

Project

Date

Product Code

Type

Designer



# WAFER/3 DL

recessed shallow LED downlight

FULLY SUSTAINABLE – FULLY SUSTAINABLE



## FEATURES

- **WAFER/3 DL is a 3" aperture, high efficacy, LED downlight** with an overall depth of 3 1/2" (housing depth of 2 1/2" plus a 1" throat).
- **Luminaire employs an internal 'twist and lock' lens** to produce an initial beam-spread of either 32° or 60°. To allow beam-spread to be changed in installed luminaires, internal lenses are available as accessories.
- **Luminaire may be ordered standard (- DL) for maximum efficacy and spacing ratio - or - with a plastic diffuser (- DG)**, mounted atop reflector, to maximize beam uniformity and obscure appearance of 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 three clear natural aluminum colors** – semi-specular (C), slightly diffuse (V) or fully diffuse (EC) – as well as champagne gold, black Alzak® and specular white enamel. Other finishes are available on special order.
- **Optional housing design for residential installation** in wood joist ceilings (- RI).
- **WAFER/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.

For Trimless Square aperture, see [WAFER PRIM SQUARE/3 DL](#)  
 For Overlap Square aperture, see [WAFER SQUARE/3 DL](#)  
 For IC-rated, see [EPIC WAFER/3 DL](#)  
 For Chicago Plenum, see [CHP WAFER/3 DL](#)

## PRODUCT CODE

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

**Basic Unit**  
 no diffuser ..... standard installation design..... W3-CLT-DL  
 with diffuser ..... standard installation design..... W3-CLT-DG

**Internal Lens** *Choose one.*  
 32° initial beamspread ..... - 32D  
 60° initial beamspread ..... - 60D

**Light Source Output (Lumens)**  
 800 lumens / CRI 90+ ..... 4000K not available ..... - L08H  
 1000 lumens ..... 4000K not available ..... - L10H  
 1200 lumens ..... 4000K not available ..... - 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 ..... - DMHU  
 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	DL Model (no diffuser)		DG Model (with diffuser)	
	Overlap	Trim Flush*	Overlap	Trim Flush*
Semi-specular Clear	DL-COL	DL-CTF	DG-COL	DG-CTF
Slightly diffuse Clear	DL-VOL	DL-VTF	DG-VOL	DG-VTF
Fully diffuse Clear	DL-ECOL	DL-ECTF	DG-ECOL	DG-ECTF
Champagne Gold	DL-GOL	DL-GTF	DG-GOL	DG-GTF
Black	DL-BOL	DL-BTF	DG-BOL	DG-BTF
White	DL-WOL	DL-WTF	DG-WOL	DG-WTF

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).  
 \*Trim Flush reflector trim requires the use of a **plaster ring** Accessory (see below).

## 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  
**Millwork trim detail** consists of an aperture collar (see below) and a Trim Flush (TF) external reflector (see above). *Note: a Plaster Ring is not required.*  
 milled aluminum aperture collar ..... - M  
 white aperture collar..... - MWH  
 black aperture collar..... - MBL  
 custom color aperture collar ..... - MCC  
**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

## ACCESSORIES

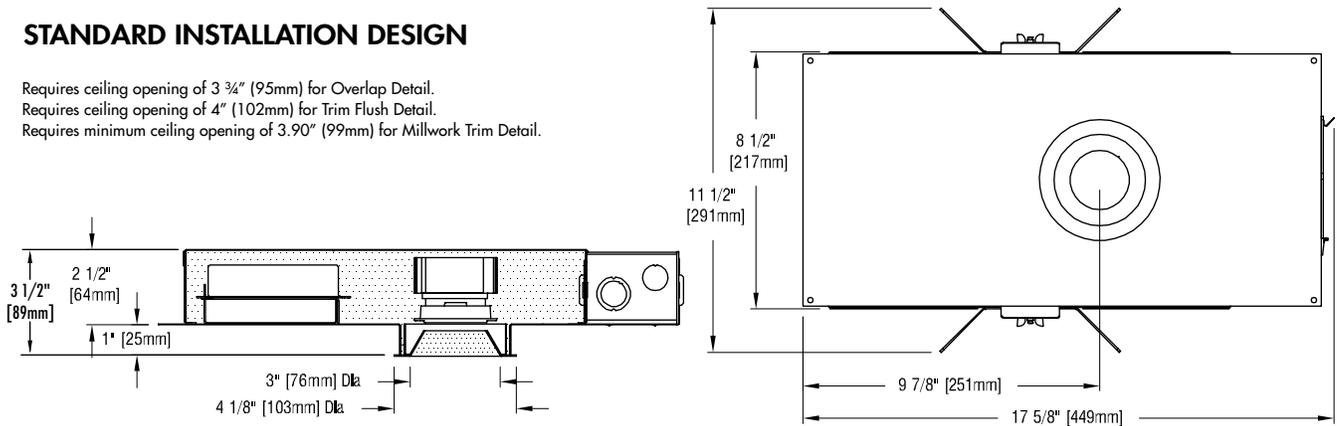
*Specify as a separate line item.*

**Plaster ring** allows use of 3 3/4" OD Trim Flush (-TF) reflector in sheetrock ceiling; 4" dia hole required..... TF RING/3

