

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: P517658

Luminaire Tested: HVL12-8-LD4-2LO-50-UNV-O-EDD

Issue Date: 4/27/2021

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

Test Information

Test Method: LM-79-2019
Report Number: P517658
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-2LO-50-UNV-O-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: 9155.0 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

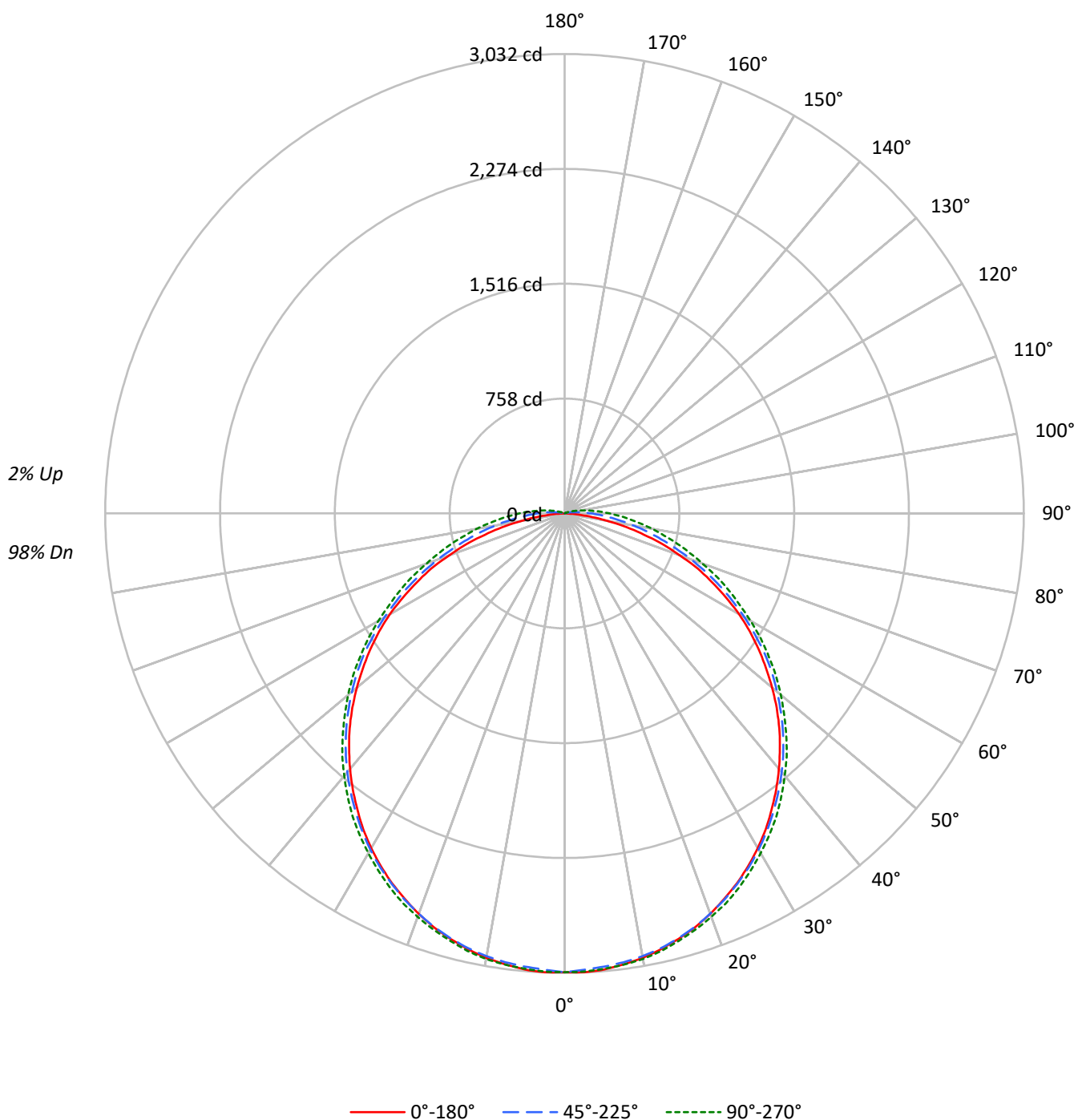
Input Watts (W): 94.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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

TEST NUMBER: P517658

CATALOG NUMBER: HVL12-8-LD4-2LO-50-UNV-O-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P517658

CATALOG NUMBER: HVL12-8-LD4-2LO-50-UNV-O-EDD

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			98
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	77	73	79	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	52	62	56	51	60	54	50			47
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	40	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°	4074	4074	4074
5°	4073	4008	4016
10°	4054	3961	3963
15°	4026	3906	3893
20°	3997	3840	3824
25°	3960	3772	3754
30°	3916	3698	3670
35°	3860	3614	3587
40°	3801	3526	3487
45°	3739	3427	3376
50°	3655	3311	3256
55°	3566	3182	3121
60°	3459	3005	2960
65°	3278	2806	2804
70°	3012	2567	2619
75°	2627	2304	2466
80°	2038	2058	2351
85°	1175	1835	2287

