

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: P517608

Luminaire Tested: HVL12-8-LD4-1LO-50-UNV-C-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: P517608
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-1LO-50-UNV-C-EDD
Description: 8 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5324.0 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

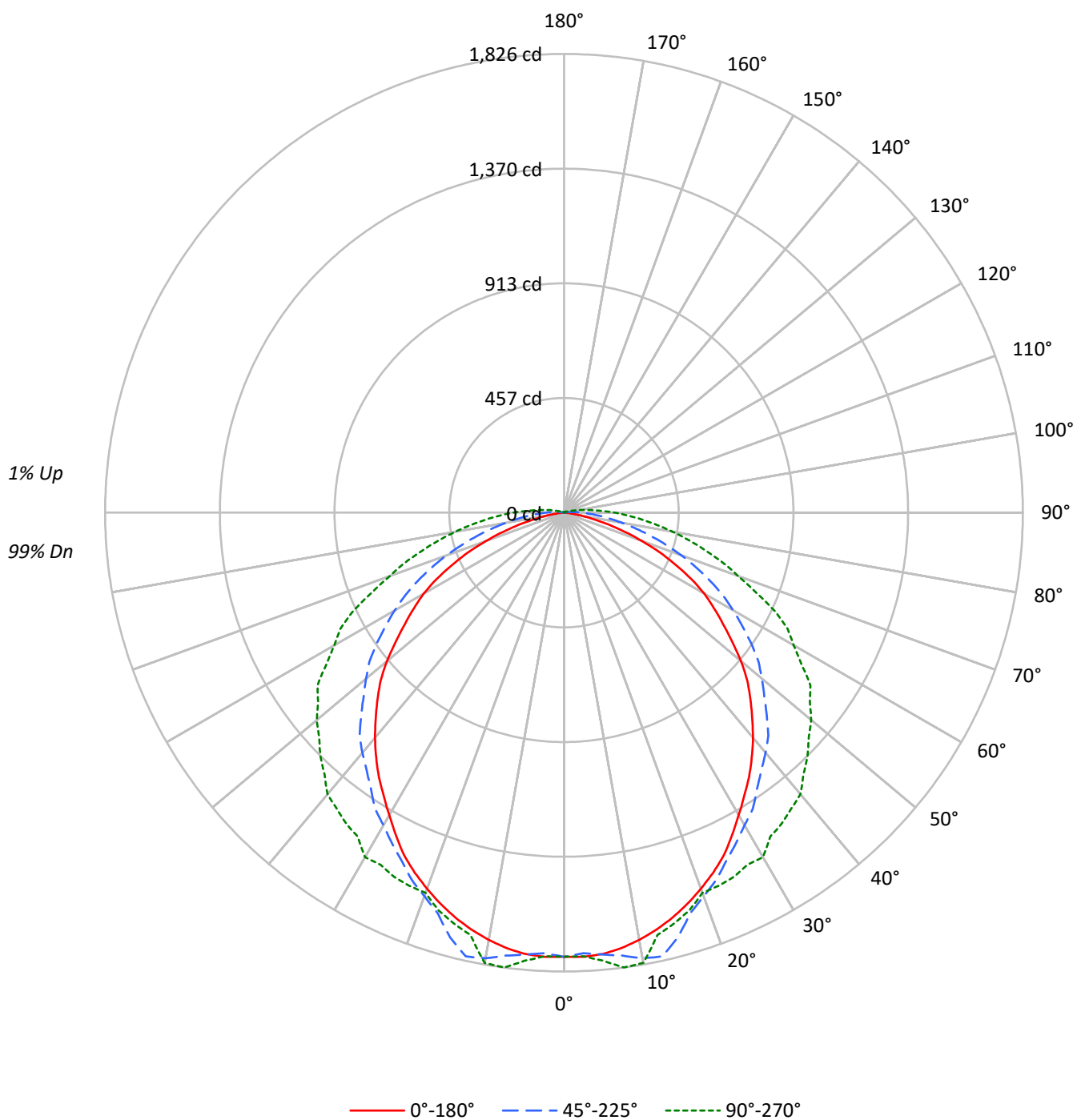
Input Watts (W): 47.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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

TEST NUMBER: P517608

CATALOG NUMBER: HVL12-8-LD4-1LO-50-UNV-C-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P517608

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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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101			99
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	76	72	69			67
3	89	78	69	63	86	76	68	62	73	66	61	70	64	59	67	62	58			56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	54	50			47
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	39	67	54	46	39	52	45	39	50	44	38	49	43	38			36
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	34			32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30			28
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27			25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25			23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2378	2378	2378
5°	2377	2357	2383
10°	2350	2404	2415
15°	2311	2353	2257
20°	2264	2219	2174
25°	2213	2137	2203
30°	2134	2073	2244
35°	2079	2013	2222
40°	2020	1973	2256
45°	1956	1917	2236
50°	1878	1858	2242
55°	1761	1795	2269
60°	1674	1703	2203
65°	1491	1589	2171
70°	1230	1436	1990
75°	892	1243	1871
80°	516	1051	1752
85°	207	855	1649

