

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: P518234

Luminaire Tested: HVL8-8-LD4-2LO-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: P518234
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-2LO-50-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

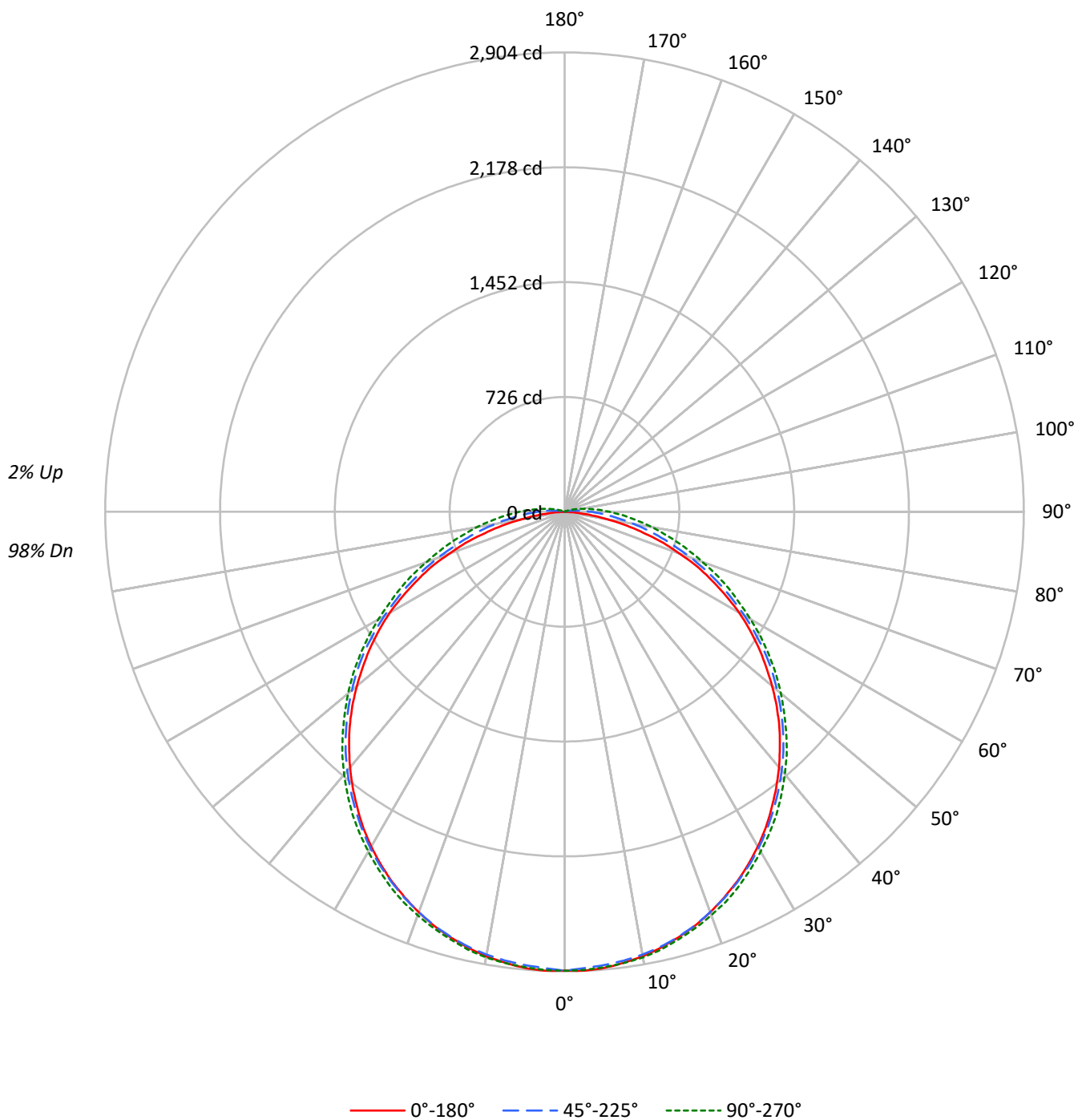
Lumens per Lamp: N/A
Luminaire Lumens: 8769.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

Input Watts (W): 92.2
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	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°	5853	5853	5853
5°	5853	5730	5728
10°	5824	5634	5613
15°	5785	5528	5476
20°	5742	5407	5342
25°	5689	5283	5206
30°	5627	5151	5051
35°	5545	5004	4898
40°	5461	4850	4720
45°	5372	4681	4527
50°	5251	4485	4320
55°	5123	4269	4091
60°	4970	3987	3824
65°	4710	3670	3560
70°	4327	3296	3252
75°	3775	2885	2973
80°	2928	2483	2718
85°	1687	2080	2475

