

# PHILIPS LIGHTOLIER

## Downlighting

### LyteCaster

5" Round downlight  
1000 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 + Adjustable light engine / Trim Order each separately

#### Ordering guide: Frame-In kit

Example: L5RAE1VA

Series	Frame type	Dimming	Input voltage	Version
<b>L5R</b>				<b>VA</b>
L5R LyteCaster 5" Round	<b>A</b> AirSeal IC, New Construction, Screw <b>AN</b> AirSeal IC, New Construction, Nail	<b>E</b> ELV dimming <b>Z10</b> 0-10V	<b>1</b> 120V <b>U</b> Universal	<b>VA</b> Version A <sup>1</sup>

#### Ordering guide: Light engine

Example: L5R10827VA

Series	Lumens	CRI	CCT	Version
<b>L5R</b>	<b>10</b>			<b>VA</b>
L5R LyteCaster 5" Round	<b>10</b> 1000	<b>8</b> 80 <b>9</b> 90	<b>27</b> 2700K <b>30</b> 3000K <b>35</b> 3500K <b>40</b> 4000K <b>27</b> 2700K	<b>VA</b> Version A <sup>1</sup>

**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: L5RDW

Series	Luminaire type	Finish
<b>L5R</b>		
L5R LyteCaster 5" Round	<b>D</b> Open Downlight <b>B</b> Baffle Downlight	<b>D</b> Clear diffuse (with white flange) <b>W</b> White (with white flange) <b>W</b> White (with white flange)

1. Version A (VA) frames and light engines are not compatible with previous versions.

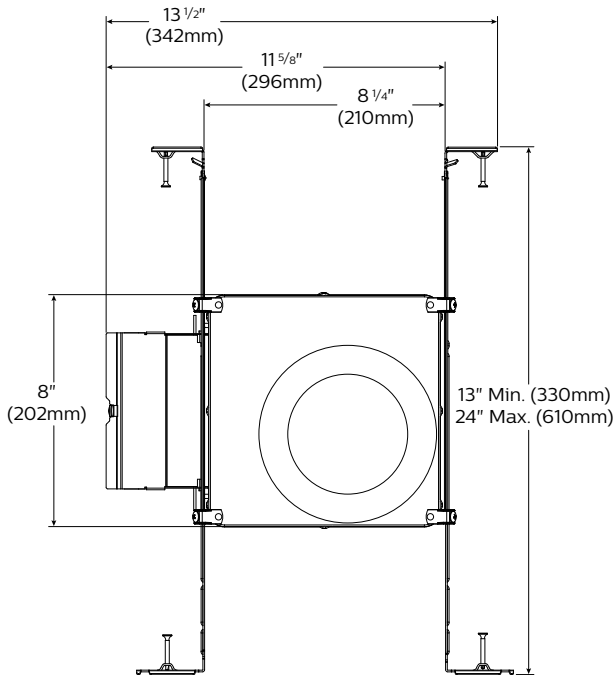


# L5R LyteCaster 5" Round

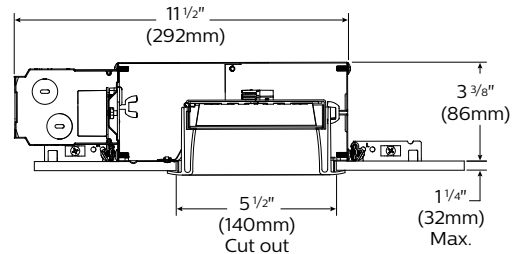
General purpose downlight, 1000 lumens

## Frame-in kit

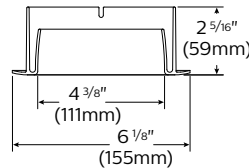
### Bottom view



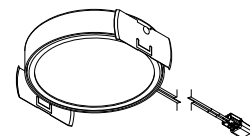
### Side view



### 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 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 1/4" (32mm) 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:** 5 1/2" (140mm).

## Options and Accessories

For fire rated box accessory, use Fireline:

<b>16FR2X10</b>	16" on center 2x10 construction
<b>16FR2X6</b>	16" on center 2x6 construction

See Fireline spec sheets for more information.