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 55°

Luminance: 2269 cd/sqm

TEST NUMBER: P517608

CATALOG NUMBER: HVL12-8-LD4-1LO-50-UNV-C-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.9	3.2
10°-20°	483.7	9.1
20°-30°	719.7	13.5
30°-40°	865.1	16.2
40°-50°	910.5	17.1
50°-60°	844.9	15.9
60°-70°	668.0	12.5
70°-80°	408.1	7.7
80°-90°	177.8	3.3
90°-100°	55.4	1.0
100°-110°	12.4	0.2
110°-120°	5.0	0.1
120°-130°	2.8	0.1
130°-140°	0.7	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°	1373.3	25.8
0°-40°	2238.4	42.0
0°-60°	3993.8	75.0
0°-90°	5247.7	98.6
90°-120°	72.8	1.4
90°-150°	76.3	1.4
90°-180°	76.0	1.4
0°-180°	5324.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1767	1767	1767	1767	1767	
5°	1763	1759	1766	1785	1790	167
15°	1669	1733	1750	1692	1693	470
25°	1505	1601	1528	1574	1600	691
35°	1284	1320	1340	1461	1511	803
45°	1049	1054	1141	1322	1371	809
55°	773	786	910	1109	1197	694
65°	489	505	641	848	926	485
75°	185	245	358	549	584	202
85°	17	58	139	270	310	26
90°	0	17	73	171	202	1
95°	0	4	32	94	115	0
105°	0	2	6	18	26	1
115°	0	1	5	8	9	1
125°	0	1	2	5	8	1
135°	1	1	1	2	2	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: P517608

CATALOG NUMBER: HVL12-8-LD4-1LO-50-UNV-C-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1767.3	1767.3	1767.3	1767.3	1767.3
2.5°	1769.4	1764.8	1755.0	1764.4	1766.9
5°	1763.0	1759.4	1765.5	1785.3	1790.3
7.5°	1748.2	1761.9	1778.1	1814.1	1825.6
10°	1726.2	1752.2	1800.8	1831.4	1819.5
12.5°	1699.6	1743.5	1808.7	1748.9	1721.2
15°	1668.6	1732.7	1749.6	1691.7	1692.8
17.5°	1632.3	1723.7	1671.5	1670.1	1659.6
20°	1593.0	1693.5	1624.4	1621.5	1610.3
22.5°	1550.9	1653.5	1582.6	1576.8	1607.1
25°	1505.2	1601.3	1528.2	1574.0	1599.5
27.5°	1448.0	1532.9	1482.9	1547.7	1579.7
30°	1390.0	1462.4	1436.4	1526.8	1583.7
32.5°	1335.6	1388.6	1398.3	1518.9	1528.2
35°	1284.1	1319.8	1339.6	1461.3	1511.0
37.5°	1227.6	1237.3	1289.9	1437.2	1485.0
40°	1170.0	1163.9	1248.1	1397.6	1463.8
42.5°	1108.1	1105.9	1203.9	1377.7	1410.9
45°	1049.4	1054.1	1140.9	1321.6	1370.9
47.5°	989.3	995.4	1081.1	1260.0	1321.2
50°	919.5	927.4	1027.8	1205.3	1284.1
52.5°	843.9	859.0	976.0	1153.5	1233.0
55°	772.9	785.5	910.1	1109.2	1197.4
57.5°	708.1	715.7	842.1	1053.4	1120.0
60°	644.4	646.2	778.0	991.5	1055.2
62.5°	571.3	574.6	712.1	918.4	1003.7
65°	489.3	504.7	641.2	848.5	925.6
67.5°	412.6	439.6	568.8	784.5	824.8
70°	330.5	376.2	497.9	709.2	737.7
72.5°	255.2	308.9	425.2	625.0	664.9
75°	185.0	245.2	357.5	549.4	583.9
77.5°	124.6	185.8	294.1	465.9	511.6
80°	74.5	135.7	237.6	388.4	439.9
82.5°	38.2	91.1	184.3	325.8	371.9
85°	16.6	57.6	139.3	270.4	310.3
87.5°	4.7	32.8	102.6	218.5	252.4
90°	0.4	17.3	73.1	171.4	202.0
92.5°	0.4	8.3	51.5	129.6	153.0
95°	0.4	4.3	32.0	94.0	114.8
97.5°	0.4	2.5	19.4	66.6	84.2
100°	0.4	2.2	11.5	44.3	60.1
102.5°	0.4	2.5	7.9	28.1	39.2
105°	0.4	2.5	6.5	18.4	25.9
107.5°	0.7	2.5	5.8	13.7	18.0
110°	0.4	2.2	6.1	10.4	14.0

TEST NUMBER: P517608

CATALOG NUMBER: HVL12-8-LD4-1LO-50-UNV-C-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	1.8	5.8	8.6	10.4
115°	0.4	1.4	5.0	8.3	8.6
117.5°	0.7	1.1	4.0	8.3	8.6
120°	0.7	0.7	3.2	7.9	9.0
122.5°	0.7	0.7	2.5	7.2	8.6
125°	0.4	0.7	2.2	5.4	7.6
127.5°	0.7	0.7	1.8	4.3	5.8
130°	0.7	0.7	1.4	3.2	4.3
132.5°	0.7	0.7	1.1	2.5	3.2
135°	0.7	0.7	0.7	1.8	2.5
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)