35	47	35	46	35	33
	9	61	48	40	35	47	35	46	35	45	34	33	33	57	44	37	32	44	32	43	32	30
	10	57	44	37	32	44	32	43	32	42	31	30	30									

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	142	35.1%
0-40	225	55.5%
0-60	355	87.5%
0-90	405	100.0%

Frame: L4RAE1
Light engine: L4R06927
Trim: L4RBW

Report no³: 510GFR

Output lumens: 405.4lm
Input Watts: 7.4W
Spacing Criterion: 1.2

Efficacy: 54.8lm/W
CCT²: 2700K
CRI: ≥90

1. Wattage: controlled to within ± 10%
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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