

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: P518266

Luminaire Tested: HVL8-8-LD4-3HI-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: P518266
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3HI-50-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

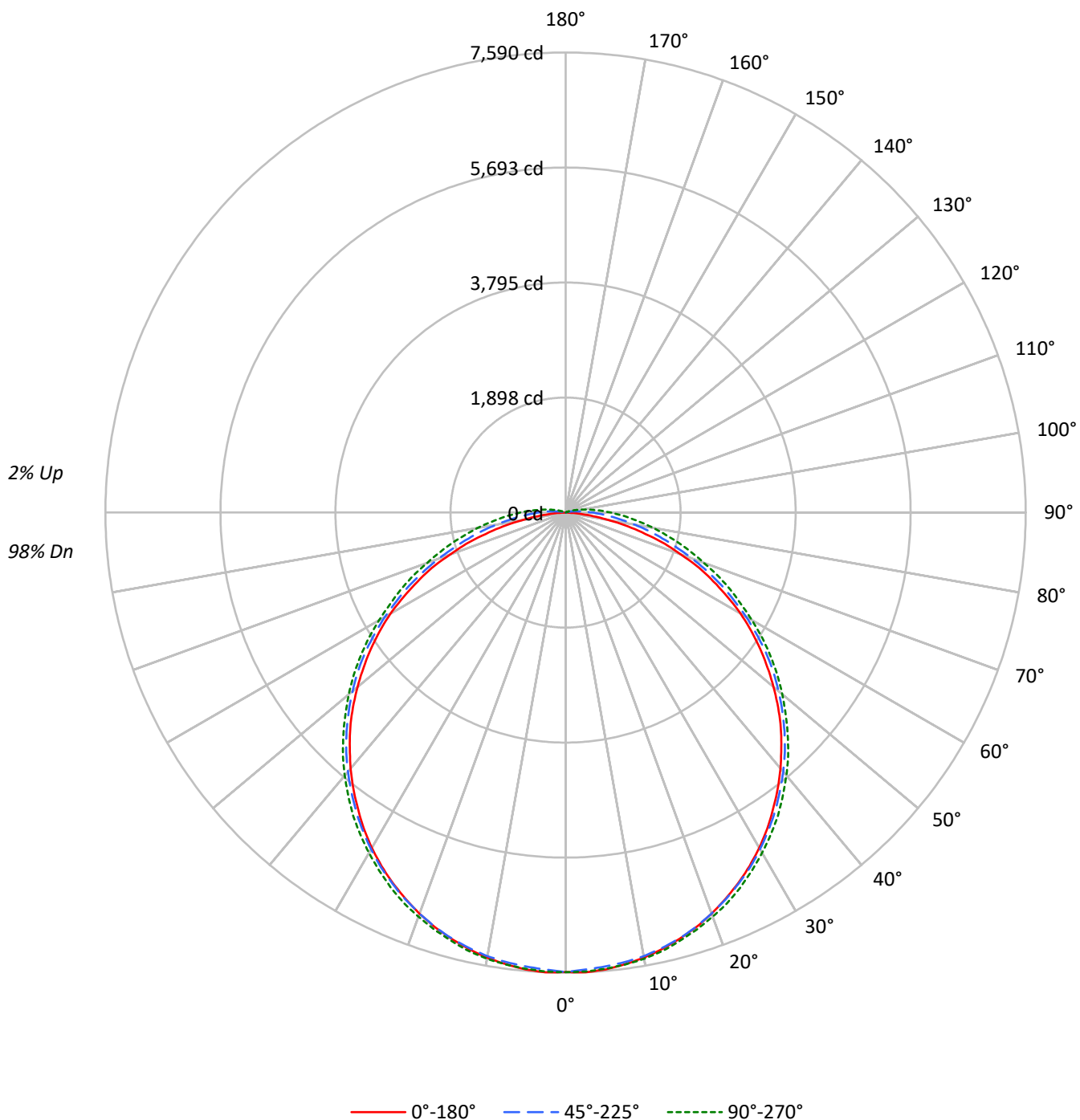
Lumens per Lamp: N/A
Luminaire Lumens: 22923.1 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

Input Watts (W): 251.8
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: P518266
CATALOG NUMBER: HVL8-8-LD4-3HI-50-UNV-O-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P518266

CATALOG NUMBER: HVL8-8-LD4-3HI-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°	15301	15301	15301
5°	15299	14978	14974
10°	15225	14729	14674
15°	15122	14450	14314
20°	15010	14135	13964
25°	14872	13811	13609
30°	14709	13464	13205
35°	14496	13081	12805
40°	14277	12677	12338
45°	14042	12236	11834
50°	13728	11723	11292
55°	13393	11160	10695
60°	12993	10422	9998
65°	12312	9595	9306
70°	11312	8617	8502
75°	9867	7542	7772
80°	7653	6492	7104
85°	4412	5437	6468

