



**HH5-5501**  
Flanged Downlight



**HH5-5507**  
Flanged Wall Wash



**HH5-5577**  
Flanged Double Wall Wash

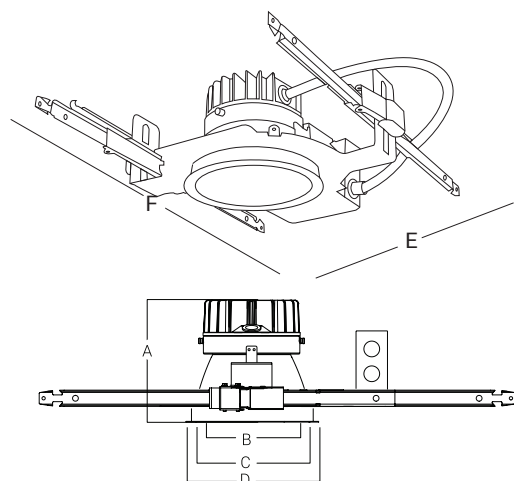


**HH5-TL-5501**  
Trimless Downlight



**HH5-TL-5507**  
Trimless Wall Wash

REFLECTOR/  
FLANGE COLORS



A: Height = 5-3/4"  
B: Trim Aperture = 5"  
C: Cut-Out = 5-1/2"  
D: Trim Outside Dia = 6-3/8"  
E: Width = 10"  
F: Length = 18-1/8"

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
3000	3579	32 W
2000	2101	26 W
1500	1665	20 W
1200	1314	16 W
900	975	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.

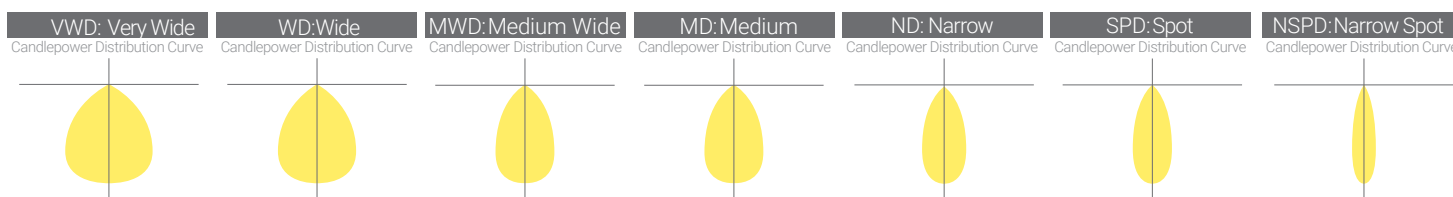
## OPTICS AND REFLECTOR

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* (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	VWD, WD, MWD, MD, ND, SPD, INSP
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, LUTFTB, LUT2W, ELD010.1, ELD0DMX.1, ELD0DALI.1, DIMTR, BLE
EMERGENCY	10W - Up to 1000L Output (Bodine BSL310) 20W - Up to 2000L Output (Bodine BSL20)
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21

\*3000 Lumens is not ENERGY STAR certified

\* Only Available on 85+ CRI



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.

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

**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 20 watts.

**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.

**BLE** - Luminaires may be controlled, grouped, scheduled or placed in scenes and or zones Via Cassambi Bluetooth 4.0 App.

### 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)

### OPTICAL

Modular Optics Available with 15°, 24°, 30°, 36°, 52°, 60° and 70° field interchangeable optics design with 45° cutoff to source.

Top-down flash characteristic for superior glare control. The optics attached directly the light engine to the Trim for complete optical alignment and sufficient efficacy.

### WARRANTY

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

### LISTINGS

c-UL-us - Listed for Wet Location if used with HH5-5501 Trim.

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

U.S Patent No. - D685,118S

CP-City of Chicago environmental air (CCEA) marking for plenum applications.

Energy Star and California Title 24 compliant

Optional Black color trim is not ENERGYSTAR certified and won't meet the requirement.

