

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: P518186

Luminaire Tested: HVL8-8-LD4-1LO-50-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: P518186
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-1LO-50-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

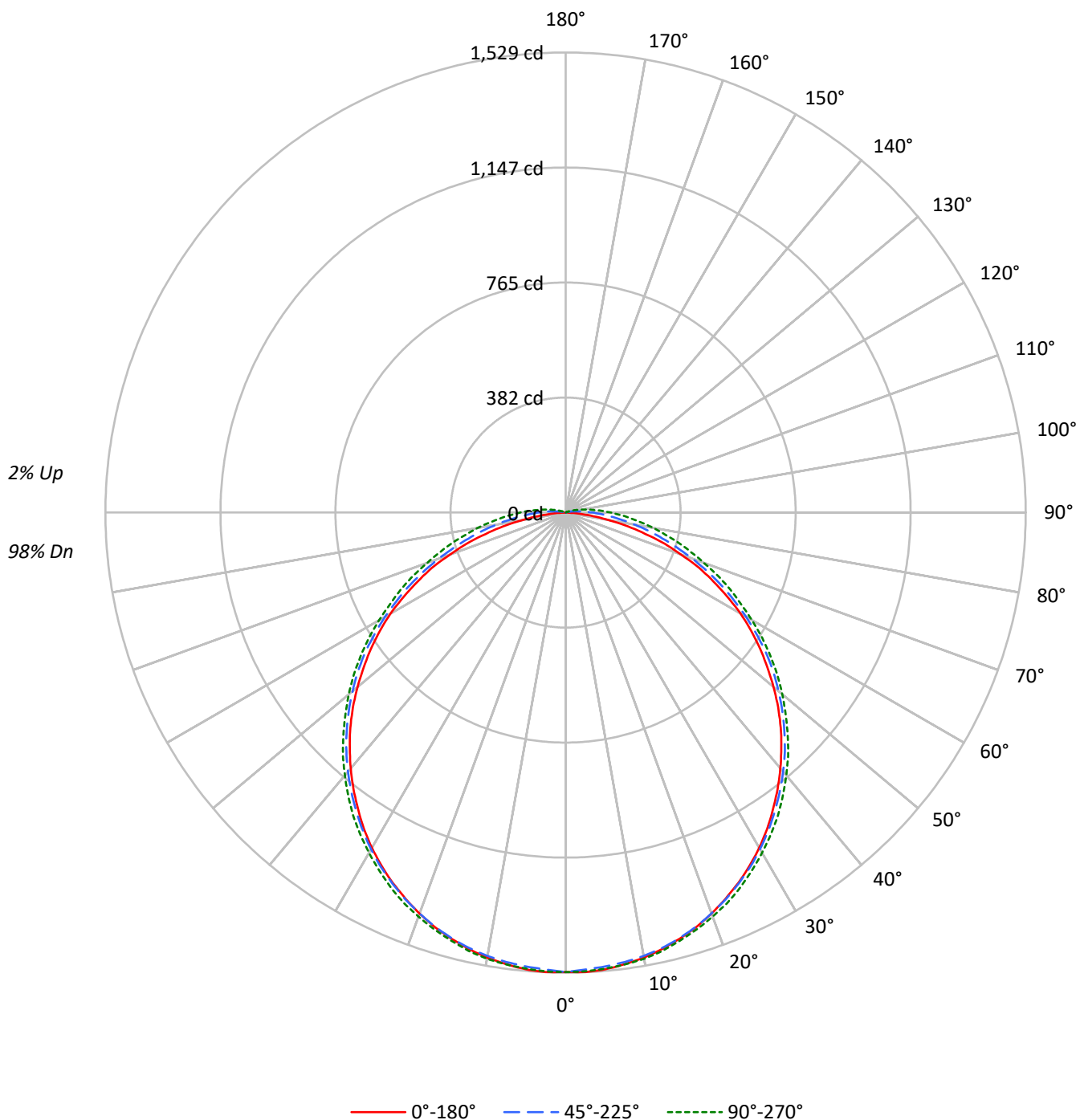
Lumens per Lamp: N/A
Luminaire Lumens: 4617.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

