

PHILIPS LIGHTOLIER

Downlighting

LyteCaster

6" Round adjustable



New construction



Remodeler



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 |
| | | | 27 2700K 30 3000K | W White (with white flange) | |

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.

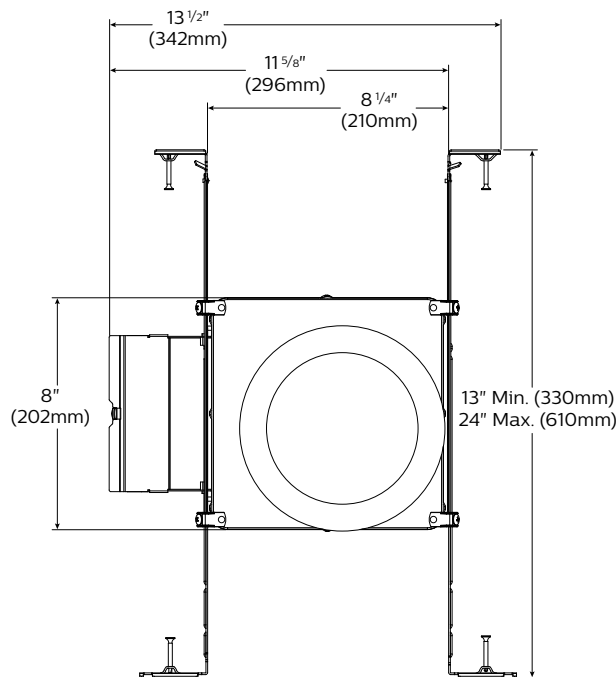


L6RA LyteCaster 6" Round adjustable

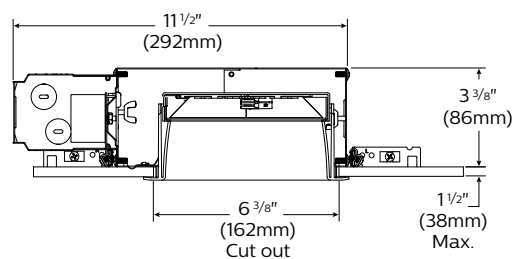
General purpose downlight

New construction frame-in kit

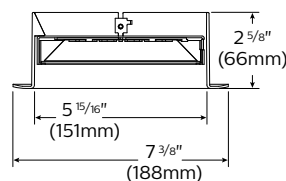
Bottom view



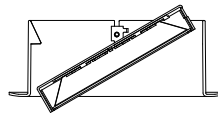
Side view



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

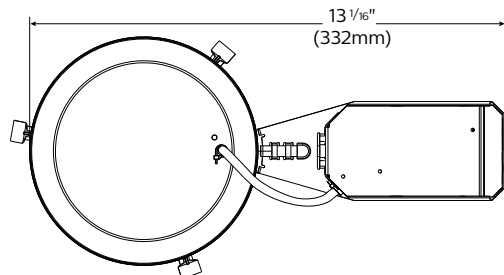
cULus Listed Type I.C., frames are suitable for damp location. Trims are cULus suitable for damp location. Complies with Air Leakage. Energy Star certified.

L6RA LyteCaster 6" Round adjustable

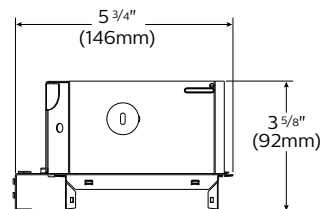
General purpose downlight

Remodeler kit

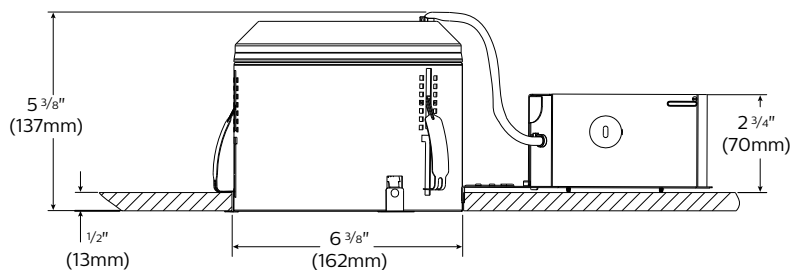
Bottom view



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.

