

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: P518158

Luminaire Tested: HVL8-8-LD4-1HI-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: P518158
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-1HI-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: 7073.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

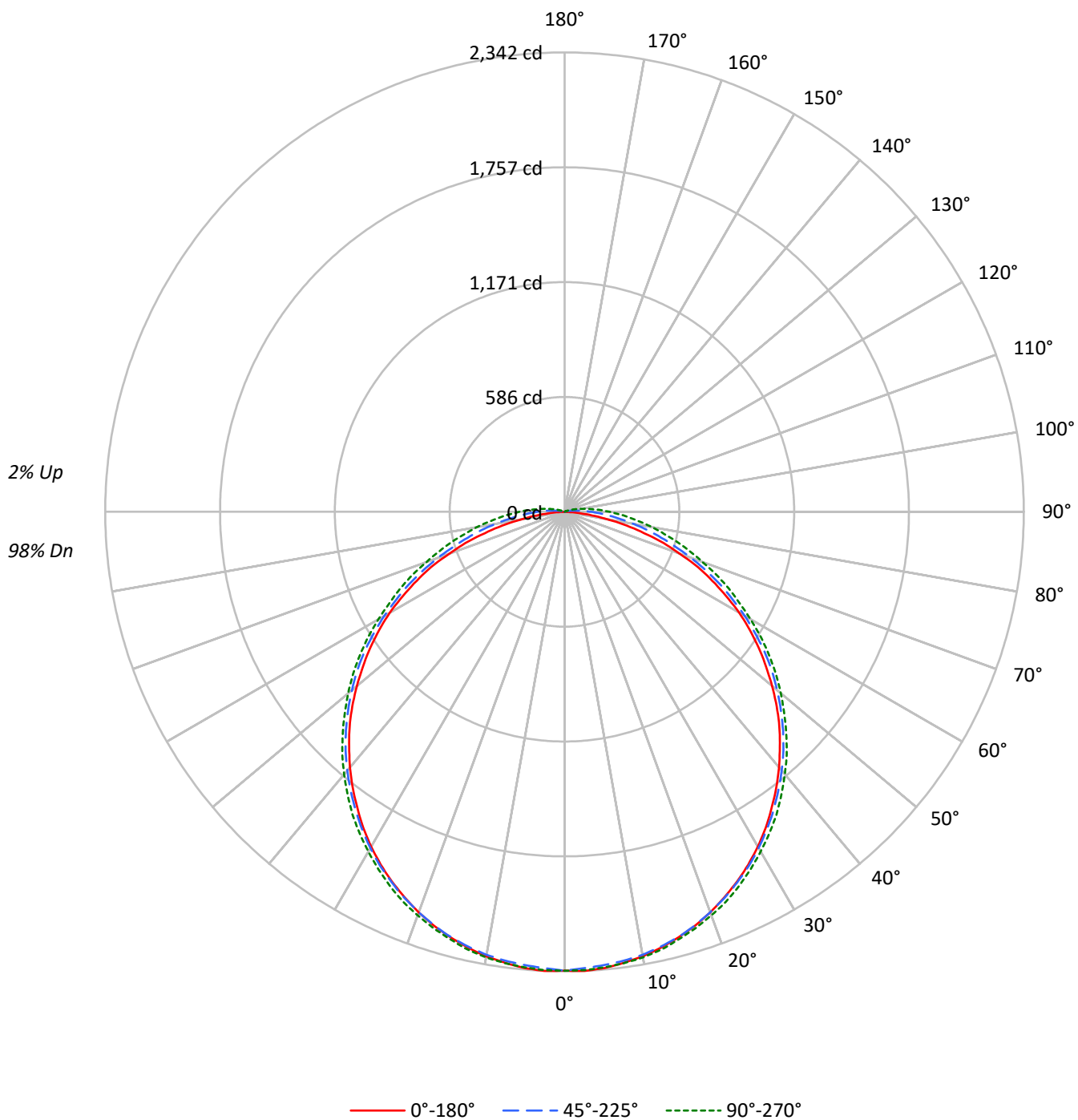
Input Watts (W): 86
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110		105	105	105		101
1	108	102	98	94	105	100	96	92	95	92	89		91	88	86		87
2	98	89	82	76	95	87	80	75	83	77	73		79	75	71		76
3	89	78	69	63	86	76	68	62	73	66	61		70	64	59		67
4	81	69	60	53	79	67	59	52	65	57	52		62	56	51		60
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		54
6	69	55	46	40	67	54	46	39	52	45	39		50	44	38		49
7	64	50	41	35	62	49	41	35	47	40	34		46	39	34		44
8	59	46	37	31	58	45	37	31	43	36	31		42	35	30		41
9	55	42	34	28	54	41	33	28	40	33	28		39	32	27		38
10	52	39	31	25	51	38	30	25	37	30	25		36	29	25		35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4721	4721	4721
5°	4721	4622	4620
10°	4698	4544	4528
15°	4666	4459	4417
20°	4632	4361	4309
25°	4589	4261	4199
30°	4538	4154	4074
35°	4473	4036	3951
40°	4405	3912	3807
45°	4333	3775	3652
50°	4236	3617	3484
55°	4133	3443	3300
60°	4009	3216	3085
65°	3799	2961	2871
70°	3491	2659	2623
75°	3045	2327	2398
80°	2362	2003	2192
85°	1362	1678	1996

