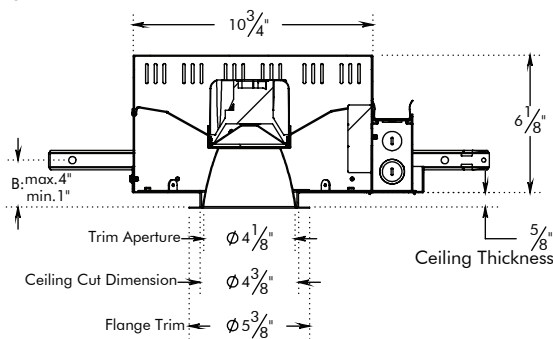
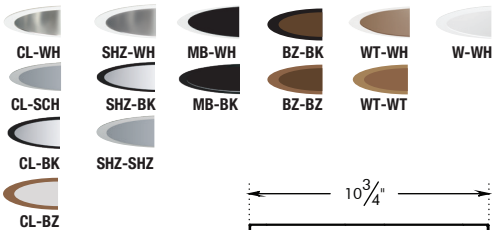


REFLECTOR/
FLANGE COLORS



See the last page for more details and drawings.

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
2000	2144	24W
1500	1699	18W
1200	1341	14W
900	995	10W
NOMINAL LUMENS (HP)	DELIVERED LUMENS (HP)	WATTAGE (HP)
1200	1401	12W
2000	2059	18W

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.

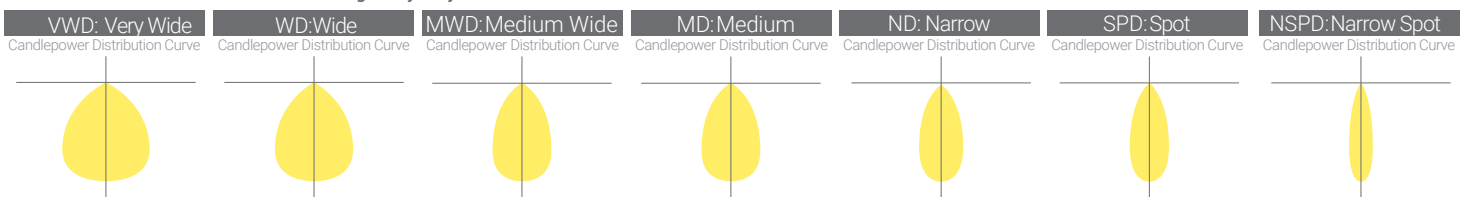
OPTICS AND REFLECTOR

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, packages available) (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, NSPD
TRIM OPTIONS	Downlight, Wall Wash, Double Wall Wash,
REFLECTOR COLORS	CL (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), WT (Wheat), W (White), MB (Black), BZ (Bronze)
FLANGE COLORS	Self-Flanged WH (White), SCH (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), BK (Black), BZ (Bronze)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUTFB, LUT2W, ELD010.1, ELD0DMX.1, ELD0DALI.1, DIMTR, BLE
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

* 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 HH4-4501 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: **HH4IC-LED-2000L-DIM10-MVOLT-MD-40K-90-HH4-4501-CL-WH**

SERIES	LUMENS	DRIVER	VOLTAGE	CCT	EMERGENCY	TRIM TYPE	REFLECTOR/FLANGE COLORS		
HH4IC-LED	<input type="checkbox"/> 900L	<input type="checkbox"/> DIM10	<input type="checkbox"/> 120	<input type="checkbox"/> 22K	<input type="checkbox"/> EMG-LED-10W	<input type="checkbox"/> HH4-4501 Flanged Downlight	<input type="checkbox"/> CL-WH	<input type="checkbox"/> W-WH	<input type="checkbox"/> SHZ-SHZ
	<input type="checkbox"/> 1200L	<input type="checkbox"/> DIMTR ¹	<input type="checkbox"/> 277	<input type="checkbox"/> 27K	<input type="checkbox"/> EMG-LED-20W	<input type="checkbox"/> HH4-4507 Flanged Wall Wash	<input type="checkbox"/> CL-SCH	<input type="checkbox"/> MB-WH*	<input type="checkbox"/> SHZ-BK
	<input type="checkbox"/> 1500L	<input type="checkbox"/> LUTH	<input type="checkbox"/> MVOLT	<input type="checkbox"/> 30K	<input type="checkbox"/> INTG-EMG-LED-10W		<input type="checkbox"/> CL-BK	<input type="checkbox"/> MB-BK*	<input type="checkbox"/> WT-WH
	<input type="checkbox"/> 2000L	<input type="checkbox"/> LUT2W ¹	<input type="checkbox"/> 347	<input type="checkbox"/> 35K	<input type="checkbox"/> INTG-EMG-LED-20W		<input type="checkbox"/> CL-BZ	<input type="checkbox"/> BZ-BK	<input type="checkbox"/> WT-WT
		<input type="checkbox"/> LUTFTB ⁵	(DIM10 only)	<input type="checkbox"/> 40K	<input type="checkbox"/> EMG-LED-G2-10W-SDT*		<input type="checkbox"/> SHZ-WH	<input type="checkbox"/> BZ-BZ	* Black color trim is not ENERGYSTAR certified
		<input type="checkbox"/> ELDO10-.1		<input type="checkbox"/> 50K ²	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				
		<input type="checkbox"/> ELDODALI-.1							
		<input type="checkbox"/> ELDODMX-.1							
		<input type="checkbox"/> BLE							
						</			

