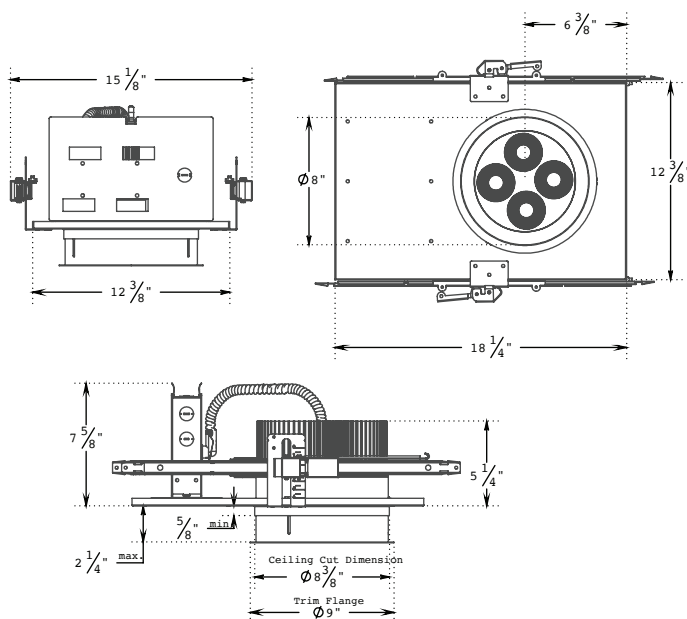




REFLECTOR/
FLANGE COLORS



NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
8000	8338	77 W
10000	10456	98 W
16000	16529	158 W
20000	20323	199 W
22000	22689	226 W
24000	24030	243 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

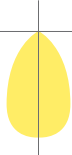
The reflector has a 45° visual cutoff, and is shipped standard with a Solite lens in a smooth frosted finish. Spun from 0.05" thick aluminum, with a 1-step anodized finish, and available in different colors or custom RAL finishes. Reflector flange options include self-flanged and white painted flange.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

LUMENS	8000, 10000, 16000, 20000, 22000, 24000
CCT & DYNAMIC PLATFORMS	22K, 27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm
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
REFLECTOR COLORS	CL (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), WH (White)
FLANGE COLORS	Self-Flanged WH (White), SCH (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUT2W, ELD010.1, ELD0DMX.1, ELDODALI.1, DIMTR
EMERGENCY	10W - Up to 1000L Output 20W - Up to 2000L Output
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08 and 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 3000 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 16000 lumens.

LUTH - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology. Available on all luminaires up to 16000 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.

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)

LIGHT ENGINE:

Contains a plurality of high brightness white LED's combined with high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation.

Lumen output shall not decrease by more than 30% over the minimum life of 102,000 hours (L70 > 102,000 hours) Color variation within 2-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling Available in 2200K, 2700K, 3000K, 3500K, 4000K and 5000K correlated color temperature (CCT). Available in 90 or 98

color rendering index (CRI)

WARRANTY

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

LISTINGS

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

Energy Star and California Title 24 compliant.

Example: **HL8-LED-8000L-DIM10-MVOLT-MD-40K-90-HL8-8501-CL-WH**

SERIES	LUMENS	DRIVER	VOLTAGE	CCT	EMERGENCY	TRIM TYPE	REFLECTOR/ FLANGE COLORS	
HL8-LED	☐ 8000L ☐ 10000L ☐ 16000L ☐ 20000L ☐ 22000L ☐ 24000L	☐ DIM10 ☐ DIMTR ³ ⁶ ☐ LUTH ² ⁶ ☐ LUT2W ³ ⁶ ☐ ELDO10-.1 ² ☐ ELDODALI-.1 ² ☐ ELDODMX-.1 ²	☐ 120 ☐ 277 ☐ MVOLT ☐ 347 (DIM10 only)	☐ 27K ☐ 30K ☐ 35K ☐ 40K ☐ 50K ⁴	☐ EMG-LED-10W ☐ EMG-LED-20W ☐ EMG-LED-G2-10W-SDT* Remote mounted installation * Consult Factory for Self Diagnostic	☐ HL8-8501	☐ CL-WH ☐ CL-SCH ☐ SHZ-WH ☐ SHZ-SHZ ☐ WT-WH ☐ W-WH ☐ MB-WH ☐ CL-BK ☐ MB-BK	☐ TGL-CL - TEMPERED GLASS prismatic lens ☐ TGL-FR - TEMPERED GLASS frosted prismatic lens (75° only)
			OPTICS	CRI				
			☐ WD ☐ MD ☐ ND	☐ 90+ ☐ 98+ ⁵				