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5372 cd/sqm

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CATALOG NUMBER: HVL8-8-LD4-2LO-50-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.5	3.1
10°-20°	787.3	9.0
20°-30°	1194.5	13.6
30°-40°	1444.4	16.5
40°-50°	1507.1	17.2
50°-60°	1377.9	15.7
60°-70°	1074.2	12.2
70°-80°	672.0	7.7
80°-90°	305.2	3.5
90°-100°	102.3	1.2
100°-110°	25.7	0.3
110°-120°	4.1	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°	2256.2	25.7
0°-40°	3700.6	42.2
0°-60°	6585.7	75.1
0°-90°	8637.0	98.5
90°-120°	132.0	1.5
90°-150°	132.0	1.5
90°-180°	132.0	1.5
0°-180°	8769.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2900	2900	2900	2900	2900	
5°	2894	2889	2876	2889	2889	275
15°	2784	2789	2781	2797	2796	786
25°	2580	2582	2584	2606	2610	1189
35°	2284	2294	2303	2327	2336	1429
45°	1921	1938	1954	1973	1983	1480
55°	1499	1517	1545	1568	1578	1340
65°	1030	1048	1084	1127	1145	1019
75°	522	554	634	710	737	556
85°	90	167	286	379	412	114
90°	1	62	169	254	284	4
95°	1	16	88	159	183	1
105°	1	2	14	42	57	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: P518234

CATALOG NUMBER: HVL8-8-LD4-2LO-50-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2900.3	2900.3	2900.3	2900.3	2900.3
2.5°	2903.7	2899.6	2886.6	2899.6	2898.9
5°	2894.1	2888.6	2875.6	2889.3	2889.3
7.5°	2875.0	2872.9	2861.3	2877.0	2877.0
10°	2852.4	2851.7	2842.1	2859.2	2859.9
12.5°	2820.9	2823.7	2814.8	2831.2	2833.3
15°	2784.0	2788.8	2781.3	2797.0	2796.3
17.5°	2743.7	2746.4	2741.0	2758.7	2758.0
20°	2693.8	2697.2	2693.1	2711.6	2713.6
22.5°	2638.4	2643.2	2642.5	2661.6	2667.1
25°	2579.6	2581.7	2584.4	2606.3	2610.4
27.5°	2514.6	2518.1	2522.9	2542.7	2546.8
30°	2443.5	2449.0	2454.5	2475.0	2480.5
32.5°	2368.3	2373.8	2380.6	2407.3	2410.0
35°	2283.6	2293.8	2303.4	2326.6	2336.2
37.5°	2198.8	2211.8	2220.7	2245.3	2252.8
40°	2109.2	2122.2	2136.6	2162.5	2167.3
42.5°	2015.5	2030.6	2047.7	2070.9	2079.1
45°	1921.2	1938.3	1954.0	1973.2	1982.7
47.5°	1819.3	1836.4	1855.6	1877.4	1883.6
50°	1714.0	1733.9	1754.4	1774.9	1785.8
52.5°	1606.0	1629.9	1653.2	1675.1	1685.3
55°	1499.4	1517.1	1545.2	1567.7	1578.0
57.5°	1388.6	1403.6	1428.9	1465.9	1471.3
60°	1275.8	1289.5	1315.4	1345.5	1357.8
62.5°	1151.4	1169.8	1197.2	1235.4	1246.4
65°	1030.3	1048.1	1084.3	1127.4	1145.2
67.5°	913.4	919.6	966.1	1011.2	1039.9
70°	775.3	798.6	852.6	908.0	929.8
72.5°	656.4	679.6	739.1	804.0	831.4
75°	521.7	553.8	634.5	710.4	737.0
77.5°	403.4	438.9	538.8	615.3	646.1
80°	281.7	337.1	445.8	531.9	565.4
82.5°	177.1	245.4	361.7	451.9	481.3
85°	90.2	166.8	286.5	378.8	412.3
87.5°	23.9	108.0	222.9	311.1	345.3
90°	0.7	62.2	168.9	253.7	284.4
92.5°	0.7	34.9	125.8	201.7	233.1
95°	0.7	16.4	87.5	158.6	183.2
97.5°	0.7	6.8	60.2	119.6	144.3
100°	0.7	3.4	38.3	86.8	108.0
102.5°	1.4	2.1	23.9	62.2	79.3
105°	1.4	2.1	14.4	42.4	56.7
107.5°	1.4	2.1	8.2	28.7	39.0
110°	2.1	2.1	4.8	17.8	26.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	2.1	2.7	11.6	17.1
115°	2.1	2.1	2.7	7.5	10.9
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)