

**PHILIPS  
LIGHTOLIER**

Downlighting

LyteCaster

4" 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: L4R10AE1VA

Series	Lumens <sup>1</sup>	Frame type	Dimming	Input voltage	Version
<b>L4R</b>					<b>VA</b>
<b>L4R</b> LyteCaster 4" Round	<b>blank</b> 650 <b>10</b> 1000	<b>A</b> AirSeal IC, New Construction, Screw <b>AN</b> AirSeal IC, New Construction, Nail	<b>E</b> ELV/Triac dimming <b>Z10</b> 0-10V	<b>1</b> 120V <b>U</b> Universal	<b>VA</b> Version A <sup>2</sup>
	<b>06</b> 650 <b>10</b> 1000	<b>R</b> AirSeal IC, Remodeler			

**Ordering guide: Adjustable light engine / Trim**

Example: L4R10A827WVA

Series	Lumens <sup>1</sup>	CRI	CCT	Finish	Version
<b>L4RA</b>				<b>W</b>	<b>VA</b>
<b>L4RA</b> LyteCaster 4" Round adjustable	<b>06</b> 650 <b>10</b> 1000	<b>8</b> 80	<b>27</b> 2700K <b>30</b> 3000K <b>35</b> 3500K <b>40</b> 4000K	<b>W</b> White (with white flange)	<b>VA</b> Version A <sup>2</sup>
			<b>9</b> 90		

**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.

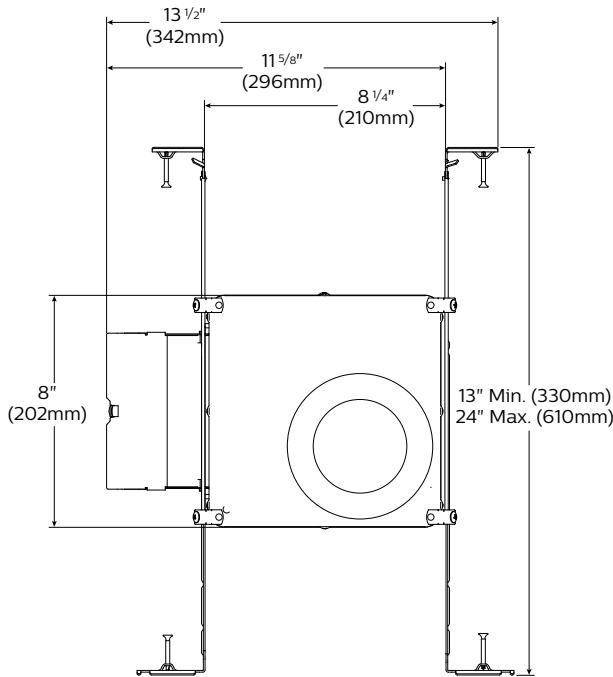


# L4RA LyteCaster 4" Round adjustable

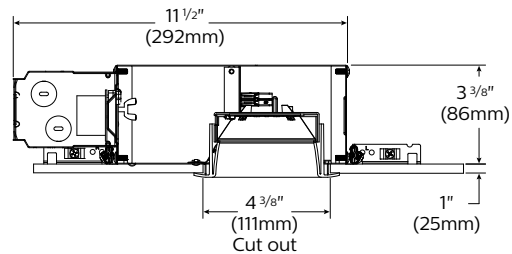
## General purpose downlight

### Frame-in kit

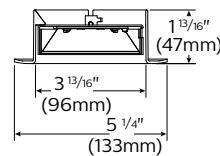
#### Bottom view



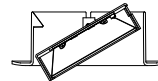
#### Side view



#### 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" (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 50,000 hours and backed by a 5-year warranty. (see Philips.com/warranties for details)

### Recommended dimmers

See LED-DIM Specification Sheet.

### Labels

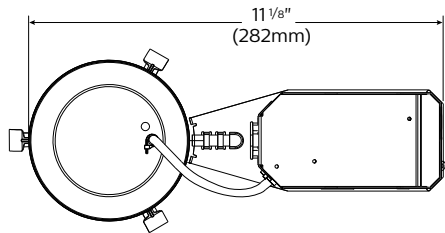
cULus Listed Type I.C., frames are suitable for damp location. Trims are cULus suitable for damp location. Complies with Air Leakage. Energy Star certified.