¹ DIMTR and LUT2W are available in 120V only ² 50K series are available with 85+ CRI only ³ 98+CRI is available in 27K, 30K and 40K only

⁴ 3000 Lumens is not energy Star certified ⁵ LUTFTB Available for luminaires up to 1500L ⁶ 3500K and 4000K based on 90 CRI

-Reference last page for Control Options * Only Available on 85+ CRI

HH4IC-LED-2000L-DIM10-MVOLT-MD-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05122274**

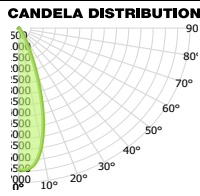
INPUT WATTS: **24.6**

LUMENS: **2251**

EFFICACY: **92**

BEAM ANGLE: **33**

SPACING CRITERIA: **0.55**



CANDELA TABLE	
0°	90°
0° 6407 6407	
10° 5388 4849	
20° 2049 1770	
30° 455 410	
40° 132 142	
50° 18 24	
60° 2 3	
70° 1 1	
80° 1 1	
90° 0 0	

LUMINANCE (cd/sq.m)	
0.00°	90.00°
0.00° 548804 548804	
45.00° 6836 8000	
55.00° 599 812	
65.00° 314 367	
75.00° 351 374	
85.00° 609 717	

LUMENS PER ZONE	
ZONE	LUMENS
0° - 10°	561
10° - 20°	1000
20° - 30°	462
30° - 40°	163
40° - 50°	53
50° - 60°	7
60° - 70°	2
70° - 80°	1
80° - 90°	0

ZONAL LUMEN SUMMARY		
ZONE	UMENS	% LUMINAIRE
0° - 20°	1561	69%
0° - 30°	2024	90%
0° - 40°	2187	97%
0° - 60°	2247	100%
0° - 80°	2250	100%
0° - 90°	2250	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	178.0 fc	3.5 ft	3.5 ft
8.0 ft	100.1 fc	4.7 ft	4.7 ft
10.0 ft	64.1 fc	5.9 ft	5.8 ft
12.0 ft	44.5 fc	7.1 ft	7.0 ft
14.0 ft	32.7 fc	8.3 ft	8.2 ft
16.0 ft	25.0 fc	9.4 ft	9.3 ft
18.0 ft	19.8 fc	10.6 ft	10.5 ft
20.0 ft	16.0 fc	11.8 ft	11.7 ft

INDOOR COEFFICIENTS OF UTILIZATION

pc	80%			70%			20%			50%			30%			10%			0%
pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	0%
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	
1	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96	
2	110	106	103	100	108	105	102	99	101	99	97	99	97	95	96	94	93	91	
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	93	91	89	87	
4	102	96	92	89	101	95	91	88	93	90	87	91	88	86	90	87	85	84	
5	99	92	87	84	97	91	87	84	90	86	83	88	85	82	87	84	82	80	
6	95	88	83	80	94	87	83	80	86	82	79	85	81	79	84	81	78	77	
7	92	85	80	77	91	84	80	76	83	79	76	82	78	76	81	78	75	74	
8	89	81	77	74	88	81	76	73	80	76	73	79	75	73	78	75	73	71	
9	86	78	74	71	85	78	74	71	77	73	70	76	73	70	76	72	70	69	
10	83	76	71	68	82	75	71	68	75	71	68	74	70	68	73	70	68	67	

HH4IC-LED-2000L-DIM10-MVOLT-MWD-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05022201**