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14042 cd/sqm

TEST NUMBER: P518266

CATALOG NUMBER: HVL8-8-LD4-3HI-50-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	717.4	3.1
10°-20°	2058.0	9.0
20°-30°	3122.6	13.6
30°-40°	3775.8	16.5
40°-50°	3939.7	17.2
50°-60°	3602.1	15.7
60°-70°	2808.0	12.2
70°-80°	1756.5	7.7
80°-90°	797.8	3.5
90°-100°	267.4	1.2
100°-110°	67.1	0.3
110°-120°	10.6	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°	5898.0	25.7
0°-40°	9673.8	42.2
0°-60°	17215.6	75.1
0°-90°	22577.9	98.5
90°-120°	345.1	1.5
90°-150°	345.1	1.5
90°-180°	345.0	1.5
0°-180°	22923.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7582	7582	7582	7582	7582	
5°	7566	7551	7517	7553	7553	718
15°	7278	7290	7271	7312	7310	2054
25°	6743	6749	6756	6813	6824	3107
35°	5969	5996	6021	6082	6107	3736
45°	5022	5067	5108	5158	5183	3870
55°	3920	3966	4039	4098	4125	3502
65°	2693	2740	2835	2947	2994	2665
75°	1364	1448	1659	1857	1927	1454
85°	236	436	749	990	1078	298
90°	2	163	442	663	744	9
95°	2	43	229	415	479	1
105°	4	5	38	111	148	4
115°	5	5	7	20	29	3
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: P518266

CATALOG NUMBER: HVL8-8-LD4-3HI-50-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7581.5	7581.5	7581.5	7581.5	7581.5
2.5°	7590.5	7579.8	7545.8	7579.8	7578.0
5°	7565.5	7551.2	7517.2	7552.9	7552.9
7.5°	7515.4	7510.1	7479.7	7520.8	7520.8
10°	7456.4	7454.6	7429.6	7474.3	7476.1
12.5°	7374.2	7381.4	7358.1	7401.0	7406.4
15°	7277.7	7290.2	7270.6	7311.7	7309.9
17.5°	7172.3	7179.4	7165.1	7211.6	7209.8
20°	7041.8	7050.7	7040.0	7088.3	7093.6
22.5°	6897.0	6909.5	6907.7	6957.8	6972.1
25°	6743.3	6748.7	6755.8	6813.0	6823.7
27.5°	6573.5	6582.5	6595.0	6646.8	6657.5
30°	6387.7	6402.0	6416.3	6469.9	6484.2
32.5°	6191.1	6205.4	6223.2	6292.9	6300.1
35°	5969.4	5996.2	6021.3	6082.0	6107.1
37.5°	5747.8	5781.8	5805.0	5869.4	5889.0
40°	5513.7	5547.6	5585.2	5653.1	5665.6
42.5°	5268.8	5308.2	5352.8	5413.6	5435.0
45°	5022.2	5066.9	5108.0	5158.0	5183.0
47.5°	4755.9	4800.6	4850.6	4907.8	4923.9
50°	4480.7	4532.5	4586.1	4639.7	4668.3
52.5°	4198.3	4260.8	4321.6	4378.8	4405.6
55°	3919.5	3965.9	4039.2	4098.2	4125.0
57.5°	3629.9	3669.2	3735.4	3831.9	3846.2
60°	3335.0	3370.8	3438.7	3517.3	3549.5
62.5°	3009.7	3058.0	3129.5	3229.6	3258.2
65°	2693.4	2739.9	2834.6	2947.2	2993.7
67.5°	2387.8	2403.9	2525.4	2643.4	2718.4
70°	2026.7	2087.5	2228.7	2373.5	2430.7
72.5°	1715.8	1776.5	1932.0	2101.8	2173.3
75°	1363.7	1447.7	1658.6	1857.0	1926.7
77.5°	1054.5	1147.4	1408.4	1608.5	1689.0
80°	736.3	881.1	1165.3	1390.5	1478.1
82.5°	462.9	641.6	945.5	1181.4	1258.2
85°	235.9	436.1	748.9	990.1	1077.7
87.5°	62.6	282.4	582.6	813.2	902.6
90°	1.8	162.6	441.5	663.1	743.5
92.5°	1.8	91.2	328.9	527.2	609.5
95°	1.8	42.9	228.8	414.6	479.0
97.5°	1.8	17.9	157.3	312.8	377.1
100°	1.8	8.9	100.1	227.0	282.4
102.5°	3.6	5.4	62.6	162.6	207.3
105°	3.6	5.4	37.5	110.8	148.3
107.5°	3.6	5.4	21.4	75.1	101.9
110°	5.4	5.4	12.5	46.5	67.9

TEST NUMBER: P518266

CATALOG NUMBER: HVL8-8-LD4-3HI-50-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.4	5.4	7.1	30.4	44.7
115°	5.4	5.4	7.1	19.7	28.6
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)