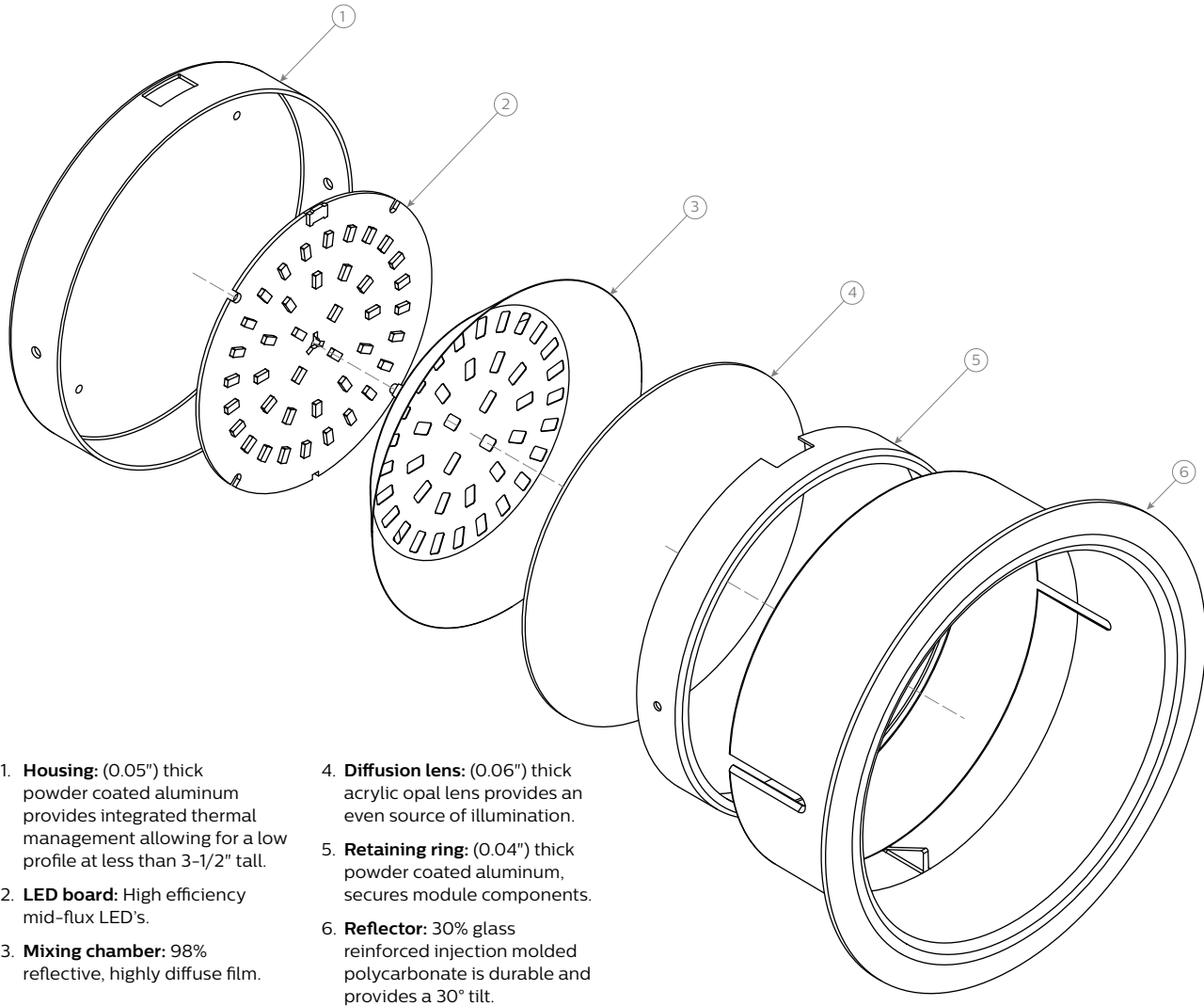
Labels

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

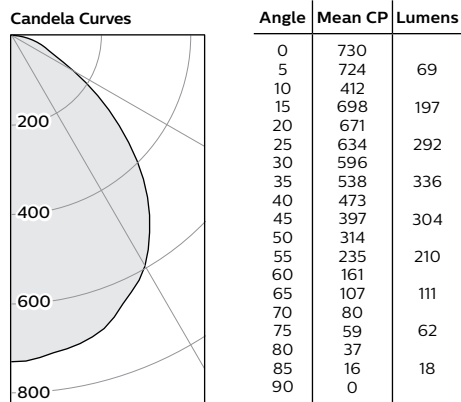
Frame-in kit / Remodeler

| | 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)



Frame: L6RAE1VA / L6RAZ10UVA / L6R15RE1VA / L6R15RZ10UVA
Light engine: L6R15835VA
Trim: L6RDW