Example: **HH5-LED-3000L-DIM10-MVOLT-MD-40K-85-HH5-5501-CL-WH**

SERIES	LUMENS	DRIVER	VOLTAGE	CCT	EMERGENCY	TRIM TYPE	REFLECTOR/FLANGED COLORS
HH5-LED	<input type="checkbox"/> 900L <input type="checkbox"/> 1200L <input type="checkbox"/> 1500L <input type="checkbox"/> 2000L <input type="checkbox"/> 3000L* 4	<input type="checkbox"/> DIM10 <input type="checkbox"/> DIMTR 1 <input type="checkbox"/> LUTH 2 <input type="checkbox"/> LUT2W 1 <input type="checkbox"/> LUTFB 5 <input type="checkbox"/> ELDO10-1 2 <input type="checkbox"/> ELDODALI-1 2 <input type="checkbox"/> ELDODMX-1 2 <input type="checkbox"/> BLE	<input type="checkbox"/> 120 <input type="checkbox"/> 277 <input type="checkbox"/> MVOLT <input type="checkbox"/> 347 (DIM10 only) <input type="checkbox"/> 50K 2	<input type="checkbox"/> 22K <input type="checkbox"/> 27K <input type="checkbox"/> 30K <input type="checkbox"/> 35K <input type="checkbox"/> 40K <input type="checkbox"/> 50K 2	<input type="checkbox"/> EMG-LED-10W <input type="checkbox"/> EMG-LED-20W  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	<input type="checkbox"/> HH5-5501 Flanged Downlight <input type="checkbox"/> HH5-5507 Flanged Wall Wash <input type="checkbox"/> HH5-5577 Flanged Double Wall Wash  <b>TRIMLESS</b> <input type="checkbox"/> HH5-TL-5501 Trimless Downlight <input type="checkbox"/> HH5-TL-5507 Trimless Wall Wash	<input type="checkbox"/> CL-WH <input type="checkbox"/> CL-SCH <input type="checkbox"/> SHZ-WH <input type="checkbox"/> SHZ-SHZ <input type="checkbox"/> WT-WH <input type="checkbox"/> WH-WH <input type="checkbox"/> MB-WH* <input type="checkbox"/> CL-BK <input type="checkbox"/> MB-BK*  * Black color trim is not ENERGYSTAR certified
			<b>OPTICS</b> <input type="checkbox"/> VWD 70° <input type="checkbox"/> WD 60° <input type="checkbox"/> MWD 52° <input type="checkbox"/> MD 36° <input type="checkbox"/> ND 30° <input type="checkbox"/> SPD 24° <input type="checkbox"/> NSPD 15°	<input type="checkbox"/> 90+ <input type="checkbox"/> 98+3			

<sup>1</sup> DIMTR and LUT2W are available in 120V only

<sup>2</sup> 50K series are available with 85+ CRI only

<sup>3</sup> 98+ CRI is available in 27K, 30K and 40K only

<sup>4</sup> 3000 Lumens is not energy Star certified

<sup>5</sup> LUTFB Available for luminaires up to 1500L

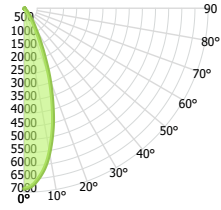
\* Only Available on 85+ CRI

-Reference last page for Control Options

**HH5-LED-3000L-DIM10-MVOLT-MD-40K-90-HH4-4501-CL-WH**

INPUT WATTS: **32.1** LUMENS: **3074** EFFICACY: **96** BEAM ANGLE: **37** SPACING CRITERIA: **0.57**

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	6865	6865
10°	5563	5499
20°	2816	2708
30°	777	740
40°	208	220
50°	32	36
60°	3	4
70°	0	0
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	147009	147009
45.00°	2646	2904
55.00°	255	274
65.00°	98	106
75.00°	57	63
85.00°	10	15

