



HH10-1501
Flanged Downlight



HH10-1507
Flanged Wall Wash



HH10-1577
Flanged Double Wall Wash

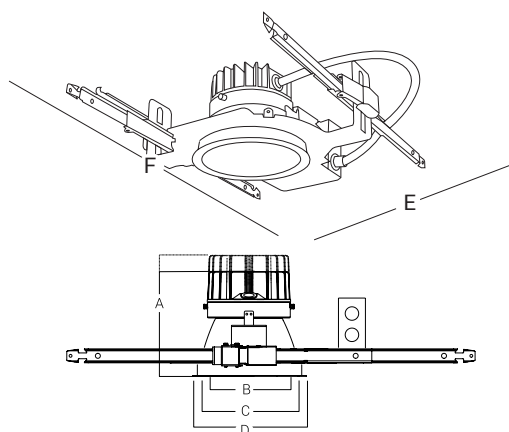


HH10-TL-1501
Trimless Downlight



HH10-TL-1507
Trimless Wall Wash

REFLECTOR/
FLANGE COLORS



A 900L to 4000L: Height = 9"
A 6000L to 8000L: Height = 12"
B: Trim Aperture = 9-5/8"
C: Cut-Out = 10-1/2"
D: Trim Outside Dia = 11"
E: Width = 17-1/2"
F: Length = 16-1/2"

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
8000	7789	101 W
6000	6412	76 W
4000	4638	49 W
3000	3512	44 W
2000	2382	28 W
1500	1782	22 W
1200	1439	16 W
900	1091	12 W

Based on 4000K, 90+CRI with semi-specular chrome reflector.
Actual wattage may vary +/-5%

FEATURES

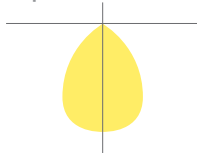
A highly sustainable and ultra-efficient architectural LED downlight that provides even, glare-free illumination. Available in a range of finishes, distributions, and lumen packages, it is ideally suited for use in corporate office space, hospitality, healthcare, commercial, academic, churches and retail.

OPTICS AND REFLECTOR

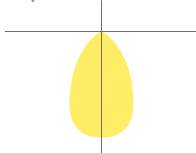
The reflector has a 45° visual cutoff, and is shipped standard with a Solite lens in a smooth frosted finish. Spun from 0.05" thick aluminum, with a 1-step anodized finish, and available in different colors or custom RAL finishes. Reflector flange options include self-flanged and white painted flange. Various distribution options are available, and all optics are field changeable.

LUMENS	900, 1200, 1500, 2000, 3000, 4000, 6000, 8000 (Custom lumen packages available)
CCT & DYNAMIC PLATFORMS	22K, 27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm, RGB + White
CRI	90+ Standard, 98+ Optional
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTIONS	WD (Wide Distribution), MD (Medium Distribution) and ND (Narrow Distribution)
TRIM OPTIONS	Downlight, Wall Wash, Double 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, LUTFB, LUT2W, ELDO10.1, ELDDMX.1, ELDDALI.1, DIMTR
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

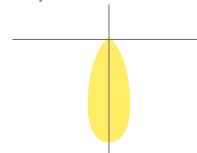
WD: Wide
Candlepower Distribution Curve



MD: Medium
Candlepower Distribution Curve



ND: Narrow
Candlepower Distribution Curve



Reference IES files for additional distribution curve information.



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 & BRACKETS

The downlight mounting frame is a fabricated assembly constructed of 16-gauge steel, with C-channel mounting brackets, included. The versatility of the mounting brackets allow for an adjustability of up to 28" horizontally, and 2-3/4" vertically, locking into place. With the added die-formed construction of the mounting frame, it provides maximum heat dissipation and rust protection.

DRIVER ELECTRICAL INFORMATION

The LED driver is rated for 50 to 60Hz at 120V/277V also available in 347V 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. Available in 120V, and up to 4000 lumens only.

LUT2W - Lutron LTEA2W Hi-Lume 1%. 2-wire LED Driver Forward Phase Control, 1% dimming in 120V only. Available on all luminaires up to 3000 lumens.

LUTH - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology. Available on all luminaires up to 3000 lumens.

LUTFB - Lutron PEQ0 Hi-Lume Premier Eco System. 0.1% dimming with Soft in Fade to Black dimming technology. Available on all luminaires up to 1500 lumens.

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)

LED DYNAMIC PLATFORM OPTIONS

 **Tunable White with Smart White Technology** utilizing the Lumenetix Platform allows you to color tune the luminaire via various controls. Create the perfect environment for the desired use of the space, while maintaining a CRI of 90+ across the tunable range of 8000 to 1650K. (Click here for more details)

 **Dims to Warm with Smart Dimming Technology.** At 100% full brightness the luminaire is at 3000K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)

 **RGB+White with Smart Hue Technology** provides full color mixing of RGB and white colors. Utilizing the Lumenetix Platform allows you to choose from unlimited RGB color options, via various controls. Ideal for Circadian Rhythm applications or to create the perfect human centric environment. (Click here for more details)

LISTINGS

c-UL-us - Listed for Wet Location if used with HH10-1501 Trim.

