

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: P517624

Luminaire Tested: HVL12-8-LD4-1STD-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: P517624
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-1STD-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: 6858.0 lumens
Efficiency: N/A
Efficacy: 102.4 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

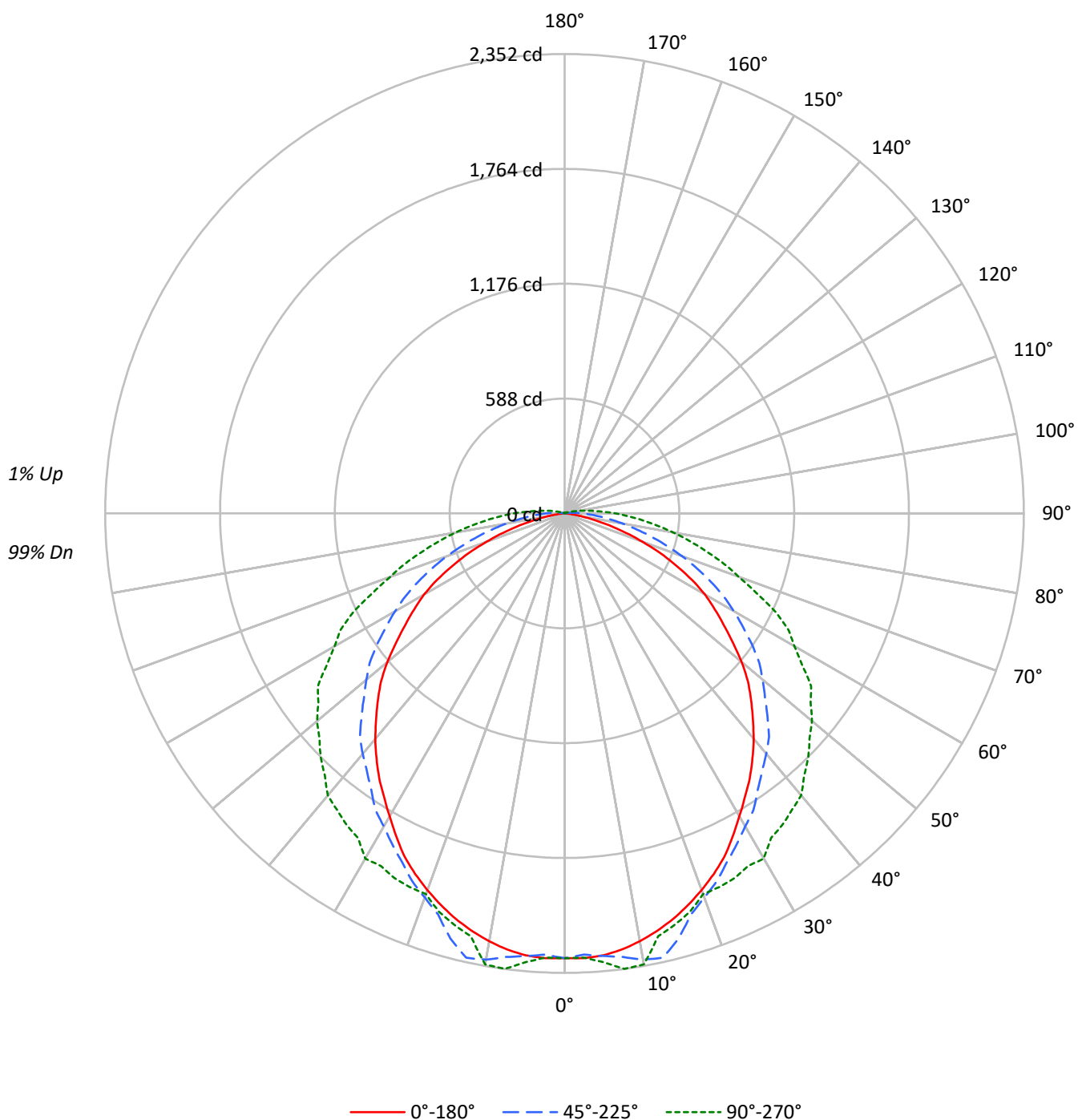
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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	103	98	94	105	100	96	92	96	92	89		91	89	86		87
2	98	89	82	76	95	87	80	75	83	78	73		80	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	51		62	56	51		60
5	75	61	52	45	72	60	51	45	58	50	44		56	49	44		54
6	69	55	46	39	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°	3063	3063	3063
5°	3062	3036	3070
10°	3027	3097	3111
15°	2977	3032	2907
20°	2916	2858	2800
25°	2851	2752	2838
30°	2749	2670	2891
35°	2678	2594	2863
40°	2602	2541	2905
45°	2520	2469	2880
50°	2419	2393	2889
55°	2268	2312	2922
60°	2156	2193	2838
65°	1921	2047	2796
70°	1584	1849	2564
75°	1150	1601	2411
80°	665	1354	2257
85°	266	1102	2124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 55°