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	604
10° - 20°	1224
20° - 30°	817
30° - 40°	313
40° - 50°	98
50° - 60°	14
60° - 70°	0
70° - 80°	0
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	1828	59%
0° - 30°	2645	86%
0° - 40°	2958	96%
0° - 60°	3069	100%
0° - 80°	3072	100%
0° - 90°	3073	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	190.7 fc	4.0 ft	4.0 ft
8.0 ft	107.3 fc	5.4 ft	5.4 ft
10.0 ft	68.7 fc	6.7 ft	6.7 ft
12.0 ft	47.7 fc	8.1 ft	8.1 ft
14.0 ft	35.0 fc	9.4 ft	9.4 ft
16.0 ft	26.8 fc	10.8 ft	10.8 ft
18.0 ft	21.2 fc	12.1 ft	12.1 ft
20.0 ft	17.2 fc	13.5 ft	13.4 ft

INDOOR COEFFICIENTS OF UTILIZATION

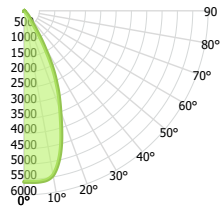
pc	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
0	119	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	100	0%
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	105	102	99	107	104	101	98	100	98	96	98	95	94	95	93	92	90
3	105	100	95	92	103	98	94	91	96	92	90	93	91	88	91	89	87	86
4	101	94	90	86	99	93	89	86	91	88	85	89	86	84	88	85	83	81
5	97	90	85	81	95	89	84	81	87	83	80	86	82	79	84	81	79	77
6	93	85	80	77	92	85	80	77	83	79	76	82	78	76	81	78	75	74
7	89	82	76	73	88	81	76	73	80	75	72	79	75	72	78	74	72	70
8	86	78	73	69	85	77	73	69	76	72	69	76	72	69	75	71	69	67
9	83	75	70	66	82	74	69	66	73	69	66	73	69	66	72	68	66	64
10	80	72	67	63	79	71	67	63	71	66	63	70	66	63	69	66	63	62

**HH4-LED-3000L-DIM10-MVOLT-MWD-40K-90-HH4-4501-CL-WH**

TEST NO.: **EL05022201**

INPUT WATTS: **32.2** LUMENS: **3579** EFFICACY: **111** BEAM ANGLE: **48** SPACING CRITERIA: **0.74**

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	5579	5579
10°	5439	5397
20°	3446	3683
30°	1237	1423
40°	215	229
50°	40	48
60°	5	5
70°	0	0
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	477859	477859
45.00°	11776	13161
55.00°	1298	1653
65.00°	608	655
75.00°	374	410
85.00°	69	88

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	537
10° - 20°	1328
20° - 30°	1180
30° - 40°	410
40° - 50°	100
50° - 60°	17
60° - 70°	0
70° - 80°	0
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	1865	52%
0° - 30°	3045	85%
0° - 40°	3455	97%
0° - 60°	3572	100%
0° - 80°	3577	100%
0° - 90°	3577	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	155.0 fc	5.3 ft	5.3 ft
8.0 ft	87.2 fc	7.1 ft	7.1 ft
10.0 ft	55.8 fc	8.8 ft	8.8 ft
12.0 ft	38.7 fc	10.6 ft	10.6 ft
14.0 ft	28.5 fc	12.4 ft	12.3 ft
16.0 ft	21.8 fc	14.1 ft	14.1 ft
18.0 ft	17.2 fc	15.9 ft	15.9 ft
20.0 ft	13.9 fc	17.7 ft	17.6 ft

INDOOR COEFFICIENTS OF UTILIZATION

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

**HH5-LED-3000L-DIM10-MVOLT-SPD-40K-90-HH4-4501-CL-WH**

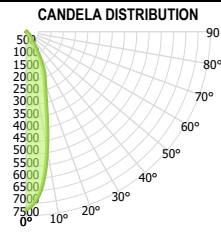
INPUT WATTS: 32.1

LUMENS: 3026

EFFICACY: 94

BEAM ANGLE: 25

SPACING CRITERIA: 0.44



**CANDELA TABLE**

	0°	90°
0°	7242	7242
10°	4864	5172
20°	2219	2261
30°	778	910
40°	270	295
50°	55	66
60°	7	7
70°	0	0
80°	0	0
90°	0	0