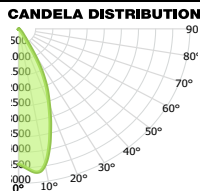
INPUT WATTS: **24.9**

LUMENS: **2741**

EFFICACY: **110**

BEAM ANGLE: **47**

SPACING CRITERIA: **0.72**



CANDELA TABLE	
0°	90°
0° 4380 4380	
10° 4454 4396	
20° 2603 2856	
30° 739 866	
40° 137 149	
50° 23 35	
60° 3 4	
70° 1 2	
80° 0 0	
90° 0 0	

LUMINANCE (cd/sq.m)	
0.00°	90.00°
0.00° 375182 375182	
45.00° 7558 9336	
55.00° 877 1269	
65.00° 424 493	
75.00° 265 311	
85.00° 49 79	

LUMENS PER ZONE	
ZONE	LUMENS
0° - 10°	430
10° - 20°	1049
20° - 30°	924
30° - 40°	257
40° - 50°	65
50° - 60°	11
60° - 70°	2
70° - 80°	1
80° - 90°	0

ZONAL LUMEN SUMMARY		
ZONE	UMENS	% LUMINAIRE
0° - 20°	1479	54%
0° - 30°	2402	88%
0° - 40°	2659	97%
0° - 60°	2736	100%
0° - 80°	2739	100%
0° - 90°	2739	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	121.7 fc	5.2 ft	5.2 ft
8.0 ft	68.4 fc	7.0 ft	7.0 ft
10.0 ft	43.8 fc	8.7 ft	8.7 ft
12.0 ft	30.4 fc	10.5 ft	10.5 ft
14.0 ft	22.3 fc	12.2 ft	12.2 ft
16.0 ft	17.1 fc	13.9 ft	14.0 ft
18.0 ft	13.5 fc	15.7 ft	15.7 ft
20.0 ft	11.0 fc	17.4 ft	17.5 ft

INDOOR COEFFICIENTS OF UTILIZATION

pc	80%			70%			20%			50%			30%			10%			0%
pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	0%
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	
1	114	112	109	107	112	109	108	106	105	104	102	102	101	99	98	97	97	95	
2	109	105	101	98	107	103	100	97	100	98	95	97	95	93	94	93	91	90	
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85	
4	100	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80	
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76	
6	92	84	79	75	91	84	79	75	82	78	75	81	77	74	80	76	74	72	
7	88	80	75	71	87	80	75	71	78	74	71	77	73	71	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	64	81	73	68	64	72	67	64	71	67	64	70	66	64	63	
10	78	70	65	61	77	70	65	61	69	64	61	68	64	61	67	64	61	60	

HH4IC-LED-2000L-DIM10-MVOLT-ND-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05112270**

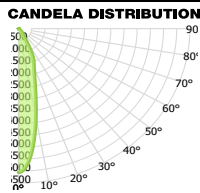
INPUT WATTS: **24.5**

LUMENS: **2258**

EFFICACY: **92**

BEAM ANGLE: **28**

SPACING CRITERIA: **0.42**



CANDELA TABLE	
0°	90°
0° 6050 6050	
10° 3785 4060	
20° 1715 1888	
30° 551 752	
40° 208 239	
50° 30 46	
60° 5 6	
70° 2 3	
80° 2 2	
90° 0 0	

LUMINANCE (cd/sq.m)	
0.00°	90.00°
0.00° 518215 518215	
45.00° 12546 15390	
55.00° 1334 1722	
65.00° 677 799	
75.00° 702 745	
85.00° 943 1297	

LUMENS PER ZONE	
ZONE	LUMENS
0° - 10°	473
10° - 20°	774
20° - 30°	632
30° - 40°	247
40° - 50°	106
50° - 60°	16
60° - 70°	4
70° - 80°	2
80° - 90°	1

