

Project

Type



Date

Product Code

Designer

WAFER SQUARE/3 DL

recessed shallow LED downlight

FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE



FEATURES

- **WAFER SQUARE/3 DL is a 3" aperture, high efficacy, square LED downlight** with a recess depth of only 2 1/2".
- **Luminaire employs an internal 'twist and lock' lens** to produce an initial beam-spread of either 32° or 60°. To allow beamspread to be changed in installed luminaires, internal lenses are available as accessories.
- **Luminaire may be ordered with its external reflector capped** with a prismatic lens (-PRS) to widen beam distribution, or a diffuser (-DIF) to maximize beam uniformity and obscure the appearance of the LED.
- **Luminaire is powered by one of a number of Cree Chip on board LED's.** See below for wattages and efficacies.
- **External reflectors are available in four colors:** a slightly diffuse clear natural aluminum (-VOL), champagne gold (-GOL), white (-WOL) or black (-BOL). Other finishes are available on special order.
- **Optional housing design for residential installation** in wood joist ceilings (-RI).
- **WAFER SQUARE/3 DL includes a pair of mounting bars** (3/4" x 27" C channel). Specialty bars for wood and T-bar installations are also available.
- **For more information, [click here](#).**

APPLICATIONS

Luminaire is listed as an inherently protected luminaire for Damp Location. Luminaire is RoHS compliant, is suitable for use in a fire rated ceiling. Removal of the external reflector allows access to the LED module and junction box.

ENERGY STAR



Energy Star qualified under Luminaires Specification V2.0. See Energy Star website for model numbers included in listing. The following options are not qualified: L08H, L15S and ZGOMAG. On orders which require Energy Star labelling, add "-ESL" to the specified Product Code.

PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit WS3-CLT-DL

Internal Lens *Choose one.*

32° initial beamspread - 32D
60° initial beamspread - 60D

Light Source Output (Lumens)

800 lumens / CRI 90+ 2700K & 3000K only - L08H
1000 lumens 2700K & 3000K only - L10H
1200 lumens 2700K & 3000K only - L12H
1000 lumens / CRI 80+ - L10S
1200 lumens - L12S
1500 lumens - L15S

Driver

dimmable to 1% by a 0-10V dimmer on 120 Or 277-volt service - DMV
dimmable to 5% by either an incandescent or electronic low voltage dimmer only; 120-volt service only - DMP
dimmable to 1% by a 2-wire Lutron compatible dimmer - DMI-LU
dimmable to 1% SoftOn/FadeToBlack by a Lutron EcoSystem control ... - ECO-LU
eldoLED 0-10V (Logarithmic) driver dimmable to 0.1% with a 0-10V dimmer - DVOELG
eldoLED 0-10V (Linear) driver dimmable to 0.1% with a 0-10V dimmer - DVOELN
eldoLED driver dimmable to 0.1% with DALI control system - DA0-EL
dimmable to 0.1% by a Zigbee wireless network (Daintree, Encelium or Wink); wireless range 50' through standard walls; available with L12H or L15S models only - ZGOMAG

Light Color

2700 K - 27K
3000 K - 30K
3500 K - 35K
4000 K - 40K

External Reflector Color & Trim	PRS Prismatic Lens	DIF Diffuse Lens
Slightly diffuse clear	PRS-VOL	DIF-VOL
Champagne Gold	PRS-GOL	DIF-GOL
White	PRS-WOL	DIF-WOL
Black	PRS-BOL	DIF-BOL

Standard reflector flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).

OPTIONS *Specify by adding to the basic unit.*

Housing designed for residential installation (see next page) including a pair of mounting bars (extendable to 20") for use between wood joists. - RI
Remote emergency battery pack including two components - battery pack and plate with test switch and light - to be mounted adjacent to luminaire; for use in accessible ceilings; not available with residential housing (-RI) - RX
Energy Star labelling available on some models; see the Energy Star info 'box' on this page - ESL

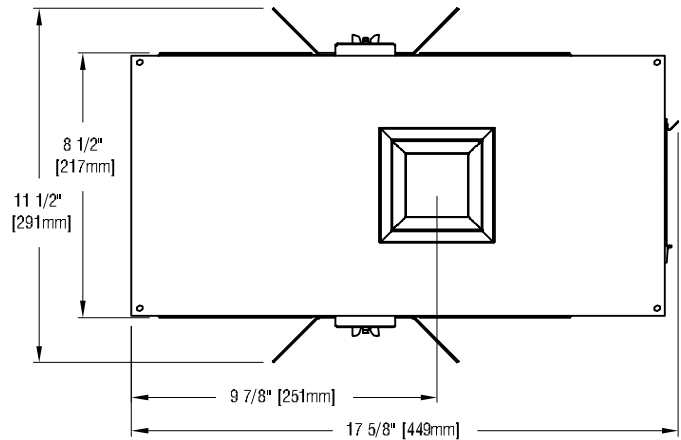
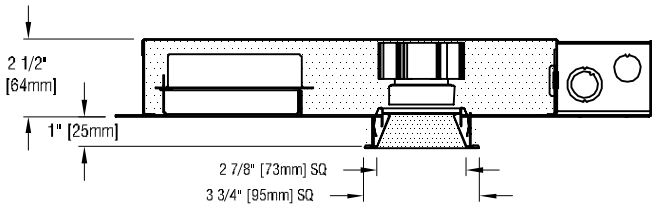
EXTRA INTERNAL LENSES *Specify as separate line items.*