Luminance: 2922 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.8	3.2
10°-20°	623.1	9.1
20°-30°	927.1	13.5
30°-40°	1114.3	16.2
40°-50°	1172.9	17.1
50°-60°	1088.3	15.9
60°-70°	860.5	12.5
70°-80°	525.6	7.7
80°-90°	229.0	3.3
90°-100°	71.3	1.0
100°-110°	16.0	0.2
110°-120°	6.4	0.1
120°-130°	3.6	0.1
130°-140°	1.0	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°	1768.9	25.8
0°-40°	2883.3	42.0
0°-60°	5144.5	75.0
0°-90°	6759.7	98.6
90°-120°	93.7	1.4
90°-150°	98.3	1.4
90°-180°	98.0	1.4
0°-180°	6858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2276	2276	2276	2276	2276	
5°	2271	2266	2274	2300	2306	215
15°	2149	2232	2254	2179	2180	605
25°	1939	2063	1969	2028	2060	890
35°	1654	1700	1726	1882	1946	1034
45°	1352	1358	1470	1702	1766	1042
55°	996	1012	1172	1429	1542	895
65°	630	650	826	1093	1192	624
75°	238	316	460	708	752	260
85°	21	74	180	348	400	33
90°	0	22	94	221	260	1
95°	0	6	41	121	148	0
105°	0	3	8	24	33	1
115°	0	2	6	11	11	1
125°	0	1	3	7	10	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

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2276.5	2276.5	2276.5	2276.5	2276.5
2.5°	2279.3	2273.2	2260.7	2272.8	2276.0
5°	2270.9	2266.3	2274.2	2299.7	2306.2
7.5°	2251.9	2269.5	2290.4	2336.8	2351.6
10°	2223.6	2257.0	2319.6	2359.0	2343.7
12.5°	2189.3	2245.9	2329.8	2252.8	2217.1
15°	2149.4	2232.0	2253.8	2179.1	2180.5
17.5°	2102.6	2220.4	2153.1	2151.3	2137.8
20°	2052.0	2181.4	2092.4	2088.7	2074.3
22.5°	1997.8	2129.9	2038.6	2031.2	2070.1
25°	1938.9	2062.7	1968.6	2027.5	2060.4
27.5°	1865.1	1974.6	1910.1	1993.6	2034.9
30°	1790.5	1883.7	1850.3	1966.7	2040.0
32.5°	1720.5	1788.6	1801.2	1956.5	1968.6
35°	1654.1	1700.1	1725.6	1882.3	1946.3
37.5°	1581.3	1593.9	1661.6	1851.2	1912.9
40°	1507.1	1499.3	1607.8	1800.2	1885.6
42.5°	1427.4	1424.6	1550.7	1774.7	1817.4
45°	1351.8	1357.8	1469.6	1702.4	1765.9
47.5°	1274.3	1282.2	1392.6	1623.1	1701.9
50°	1184.4	1194.6	1324.0	1552.6	1654.1
52.5°	1087.0	1106.5	1257.2	1485.8	1588.3
55°	995.6	1011.9	1172.3	1428.8	1542.4
57.5°	912.2	921.9	1084.7	1356.9	1442.7
60°	830.1	832.4	1002.1	1277.1	1359.2
62.5°	735.9	740.1	917.3	1183.0	1292.9
65°	630.2	650.2	825.9	1093.0	1192.3
67.5°	531.4	566.2	732.7	1010.5	1062.4
70°	425.7	484.6	641.3	913.6	950.2
72.5°	328.8	397.9	547.7	805.0	856.5
75°	238.4	315.8	460.5	707.7	752.2
77.5°	160.5	239.3	378.9	600.1	659.0
80°	96.0	174.8	306.1	500.4	566.7
82.5°	49.2	117.3	237.4	419.7	479.0
85°	21.3	74.2	179.5	348.3	399.7
87.5°	6.0	42.2	132.2	281.5	325.1
90°	0.5	22.3	94.1	220.7	260.2
92.5°	0.5	10.7	66.3	166.9	197.1
95°	0.5	5.6	41.3	121.0	147.9
97.5°	0.5	3.2	25.0	85.8	108.5
100°	0.5	2.8	14.8	57.0	77.4
102.5°	0.5	3.2	10.2	36.2	50.5
105°	0.5	3.2	8.3	23.7	33.4
107.5°	0.9	3.2	7.4	17.6	23.2
110°	0.5	2.8	7.9	13.4	18.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.9	2.3	7.4	11.1	13.4
115°	0.5	1.9	6.5	10.7	11.1
117.5°	0.9	1.4	5.1	10.7	11.1
120°	0.9	0.9	4.2	10.2	11.6
122.5°	0.9	0.9	3.2	9.3	11.1
125°	0.5	0.9	2.8	7.0	9.7
127.5°	0.9	0.9	2.3	5.6	7.4
130°	0.9	0.9	1.9	4.2	5.6
132.5°	0.9	0.9	1.4	3.2	4.2
135°	0.9	0.9	0.9	2.3	3.2
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)