² LUTH, ELDO10-.1, ELDODALI -.1, and ELDODMX-.1 are available in 120V and 277V

¹ LUT2W and DIMTR are available in 120V only(160W)

³ 50K series are available with 85+ CRI only

⁴ 98+ CRI is available in 27K, 30K and 40K only

⁵ LUTH Available for luminaires up to 22000L and LUT2W, DIMTR Available for luminaires up to 18000L

HL8-LED-24000L-DIM10-MVOLT-ND-40K-90-HL8-8501-CL-W

INPUT WATTS: **239.421**

LUMENS: **23186**

CRI: **90**

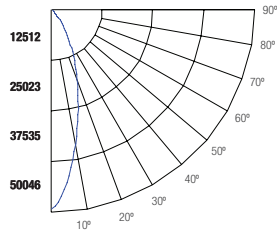
EFFICACY: **97**

CCT: **4000K**

TEST NO.: **EL07012201**

SPACING CRITERIA: **0.5**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	11782.9	50.8	50.8
0-30	18392.25	79.3	79.3
0-40	21955.16	94.7	94.7
0-60	23139.99	99.8	99.8
0-80	23173.84	99.9	99.9
0-90	23175.08	100	100

Luminance (Average candela/M²)

Angle in Degrees	Average 0f	Average 45f	Average 90f
45	91815	103532	138171
55	17702	17119	21049
65	8490	2594	6378
75	1498	1389	1703
85	461	412	835

Lumens Per Zone

Zone	Lumens
0-10	4070.58
20-Oct	7712.32
20-30	6609.35
30-40	3562.91
40-50	1019.95
50-60	164.88
60-70	27.93
70-80	5.92
80-90	1.24

Candela Tabulation

0	0
0	49383.24
5	42969.77
15	24813.56
25	12464.42
35	4895.89
45	758.66
55	118.65
65	41.93
75	4.53
85	0.47
90	0.12

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%	
0	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94
2	109	105	101	98	98	107	103	99	97	100	97	95	97	94	93	94	92	91	89
3	104	98	94	90	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84
4	100	93	88	84	84	98	92	87	83	89	86	82	88	84	81	86	83	81	79
5	95	88	82	78	78	94	87	82	78	85	81	77	83	80	77	82	79	76	75
6	91	83	78	74	74	90	82	77	73	81	76	73	79	76	73	78	75	72	71
7	87	79	73	70	70	86	78	73	69	77	72	69	76	72	69	75	71	68	67
8	84	75	70	66	66	82	74	69	66	73	69	65	72	68	65	71	68	65	64
9	80	71	66	63	63	79	71	66	62	70	65	62	69	65	62	68	65	62	61
10	77	68	63	60	60	76	68	63	59	67	62	59	66	62	59	66	62	59	58

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

HL8-LED-24000L-DIM10-MVOLT-MD-40K-90-HL8-8501-CL-W

INPUT WATTS: **243.523**

LUMENS: **24030**

CRI: **90**

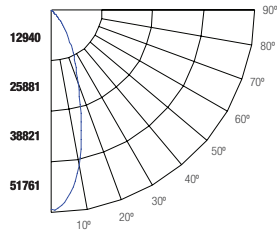
EFFICACY: **99**

CCT: **4000K**

TEST NO.: **EL07012201**

SPACING CRITERIA: **0.6**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	12904.43	53.7	53.7
0-30	19433.61	80.9	80.9
0-40	22905.02	95.3	95.3
0-60	23985.24	99.8	99.8
0-80	24017.07	99.9	99.9
0-90	24018.3	100	100

Luminance (Average candela/M²)

Angle in Degrees	Average 0f	Average 45f	Average 90f
45	92375	111919	132121
55	18703	18908	20100
65	6348	2598	4382
75	1617	1366	1316
85	756	609	717

Lumens Per Zone

Zone	Lumens
0-10	4436.44
20-Oct	8468
20-30	6529.17
30-40	3471.42
40-50	926.47
50-60	153.74
60-70	26.2
70-80	5.64
80-90	1.23

