

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: P517395

Luminaire Tested: HVL12-2-LD4-3HI-40-UNV-C-EDD-90

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: P517395
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-2-LD4-3HI-40-UNV-C-EDD-90
Description: 2 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 4000K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6275.0 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 2' x H: 0.17')
CIE Type: Direct

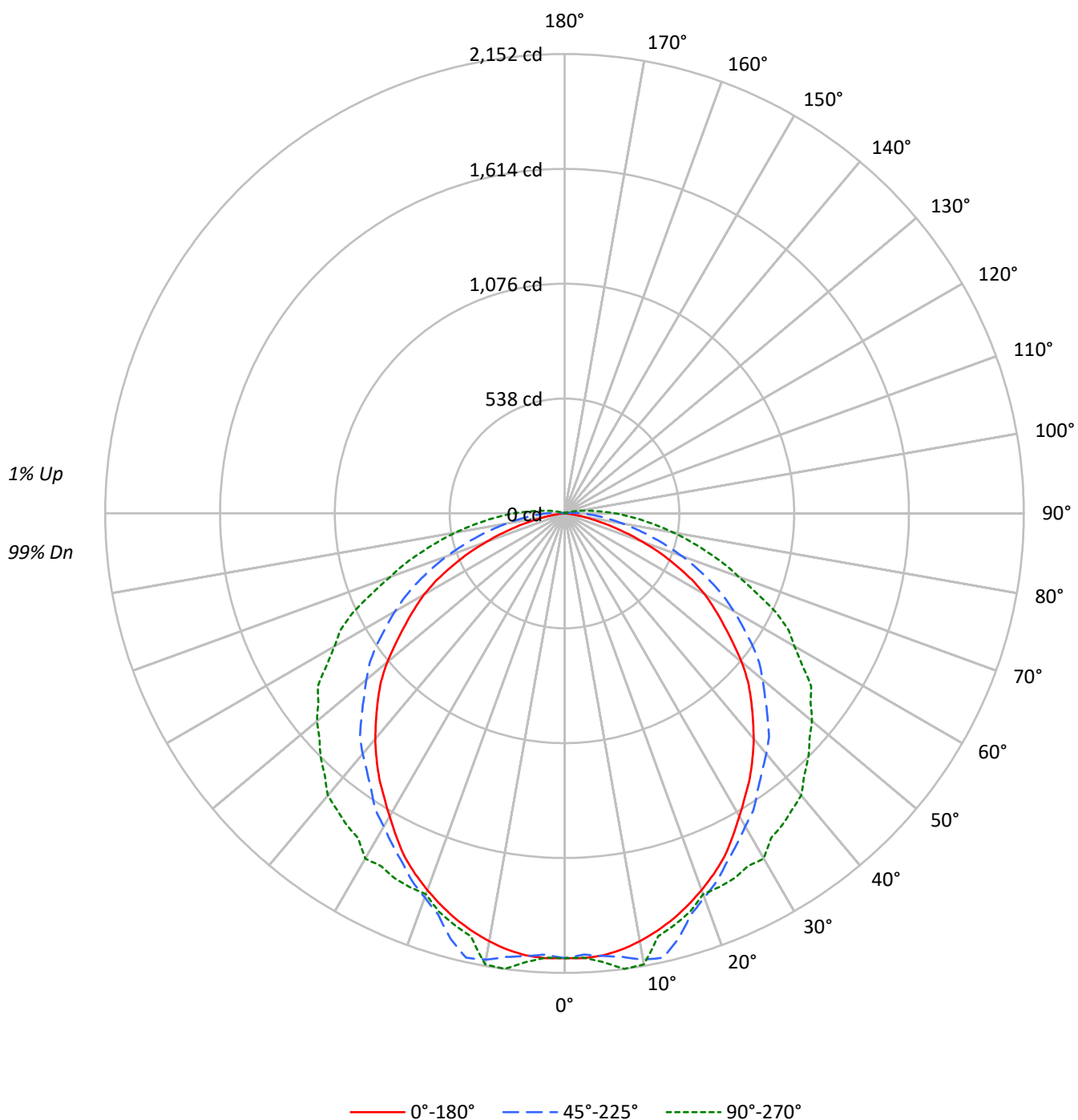
Input Watts (W): 64.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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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	0			
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			

	0°	45°	90°
0°	11211	11211	11211
5°	11145	11070	11236
10°	10958	11248	11385
15°	10719	10970	10641
20°	10437	10302	10249
25°	10141	9881	10387
30°	9714	9547	10582
35°	9396	9231	10477
40°	9055	9000	10634
45°	8690	8697	10541
50°	8254	8378	10572
55°	7639	8036	10696
60°	7144	7556	10388
65°	6229	6978	10234
70°	4987	6215	9383
75°	3459	5278	8822
80°	1848	4333	8261
85°	617	3356	7775