ZONAL LUMEN SUMMARY		
ZONE	UMENS	% LUMINAIRE
0° - 20°	1247	55%
0° - 30°	1879	83%
0° - 40°	2126	94%
0° - 60°	2249	100%
0° - 80°	2255	100%
0° - 90°	2256	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	168.1 fc	3.0 ft	3.0 ft
8.0 ft	94.5 fc	4.0 ft	3.9 ft
10.0 ft	60.5 fc	5.0 ft	4.9 ft
12.0 ft	42.0 fc	6.0 ft	5.9 ft
14.0 ft	30.9 fc	7.0 ft	6.9 ft
16.0 ft	23.6 fc	8.0 ft	7.9 ft
18.0 ft	18.7 fc	9.0 ft	8.9 ft
20.0 ft	15.1 fc	10.0 ft	9.8 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf pc pw	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%	0%				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100				
1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95	95	95	95				
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	94	93	91	90					
3	105	99	95	91	103	98	94	90	95	92	89	93	90	88	90	88	86	85	85	85					
4	100	94	89	85	99	93	88	85	90	87	84	89	85	83	87	84	82	80	78	76					
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76	74	73					
6	92	84	79	76	91	84	79	75	82	78	75	81	77	74	80	76	74	72	70	69					
7	89	81	75	72	87	80	75	71	79	74	71	78	74	71	76	73	70	67	66	66					
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66	65	65					
9	82	74	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63	62	62					
10	79	71	65	62	78	70	65	62	69	65	62	69	65	62	68	64	62	60	58	57					

HH4IC-LED-2000L-DIM10-MVOLT-NSPD-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05122274**

INPUT WATTS: **24.6**

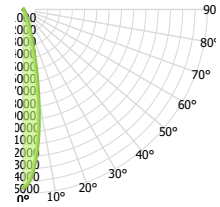
LUMENS: **2341**

EFFICACY: **95**

BEAM ANGLE: **20 x 20**

SPACING CRITERIA: **0.33**

CANDELA DISTRIBUTION



CANDELA TABLE

	0°	90°
0°	14512	14512
10°	7010	7304
20°	1251	899
30°	329	293
40°	106	128
50°	14	26
60°	1	2
70°	1	1
80°	0	1
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	1243043	1243043
45.00°	6119	7590
55.00°	415	750
65.00°	148	259
75.00°	162	252
85.00°	49	482

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	1004
10° - 20°	850
20° - 30°	298
30° - 40°	129
40° - 50°	50
50° - 60°	6
60° - 70°	1
70° - 80°	1
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	1854	79%
0° - 30°	2152	92%
0° - 40°	2281	97%
0° - 60°	2337	100%
0° - 80°	2339	100%
0° - 90°	2340	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 0°-180°	BEAM DIA. 90°-270°
6.0 ft	403.1 fc	2.1 ft	2.1 ft
8.0 ft	226.7 fc	2.8 ft	2.8 ft
10.0 ft	145.1 fc	3.5 ft	3.5 ft
12.0 ft	100.8 fc	4.2 ft	4.2 ft
14.0 ft	74.0 fc	4.9 ft	4.9 ft
16.0 ft	56.7 fc	5.6 ft	5.6 ft
18.0 ft	44.8 fc	6.3 ft	6.3 ft
20.0 ft	36.3 fc	7.0 ft	7.0 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf	20%																		0%		
pc	80%				70%				50%				30%				10%				0%
pw	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	115	113	111	109	113	111	109	108	107	105	104	103	102	101	100	99	98	97			
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93			
3	108	103	100	97	106	102	99	96	99	97	95	97	95	93	95	93	92	91			
4	105	99	95	93	103	98	95	92	96	93	91	94	92	90	93	91	89	88			
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	91	88	86	85			
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83			
7	96	90	86	83	95	89	86	83	88	85	82	87	84	82	86	84	82	81			
8	94	87	83	81	93	87	83	80	86	83	80	85	82	80	84	82	80	79			
9	91	85	81	78	91	85	81	78	84	80	78	83	80	78	82	80	78	77			
10	89	83	79	76	88	82	79	76	82	78	76	81	78	76	81	78	76	75			

HH4IC-LED-2000L-DIM10-MVOLT-SPD-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05122274**

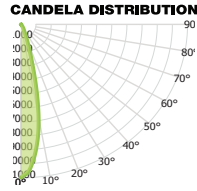
INPUT WATTS: **24.7**

LUMENS: **2362**

EFFICACY: **96**

BEAM ANGLE: **25**

SPACING CRITERIA: **0.39**



CANDELA TABLE

	0°	90°
0°	10979	10979
10°	6721	7035
20°	1167	1397
30°	310	346
40°	104	114
50°	14	20
60°	1	2
70°	1	1
80°	0	0
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	940449	940449
45.00°	5806	6797
55.00°	463	606
65.00°	180	211
75.00°	199	208
85.00°	79	216

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	852
10° - 20°	991
20° - 30°	332
30° - 40°	132
40° - 50°	46
50° - 60°	6
60° - 70°	1
70° - 80°	1
80° - 90°	0