Report no³: 686GFR

Output lumens: 1599 lm
Input Watts¹: 16 W
Spacing Criterion: 1.2

Efficacy: 99.9 lm/W
CCT²: 3500 K
CRI: ≥80

Single unit data

| Height to Lighted Plane | Initial Center Beam Foot-Candles | Beam Dia. (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' | 66.8 | 0.71 |
| 6' | 43.8 | 0.47 |
| 7' | 31.3 | 0.33 |
| 8' | 26.1 | 0.28 |
| 9' | 20.9 | 0.22 |

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

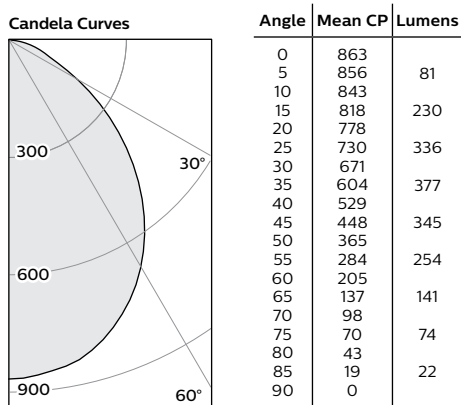
Zonal lumens & percentages

| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 5558 | 347.6% |
| 0-40 | 893 | 55.9% |
| 0-60 | 1408 | 88.1% |
| 0-90 | 1599 | 100.0% |

CRI and CCT adjustment factors

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

80 CRI, 2000 lumens (downlight photometry shown)



Frame: L6R20AZ20UVA/L6R20AE1VA/
L6R20RZ10UVA/L6R20RE1VA
Light engine: L6R20835VA
Trim: L6RDW

Report no³: 891GFR

Output lumens: 1859 lm
Input Watts¹: 19.8 W
Spacing Criterion: 1.1

Efficacy: 93.9 lm/W
CCT²: 3500 K
CRI: ≥80

Single unit data

| Height to Lighted Plane | Initial Center Beam Foot-Candles | Beam Dia. (ft)* |
|----------------------------|-------------------------------------|--------------------|
| 5' | 35 | 5.5' |
| 6' | 24 | 6.6' |
| 7' | 18 | 7.7' |
| 8' | 13 | 8.8' |
| 9' | 11 | 9.9' |

* 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' | 77.5 | 0.88 |
| 6' | 50.8 | 0.58 |
| 7' | 36.3 | 0.41 |
| 8' | 30.3 | 0.34 |
| 9' | 24.2 | 0.27 |

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 | 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 | 100 | 106 | 106 | 100 | |
| | 1 | 110 | 106 | 102 | 99 | 104 | 97 | 100 | 94 | 96 | 91 | 87 | 87 | 96 | 91 | 87 | |
| | 2 | 101 | 94 | 88 | 83 | 92 | 82 | 89 | 80 | 86 | 78 | 75 | 75 | 86 | 78 | 75 | |
| | 3 | 93 | 84 | 77 | 71 | 82 | 70 | 79 | 69 | 77 | 68 | 65 | 65 | 77 | 68 | 65 | |
| | 4 | 86 | 75 | 67 | 61 | 74 | 61 | 72 | 60 | 69 | 59 | 56 | 56 | 69 | 59 | 56 | |
| | 5 | 80 | 68 | 60 | 54 | 67 | 53 | 65 | 53 | 63 | 52 | 50 | 50 | 63 | 52 | 50 | |
| | 6 | 74 | 62 | 53 | 47 | 61 | 47 | 59 | 47 | 57 | 46 | 44 | 44 | 57 | 46 | 44 | |
| | 7 | 69 | 56 | 48 | 42 | 55 | 42 | 54 | 42 | 53 | 42 | 39 | 39 | 53 | 42 | 39 | |
| | 8 | 64 | 52 | 44 | 38 | 51 | 38 | 50 | 38 | 48 | 38 | 36 | 36 | 48 | 38 | 36 | |
| | 9 | 60 | 48 | 40 | 35 | 47 | 35 | 46 | 34 | 45 | 34 | 32 | 32 | 45 | 34 | 32 | |
| | 10 | 57 | 44 | 37 | 32 | 44 | 32 | 43 | 31 | 42 | 31 | 29 | 29 | 42 | 31 | 29 | |

Zonal lumens & percentages

| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 647 | 34.8% |
| 0-40 | 1023 | 55.1% |
| 0-60 | 1622 | 87.3% |
| 0-90 | 1859 | 100.0% |

CRI and CCT adjustment factors

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

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.

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philips.com/luminaires



Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008