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

U.S Patent No. - D685,118S

Example: HH10-LED-4000L-DIM10-MVOLT-MD-40K-90-HH10-1501-CL-WH

SERIES	LUMENS	DRIVER	VOLTAGE	CCT	EMERGENCY	TRIM TYPE	REFLECTOR/FLANGE COLORS
HH10-LED	☐ 900L	☐ DIM10	☐ 120	☐ 22K	☐ 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 with EMG-LED-20W option in emergency mode. Contact the factory for details. Remote mounted installation * Consult Factory for Self Diagnostic	☐ HH10-1501 Flanged Downlight	☐ CL-WH ☐ CL-SCH ☐ SHZ-WH ☐ SHZ-SHZ ☐ WT-WH ☐ WH-WH ☐ MB-WH ☐ CL-BK ☐ MB-BK
	☐ 1200L	☐ DIMTR ^{3 6}	☐ 277	☐ 27K		☐ HH10-1507 Flanged Wall Wash	
	☐ 1500L	☐ LUTH ^{2 6}	☐ MVOLT	☐ 30K		☐ HH10-1577 Flanged Double Wall Wash	
	☐ 2000L	☐ LUT2W ^{3 6}	☐ 347 (DIM10 only)	☐ 35K			
	☐ 3000L	☐ LUTFB ⁷		☐ 40K			
	☐ 4000L	☐ ELDO10-1 ²		☐ 50K ⁴			
	☐ 6000L	☐ ELDODALI-1 ²					
	☐ 8000L ¹	☐ ELDODMX-1 ²					
			OPTICS	CRI		TRIMLESS	
			☐ WD	☐ 90+		☐ HH10-TL-1501 Trimless Downlight	
			☐ MD	☐ 98+ ⁵		☐ HH10-TL-1507 Trimless Wall Wash	
			☐ ND			OPTIONS	
						☐ INTG (Reflector shipped with pre-punched hole to accept INTG-EMG-LED)	

¹ DIM10 5% is available only for 8000L ²LUTH, ELDO10-1, ELDODALI-1, and ELDODMX-1 are available in 120V and 277V ³DIMTR and LUT2W are available in 120V only

⁴ 50K series are available with 85+ CRI only ⁵ 98+ CRI is available in 27K, 30K and 40K only ⁶ DIMTR and LUTH, LUT2W Available for luminaires up to 4000L ⁷ LUTFB Available for luminaires up to 1500L

-Reference last page for Control Options

HH10-LED-4000L-DIM10-MVOLT-ND-40K-90-HH10-1501-CL-WH

INPUT WATTS: **49.1**

LUMENS: **4638**

CRI: **90**

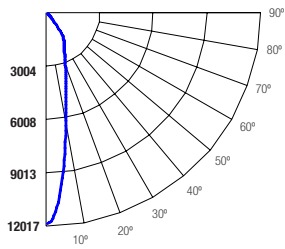
EFFICACY: **94**

CCT: **4000K**

TEST NO.: **EL1218150**

SPACING CRITERIA: **0.50**

Candle Power Distribution (Candelas)



Cone of Light		
4.0	41.6 fc	7 ft
8.0	10.4 fc	14 ft
12.0	4.62 fc	21 ft
16.0	2.6 fc	28 ft
20.0	1.66 fc	34.9 ft
24.0	1.16 fc	41.9 ft
Distance to Plane	Initial Footcandle at Nadir	Beam diameter
BEAM DIA. MEASURED AT 50% OF NADIR F.C.		

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	2103.89	N.A.	45.40
0-30	3285.54	N.A.	70.80
0-40	4245.56	N.A.	91.50
0-60	4613.57	N.A.	99.50
0-80	4635.24	N.A.	99.90
0-90	4637.98	N.A.	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	4317	6702	16560
55	1312	1742	2363
65	471	539	1316
75	310	431	506
85	210	825	914

Lumens Per Zone

Zone	Lumens
0-10	820.29
10-20	1283.6
20-30	1181.65
30-40	960.02
40-50	315.89
50-60	52.12
60-70	16.11
70-80	5.57
80-90	2.73

Candela Tabulation

0	12016.731
5	9825.235
15	4459.990
25	2463.132
35	1696.272
45	153.595
55	37.848
65	10.006
75	4.038
85	0.921
90	0.147

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	RW	80%				70%				50%				30%				10%				0%			
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
	1	114	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94	94	94	94	94	94	94
	2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88	88	88	88	88	88	88
	3	103	97	92	88	101	96	91	88	93	89	86	91	88	85	88	86	84	84	82	82	82	82	82	82
	4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	78	77	77	77	77	77	77	77
	5	94	86	80	76	92	85	80	76	83	78	75	81	77	74	80	76	74	72	72	72	72	72	72	72
	6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68	68	68	68	68	68	68
	7	85	76	71	67	84	76	70	66	74	70	66	73	69	66	72	68	65	64	64	64	64	64	64	64
	8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61	61	61	61	61	61	61
	9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57	57	57	57	57	57	57
	10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	55	55	55	55	55	55	55