# L4RA LyteCaster 4" Round adjustable

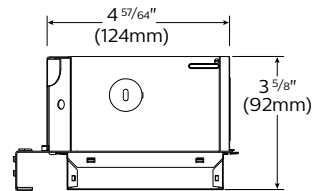
General purpose downlight

## Remodeler kit

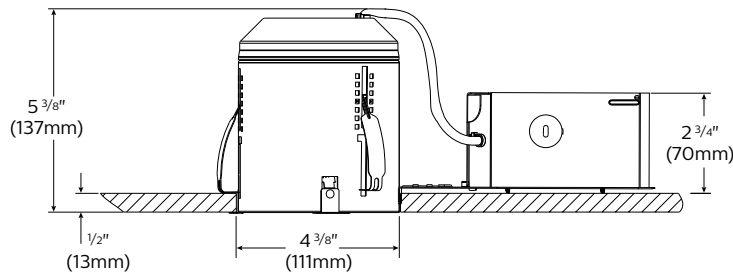
Bottom view



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:** 4 3/8" (111mm).

## 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.

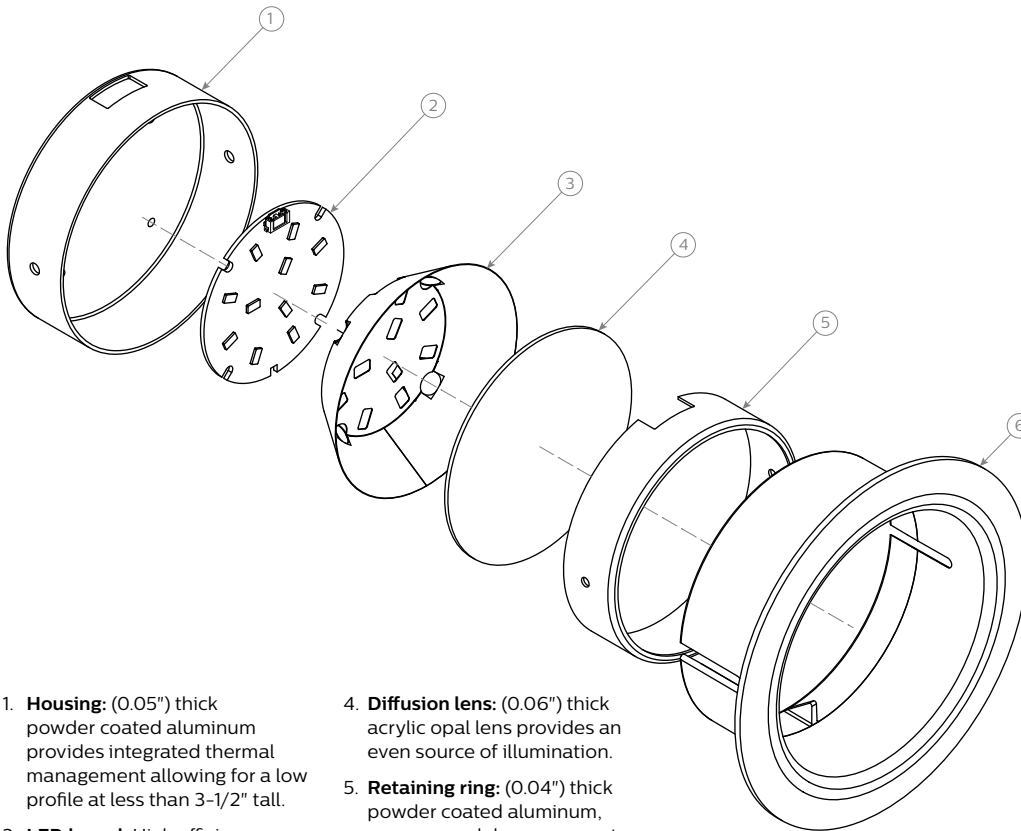
## Labels

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.