Input Watts (W): 46
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	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83
2	98	89	82	76	95	87	80	75	83	77	73	79	75	71	76	72	69
3	89	78	69	63	86	76	68	62	73	66	61	70	64	59	67	62	58
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	54	50
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43
6	69	55	46	40	67	54	46	39	52	45	39	50	44	38	49	43	38
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	34
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3082	3082	3082
5°	3082	3017	3016
10°	3066	2966	2956
15°	3046	2910	2883
20°	3023	2847	2813
25°	2995	2782	2741
30°	2963	2712	2660
35°	2920	2635	2579
40°	2875	2553	2485
45°	2828	2464	2384
50°	2765	2361	2275
55°	2697	2248	2154
60°	2617	2099	2014
65°	2480	1933	1874
70°	2278	1736	1713
75°	1988	1519	1565
80°	1541	1307	1431
85°	888	1095	1303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2828 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.5	3.1
10°-20°	414.5	9.0
20°-30°	628.9	13.6
30°-40°	760.5	16.5
40°-50°	793.5	17.2
50°-60°	725.5	15.7
60°-70°	565.6	12.2
70°-80°	353.8	7.7
80°-90°	160.7	3.5
90°-100°	53.9	1.2
100°-110°	13.5	0.3
110°-120°	2.1	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°	1187.9	25.7
0°-40°	1948.4	42.2
0°-60°	3467.4	75.1
0°-90°	4547.5	98.5
90°-120°	69.5	1.5
90°-150°	69.5	1.5
90°-180°	70.0	1.5
0°-180°	4617.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1524	1521	1514	1521	1521	145
15°	1466	1468	1464	1473	1472	414
25°	1358	1359	1361	1372	1374	626
35°	1202	1208	1213	1225	1230	753
45°	1012	1020	1029	1039	1044	779
55°	789	799	814	825	831	705
65°	542	552	571	594	603	537
75°	275	292	334	374	388	293
85°	48	88	151	199	217	60
90°	0	33	89	134	150	2
95°	0	9	46	84	96	0
105°	1	1	8	22	30	1
115°	1	1	1	4	6	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

TEST NUMBER: P518186

CATALOG NUMBER: HVL8-8-LD4-1LO-50-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.0	1527.0	1527.0	1527.0	1527.0
2.5°	1528.8	1526.7	1519.8	1526.7	1526.3
5°	1523.8	1520.9	1514.1	1521.3	1521.3
7.5°	1513.7	1512.6	1506.5	1514.8	1514.8
10°	1501.8	1501.5	1496.4	1505.4	1505.8
12.5°	1485.3	1486.7	1482.0	1490.7	1491.7
15°	1465.8	1468.3	1464.4	1472.7	1472.3
17.5°	1444.6	1446.0	1443.1	1452.5	1452.1
20°	1418.3	1420.1	1418.0	1427.7	1428.8
22.5°	1389.2	1391.7	1391.3	1401.4	1404.3
25°	1358.2	1359.3	1360.7	1372.2	1374.4
27.5°	1324.0	1325.8	1328.3	1338.8	1340.9
30°	1286.6	1289.4	1292.3	1303.1	1306.0
32.5°	1247.0	1249.8	1253.4	1267.5	1268.9
35°	1202.3	1207.7	1212.8	1225.0	1230.0
37.5°	1157.7	1164.5	1169.2	1182.2	1186.1
40°	1110.5	1117.4	1124.9	1138.6	1141.1
42.5°	1061.2	1069.1	1078.1	1090.4	1094.7
45°	1011.5	1020.5	1028.8	1038.9	1043.9
47.5°	957.9	966.9	977.0	988.5	991.7
50°	902.5	912.9	923.7	934.5	940.3
52.5°	845.6	858.2	870.4	881.9	887.3
55°	789.4	798.8	813.5	825.4	830.8
57.5°	731.1	739.0	752.4	771.8	774.7
60°	671.7	678.9	692.6	708.4	714.9
62.5°	606.2	615.9	630.3	650.5	656.2
65°	542.5	551.8	570.9	593.6	603.0
67.5°	480.9	484.2	508.6	532.4	547.5
70°	408.2	420.5	448.9	478.1	489.6
72.5°	345.6	357.8	389.1	423.3	437.7
75°	274.7	291.6	334.1	374.0	388.1
77.5°	212.4	231.1	283.7	324.0	340.2
80°	148.3	177.5	234.7	280.1	297.7
82.5°	93.2	129.2	190.4	237.9	253.4
85°	47.5	87.8	150.8	199.4	217.1
87.5°	12.6	56.9	117.4	163.8	181.8
90°	0.4	32.8	88.9	133.6	149.8
92.5°	0.4	18.4	66.2	106.2	122.8
95°	0.4	8.6	46.1	83.5	96.5
97.5°	0.4	3.6	31.7	63.0	76.0
100°	0.4	1.8	20.2	45.7	56.9
102.5°	0.7	1.1	12.6	32.8	41.8
105°	0.7	1.1	7.6	22.3	29.9
107.5°	0.7	1.1	4.3	15.1	20.5
110°	1.1	1.1	2.5	9.4	13.7

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	1.1	1.4	6.1	9.0
115°	1.1	1.1	1.4	4.0	5.8
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)