Luminance: 10696 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.2	3.2
10°-20°	570.1	9.1
20°-30°	848.3	13.5
30°-40°	1019.6	16.2
40°-50°	1073.2	17.1
50°-60°	995.8	15.9
60°-70°	787.4	12.5
70°-80°	480.9	7.7
80°-90°	209.5	3.3
90°-100°	65.2	1.0
100°-110°	14.6	0.2
110°-120°	5.9	0.1
120°-130°	3.3	0.1
130°-140°	0.9	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°	1618.6	25.8
0°-40°	2638.2	42.0
0°-60°	4707.2	75.0
0°-90°	6185.0	98.6
90°-120°	85.8	1.4
90°-150°	90.0	1.4
90°-180°	90.0	1.4
0°-180°	6275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2083	2083	2083	2083	2083	
5°	2078	2074	2081	2104	2110	197
15°	1967	2042	2062	1994	1995	554
25°	1774	1887	1801	1855	1885	814
35°	1514	1556	1579	1722	1781	946
45°	1237	1242	1345	1558	1616	953
55°	911	926	1073	1307	1411	819
65°	577	595	756	1000	1091	571
75°	218	289	421	648	688	238
85°	20	68	164	319	366	30
90°	0	20	86	202	238	1
95°	0	5	38	111	135	0
105°	0	3	8	22	31	1
115°	0	2	6	10	10	1
125°	0	1	2	6	9	1
135°	1	1	1	2	3	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: P517395

CATALOG NUMBER: HVL12-2-LD4-3HI-40-UNV-C-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2083.0	2083.0	2083.0	2083.0	2083.0
2.5°	2085.5	2080.0	2068.5	2079.6	2082.5
5°	2077.9	2073.6	2080.8	2104.2	2110.1
7.5°	2060.5	2076.6	2095.7	2138.1	2151.7
10°	2034.6	2065.1	2122.4	2158.5	2144.5
12.5°	2003.2	2055.0	2131.8	2061.3	2028.6
15°	1966.7	2042.2	2062.2	1993.9	1995.1
17.5°	1923.8	2031.6	1970.1	1968.4	1956.1
20°	1877.6	1996.0	1914.5	1911.1	1898.0
22.5°	1827.9	1948.9	1865.3	1858.5	1894.1
25°	1774.1	1887.3	1801.2	1855.1	1885.2
27.5°	1706.6	1806.7	1747.8	1824.1	1861.9
30°	1638.3	1723.6	1693.0	1799.5	1866.6
32.5°	1574.2	1636.6	1648.0	1790.2	1801.2
35°	1513.5	1555.5	1578.9	1722.3	1780.8
37.5°	1446.9	1458.4	1520.3	1693.9	1750.3
40°	1379.0	1371.8	1471.1	1647.2	1725.3
42.5°	1306.0	1303.5	1418.9	1623.9	1662.9
45°	1236.9	1242.4	1344.7	1557.7	1615.8
47.5°	1166.0	1173.2	1274.2	1485.1	1557.2
50°	1083.7	1093.0	1211.4	1420.6	1513.5
52.5°	994.6	1012.4	1150.3	1359.5	1453.3
55°	911.0	925.9	1072.7	1307.3	1411.3
57.5°	834.6	843.5	992.5	1241.5	1320.0
60°	759.5	761.6	916.9	1168.6	1243.7
62.5°	673.4	677.2	839.3	1082.4	1183.0
65°	576.6	594.9	755.7	1000.1	1090.9
67.5°	486.3	518.1	670.4	924.6	972.1
70°	389.5	443.4	586.8	835.9	869.4
72.5°	300.8	364.1	501.1	736.6	783.7
75°	218.1	289.0	421.3	647.5	688.2
77.5°	146.8	218.9	346.7	549.1	603.0
80°	87.8	160.0	280.0	457.8	518.5
82.5°	45.0	107.4	217.2	384.0	438.3
85°	19.5	67.9	164.2	318.7	365.8
87.5°	5.5	38.6	120.9	257.6	297.4
90°	0.4	20.4	86.1	202.0	238.0
92.5°	0.4	9.8	60.7	152.8	180.3
95°	0.4	5.1	37.8	110.7	135.4
97.5°	0.4	3.0	22.9	78.5	99.3
100°	0.4	2.5	13.6	52.2	70.9
102.5°	0.4	3.0	9.3	33.1	46.3
105°	0.4	3.0	7.6	21.6	30.6
107.5°	0.8	3.0	6.8	16.1	21.2
110°	0.4	2.5	7.2	12.3	16.5

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CATALOG NUMBER: HVL12-2-LD4-3HI-40-UNV-C-EDD-90

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	2.1	6.8	10.2	12.3
115°	0.4	1.7	5.9	9.8	10.2
117.5°	0.8	1.3	4.7	9.8	10.2
120°	0.8	0.8	3.8	9.3	10.6
122.5°	0.8	0.8	3.0	8.5	10.2
125°	0.4	0.8	2.5	6.4	8.9
127.5°	0.8	0.8	2.1	5.1	6.8
130°	0.8	0.8	1.7	3.8	5.1
132.5°	0.8	0.8	1.3	3.0	3.8
135°	0.8	0.8	0.8	2.1	3.0
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)