32° internal lens CLT-LENS32-70
60° internal lens CLT-LENS60-70

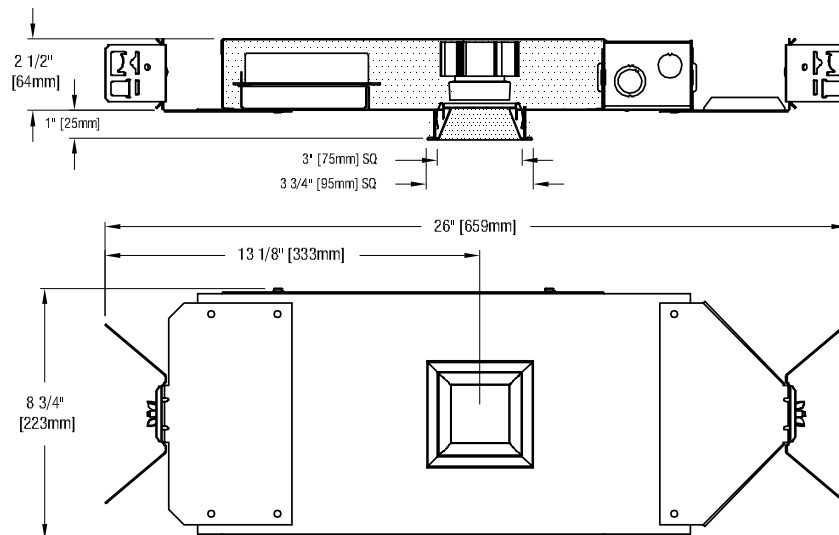


STANDARD INSTALLATION DESIGN

Requires ceiling opening of 3 5/16" (84mm) square.



RESIDENTIAL INSTALLATION DESIGN (-RI)



EXTERNAL REFLECTOR TRIM DETAILS



STANDARD DMV DRIVER INFORMATION (UL Class 2, dry and damp location)

Voltage	120	277
Input Watts (L08H/L10H/L12H/L10S/L12S/L15S)	9/10/13/9/10/13	9/10/13/9/10/13
Input Current (A) (L08H/L10H/L12H/L10S/L12S/L15S)	08/08/11/08/08/11	04/04/06/04/04/06
Output Current (mA)	220-350	220-350
Min. Power Factor	.99	.99
Operating Temperature Range (F)	-13 to 122	-13 to 122

LIGHT OUTPUT MULTIPLIER

LED Light Engine	Light Output Multiplier	RX Light Output Multiplier
800 Lumens 90 CRI	0.84*	0.55*
1000 Lumens 90 CRI	1	0.55*
1200 Lumens 90 CRI	1.23*	0.55*
1000 Lumens 80 CRI	1.04*	0.67*
1200 Lumens 80 CRI	1.24*	0.67*
1500 Lumens 80 CRI	1.53*	0.67*

*estimated values

REFLECTOR COLOR MULTIPLIERS

Slightly diffuse clear (V)	1
Fully diffuse clear (EC)	.90
Specular white (W)	.70
Black (B)	.40

– photometrics continued below –

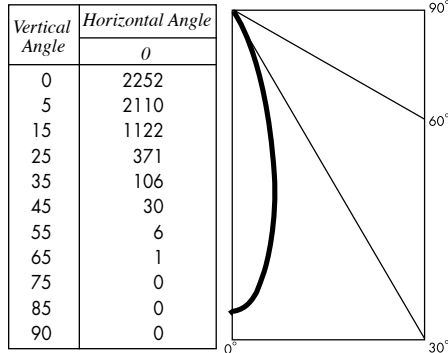


PHOTOMETRIC REPORT with 32° internal lens and prismatic external lens (PRS) (tested per IESNA LM-79-2008)

Prorated from Verification Services Report No. 12269958.09A. Original test report furnished upon request.