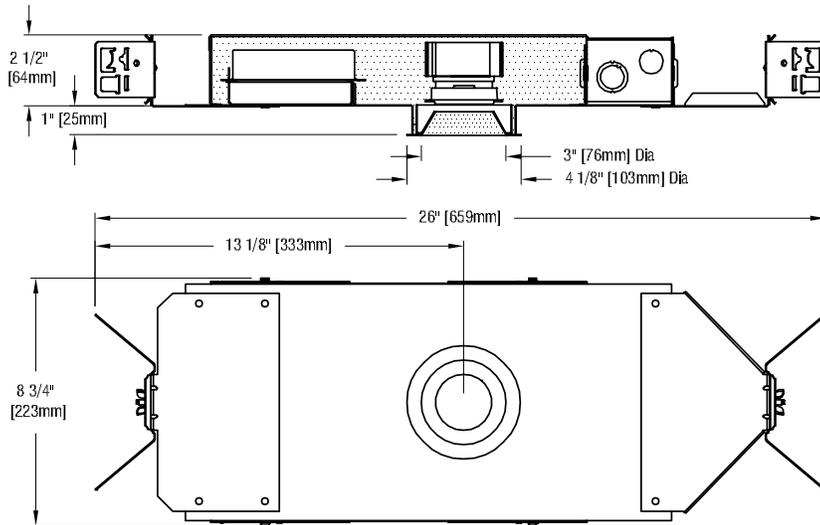


## STANDARD INSTALLATION DESIGN

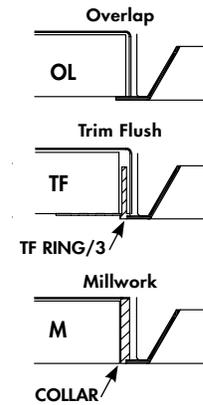
Requires ceiling opening of 3 3/4" (95mm) for Overlap Detail.  
 Requires ceiling opening of 4" (102mm) for Trim Flush Detail.  
 Requires minimum ceiling opening of 3.90" (99mm) for Millwork Trim Detail.



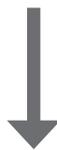
## RESIDENTIAL INSTALLATION DESIGN (-RI)



### EXTERNAL REFLECTOR TRIM DETAILS



– see below for photometric reports –

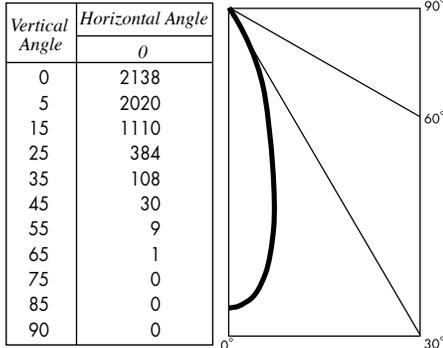


## PHOTOMETRIC REPORT with 32° lens (tested per IESNA LM-79-2008)

**UL** Verification Services Report No. 11863545.12. Original test report furnished upon request.

Luminaire ..... recessed LED round downlight with semi-specular clear aluminum reflector (NO DIFFUSER)  
 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	Candela/m²
45	9282
55	3451
65	727
75	93
85	106

### ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 40°	734	95.5
0 - 60°	767	99.8
0 - 90°	769	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	646*	72*	9	423*
1000 Lumens 90 CRI	769	72	10	423*
1200 Lumens 90 CRI	945*	73*	13	423*
1000 Lumens 80 CRI	799*	89*	9	515*
1200 Lumens 80 CRI	953*	95*	10	515*
1500 Lumens 80 CRI	1176*	90*	13	515*

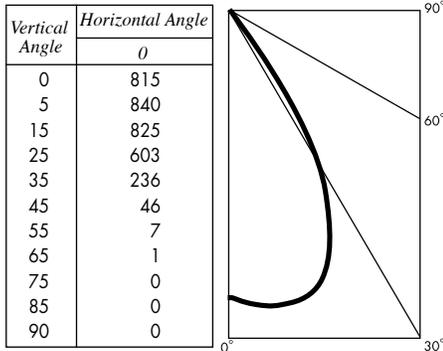
\*estimated values

## PHOTOMETRIC REPORT with 60° lens (tested per IESNA LM-79-2008)

**UL** Verification Services Report No. 11863545.11. Original test report furnished upon request.

Luminaire ..... recessed LED round downlight with semi-specular clear aluminum reflector (NO DIFFUSER)  
 Light Source ..... Cree CXB1310 LED with 60° beam spread integral lens, 2700K CCT, 90 CRI, 1000 lumens  
 Spacing Criteria ..... 1.0

### CANDLEPOWER DISTRIBUTION (Candela)



### LUMINANCE DATA

Vertical Angle	Candela/m²
45	14370
55	2524
65	465
75	31
85	48

### ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 40°	732	93.8
0 - 60°	779	99.9
0 - 90°	780	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	655*	73*	9	429*
1000 Lumens 90 CRI	780	72	10	429*
1200 Lumens 90 CRI	959*	74*	13	429*
1000 Lumens 80 CRI	811*	90*	9	522*
1200 Lumens 80 CRI	967*	97*	10	522*
1500 Lumens 80 CRI	1193*	92*	13	522*

\*estimated values

## 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)	350-700	350-700
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*	.55
1000 Lumens 90 CRI	1	.55
1200 Lumens 90 CRI	1.23*	.55
1000 Lumens 80 CRI	1.04*	.67
1200 Lumens 80 CRI	1.24*	.67
1500 Lumens 80 CRI	1.53*	.67

\*estimated values

## REFLECTOR COLOR MULTIPLIERS

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