

REFLECTOR/ FLANGE COLORS



## Dims to Warm HH4SQ-LED

## 4" Architectural High Lumen Square LED Downlight







LED-4614 Reflector with Frosted Glass Lens

LED-4615 Reflector with Tempered Glass Lens



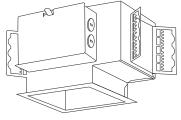
HH4SQ-TL-4614 HH4SQ-TL-4615 Trimless Reflector with Trimless Reflector with Tempered Glass Lens Frosted Glass Lens

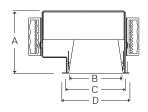
HH4SQ-TL-4607 Trimless Wall Wash

Reflector with Diffuse Lens

DYNAMIC PLATFORM

CL-SCH SHZ-SHZ MB-BK





A: Height = 5-1/2" B: Trim Aperture = 4-1/2' C: Cut-Out = 5-1/8"

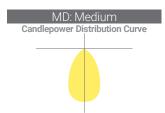
D: Trim Outside Dia = 5-3/4"

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
2000	1995	29 W
1500	1473	22 W
1200	1203	18 W
900	910	14W

Based on 3000K, 90+CRI with semi-specular chrome reflector. Actual wattage may vary +/-5%

SMART DIM - Dims to Warm with Smart Dim technology simulates traditional incandescent halogen lighting through dimming, while providing the energy efficiency, high performance and longevity of LED luminaires. When the luminaire dims to warm, it makes a smooth transition across the black body radiator curve. Starting with a 100% lumen output at 3000K, down to a 1% lumen output at 1800K, and maintaining a constant CRI of 90+. It results in rich amber tones as the light dims, encouraging relaxation. An ideal source for hospitality, residential, and assisted living applications.

LUMENS	900, 1200, 1500, 2000
DIMS TO WARM PLATFORMS	100% lumen output at 3000K, down to a 1% lumen output at 1800K
CRI	90+ Standard
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTIONS	MD (Medium Distribution)
TRIM OPTIONS	Downlight, Wall Wash, Wet Location
REFLECTOR COLORS	CL (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), WT (Wheat), WH (White), MB (Black)
FLANGE COLORS	Self-flanged WH (White), SCH (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), BK (Black)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, DIMTR, ELDO101, ELDODALI1 ELDODMX1
EMERGENCY	10W - Up to 1000L Output 20W - Up to 2000L Output EMG-LED-G2-10W-SDT - Self Diagnostic (Consult Factory)
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21



Reference IES files for additional distribution curve information.















#### **FEATURES**

A highly sustainable and ultra-efficient architectural LED downlight that provides even, glare-free illumination. Available in a range of finishes and lumen packages, it is ideally suited for use in corporate office space, hospitality, healthcare, commercial, academic, churches and retail.

### **OPTICS AND REFLECTOR**

The reflector has a 45° cutoff, and is shipped standard with a Solite lens in a smooth frosted finish. It is spun from 0.05" thick aluminum, has a 1-step anodized finish, and is available in different colors or custom RAL finishes. Reflector trim options include self-flanged and white painted flange.

### THERMAL MANAGEMENT SYSTEM

Passive cooling Diecast Aluminum Heat Sink, LED light engine and driver are replaceable, upgradeable, and can be accessed from below the ceiling. The consistency in the quality of light is delivered with precision performance by the use of a unique locking mechanism that aligns the reflector with the light engine.

### **MOUNTING FRAME & BRACKET**

Constructed from 16 gauge steel. Can be installed with 3/4" or 1-1/2" lathing channel, 1/2" EMT, or with optional C-channel mounting bars (Part# BP31) ordered separately. Housing can be adjusted from the inside of the ceiling.

## **DRIVER ELECTRICAL INFORMATION**

The LED driver is rated for 50 to 60Hz at 120V/277V input, produces less than 20%THD, has a power factor between 90% and 100%, and is thermally protected for additional safety. Junction box and Driver can be accessed from below the ceiling and above the ceiling. Junction Box is Listed for through branch circuit wiring.

## **DIMMING & DRIVER INFORMATION**

**DIM10** - 0-10V dimming on either MVOLT 120, 277 or 347V. Dimmable down to 1% of initial lumens, standard.

**DIMTR** - Triac & Electronic low voltage dimming.

**LUTH** - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology.

ELDO10.1 - EldoLED SoloDrive 0-10V. Dimming down to 0.1%.

DALI - DALI DT6, DT8 dimming down to 1%.

