

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P518238

Luminaire Tested: HVL8-8-LD4-2STD-30-UNV-O-EDD

Issue Date: 4/27/2021

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

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Test Information

Test Method: LM-79-2019
Report Number: P518238
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-2STD-30-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10437.0 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

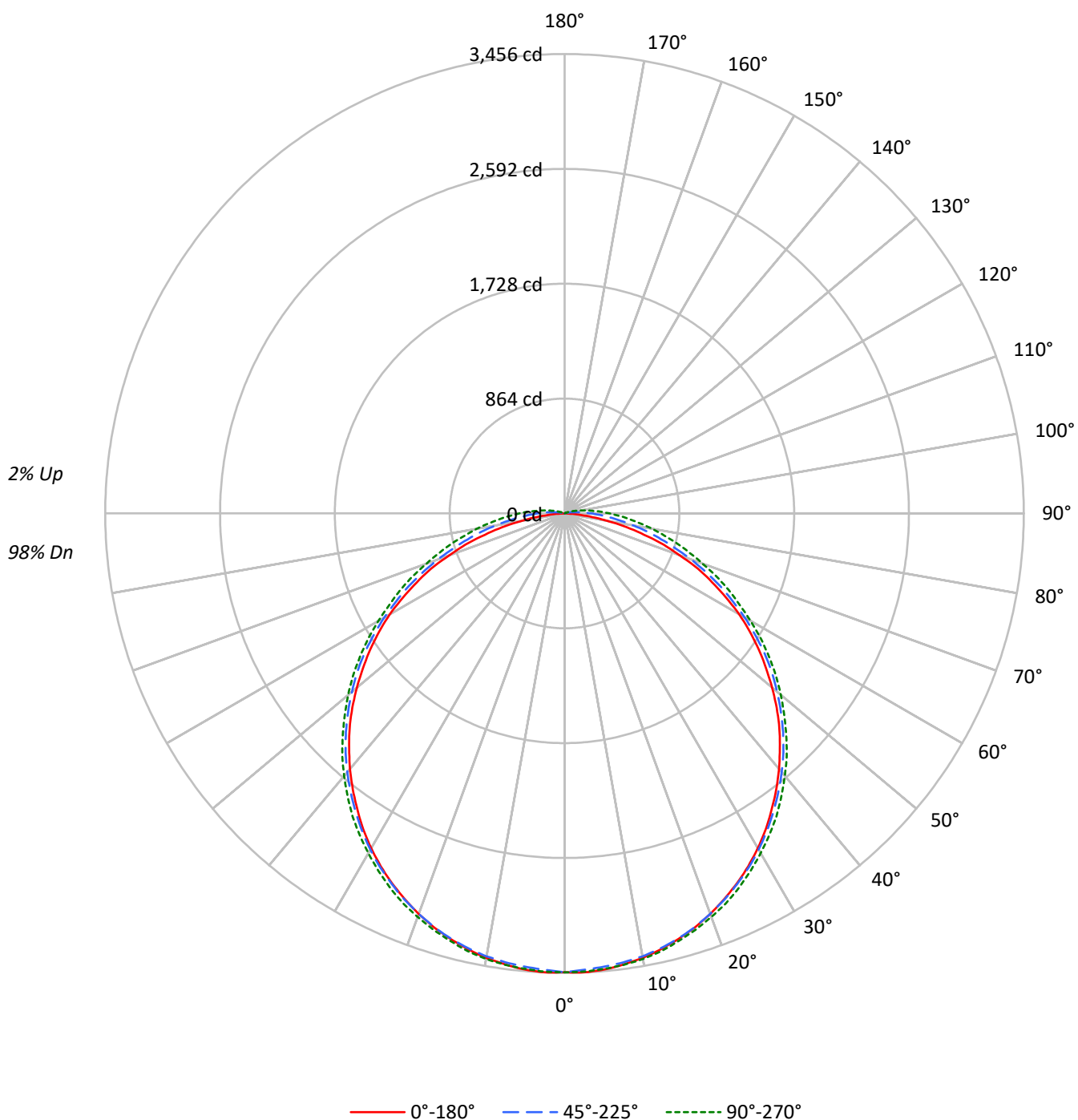
Input Watts (W): 130.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		0
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110		105	105	105		98
1	108	102	98	94	105	100	96	92	95	92	89		91	88	86		81
2	98	89	82	76	95	87	80	75	83	77	73		79	75	71		67
3	89	78	69	63	86	76	68	62	73	66	61		70	64	59		56
4	81	69	60	53	79	67	59	52	65	57	52		62	56	51		47
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		41
6	69	55	46	40	67	54	46	39	52	45	39		50	44	38		36
7	64	50	41	35	62	49	41	35	47	40	34		46	39	34		32
8	59	46	37	31	58	45	37	31	43	36	31		42	35	30		28
9	55	42	34	28	54	41	33	28	40	33	28		39	32	27		25
10	52	39	31	25	51	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6967	6967	6967
5°	6966	6820	6818
10°	6932	6706	6681
15°	6885	6579	6517
20°	6834	6436	6358
25°	6771	6288	6196
30°	6697	6130	6012
35°	6600	5956	5830
40°	6500	5772	5618
45°	6393	5571	5388
50°	6250	5338	5142
55°	6098	5081	4870
60°	5916	4745	4552
65°	5606	4369	4237
70°	5151	3923	3871
75°	4492	3434	3538
80°	3485	2956	3235
85°	2009	2476	2945