**LUMINANCE (cd/sq.m)**

	0.00°	90.00°
0.00°	155070	155070
45.00°	4421	4921
55.00°	529	564
65.00°	199	220
75.00°	105	117
85.00°	12	22

**LUMENS PER ZONE**

ZONE	LUMENS
0° - 10°	617
10° - 20°	1049
20° - 30°	828
30° - 40°	347
40° - 50°	148
50° - 60°	28
60° - 70°	0
70° - 80°	0
80° - 90°	0

**ZONAL LUMEN SUMMARY**

ZONE	UMENS	% LUMINAIRE
0° - 20°	1667	53%
0° - 30°	2494	86%
0° - 40°	2842	96%
0° - 60°	3018	100%
0° - 80°	3024	100%
0° - 90°	3025	100%

**CONE OF LIGHT**

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	201.2 fc	3.3 ft	3.2 ft
8.0 ft	113.1 fc	4.4 ft	4.3 ft
10.0 ft	72.4 fc	5.5 ft	5.4 ft
12.0 ft	50.3 fc	6.5 ft	6.5 ft
14.0 ft	36.9 fc	7.6 ft	7.6 ft
16.0 ft	28.3 fc	8.7 ft	8.6 ft
18.0 ft	22.4 fc	9.8 ft	9.7 ft
20.0 ft	18.1 fc	10.9 ft	10.8 ft

**INDOOR COEFFICIENTS OF UTILIZATION**

pf	pc	20%																0%
		80%				70%				50%				30%				
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	106	102	102	100
1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	90
3	105	99	94	91	103	98	93	90	95	92	89	93	90	87	90	88	86	85
4	100	93	89	85	98	92	88	84	90	86	83	88	85	82	87	84	82	80
5	96	89	84	80	94	88	83	79	86	82	79	84	81	78	83	80	77	76
6	92	84	79	75	91	83	79	75	82	78	75	81	77	74	79	76	74	72
7	88	80	75	71	87	80	75	71	78	74	71	77	73	70	76	73	70	69
8	85	77	71	68	84	76	71	68	75	71	67	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	61	68	64	61	60

**HH5-LED-3000L-DIM10-MVOLT-NSPD-40K-90-HH4-4501-CL-WH**

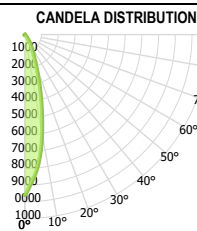
INPUT WATTS: 32.1

LUMENS: 3153

EFFICACY: 98

BEAM ANGLE: 19

SPACING CRITERIA: 0.42



**CANDELA TABLE**

	0°	90°
0°	9601	9601
10°	5978	6553
20°	2033	2040
30°	737	645
40°	202	223
50°	32	39
60°	3	3
70°	1	1
80°	0	0
90°	0	0

**LUMINANCE (cd/sq.m)**

	0.00°	90.00°
0.00°	205607	205607
45.00°	2565	2863
55.00°	214	255
65.00°	73	85
75.00°	41	50
85.00°	7	15

**LUMENS PER ZONE**

ZONE	LUMENS
0° - 10°	798
10° - 20°	1304
20° - 30°	643
30° - 40°	291
40° - 50°	98
50° - 60°	15
60° - 70°	2
70° - 80°	1
80° - 90°	0

**ZONAL LUMEN SUMMARY**

ZONE	UMENS	% LUMINAIRE
0° - 20°	2102	67%
0° - 30°	2745	87%
0° - 40°	3036	96%
0° - 60°	3149	100%
0° - 80°	3151	100%
0° - 90°	3151	100%