ELDODMX - EldoLED PowerDrive dimming down to 0.1%.

Please see EldoLED website for wiring diagrams and a list of compatible DMX and Dali control systems.

### WARRANTY

Five-year warranty for parts and components. (Labor not included)

#### LISTINGS

c-UL-us - Listed for Wet Location. c-UL-us - Listed for Feed Through Wiring.

U.S Patent No. - D685,118S



Example: HH4SQ-LED-WDM-30K-18K-900L-DIM10-120-MD-90-LED-4607-CL-WH

SERIES	LUMENS	DRIVER	VOLTAGE	EMERGENCY	TRIM TYPE	REFLECTOR/TRIM- FINISH
HH4SQ-LED-WDM-30K-18K	900L 1200L 1500L 2000L	□ DIMTR ¹ □ DIM10 □ LUTH ² □ ELDO101 ² □ ELDODALI1 ² □ ELDODAX1 ²	□ 120 □ 277 □ MVOLT	☐ EMG-LED-10W ☐ EMG-LED-20W ☐ INTG-EMG-LED-10W ☐ INTG-EMG-LED-20W ☐ EMG-LED-G2-10W-SDT* Typical lumen output of the luminaire is up to 1000L with EMG-LED-10W option & 2000L	□ LED-4607 □ LED-4614 □ LED-4615	□ CL-WH □ CL-SCH □ SHZ-WH □ SHZ-SHZ □ WT-WH □ WH-WH □ MB-WH □ CL-BK □ MB-BK
			OPTICS CRI	with EMG-LED-20W option in emergency mode. Contact the factory for details. Remote mounted installation "Consult Factory for Self Diagnostic	TRIMLESS  ☐ HH4SQTL-4607 ☐ HH4SQTL-4614 ☐ HH4SQTL-4615	TRIMLESS FINISH  SHZ CL

<sup>&</sup>lt;sup>1</sup> DIMTR is available in 120V only -Reference last page for Control Options



<sup>&</sup>lt;sup>2</sup> LUTH, ELD010-.1, ELD0DALI-.1, and ELD0DMX-.1 are available in 120V and 277V



# Dims to Warm HH4SQ-LED

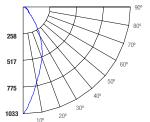
4" Architectural High Lumen Square LED Downlight

TEST NO.: **EL011933** 

## HH4SQ-LED-WDM-30K-18K-900L-DIM10-MVOLT-MD-40K-90-LED-4607-CL-WH

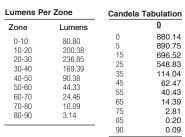
CCT: 4000K INPUT WATTS: 11.3 LUMENS: 860 CRI: **90** EFFICACY: 76 SPACING CRITERIA: 0.92

## Candle Power Distribution (Candelas)



Zonai Lumens Summary							
Zone	Lumens	%Lamp	%Fixt				
0-20	281.18	N.A.	32.70				
0-30	518.04	N.A.	60.20				
0-40	687.43	N.A.	79.90				
0-60	822.14	N.A.	95.60				
0-80	856.69	N.A.	99.60				
0-90	859.83	N.A.	100.00				

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	8724	18656	28746
55	6961	11163	13443
65	3362	9755	11999
75	1072	7398	10927
85	227	7059	11274



220 2.1 1.8 4.2 3.6 24.4 8.5 10 8.8 10.6 9.1 6.11 10.9 12.7

Coefficients of Utilization - Zonal Cavity Method

ffective Floor Cavity Reflectance 0.20
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	RC			80%		70%				50%			30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
ROOM CAVITY RATIO	0 1 2 3 4 5 6 7 8 9	119 112 106 100 94 89 84 79 75 71 68	119 109 100 92 85 79 74 69 64 61 57	119 106 96 87 79 73 67 62 58 54 51	119 104 92 82 74 68 62 57 53 50 47	116 110 104 98 92 87 82 78 74 70 66	116 107 99 91 84 78 73 68 64 60 57	116 105 94 86 78 72 67 62 58 54 51	116 102 91 81 74 67 62 57 53 50 46	111 103 95 88 82 76 71 67 63 59	111 101 92 84 77 71 66 61 57 53	111 99 89 80 73 67 62 57 53 49 46	106 99 92 86 80 75 70 65 62 58 55	106 98 89 82 76 70 65 60 56 53	106 96 87 79 72 66 61 57 53 49	102 96 89 83 78 73 68 64 61 57	102 95 87 80 74 69 64 60 56 53 49	102 93 85 78 71 66 61 56 52 49	100 91 83 76 70 64 59 55 51 48