## 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.

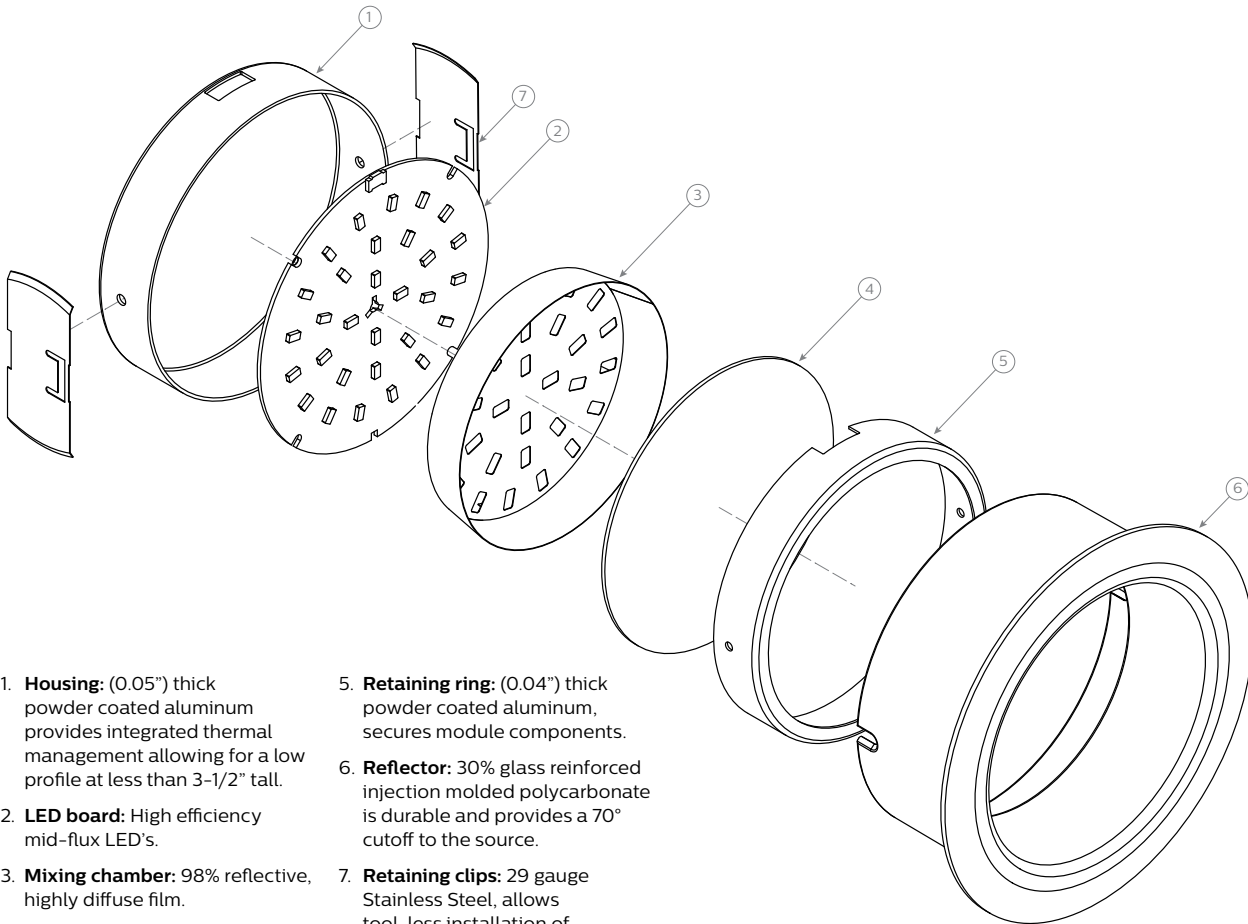
## Labels

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.

# L5R LyteCaster 5" Round

General purpose downlight, 1000 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

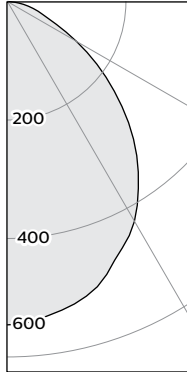
Screw / Nail Frame-in kit Electrical specifications	Input volts	Input freq.	Input current	LED drive current	Input power	LED power	THD factor	Power factor
L5RAE1VA	120V	50/60Hz	0.10A	260mA	12W	10W	<20%	>0.9
L5RAZ10UVA	120V	50/60Hz	0.11A	260mA	13W	11W	<10%	>0.9
	277V	50/60Hz	0.06A	260mA	13W	11W	<15%	>0.9

# L5R LyteCaster 5" Round

General purpose downlight, 1000 lumens

## 80 CRI, 1000 lumens

### Candela Curves



Angle	Mean CP	Lumens
0	546	
5	541	
10	529	
15	515	145
20	490	
25	459	212
30	429	
35	385	241
40	340	
45	289	222
50	236	
55	184	165
60	135	
65	91	93
70	63	
75	45	48
80	28	
85	12	13
90	0	

### Single unit data

Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*
5'	22	6.0'
6'	15	7.2'
7'	11	8.4'
8'	9	9.6'
9'	7	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'	49.5	0.51
6'	32.5	0.34
7'	23.2	0.24
8'	19.3	0.20
9'	15.5	0.16

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	97	99	94	96	91	87	87	87	83	82	89	80	85	78	74	74
	2	101	94	88	83	92	82	89	80	85	78	74	74	74	70	79	69	77	67	64	64	64
	3	93	84	76	70	82	70	79	69	77	67	64	64	64	61	67	61	69	59	56	56	56
	4	86	75	67	61	74	60	71	60	69	59	56	56	56	53	53	65	52	63	52	49	49
	5	80	68	59	53	67	53	65	52	63	52	49	49	49	47	47	59	47	57	46	44	44
	6	74	61	53	47	60	47	59	47	57	46	44	44	44	42	42	54	42	52	41	39	39
	7	69	56	48	42	55	42	54	42	52	41	39	39	39	38	38	49	38	48	37	35	35
	8	64	51	43	38	51	38	49	38	48	37	35	35	35	34	34	46	34	45	34	32	32
	9	60	47	40	34	47	34	46	34	45	34	32	32	32	31	31	42	31	41	31	29	29
	10	56	44	36	31	43	31	42	31	41	31	29	29	29	29	29	42	31	41	31	29	29

### Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	408	34.3%
0-40	649	54.5%
0-60	1036	87.1%
0-90	1190	100.0%

### CRI and CCT adjustment factors

90CRI 2700K = 0.71
80CRI 2700K = 0.89
80CRI 3000K = 0.97
80CRI 3500K = 1.00

Frame: L5RAE1VA  
Light engine: L5R10835VA  
Trim: L5RDW

Report no<sup>3</sup>: 685GFR

Output lumens: 1190 lm  
Input Watts: 11.6 W  
Spacing Criterion: 1.2

Efficacy: 102.6 lm/W  
CCT<sup>2</sup>: 3500 K  
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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