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	1843	78%
0° - 30°	2175	92%
0° - 40°	2307	98%
0° - 60°	2359	100%
0° - 80°	2361	100%
0° - 90°	2361	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 90°-270°	BEAM DIA. 0°-180°
6.0 ft	305.0 fc	2.6 ft	2.6 ft
8.0 ft	171.6 fc	3.5 ft	3.5 ft
10.0 ft	109.8 fc	4.4 ft	4.3 ft
12.0 ft	76.2 fc	5.2 ft	5.2 ft
14.0 ft	56.0 fc	6.1 ft	6.1 ft
16.0 ft	42.9 fc	7.0 ft	6.9 ft
18.0 ft	33.9 fc	7.9 ft	7.8 ft
20.0 ft	27.4 fc	8.7 ft	8.7 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf	20%																0%		
pc	80%				70%				50%				30%				10%		0%
pw	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	115	113	111	109	112	111	109	107	107	105	104	103	102	101	100	99	98	96	
2	111	107	104	102	109	106	103	101	103	100	98	100	98	96	97	96	94	93	
3	107	103	99	96	106	101	98	95	99	96	94	97	94	92	94	93	91	90	
4	104	99	95	91	102	97	94	91	95	92	90	94	91	89	92	90	88	87	
5	101	95	91	88	99	94	90	87	92	89	86	91	88	86	89	87	85	84	
6	98	91	87	84	97	91	87	84	89	86	83	88	85	83	87	84	82	81	
7	95	88	84	81	94	88	84	81	87	83	81	86	83	80	85	82	80	79	
8	92	86	81	79	91	85	81	78	84	81	78	83	80	78	83	80	78	77	
9	90	83	79	76	89	83	79	76	82	78	76	81	78	76	80	78	75	75	
10	88	81	77	74	87	80	77	74	80	76	74	79	76	74	79	76	73	73	

HH4IC-LED-2000L-DIM10-MVOLT-VWD-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05112270**

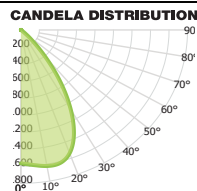
INPUT WATTS: **24.6**

LUMENS: **1972**

EFFICACY: **80**

BEAM ANGLE: **71**

SPACING CRITERIA: **1.09**



CANDELA TABLE

	0°	90°
0°	1565	1565
10°	1621	1612
20°	1539	1585
30°	1076	1173
40°	405	493
50°	40	61
60°	6	7
70°	3	3
80°	2	2
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	134045	134045
45.00°	19616	25884
55.00°	1867	2188
65.00°	776	872
75.00°	725	781
85.00°	1120	1455

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	151
10° - 20°	451
20° - 30°	638
30° - 40°	516
40° - 50°	186
50° - 60°	21
60° - 70°	4
70° - 80°	2
80° - 90°	1

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	603	31%
0° - 30°	1241	63%
0° - 40°	1757	89%
0° - 60°	1964	100%
0° - 80°	1971	100%
0° - 90°	1972	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 90°-270°	BEAM DIA. 0°-180°
6.0 ft	43.5 fc	8.5 ft	8.5 ft
8.0 ft	24.5 fc	11.4 ft	11.3 ft
10.0 ft	15.6 fc	14.2 ft	14.1 ft
12.0 ft	10.9 fc	17.0 ft	17.0 ft
14.0 ft	8.0 fc	19.9 ft	19.8 ft
16.0 ft	6.1 fc	22.7 ft	22.6 ft
18.0 ft	4.8 fc	25.6 ft	25.4 ft
20.0 ft	3.9 fc	28.4 ft	28.3 ft

INDOOR COEFFICIENTS OF UTILIZATION

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

HH4IC-LED-2000L-DIM10-MVOLT-WD-40K-90-HH4-4501-CL-WH

TEST NO.: **EL05122274**

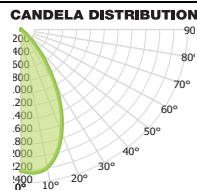
INPUT WATTS: **24.6**

LUMENS: **2054**

EFFICACY: **83**

BEAM ANGLE: **59**

SPACING CRITERIA: **0.88**



CANDELA TABLE

	0°	90°
0°	2210	2210
10°	2191	2112
20°	1711	1776
30°	978	1087
40°	345	421
50°	38	63
60°	5	7
70°	2	3
80°	1	2
90°	0	0

LUMINANCE (cd/sq.m)