RC - Ceiling Cavity Reflectance RW - Wall Reflectance

HH10-LED-4000L-DIM10-MVOLT-MD-40K-90-HH10-1501-CL-WH

INPUT WATTS: **48.5**

LUMENS: **4363**

CRI: **90**

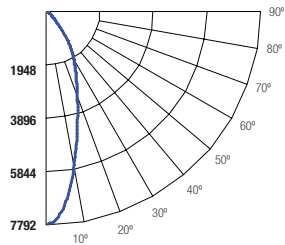
EFFICACY: **90**

CCT: **4000K**

TEST NO.: **EL1218148**

SPACING CRITERIA: **0.66**

Candle Power Distribution (Candelas)



Cone of Light		
4.0	27 fc	10.8 ft
8.0	6.74 fc	21.6 ft
12.0	3 fc	32.4 ft
16.0	1.69 fc	43.2 ft
20.0	1.08 fc	54 ft
24.0	0.75 fc	64.9 ft
Distance to Plane	Initial Footcandle at Nadir	Beam diameter
BEAM DIA. MEASURED AT 50% OF NADIR F.C.		

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1858.94	43.50	42.60
0-30	3045.77	71.20	69.80
0-40	3931.59	91.90	90.10
0-60	4338.31	101.50	99.40
0-80	4360.45	102.00	99.90
0-90	4363.05	102.00	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	10117	16331	24847
55	1983	3513	4050
65	705	800	2194
75	457	634	740
85	303	1208	1331

Lumens Per Zone

Zone	Lumens
0-10	631.11
10-20	1227.84
20-30	1186.83
30-40	885.82
40-50	346.15
50-60	60.57
60-70	16.85
70-80	5.30
80-90	2.60

Candela Tabulation

0	7791.97
5	7129.49
15	4331.67
25	2510.30
35	1374.17
45	227.60
55	36.18
65	9.48
75	3.76
85	0.84
90	0.15

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	RW	80%				70%				50%				30%				10%				0%			
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
ROOM CAVITY RATIO	0	121	121	121	121	119	119	119	119	113	113	113	109	109	109	104	104	104	102	102	102	102	102	102	102
	1	116	113	111	108	111	109	107	105	107	105	103	103	102	100	99	98	97	96	96	96	96	96	96	96
	2	110	105	101	98	108	104	100	97	100	97	95	97	95	93	94	92	91	89	89	89	89	89	89	89
	3	105	98	93	89	103	97	92	89	94	90	87	92	89	86	89	87	85	83	83	83	83	83	83	83
	4	100	92	86	82	98	91	86	82	89	84	81	87	83	80	85	82	79	77	77	77	77	77	77	77
	5	95	86	80	76	93	85																		

1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated control 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	LUTRON	enlighted	LEVITON	OSRAM	PHILIPS EasySense	legrand
CONTROL UNIT	☐ LEDRU LED Relay Zone Controller 0-10V ¹	☐ FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴	☐ CU-4E-FMH Fixture Mount Control Unit ¹⁵	☐ ZL027 –NOW Intellect Power Control Module ¹⁶	☐ EN-WCM2-ZB-DR Wireless Control Module ¹⁷	☐ SBR -BS Xitanium SR Bridge ¹⁸	☐ LMFC-011 ON/OFF/0-10V dimming fixture controller ¹⁹
	☐ LEDDU LED Zone Controller 0-10V ¹	☐ FCJS-ECO Lutron Vive Eco-system Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴		☐ ZL027 –NOW Intellect Power Control Module ¹⁶	☐ EN- ALC-ZB-BK-DR Wireless Area Lighting Control Module ¹⁷		
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 ³
*WIRELESS DAYLIGHT SENSOR	☐ ELLSU-W-EO 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 ³
*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 -TOW Intellect Intelligent Fixture Control System ³ (Must be specified with ZL027 –NOW Control Unit)	☐ EN-CLM-PIR-DD-ZB SensiLUM™ Wireless Integrated Sensor ☐ EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors ³ (Must be specified with EN-WCM2-ZB-DR or EN- ALC-ZB-BK-DR Control Unit)	☐ SNS200- CMP SNS200 for grouping ³	N/A
ACCESSORIES	N/A	N/A	☐ TMC-SU-5E Tile Mount Carrier ☐ CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4 and IoT Ready™ drivers ☐ CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4 and IoT Ready™ drivers	N/A	N/A	N/A	N/A
NOTES	N/A	4- Luminaire will be compatible with Lutron LRF2-OCR2B-P-WH Ceiling mount 360° 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 compatible with DLM Room control system LMPB-100. DLM control system must be orderd through Legrand.