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3739 cd/sqm

TEST NUMBER: P517658

CATALOG NUMBER: HVL12-8-LD4-2LO-50-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.5	3.1
10°-20°	821.9	9.0
20°-30°	1247.1	13.6
30°-40°	1508.0	16.5
40°-50°	1573.4	17.2
50°-60°	1438.6	15.7
60°-70°	1121.5	12.2
70°-80°	701.5	7.7
80°-90°	318.6	3.5
90°-100°	106.8	1.2
100°-110°	26.8	0.3
110°-120°	4.2	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°	2355.5	25.7
0°-40°	3863.5	42.2
0°-60°	6875.5	75.1
0°-90°	9017.2	98.5
90°-120°	137.8	1.5
90°-150°	137.8	1.5
90°-180°	138.0	1.5
0°-180°	9155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3028	3028	3028	3028	3028	
5°	3022	3016	3002	3016	3016	287
15°	2907	2912	2904	2920	2919	820
25°	2693	2695	2698	2721	2725	1241
35°	2384	2395	2405	2429	2439	1492
45°	2006	2024	2040	2060	2070	1546
55°	1565	1584	1613	1637	1647	1398
65°	1076	1094	1132	1177	1196	1064
75°	545	578	662	742	770	581
85°	94	174	299	395	430	119
90°	1	65	176	265	297	4
95°	1	17	91	166	191	1
105°	1	2	15	44	59	1
115°	2	2	3	8	11	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: P517658

CATALOG NUMBER: HVL12-8-LD4-2LO-50-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3027.9	3027.9	3027.9	3027.9	3027.9
2.5°	3031.5	3027.2	3013.6	3027.2	3026.5
5°	3021.5	3015.8	3002.2	3016.5	3016.5
7.5°	3001.5	2999.4	2987.2	3003.7	3003.7
10°	2978.0	2977.2	2967.2	2985.1	2985.8
12.5°	2945.1	2948.0	2938.7	2955.8	2958.0
15°	2906.6	2911.6	2903.7	2920.1	2919.4
17.5°	2864.5	2867.3	2861.6	2880.2	2879.5
20°	2812.4	2815.9	2811.6	2830.9	2833.1
22.5°	2754.5	2759.5	2758.8	2778.8	2784.5
25°	2693.2	2695.3	2698.1	2721.0	2725.3
27.5°	2625.3	2628.9	2633.9	2654.6	2658.9
30°	2551.1	2556.8	2562.5	2583.9	2589.7
32.5°	2472.6	2478.3	2485.4	2513.3	2516.1
35°	2384.1	2394.8	2404.8	2429.0	2439.0
37.5°	2295.6	2309.1	2318.4	2344.1	2352.0
40°	2202.1	2215.6	2230.6	2257.7	2262.7
42.5°	2104.3	2120.0	2137.8	2162.1	2170.7
45°	2005.8	2023.6	2040.0	2060.0	2070.0
47.5°	1899.4	1917.3	1937.2	1960.1	1966.5
50°	1789.5	1810.2	1831.6	1853.0	1864.4
52.5°	1676.7	1701.7	1726.0	1748.8	1759.5
55°	1565.4	1583.9	1613.2	1636.7	1647.4
57.5°	1449.7	1465.4	1491.8	1530.4	1536.1
60°	1331.9	1346.2	1373.3	1404.7	1417.6
62.5°	1202.0	1221.3	1249.9	1289.8	1301.2
65°	1075.7	1094.2	1132.1	1177.0	1195.6
67.5°	953.6	960.1	1008.6	1055.7	1085.7
70°	809.4	833.7	890.1	947.9	970.8
72.5°	685.2	709.5	771.6	839.4	868.0
75°	544.6	578.2	662.4	741.6	769.5
77.5°	421.1	458.3	562.5	642.4	674.5
80°	294.1	351.9	465.4	555.3	590.3
82.5°	184.9	256.3	377.6	471.8	502.5
85°	94.2	174.2	299.1	395.4	430.4
87.5°	25.0	112.8	232.7	324.8	360.5
90°	0.7	65.0	176.3	264.8	296.9
92.5°	0.7	36.4	131.3	210.6	243.4
95°	0.7	17.1	91.4	165.6	191.3
97.5°	0.7	7.1	62.8	124.9	150.6
100°	0.7	3.6	40.0	90.7	112.8
102.5°	1.4	2.1	25.0	65.0	82.8
105°	1.4	2.1	15.0	44.3	59.2
107.5°	1.4	2.1	8.6	30.0	40.7
110°	2.1	2.1	5.0	18.6	27.1

TEST NUMBER: P517658

CATALOG NUMBER: HVL12-8-LD4-2LO-50-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	2.1	2.9	12.1	17.8
115°	2.1	2.1	2.9	7.9	11.4
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)