**CONE OF LIGHT**

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	266.7 fc	3.1 ft	3.1 ft
8.0 ft	150.0 fc	4.2 ft	4.1 ft
10.0 ft	96.0 fc	5.2 ft	5.1 ft
12.0 ft	66.7 fc	6.3 ft	6.1 ft
14.0 ft	49.0 fc	7.3 ft	7.1 ft
16.0 ft	37.5 fc	8.3 ft	8.2 ft
18.0 ft	29.6 fc	9.4 ft	9.2 ft
20.0 ft	24.0 fc	10.4 ft	10.2 ft

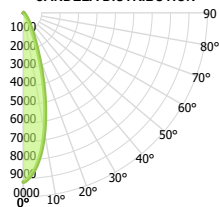
**INDOOR COEFFICIENTS OF UTILIZATION**

pf pc pw	20%																		0%								
	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%	0%						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100								
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95									
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91									
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87									
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83									
5	98	91	87	83	97	91	86	83	89	85	82	87	84	81	86	83	81	80									
6	95	87	83	79	93	87	82	79	85	81	78	84	81	78	83	80	77	76									
7	91	84	79	76	90	83	79	75	82	78	75	81	77	75	80	77	74	73									
8	88	81	76	73	87	80	76	72	79	75	72	78	74	72	77	74	72	70									
9	85	78	73	70	84	77	73	70	76	72	69	75	72	69	75	71	69	68									
10	82	75	70	67	82	74	70	67	74	70	67	73	69	67	72	69	66	65									

**HH5-LED-3000L-DIM10-MVOLT-ND-40K-90-HH4-4501-CL-WH**

INPUT WATTS: 32.1 LUMENS: 3181 EFFICACY: 99 BEAM ANGLE: 31 SPACING CRITERIA: 0.48

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	9196	9196
10°	6567	6688
20°	2387	2402
30°	702	665
40°	185	201
50°	31	36
60°	3	3
70°	0	0
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	196917	196917
45.00°	2395	2596
55.00°	225	242
65.00°	82	89
75.00°	49	54
85.00°	10	15

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	771
10° - 20°	1328
20° - 30°	694
30° - 40°	281
40° - 50°	90
50° - 60°	14
60° - 70°	0
70° - 80°	0
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	2099	66%
0° - 30°	2792	88%
0° - 40°	3073	97%
0° - 60°	3176	100%
0° - 80°	3179	100%
0° - 90°	3179	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	255.4 fc	3.4 ft	3.4 ft
8.0 ft	143.7 fc	4.5 ft	4.5 ft
10.0 ft	92.0 fc	5.6 ft	5.6 ft
12.0 ft	63.9 fc	6.7 ft	6.7 ft
14.0 ft	46.9 fc	7.9 ft	7.9 ft
16.0 ft	35.9 fc	9.0 ft	9.0 ft
18.0 ft	28.4 fc	10.1 ft	10.1 ft
20.0 ft	23.0 fc	11.2 ft	11.2 ft

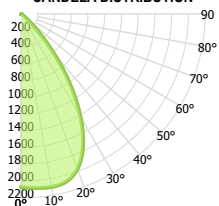
INDOOR COEFFICIENTS OF UTILIZATION

MEDIAN COST PER HOUR OF CEMENTATION																													
pf	pc	80%				70%				20%				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%	50%	30%	10%		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	106	102	102	102	102	102	102	102	100	100	100	100	100		
1	114	112	110	108	112	110	108	106	106	106	104	103	102	101	100	99	98	97	95	94	93	91	90	89	87	86	85		
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91	90	89	88	87	86	85	84	83	82		
3	106	101	96	93	104	99	95	92	97	94	91	94	92	90	92	90	89	87	86	85	84	83	82	81	80	79	78		
4	102	96	91	88	100	95	90	87	93	89	86	91	88	85	89	86	84	83	82	81	80	79	78	77	76	75	74		
5	98	91	87	83	97	90	86	83	89	85	82	87	84	81	86	83	81	80	79	78	77	76	75	74	73	72	71		
6	94	87	83	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76	75	74	73	72	71	70	69	68	67		
7	91	84	79	75	90	83	79	75	82	78	75	81	77	75	80	77	74	73	72	71	70	69	68	67	66	65	64		
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70	69	68	67	66	65	64	63	62	61		
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	74	71	68	66	65	64	63	62	61	60	59	58	57		
10	82	74	70	67	81	74	70	67	73	69	66	73	69	66	72	69	66	63	62	61	60	59	58	57	56	55	54		