# L4RA LyteCaster 4" 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
<b>L4RAE1VA / L4R06RE1VA</b>	650	120V	50/60Hz	0.07A	220mA	7W	6W	<20%	>0.9
<b>L4RAZ10UVA / L4R06RZ10UVA</b>	650	120V	50/60Hz	0.07A	220mA	8W	6W	<10%	>0.9
		277V	50/60Hz	0.04A	220mA	8W	5W	<10%	>0.9
<b>L4R10AE1VA / L4R10RE1VA</b>	1000	120V	50/60Hz	0.09A	220mA	11W	9W	<20%	>0.9
<b>L4R10AZ10UVA / L4R10R10UVA</b>	1000	120V	50/60Hz	0.14A	220mA	12W	9W	<5%	>0.96
		277V	50/60Hz	0.06A	220mA	12W	9W	<10%	>0.96

# L4RA LyteCaster 4" Round adjustable

## General purpose downlight

### 80 CRI, 650 lumens (downlight photometry shown)

Angle	Mean CP	Lumens	Single unit data		
0	307		Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*
5	303	29			
10	297		5'	12	6.0'
15	289	81	6'	9	7.2'
20	275		7'	6	8.4'
25	258	119	8'	5	9.6'
30	241		9'	4	10.8'
35	216	135	* Beam diameter is where foot-candles drop to 50% of maximum.		
40	191				
45	162	125			
50	132				
55	103	92			
60	74				
65	49	50			
70	33				
75	24	25			
80	15				
85	6	7			
90	0				

Multiple unit data - RCR 2		
Spacing on center	Initial Center Beam Foot-Candles	Watts per Sq. Ft.
5'	27.6	0.31
6'	18.1	0.20
7'	13.0	0.14
8'	10.8	0.12
9'	8.6	0.10

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

Frame: L4RAE1VA / L4RAZ10UVA / L4R06RE1VA / L4R06RZ10UVA  
 Light engine: L4R06835VA  
 Trim: L4RDW

Output lumens: 662.8lm  
 Input Watts: 6.9W  
 Spacing Criterion: 1.2  
 Efficacy: 96.1lm/W  
 CCT: 3500K  
 CRI: ≥80

Report no: 659GFR

### 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	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

### Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	229	34.5%
0-40	364	54.9%
0-60	581	87.6%
0-90	663	100.0%

### CRI and CCT adjustment factors

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

### 80 CRI, 1000 lumens (downlight photometry shown)

Angle	Mean CP	Lumens	Single unit data		
0	438		Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*
5	434	41			
10	427		5'	18	6.0'
15	414	117	6'	12	7.2'
20	394		7'	9	8.4'
25	370	170	8'	7	9.6'
30	341		9'	5	10.8'
35	307	192	* Beam diameter is where foot-candles drop to 50% of maximum.		
40	270				
45	230	177			
50	187				
55	145	130			
60	104				
65	69	70			
70	47				
75	34	36			
80	21				
85	9	10			
90	0				

Multiple unit data - RCR 2		
Spacing on center	Initial Center Beam Foot-Candles	Watts per Sq. Ft.
5'	39.3	0.46
6'	25.8	0.30
7'	18.4	0.22
8'	15.4	0.18
9'	12.3	0.14

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

Frame: L4R10AE1VA / L4R10AZ10UVA /  
 L4R10RE1VA / L4R10RZ10UVA  
 Light engine: L4R10835VA  
 Trim: L4RDW

Output lumens: 941.7lm  
 Input Watts: 10.4W  
 Spacing Criterion: 1.2  
 Efficacy: 90.6lm/W  
 CCT: 3500K  
 CRI: ≥80

Report no: 774GFR

### 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	116	116	111	111	106	106	100
	1	110	106	102	99	104	97	100	94	96	92
	2	101	94	88	83	92	82	89	80	86	78
	3	93	84	77	71	82	70	80	69	77	68
	4	86	75	67	61	74	61	72	60	69	59
	5	80	68	60	54	67	53	65	53	63	52
	6	74	62	53	47	61	47	59	47	57	47
	7	69	56	48	42	56	42	54	42	53	42
	8	64	52	44	38	51	38	50	38	49	38
	9	60	48	40	35	47	35	46	34	45	34
	10	57	44	37	32	44	32	43	31	42	31

### Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	328	34.8%
0-40	519	55.1%
0-60	826	87.7%
0-90	942	100.0%

### CRI and CCT adjustment factors

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

1. Wattage: controlled to within ± 5%
2. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSI 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.
4. 90 CRI, 2700K IES file is available on the LyteCaster family page at [www.lightingproducts.philips.com](http://www.lightingproducts.philips.com)

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