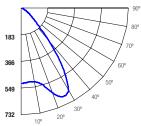
RC - Ceiling Cavity Reflectance

**Zonal Lumens Summary** 

RW - Wall Reflectance

## HH4SQ-LED-WDM-30K-18K-900L-DIM10-MVOLT-MD-40K-90-LED-4614-CL-WH

TEST NO.: **EL011932** INPUT WATTS: 11.3 LUMENS: 894 CRI: 90 EFFICACY: 79 CCT: 4000K SPACING CRITERIA: 1.24



Candle Power Distribution (Candelas)

Zone	Lumens	%Lamp	%Fixt
0-20	199.67	N.A.	22.30
0-30	464.44	N.A.	52.00
0-40	705.54	N.A.	79.00
0-60	880.40	N.A.	98.50
0-80	892.85	N.A.	99.90
0-90	893.59	N.A.	100.00

Effective Floor Cavity Reflectance 0.20

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	14719	22980	25867
55	3662	6353	11924
65	601	1192	5776
75	385	652	740
85	363	940	1054

Luminance (Average candela/M2)

Lumens Po	er Zone	Candela	Tabulation
Zone	Lumens		0
0-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90	47.24 152.43 264.77 241.10 131.29 43.57 10.75 1.70 0.74	0 5 15 25 35 45 55 65 75 85	499.26 491.18 573.25 518.62 199.45 105.40 21.27 2.57 1.01 0.32
		90	0.06

732	L	100	30	0	
			Cone o	f Light	
	2		125	2.5	2.8
	4		31.2	5	5.5
	6		13.9	7.5	8.3
	8		7.8	10.1	11

(FC.) Initial Footcandle at Nadir (FT.) Beam Vert. Spread (FT.) Beam Horiz. Spread

12.6

15.1

13.8

16.6

4.99

3.47

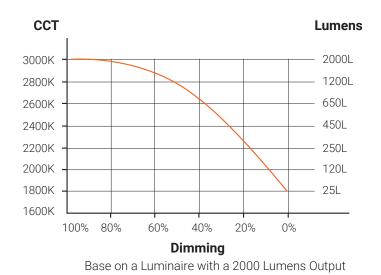
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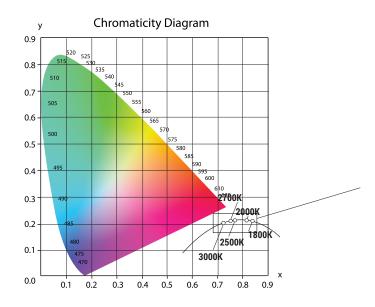
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Coefficients of Utilization - Zonal Cavity	Method

	RC			80%		70%				50%			30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
ROOM CAVITY RATIO	0 1 2 3 4 5 6 7 8 9	119 113 106 99 93 87 82 77 72 68 64	119 109 100 92 84 77 71 66 61 57 53	119 106 95 86 78 70 64 59 54 50 46	119 104 91 81 73 65 59 54 49 45	116 110 103 97 91 85 80 75 71 67 63	116 107 98 90 83 76 70 65 60 56	116 105 94 85 77 70 64 58 54 50	116 102 90 81 72 65 59 54 49 45	111 103 95 87 81 74 69 64 59 55	111 101 91 83 75 69 63 58 53 49 46	111 99 88 79 71 64 59 53 49 45	106 99 92 85 79 73 67 62 58 54	106 98 89 81 74 68 62 57 53 49 45	106 96 86 78 70 64 58 53 49 45	102 96 89 83 77 71 66 61 57 53	102 95 87 79 73 67 61 56 52 48 45	102 93 85 77 70 63 58 53 48 45	100 92 83 75 68 62 56 51 47 43 40

