

Project

Date

Product Code

Type

Designer



FIVE HI CZS SM


surface mounted LED downlight/wallwasher



FEATURES

- **Five Hi CZS/5 SM is a 5" aperture surface mounted LED downlight/wallwasher.** Luminaire is powered by one of a number of Citizen chip-on-board LED's some of which provide a CRI of 97 within 2-step MacAdam ellipses. See tables on following pages for watt-ages and efficacies.
- **Luminaire may be ordered with one of a number of drivers.**
- **One basic housing allows interchangeable use** of the downlight and wallwash (120°) reflectors. This permits housings to be installed first and reflectors installed or changed at any time.
- **Precise reflector design minimizes aperture brightness** minimizes aperture brightness and provides a shielding angle of 40°.
- **External reflectors are available in clear natural aluminum finishes** — slightly diffuse (V) or fully diffuse (EC) — as well as champagne gold Alzak® and white. Other reflector finishes are available on special order.
- **For more information, [click here](#).**

APPLICATIONS

Fixture is suitable for 120-volt or 277-volt service and is  listed for Damp Location and mounting on a 3½" or 4" octagonal outlet box (supplied by others).

MODIFICATIONS AVAILABLE

Contact factory with quantity for pricing; orders may require shop drawing approval.

- Side bracket, for mounting on vertical surfaces

For a pendant mounted model, see [FIVE HI CZS PM](#)

PRODUCT CODE

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

Basic Unit FH-SM-CZS2

Light Source Output (Lumens)

| | |
|--|--------|
| 1500L / CRI 97 2700K, 3000K only | - L15A |
| 2100L | - L21A |
| 2800L | - L28A |
| 3000L | - L30A |
| 1700L / CRI 90+ 2700K, 3000K, 3500K only | - L17H |
| 2300L | - L23H |
| 3100L | - L31H |
| 3400L | - L34H |
| 1900L / CRI 80+ | - L19S |
| 2700L | - L27S |
| 3600L | - L36S |
| 3900L | - L39S |

LED Light Engine Color

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

Driver

| | |
|---|-------|
| dimable to 1% by a 0-10V dimmer on 120 or 277-volt service | - DMV |
| dimable to 5% by either an incandescent or ELV dimmer; 120-volt service only | - DMP |

Voltage

| | |
|------------------------|-------|
| 120 volt service | - 120 |
| 277 volt service | - 277 |

Finish

| | |
|--|-------|
| white | - WHT |
| black | - BLK |
| Industrial Silver | - SIL |
| custom color: include physical chip with order | - CC |

Reflector Type

| | |
|-----------------|-----------|
| Downlight | no suffix |
| Wallwash..... | WW |

Reflector Color

| | |
|-----------------------------|------|
| Slightly diffuse Clear..... | VSM |
| Fully diffuse Clear..... | ECSM |
| Champagne Gold..... | GSM |
| White | WSM |

Other reflector finishes are available on special order.

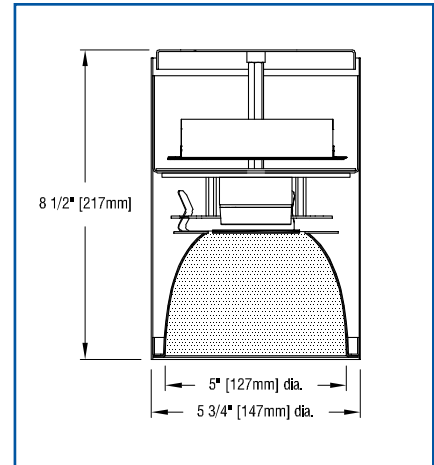
Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).



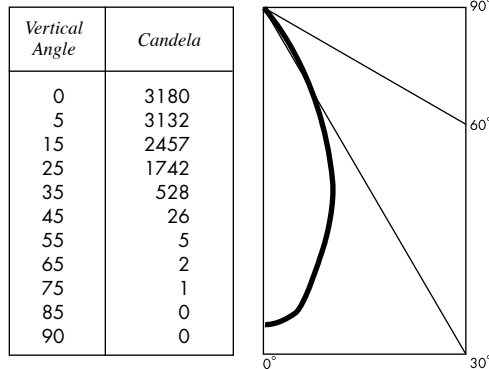
PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

Prorated from Verification Services Report No. 12159442.01. Original report furnished upon request.