Candela Tabulation

0	0
0	51138.81
5	47554.69
15	28230.3
25	12882.76
35	4974.41
45	763.28
55	125.36
65	31.35
75	4.89
85	0.77
90	0.13

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%	
0	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	109	107	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	98	107	103	100	97	100	97	95	97	95	93	94	93	91	89
3	104	99	94	91	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	93	88	85	85	98	92	88	84	90	86	83	88	85	82	86	84	81	80
5	96	88	83	79	79	94	87	83	79	86	81	78	84	80	78	83	79	77	76
6	92	84	79	75	75	90	83	78	74	82	77	74	80	76	73	79	76	73	72
7	88	80	74	71	71	87	79	74	70	78	73	70	77	73	70	76	72	69	68
8	84	76	71	67	67	83	75	70	67	74	70	67	73	69	66	72	69	66	65
9	81	73	67	64	64	80	72	67	64	71	67	63	70	66	63	70	66	63	62
10	78	69	64	61	61	77	69	64	61	68	64	61	67	63	60	67	63	60	59

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

HL8-LED-24000L-DIM10-MVOLT-WD-40K-90-HL8-8501-CL-W

INPUT WATTS: **240.575**

LUMENS: **23548**

CRI: **90**

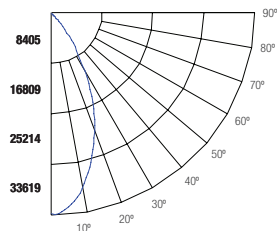
EFFICACY: **98**

CCT: **4000K**

TEST NO.: **EL07012201**

SPACING CRITERIA: **0.8**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	10185.15	43.3	43.3
0-30	17720.76	75.3	75.3
0-40	22099.69	93.8	93.8
0-60	23493.15	99.8	99.8
0-80	23536.22	99.9	99.9
0-90	23537.67	100	100

Luminance (Average candela/M²)

Angle in Degrees	Average 0f	Average 45f	Average 90f
45	134814	125287	137479
55	23984	24376	24206
65	7521	3149	8282
75	1617	1620	1792
85	589	501	805

Lumens Per Zone

Zone	Lumens
0-10	3012.33
20-Oct	7172.82
20-30	7535.62
30-40	4378.93
40-50	1186.45
50-60	207.01
60-70	36.18
70-80	6.89
80-90	1.46

Candela Tabulation

0	0
0	33260.18
5	31916.65
15	24782.57
25	15480.5
35	6282.04
45	1113.95
55	160.75
65	37.14
75	4.89
85	0.6
90	0.13

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

ROOM CAVITY RATIO	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%
	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
	1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
	2	108	104	100	97	106	102	98	96	99	96	93	96	93	91	93	91	90	88
	3	103	97	92	88	101	96	91	88	93	89	86	91	88	85	88	86	84	82
	4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	78	77
	5	94	86	80	76	92	85	79	76	83	78	75	81	77	74	80	76	74	72
	6	89	81	75	71	88	80	74	71	78	74	70	77	73	70	76	72	69	68
	7	85	76	70	66	84	75	70	66	74	69	66	73	69	65	72	68	65	64
8	81	72	66	62	80	71	66	62	70	65	62	69	65	62	68	64	61	60	
9	77	68	63	59	76	68	62	59	67	62	58	66	61	58	65	61	58	57	
10	74	65	59	55	73	64	59	55	64	59	55	63	58	55	62	58	55	54	

- 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 ☐ LEDDU LED Zone Controller 0-10V ¹	☐ FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴ ☐ FCJS-ECO Lutron Vive Eco-system Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴	☐ CU-4E-FMH Fixture Mount Control Unit ¹⁵	☐ ZL027 –NOW Intellect Power Control Module ¹⁶ ☐ ZL027 –NOW Intellect Power Control Module ¹⁶	☐ EN-WCM2-ZB-DR Wireless Control Module ¹⁷ ☐ EN- ALC-ZB-BK-DR Wireless Area Lighting Control Module ¹⁷ ☐ ZBHA-CLM-DIM-ENC Connected Lighting Module DIM ¹⁷	☐ SBR -BS Xitanium SR Bridge ¹⁸	☐ LMFC-011 ON/OFF/0-10V dimming fixture controller ¹⁹
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.