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4333 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.4	3.1
10°-20°	635.0	9.0
20°-30°	963.5	13.6
30°-40°	1165.0	16.5
40°-50°	1215.6	17.2
50°-60°	1111.4	15.7
60°-70°	866.4	12.2
70°-80°	542.0	7.7
80°-90°	246.2	3.5
90°-100°	82.5	1.2
100°-110°	20.7	0.3
110°-120°	3.3	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°	1819.9	25.7
0°-40°	2984.9	42.2
0°-60°	5311.9	75.1
0°-90°	6966.5	98.5
90°-120°	106.5	1.5
90°-150°	106.5	1.5
90°-180°	107.0	1.5
0°-180°	7073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2339	2339	2339	2339	2339	
5°	2334	2330	2320	2330	2330	222
15°	2246	2249	2243	2256	2256	634
25°	2081	2082	2084	2102	2106	959
35°	1842	1850	1858	1877	1884	1153
45°	1550	1563	1576	1592	1599	1194
55°	1209	1224	1246	1264	1273	1080
65°	831	845	875	909	924	822
75°	421	447	512	573	594	449
85°	73	135	231	306	332	92
90°	1	50	136	205	229	3
95°	1	13	71	128	148	0
105°	1	2	12	34	46	1
115°	2	2	2	6	9	1
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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CATALOG NUMBER: HVL8-8-LD4-1HI-30-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2339.3	2339.3	2339.3	2339.3	2339.3
2.5°	2342.1	2338.8	2328.3	2338.8	2338.2
5°	2334.4	2329.9	2319.5	2330.5	2330.5
7.5°	2318.9	2317.3	2307.9	2320.6	2320.6
10°	2300.7	2300.2	2292.4	2306.2	2306.8
12.5°	2275.4	2277.6	2270.4	2283.6	2285.3
15°	2245.6	2249.4	2243.4	2256.0	2255.5
17.5°	2213.0	2215.2	2210.8	2225.2	2224.6
20°	2172.8	2175.5	2172.2	2187.1	2188.8
22.5°	2128.1	2132.0	2131.4	2146.9	2151.3
25°	2080.7	2082.3	2084.5	2102.2	2105.5
27.5°	2028.3	2031.1	2034.9	2050.9	2054.2
30°	1970.9	1975.4	1979.8	1996.3	2000.7
32.5°	1910.3	1914.7	1920.2	1941.7	1943.9
35°	1841.9	1850.2	1857.9	1876.6	1884.4
37.5°	1773.5	1784.0	1791.2	1811.0	1817.1
40°	1701.3	1711.8	1723.3	1744.3	1748.1
42.5°	1625.7	1637.9	1651.6	1670.4	1677.0
45°	1549.6	1563.4	1576.1	1591.5	1599.3
47.5°	1467.5	1481.2	1496.7	1514.3	1519.3
50°	1382.5	1398.5	1415.1	1431.6	1440.4
52.5°	1295.4	1314.7	1333.4	1351.1	1359.4
55°	1209.4	1223.7	1246.3	1264.5	1272.8
57.5°	1120.0	1132.2	1152.6	1182.3	1186.8
60°	1029.0	1040.1	1061.0	1085.3	1095.2
62.5°	928.7	943.6	965.6	996.5	1005.3
65°	831.1	845.4	874.6	909.4	923.7
67.5°	736.8	741.7	779.2	815.6	838.8
70°	625.4	644.1	687.7	732.3	750.0
72.5°	529.4	548.2	596.1	648.5	670.6
75°	420.8	446.7	511.8	573.0	594.5
77.5°	325.4	354.0	434.6	496.3	521.1
80°	227.2	271.9	359.6	429.0	456.1
82.5°	142.8	198.0	291.7	364.5	388.2
85°	72.8	134.6	231.1	305.5	332.5
87.5°	19.3	87.1	179.8	250.9	278.5
90°	0.6	50.2	136.2	204.6	229.4
92.5°	0.6	28.1	101.5	162.7	188.1
95°	0.6	13.2	70.6	127.9	147.8
97.5°	0.6	5.5	48.5	96.5	116.4
100°	0.6	2.8	30.9	70.0	87.1
102.5°	1.1	1.7	19.3	50.2	64.0
105°	1.1	1.7	11.6	34.2	45.8
107.5°	1.1	1.7	6.6	23.2	31.4
110°	1.7	1.7	3.9	14.3	21.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	1.7	2.2	9.4	13.8
115°	1.7	1.7	2.2	6.1	8.8
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)