**HH5-LED-3000L-DIM10-MVOLT-VWD-40K-90-HH4-4501-CL-WH**

INPUT WATTS: 32.2 LUMENS: 2628 EFFICACY: 82 BEAM ANGLE: 72 SPACING CRITERIA: 1.09 x 1.09

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	2071	2071
10°	2101	2092
20°	1972	1967
30°	1421	1437
40°	590	617
50°	76	85
60°	9	9
70°	0	0
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	44349	44349
45.00°	7851	8507
55.00°	724	750
65.00°	243	258
75.00°	119	130
85.00°	12	22

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	199
10° - 20°	584
20° - 30°	825
30° - 40°	697
40° - 50°	278
50° - 60°	35
60° - 70°	0
70° - 80°	0
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	783	30%
0° - 30°	1609	61%
0° - 40°	2306	90%
0° - 60°	2619	100%
0° - 80°	2626	100%
0° - 90°	2627	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	57.5 fc	8.7 ft	8.7 ft
8.0 ft	32.4 fc	11.6 ft	11.6 ft
10.0 ft	20.7 fc	14.5 ft	14.5 ft
12.0 ft	14.4 fc	17.4 ft	17.5 ft
14.0 ft	10.6 fc	20.3 ft	20.4 ft
16.0 ft	8.1 fc	23.2 ft	23.3 ft
18.0 ft	6.4 fc	26.1 ft	26.2 ft
20.0 ft	5.2 fc	29.0 ft	29.1 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf	80%				70%				20%				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%	50%	30%	10%		
pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	102	102	100	100	100	100		
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	92	91	90	89	87	85	83	81		
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85	84	83	82	81	80	79	78	77		
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	83	80	78	77	76	75	74	73	72	71	70		
4	95	87	81	77	94	86	81	76	84	79	76	82	78	75	80	77	74	72	71	70	69	68	67	66	65	64		
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	66	65	64	63	62	61	60	59	58		
6	85	75	69	64	84	75	69	64	73	68	64	72	67	63	70	66	63	61	60	59	58	57	56	55	54	53		
7	80	70	64	59	79	70	64	59	68	63	59	67	62	59	66	62	58	57	56	55	54	53	52	51	50	49		
8	76	66	59	55	75	65	59	55	64	59	55	63	58	54	62	57	54	53	52	51	50	49	48	47	46	45		
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49	48	47	46	45	44	43	42	41		
10	68	58	52	47	67	57	51	47	57	51	47	56	51	47	55	50	47	46	45	44	43	42	41	40	39	38		

HH5-LED-3000L-DIM10-MVOLT-WD-40K-90-HH4-4501-CL-WH

TEST NO.: EL05022201

INPUT WATTS: 32.2

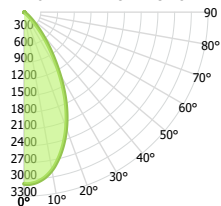
LUMENS: 2791

EFFICACY: 87

BEAM ANGLE: 58

SPACING CRITERIA: 0.84

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	3079	3079
10°	2876	2898
20°	2205	2247
30°	1260	1315
40°	459	504
50°	65	80
60°	8	0
70°	0	0
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	65935	65935
45.00°	6347	7185
55.00°	629	682
65.00°	226	247
75.00°	115	125
85.00°	12	12

