

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

dimmable to 1% by a 0-10V dimmer on 120 or 277-volt service .....	- DMV
dimmable 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 paint number or 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.

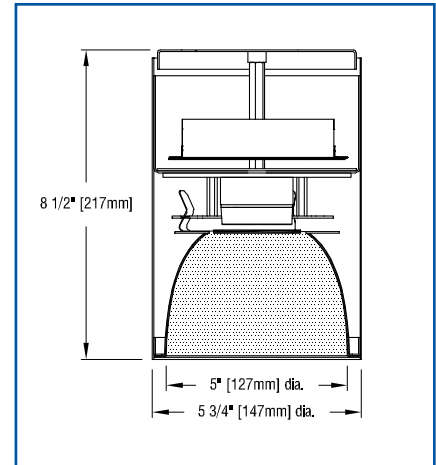
Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).



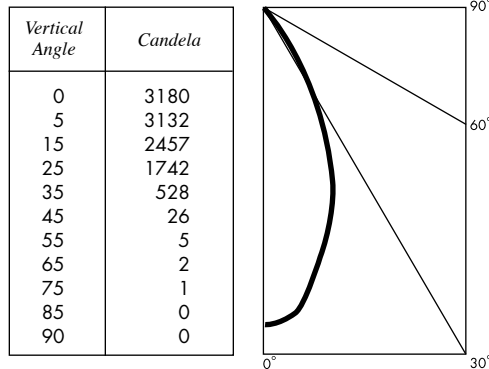
## PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

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



## 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

## 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

## 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

## 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

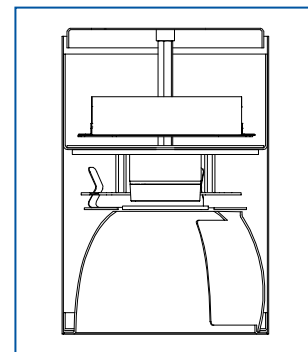
Vertical Angle	Candela/m <sup>2</sup>
45	2876
55	668
65	372
75	254
85	138

To convert cd/m<sup>2</sup> to footlamberts multiply by 0.2919.

## 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