

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: P518237

Luminaire Tested: HVL8-8-LD4-2STD-30-UNV-O-EDD-90

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: P518237
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-2STD-30-UNV-O-EDD-90
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10437.0 lumens
Efficiency: N/A
Efficacy: 79.9 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

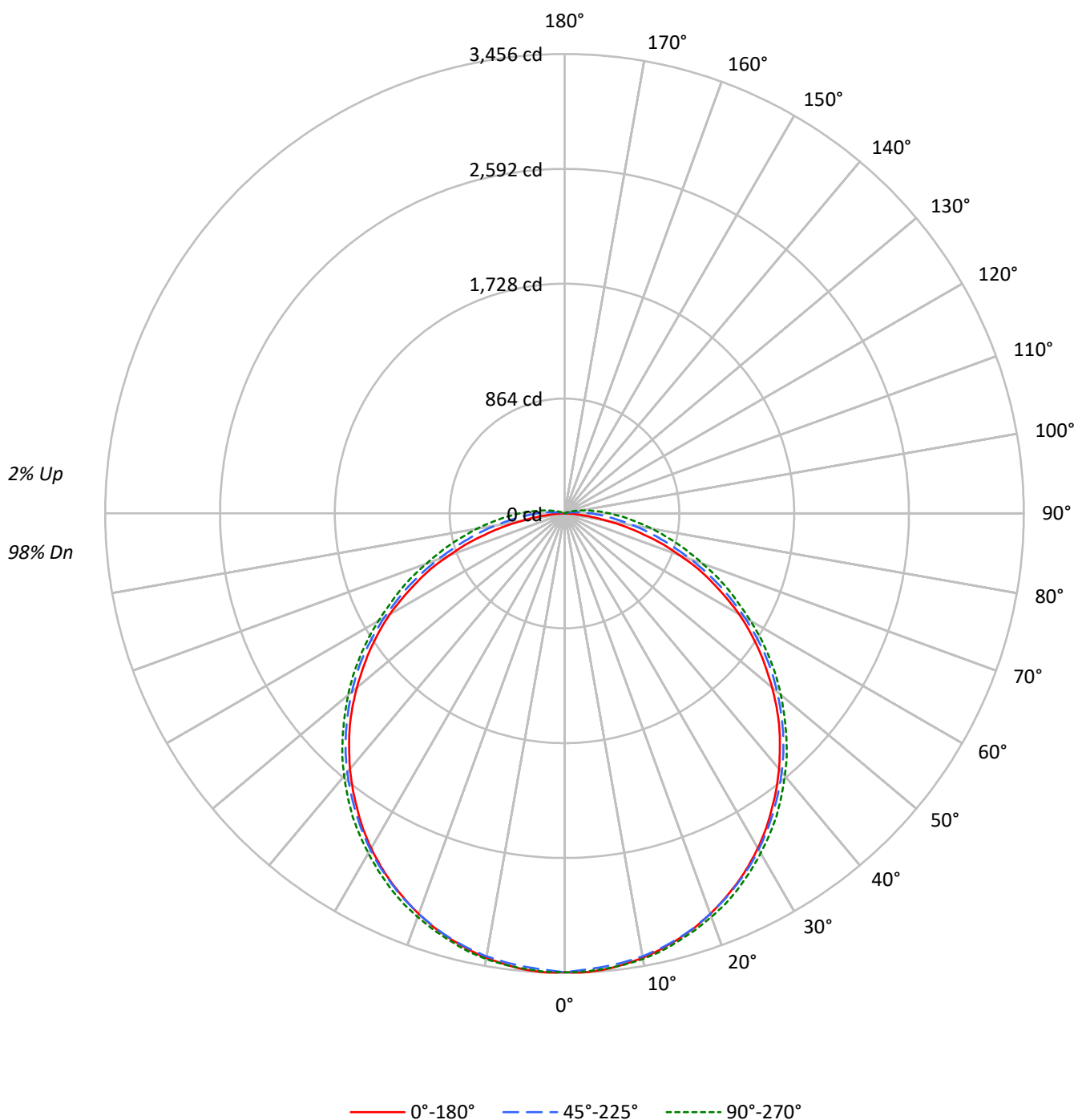
Input Watts (W): 130.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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: P518237