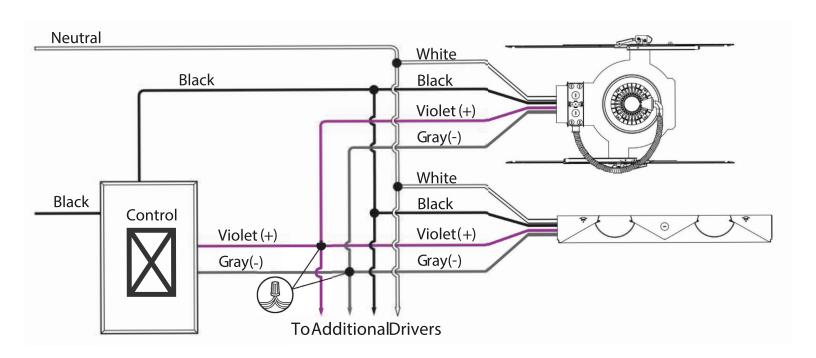
RC - Ceiling Cavity Reflectance

RW - Wall Reflectance





## WDM-30K-18K



## Dims to Warm **HH4SQ-LED**

4" Architectural High Lumen Square LED Downlight



- 1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated contol systems
- 2- Luminaire will be shipped with Sensors installed on the luminaire, allowing for individual luminaire control. Luminaires will be ready to be integrated with designated control systems
- 3- Luminaire will be shipped with Sensors to be remotely installed on the ceiling. Luminaires will be ready to be integrated with designated control systems

BRAND	EASYFIT by EnOcean	<b>#LUTRON</b>	enlighted	LEVIT <mark>ON</mark> .	OSRAM	PHILIPS EasySense	<b>La legrand</b> ®	
	☐ LEDRU LED Relay Zone Controller 0-10V <sup>1</sup>	□ FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminare is shipped Vive Enabled) 14		☐ ZL027 –NOW Intellect Power Control Module 16	□ EN-WCM2-ZB-DR Wireless Control Module <sup>17</sup>	SBR -BS Xitanium SR Bridge 18	LMFC-011 ON/0FF/0-10V dimming fixture controller 19	
CONTROL UNIT	LEDDU	☐ FCJS-EC0 Lutron Vive Eco-system Pow	□ CU-4E-FMH Fixture Mount Control Unit 15	□ ZL027 –N0W	□ EN- ALC-ZB-BK-DR Wireless Area Lighting Control Module <sup>17</sup>			
	LED Zone Controller 0-10V <sup>1</sup>	Pak (Luminare is shipped Vive Enabled) 14		Intellect Power Control Module <sup>16</sup>	☐ ZBHA-CLM-DIM-ENC Connected Lighting Module DIM <sup>1-7</sup>			
INTEGRAT Sensor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
*WIRELESS OCCUPANCY SENSOR	© EOSCU-W-EO Occupancy Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) 3	N/A	N/A	N/A	N/A	N/A	LMDC-100 Dual technology PIR Ceiling Mount Occupancy Sensor <sup>3</sup>	
*WIRELESS Daylight Sensor	Light Level Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) 3	N/A	N/A	N/A	N/A	N/A	□ LMLS-400 Single zone switching and dimming digital photosensor <sup>3</sup>	
*WIRELESS OCCUPANCY & DAYLIGHT SENSOR	N/A N/A		□ SU-5E-IoT IoT Node Micro Sensor ³ □ SU-5E-CL Connected Lighting Micro Sensor ³ □ SU-5E-IL Independent Lighting / Enlighted One Micro Sensor ³ □ SU-5S-H-(IoT/CL/IL) Surface Mount Sensor ³ (Must be specified with CU-4E-FMH Control Unit)	☐ ZL00J -T0W Intellect Intelligent Fixture Control System <sup>3</sup> (Must be specified with ZL027 –N0W Control Unit)	□ EN-CLM-PIR-DD-ZB SensiLJM <sup>TM</sup> Wireless Integrated Sensor □ EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors <sup>3</sup> (Must be specified with EN-WCM2-ZB-DR or EN- ALC-ZB-BK-DR Control Unit)	SNS200-CMP SNS200 for grouping <sup>3</sup>	N/A	
ACCESORIES	N/A	N/A	☐ TMC-SU-5E Tile Mount Carrier ☐ CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4 and IoT ReadyTM drivers ☐ CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4 and IoT ReadyTM drivers	N/A	N/A	N/A	N/A	
NOTES	N/A	4- Luminaire will be compatible with Lutron LRF2-OCR2B-P-WH Ceiling mount360° occupancy/vacancy sensor & LRF2-DCRB-WH Ceiling-mount daylight sensor. Sensors must be ordered through Lutron.	5- Luminaire will be compatible with ENLIGHTED SU-5E-IoT, SU-5E-CL, SU-5E-IL, SU- 5S-H, Sensors.	6-Luminaire will be compatible with Leviton Intellect App & Keypad Room Controller	7-Luminaire will be compatible with EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors	8-Luminaire will be compatible with Philips field and wireless switch.	9-Luminaire will be compatiable with DLM Room control system LMPB-100. DLM control system must be orderd through Legrand.	