Luminaire recessed LED square downlight with semi-specular clear aluminum reflector and prismatic lens
 Light Source Cree CXB1310 LED with 32° beam spread integral lens, 2700K CCT, 90 CRI, 1000 lumens
 Spacing Criteria 0.5

CANDLEPOWER DISTRIBUTION (Candela)



LUMINANCE DATA

Vertical Angle	Candelalm ²
45	7368
55	1865
65	472
75	88
85	61

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 40°	746	95.2
0 - 60°	782	99.8
0 - 90°	783	100.0
90 - 180°	0	0.0

LUMINAIRE LIGHT OUTPUT AND EFFICACY

LED Light Engine	Luminaire Light Output	Luminaire Efficacy (lms/watt)	System Wattage	RX Light Output (90 min. run)
800 Lumens 90 CRI	659*	73*	9	431*
1000 Lumens 90 CRI	784	75	10	431*
1200 Lumens 90 CRI	964*	74*	13	431*
1000 Lumens 80 CRI	815*	91*	9	525*
1200 Lumens 80 CRI	972*	97*	10	525*
1500 Lumens 80 CRI	1200*	92*	13	525*

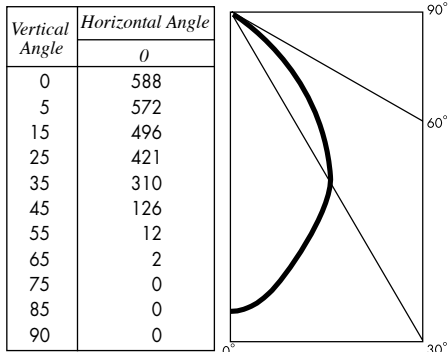
*estimated values

PHOTOMETRIC REPORT with 32° internal lens and external diffuser (DIF) (tested per IESNA LM-79-2008)

Prorated from Verification Services Report No. 12269958.10A. Original test report furnished upon request.

Luminaire recessed LED square downlight with semi-specular clear aluminum reflector and diffuser
 Light Source Cree CXB1310 LED with 32° beam spread integral lens, 2700K CCT, 90 CRI, 1000 lumens
 Spacing Criteria 0.99

CANDLEPOWER DISTRIBUTION (Candela)



LUMINANCE DATA

Vertical Angle	Candelalm ²
45	30,620
55	3602
65	888
75	249
85	170

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 40°	553	79.5
0 - 60°	693	99.5
0 - 90°	696	100.0
90 - 180°	0	0.0

LUMINAIRE LIGHT OUTPUT AND EFFICACY

LED Light Engine	Luminaire Light Output	Luminaire Efficacy (lms/watt)	System Wattage	RX Light Output (90 min. run)
800 Lumens 90 CRI	585*	65*	9	383*
1000 Lumens 90 CRI	696	66	10	383*
1200 Lumens 90 CRI	856*	66*	13	383*
1000 Lumens 80 CRI	724*	80*	9	466*
1200 Lumens 80 CRI	863*	86*	10	466*
1500 Lumens 80 CRI	1065*	82*	13	466*

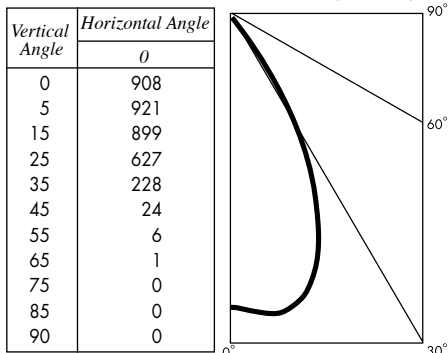
*estimated values

PHOTOMETRIC REPORT with 60° internal lens and prismatic external lens (PRS) (tested per IESNA LM-79-2008)

Prorated from Verification Services Report No. 12269958.07A. Original test report furnished upon request.

Luminaire recessed LED square downlight with semi-specular clear aluminum reflector and prismatic lens
 Light Source Cree CXB1310 LED with 60° beam spread integral lens, 2700K CCT, 90 CRI, 1000 lumens
 Spacing Criteria 0.95

CANDLEPOWER DISTRIBUTION (Candela)



LUMINANCE DATA

Vertical Angle	Candelalm ²
45	5897
55	1653
65	447
75	106
85	58

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 40°	772	94.3
0 - 60°	817	99.8
0 - 90°	818	100.0
90 - 180°	0	0.0

LUMINAIRE LIGHT OUTPUT AND EFFICACY

LED Light Engine	Luminaire Light Output	Luminaire Efficacy (lms/watt)	System Wattage	RX Light Output (90 min. run)
800 Lumens 90 CRI	687*	76*	9	450*
1000 Lumens 90 CRI	818	78	10	450*
1200 Lumens 90 CRI	1006*	77*	13	450*
1000 Lumens 80 CRI	851*	95*	9	548*
1200 Lumens 80 CRI	1014*	101*	10	548*
1500 Lumens 80 CRI	1252*	96*	13	548*

*estimated values