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6393 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.7	3.1
10°-20°	937.0	9.0
20°-30°	1421.7	13.6
30°-40°	1719.1	16.5
40°-50°	1793.8	17.2
50°-60°	1640.0	15.7
60°-70°	1278.5	12.2
70°-80°	799.8	7.7
80°-90°	363.3	3.5
90°-100°	121.7	1.2
100°-110°	30.6	0.3
110°-120°	4.8	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2685.4	25.7
0°-40°	4404.5	42.2
0°-60°	7838.4	75.1
0°-90°	10279.9	98.5
90°-120°	157.1	1.5
90°-150°	157.1	1.5
90°-180°	157.0	1.5
0°-180°	10437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3452	3452	3452	3452	3452	
5°	3445	3438	3423	3439	3439	327
15°	3314	3319	3310	3329	3328	935
25°	3070	3073	3076	3102	3107	1415
35°	2718	2730	2742	2769	2781	1701
45°	2287	2307	2326	2348	2360	1762
55°	1785	1806	1839	1866	1878	1594
65°	1226	1248	1291	1342	1363	1213
75°	621	659	755	846	877	662
85°	107	199	341	451	491	136
90°	1	74	201	302	338	4
95°	1	20	104	189	218	1
105°	2	2	17	50	68	2
115°	2	2	3	9	13	2
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3451.9	3451.9	3451.9	3451.9	3451.9
2.5°	3456.0	3451.1	3435.7	3451.1	3450.3
5°	3444.6	3438.1	3422.6	3438.9	3438.9
7.5°	3421.8	3419.4	3405.5	3424.3	3424.3
10°	3395.0	3394.2	3382.8	3403.1	3403.9
12.5°	3357.5	3360.8	3350.2	3369.7	3372.2
15°	3313.6	3319.3	3310.3	3329.1	3328.2
17.5°	3265.6	3268.8	3262.3	3283.5	3282.7
20°	3206.2	3210.2	3205.4	3227.3	3229.8
22.5°	3140.3	3146.0	3145.1	3167.9	3174.4
25°	3070.3	3072.7	3076.0	3102.0	3106.9
27.5°	2993.0	2997.0	3002.7	3026.3	3031.2
30°	2908.3	2914.9	2921.4	2945.8	2952.3
32.5°	2818.8	2825.3	2833.5	2865.2	2868.5
35°	2717.9	2730.1	2741.5	2769.2	2780.6
37.5°	2617.0	2632.5	2643.1	2672.4	2681.3
40°	2510.4	2525.9	2543.0	2573.9	2579.6
42.5°	2398.9	2416.8	2437.2	2464.8	2474.6
45°	2286.6	2307.0	2325.7	2348.5	2359.9
47.5°	2165.4	2185.7	2208.5	2234.6	2241.9
50°	2040.1	2063.7	2088.1	2112.5	2125.5
52.5°	1911.5	1940.0	1967.6	1993.7	2005.9
55°	1784.6	1805.7	1839.1	1865.9	1878.1
57.5°	1652.7	1670.6	1700.7	1744.7	1751.2
60°	1518.5	1534.7	1565.7	1601.5	1616.1
62.5°	1370.4	1392.3	1424.9	1470.4	1483.5
65°	1226.3	1247.5	1290.6	1341.9	1363.0
67.5°	1087.2	1094.5	1149.8	1203.5	1237.7
70°	922.8	950.5	1014.7	1080.7	1106.7
72.5°	781.2	808.9	879.7	957.0	989.5
75°	620.9	659.1	755.2	845.5	877.2
77.5°	480.1	522.4	641.2	732.4	769.0
80°	335.3	401.2	530.6	633.1	673.0
82.5°	210.8	292.1	430.5	537.9	572.9
85°	107.4	198.6	341.0	450.8	490.7
87.5°	28.5	128.6	265.3	370.3	410.9
90°	0.8	74.1	201.0	301.9	338.5
92.5°	0.8	41.5	149.7	240.1	277.5
95°	0.8	19.5	104.2	188.8	218.1
97.5°	0.8	8.1	71.6	142.4	171.7
100°	0.8	4.1	45.6	103.3	128.6
102.5°	1.6	2.4	28.5	74.1	94.4
105°	1.6	2.4	17.1	50.5	67.5
107.5°	1.6	2.4	9.8	34.2	46.4
110°	2.4	2.4	5.7	21.2	30.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.4	2.4	3.3	13.8	20.3
115°	2.4	2.4	3.3	9.0	13.0
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)