Luminaire surface-mounted LED round downlight with aluminum reflector
 Lamp Citizen 19mm LED, 3900 lumens, 3000K CCT, 80 CRI
 Lamp Life rated 50,000 hours based on L70/B50 criteria. LM80 report by LED manufacturer furnished upon request
 Spacing Criteria 0.8



CANDLEPOWER DISTRIBUTION



STANDARD DRIVER (0-10V DIMMING) INFORMATION UL Class 2, dry and damp location

| Voltage | 120 | 277 |
|--|-----------------|-----------------|
| Input Watts (L15A/L21A/L28A/ L30A/ L17H/L23H/L31H/ L34H/ L19S/L27S/L36S/L39S lumens) | 12/19/27/31 | 12/19/27/31 |
| Input Current (A) (L15A/L21A/L28A/ L30A/ L17H/L23H/L31H/ L34H/ L19S/L27S/L36S/L39S lumens) | .10/.16/.23/.26 | .04/.07/.10/.11 |
| Output Current (mA) | 350-800 | 350-800 |
| Min. Power Factor | >0.9 | >0.9 |
| Operating Temperature Range (F) | -4 to 122 | -4 to 122 |

LIGHT OUTPUT MULTIPLIERS

Based on 3900 lumens LED

| LED Light Engine | Light Output Multiplier |
|--------------------------|-------------------------|
| 1900 Lumens 80 CRI(L19S) | 0.49* |
| 2700 Lumens 80 CRI(L27S) | 0.68* |
| 3600 Lumens 80 CRI(L36S) | 0.91* |
| 3900 Lumens 80 CRI(L39S) | 1 |
| 1700 Lumens 90 CRI(L17H) | 0.42* |
| 2300 Lumens 90 CRI(L23H) | 0.58* |
| 3100 Lumens 90 CRI(L31H) | 0.78* |
| 3400 Lumens 90 CRI(L34H) | 0.86* |
| 1500 Lumens 97 CRI(L15A) | 0.38* |
| 2100 Lumens 97 CRI(L21A) | 0.52* |
| 2800 Lumens 97 CRI(L28A) | 0.7* |
| 3000 Lumens 97 CRI(L30A) | 0.77* |

*estimated values

LUMINAIRE LIGHT OUTPUT AND EFFICACY

| LED Light Engine | Luminaire Light Output | Luminaire Efficacy (lms/watt) | System Wattage |
|--------------------------|------------------------|-------------------------------|----------------|
| 1900 Lumens 80 CRI(L19S) | 1046* | 87* | 12 |
| 2700 Lumens 80 CRI(L27S) | 1452* | 76* | 19 |
| 3600 Lumens 80 CRI(L36S) | 1943* | 72* | 27 |
| 3900 Lumens 80 CRI(L39S) | 2135 | 70 | 31 |
| 1700 Lumens 90 CRI(L17H) | 897* | 75* | 12 |
| 2300 Lumens 90 CRI(L23H) | 1238* | 65* | 19 |
| 3100 Lumens 90 CRI(L31H) | 1665* | 62* | 27 |
| 3400 Lumens 90 CRI(L34H) | 1836* | 59* | 31 |
| 1500 Lumens 97 CRI(L15A) | 811* | 68* | 12 |
| 2100 Lumens 97 CRI(L21A) | 1110* | 58* | 19 |
| 2800 Lumens 97 CRI(L28A) | 1495* | 55* | 27 |
| 3000 Lumens 97 CRI(L30A) | 1644* | 53* | 31 |

*estimated values

LUMINANCE DATA

| Vertical Angle | Candela/m ² |
|----------------|------------------------|
| 45 | 2876 |
| 55 | 668 |
| 65 | 372 |
| 75 | 254 |
| 85 | 138 |

To convert cd/m² to footlamberts multiply by 0.2919.

ZONAL LUMEN SUMMARY

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0 - 40° | 2097 | 98.2 |
| 0 - 60° | 2132 | 99.9 |
| 0 - 90° | 2135 | 100.0 |
| 90 - 180° | 0 | 0.0 |

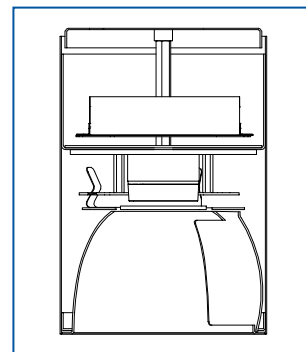
COLOR MULTIPLIERS

| | |
|----------------------------|-----|
| Slightly diffuse clear (V) | 1 |
| Fully diffuse clear (EC) | .79 |
| Champagne gold (G) | 1 |

PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

Prorated from Verification Services Report No. 12159442.02A. Original report furnished upon request.