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	288
10° - 20°	747
20° - 30°	874
30° - 40°	606
40° - 50°	234
50° - 60°	13
60° - 70°	0
70° - 80°	0
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	1034	37%
0° - 30°	1908	68%
0° - 40°	2515	90%
0° - 60°	2782	100%
0° - 80°	2790	100%
0° - 90°	2790	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	85.5 fc	6.7 ft	6.6 ft
8.0 ft	48.1 fc	8.9 ft	8.9 ft
10.0 ft	30.8 fc	11.1 ft	11.1 ft
12.0 ft	21.4 fc	13.3 ft	13.3 ft
14.0 ft	15.7 fc	15.5 ft	15.5 ft
16.0 ft	12.0 fc	17.7 ft	17.7 ft
18.0 ft	9.5 fc	20.0 ft	19.9 ft
20.0 ft	7.7 fc	22.2 ft	22.1 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf pw	80%				70%				20%				30%				10%				0%
	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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	84	82	80			
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69			
6	87	78	72	68	86	77	72	67	76	71	67	74	70	66	73	69	66	65			
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60			
8	79	69	63	59	77	68	63	59	67	62	58	66	61	58	65	61	58	56			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53			
10	71	61	55	52	70	61	55	51	60	55	51	59	55	51	59	54	51	50			

- 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	<input type="checkbox"/> LEDRU LED Relay Zone Controller 0-10V <sup>1</sup>	<input type="checkbox"/> FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminaire is shipped Vive Enabled) <sup>14</sup>	<input type="checkbox"/> CU-4E-FMH Fixture Mount Control Unit <sup>15</sup>	<input type="checkbox"/> ZL027 –NOW Intellect Power Control Module <sup>16</sup>	<input type="checkbox"/> EN-WCM2-ZB-DR Wireless Control Module <sup>17</sup>	<input type="checkbox"/> SBR -BS Xitanium SR Bridge <sup>18</sup>	<input type="checkbox"/> LMFC-011 ON/OFF/0-10V dimming fixture controller <sup>19</sup>
	<input type="checkbox"/> LEDDU LED Zone Controller 0-10V <sup>1</sup>	<input type="checkbox"/> A-WN-D01-RF-WH Athena wireless node (RF only)		<input type="checkbox"/> ZL027 –NOW Intellect Power Control Module <sup>16</sup>	<input type="checkbox"/> EN- ALC-ZB-BK-DR Wireless Area Lighting Control Module <sup>17</sup>		
INTEGRAT SENSOR	N/A	N/A	N/A	N/A	N/A	N/A	N/A
*WIRELESS OCCUPANCY SENSOR	<input type="checkbox"/> EOSCU-W-E0 Occupancy Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMDC-100 Dual technology PIR Ceiling Mount Occupancy Sensor <sup>3</sup>
*WIRELESS DAYLIGHT SENSOR	<input type="checkbox"/> ELLSU-W-E0 Light Level Sensor - Ceiling Mounted (Must be specified with LEDRU or LEDDU control unit) <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMLS-400 Single zone switching and dimming digital photosensor <sup>3</sup>
*WIRELESS OCCUPANCY & DAYLIGHT SENSOR	N/A	N/A	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor <sup>3</sup> <input type="checkbox"/> SU-5E-CL Connected Lighting Micro Sensor <sup>3</sup> <input type="checkbox"/> SU-5E-IL Independent Lighting / Enlighted One Micro Sensor <sup>3</sup> <input type="checkbox"/> SU-5S-H-(IoT/CL/IL) Surface Mount Sensor <sup>3</sup>  (Must be specified with CU- 4E-FMH Control Unit)	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System <sup>3</sup>  (Must be specified with ZL027 –NOW Control Unit)	<input type="checkbox"/> EN-CLM-PIR-DD-ZB SensiLUM™ Wireless Integrated Sensor <input type="checkbox"/> 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)	<input type="checkbox"/> SNS200- CMP SNS200 for grouping <sup>3</sup>	N/A
ACCESSORIES	N/A	N/A	<input type="checkbox"/> TMC-SU-5E Tile Mount Carrier <input type="checkbox"/> CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4 and IoT Ready™ drivers <input type="checkbox"/> 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.