	0.00°	90.00°
0.00°	189282	189282
45.00°	17461	23884
55.00°	1685	2371
65.00°	663	930
75.00°	629	844
85.00°	462	1415

LUMENS PER ZONE

ZONE	LUMENS
0° - 10°	208
10° - 20°	556
20° - 30°	658
30° - 40°	445
40° - 50°	158
50° - 60°	19
60° - 70°	5
70° - 80°	3
80° - 90°	1

ZONAL LUMEN SUMMARY

ZONE	UMENS	% LUMINAIRE
0° - 20°	764	37%
0° - 30°	1422	69%
0° - 40°	1868	91%
0° - 60°	2045	100%
0° - 80°	2052	100%
0° - 90°	2053	100%

CONE OF LIGHT

MOUNTING HEIGHT	FC AT BEAM CENTER	BEAM DIA. 90°-270°	BEAM DIA. 0°-180°
6.0 ft	61.4 fc	6.8 ft	6.8 ft
8.0 ft	34.5 fc	9.0 ft	9.0 ft
10.0 ft	22.1 fc	11.3 ft	11.3 ft
12.0 ft	15.3 fc	13.5 ft	13.5 ft
14.0 ft	11.3 fc	15.8 ft	15.8 ft
16.0 ft	8.6 fc	18.0 ft	18.0 ft
18.0 ft	6.8 fc	20.3 ft	20.3 ft
20.0 ft	5.5 fc	22.5 ft	22.5 ft

INDOOR COEFFICIENTS OF UTILIZATION

pf pc pw	80%				70%			20%			50%			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	106	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	82	78	84	80	77	82	79	76	75		
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70		
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65		
7	83	73	67	63	82	73	67	63	72	66	63	70	66	62	69	65	62	61		
8	79	69	63	59	78	69	63	59	67	62	59	66	62	58	65	61	58	57		
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	54	53		
10	71	62	56	52	70	61	55	52	60	55	52	60	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 designa

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 ¹ <input type="checkbox"/> LEDDU LED Zone Controller 0-10V ¹	<input type="checkbox"/> FCJS-010 Lutron Vive 0-10V Individual Pow Pak (Luminaire is shipped Vive Enabled) ¹⁴ <input type="checkbox"/> A-WN-D01-RF-WH Athena wireless node (RF only)	<input type="checkbox"/> CU-4E-FMH Fixture Mount Control Unit ¹⁵	<input type="checkbox"/> ZL027 -NOW Intellect Power Control Module ¹⁶ <input type="checkbox"/> ZL027 -NOW Intellect Power Control Module ¹⁶	<input type="checkbox"/> EN-WCM2-ZB-DR Wireless Control Module ¹⁷ <input type="checkbox"/> EN-ALC-ZB-BK-DR Wireless Area Lighting Control Module ¹⁷ <input type="checkbox"/> ZBHA-CLM-DIM-ENC Connected Lighting Module DIM ¹⁷	<input type="checkbox"/> SBR -BS Xitanium SR Bridge ¹⁸	<input type="checkbox"/> LMFC-011 ON/OFF/0-10V dimming fixture controller ¹⁹ <input type="checkbox"/> LMFS-601 Integrated Fixture Sensor & Controller
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) ³	N/A	N/A	N/A	N/A	N/A	<input type="checkbox"/> LMDC-100 Dual technology PIR Ceiling Mount Occupancy Sensor ³
*WIRELESS DAYLIGHT SENSOR	<input type="checkbox"/> ELLSU-W-E0 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	<input type="checkbox"/> LMLS-400 Single zone switching and dimming digital photosensor ³
*WIRELESS OCCUPANCY & DAYLIGHT SENSOR	N/A	N/A	<input type="checkbox"/> SU-5E-IoT IoT Node Micro Sensor ³ <input type="checkbox"/> SU-5E-CL Connected Lighting Micro Sensor ³ <input type="checkbox"/> SU-5E-IL Independent Lighting / Enlighted One Micro Sensor ³ <input type="checkbox"/> SU-5S-H-(IoT/CL/IL) Surface Mount Sensor ³ (Must be specified with CU- 4E-FMH Control Unit)	<input type="checkbox"/> ZL00J -TOW Intellect Intelligent Fixture Control System ³ (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 ³ (Must be specified with EN-WCM2-ZB-DR or EN- ALC-ZB-BK-DR Control Unit)	<input type="checkbox"/> SNS200- CMP SNS200 for grouping ³	N/A
ACCESORIES	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.