Luminaire surface-mounted LED round wallwasher with aluminum reflector
 Lamp Citizen 19mm LED, 3900 lumens, 3000K CCT, 80 CRI
 Lamp Life rated 50,000 hours based on L70/B50 criteria. LM80 report
 by LED manufacturer furnished upon request



WALLWASH INFORMATION *Based on 3900 lumens LED*

| Distance From Ceiling (Feet) | 3' From Wall; 3' O.C. | | 3' 6" From Wall; 3' 6" O.C. | | 4' From Wall; 4' O.C. | |
|------------------------------|-----------------------|------------------|-----------------------------|------------------|-----------------------|------------------|
| | Below Fixture | Between Fixtures | Below Fixture | Between Fixtures | Below Fixture | Between Fixtures |
| 1 | 6 | 7 | 4 | 4 | 3 | 3 |
| 2 | 12 | 12 | 8 | 8 | 6 | 6 |
| 3 | 12 | 13 | 9 | 9 | 7 | 7 |
| 4 | 13 | 14 | 9 | 9 | 7 | 7 |
| 5 | 18 | 19 | 11 | 11 | 7 | 7 |
| 6 | 20 | 21 | 13 | 15 | 8 | 9 |
| 7 | 20 | 20 | 15 | 16 | 10 | 11 |
| 8 | 18 | 18 | 15 | 15 | 11 | 12 |
| 9 | 16 | 17 | 14 | 14 | 11 | 12 |
| 10 | 14 | 15 | 12 | 13 | 11 | 11 |
| 11 | 13 | 13 | 11 | 12 | 10 | 10 |
| 12 | 12 | 12 | 10 | 11 | 9 | 9 |

All vertical footcandles are initial values with no contribution from ceiling or floor reflectances.
 Computation performed with a total of ten wallwashers.

LUMINAIRE LIGHT OUTPUT AND EFFICACY

| LED Light Engine | Luminaire Light Output | Luminaire Efficacy (lms/watt) | System Wattage |
|--------------------------|------------------------|-------------------------------|----------------|
| 1900 Lumens 80 CRI(L19S) | 1017* | 85* | 12 |
| 2700 Lumens 80 CRI(L27S) | 1411* | 74* | 19 |
| 3600 Lumens 80 CRI(L36S) | 1888* | 70* | 27 |
| 3900 Lumens 80 CRI(L39S) | 2075 | 68 | 31 |
| 1700 Lumens 90 CRI(L17H) | 872* | 73* | 12 |
| 2300 Lumens 90 CRI(L23H) | 1204* | 63* | 19 |
| 3100 Lumens 90 CRI(L31H) | 1619* | 60* | 27 |
| 3400 Lumens 90 CRI(L34H) | 1785* | 58* | 31 |
| 1500 Lumens 97 CRI(L15A) | 789* | 66* | 12 |
| 2100 Lumens 97 CRI(L21A) | 1079* | 57* | 19 |
| 2800 Lumens 97 CRI(L28A) | 1453* | 54* | 27 |
| 3000 Lumens 97 CRI(L30A) | 1598* | 52* | 31 |

*estimated values

LIGHT OUTPUT MULTIPLIERS

Based on 3900 lumens LED

| LED Light Engine | Light Output Multiplier |
|--------------------------|-------------------------|
| 1900 Lumens 80 CRI(L19S) | 0.49* |
| 2700 Lumens 80 CRI(L27S) | 0.68* |
| 3600 Lumens 80 CRI(L36S) | 0.91* |
| 3900 Lumens 80 CRI(L39S) | 1 |
| 1700 Lumens 90 CRI(L17H) | 0.42* |
| 2300 Lumens 90 CRI(L23H) | 0.58* |
| 3100 Lumens 90 CRI(L31H) | 0.78* |
| 3400 Lumens 90 CRI(L34H) | 0.86* |
| 1500 Lumens 97 CRI(L15A) | 0.38* |
| 2100 Lumens 97 CRI(L21A) | 0.52* |
| 2800 Lumens 97 CRI(L28A) | 0.7* |
| 3000 Lumens 97 CRI(L30A) | 0.77* |

*estimated values