CATALOG NUMBER: HVL8-8-LD4-2STD-30-UNV-O-EDD-90

Luminous Intensity Polar Plot



TEST NUMBER: P518237

CATALOG NUMBER: HVL8-8-LD4-2STD-30-UNV-O-EDD-90

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°	6967	6967	6967
5°	6966	6820	6818
10°	6932	6706	6681
15°	6885	6579	6517
20°	6834	6436	6358
25°	6771	6288	6196
30°	6697	6130	6012
35°	6600	5956	5830
40°	6500	5772	5618
45°	6393	5571	5388
50°	6250	5338	5142
55°	6098	5081	4870
60°	5916	4745	4552
65°	5606	4369	4237
70°	5151	3923	3871
75°	4492	3434	3538
80°	3485	2956	3235
85°	2009	2476	2945

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6393 cd/sqm

TEST NUMBER: P518237

CATALOG NUMBER: HVL8-8-LD4-2STD-30-UNV-O-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.7	3.1
10°-20°	937.0	9.0
20°-30°	1421.7	13.6
30°-40°	1719.1	16.5
40°-50°	1793.8	17.2
50°-60°	1640.0	15.7
60°-70°	1278.5	12.2
70°-80°	799.8	7.7
80°-90°	363.3	3.5
90°-100°	121.7	1.2
100°-110°	30.6	0.3
110°-120°	4.8	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°	2685.4	25.7
0°-40°	4404.5	42.2
0°-60°	7838.4	75.1
0°-90°	10279.9	98.5
90°-120°	157.1	1.5
90°-150°	157.1	1.5
90°-180°	157.0	1.5
0°-180°	10437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3452	3452	3452	3452	3452	
5°	3445	3438	3423	3439	3439	327
15°	3314	3319	3310	3329	3328	935
25°	3070	3073	3076	3102	3107	1415
35°	2718	2730	2742	2769	2781	1701
45°	2287	2307	2326	2348	2360	1762
55°	1785	1806	1839	1866	1878	1594
65°	1226	1248	1291	1342	1363	1213
75°	621	659	755	846	877	662
85°	107	199	341	451	491	136
90°	1	74	201	302	338	4
95°	1	20	104	189	218	1
105°	2	2	17	50	68	2
115°	2	2	3	9	13	2
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: P518237

CATALOG NUMBER: HVL8-8-LD4-2STD-30-UNV-O-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3451.9	3451.9	3451.9	3451.9	3451.9
2.5°	3456.0	3451.1	3435.7	3451.1	3450.3
5°	3444.6	3438.1	3422.6	3438.9	3438.9
7.5°	3421.8	3419.4	3405.5	3424.3	3424.3
10°	3395.0	3394.2	3382.8	3403.1	3403.9
12.5°	3357.5	3360.8	3350.2	3369.7	3372.2
15°	3313.6	3319.3	3310.3	3329.1	3328.2
17.5°	3265.6	3268.8	3262.3	3283.5	3282.7
20°	3206.2	3210.2	3205.4	3227.3	3229.8
22.5°	3140.3	3146.0	3145.1	3167.9	3174.4
25°	3070.3	3072.7	3076.0	3102.0	3106.9
27.5°	2993.0	2997.0	3002.7	3026.3	3031.2
30°	2908.3	2914.9	2921.4	2945.8	2952.3
32.5°	2818.8	2825.3	2833.5	2865.2	2868.5
35°	2717.9	2730.1	2741.5	2769.2	2780.6
37.5°	2617.0	2632.5	2643.1	2672.4	2681.3
40°	2510.4	2525.9	2543.0	2573.9	2579.6
42.5°	2398.9	2416.8	2437.2	2464.8	2474.6
45°	2286.6	2307.0	2325.7	2348.5	2359.9
47.5°	2165.4	2185.7	2208.5	2234.6	2241.9
50°	2040.1	2063.7	2088.1	2112.5	2125.5
52.5°	1911.5	1940.0	1967.6	1993.7	2005.9
55°	1784.6	1805.7	1839.1	1865.9	1878.1
57.5°	1652.7	1670.6	1700.7	1744.7	1751.2
60°	1518.5	1534.7	1565.7	1601.5	1616.1
62.5°	1370.4	1392.3	1424.9	1470.4	1483.5
65°	1226.3	1247.5	1290.6	1341.9	1363.0
67.5°	1087.2	1094.5	1149.8	1203.5	1237.7
70°	922.8	950.5	1014.7	1080.7	1106.7
72.5°	781.2	808.9	879.7	957.0	989.5
75°	620.9	659.1	755.2	845.5	877.2
77.5°	480.1	522.4	641.2	732.4	769.0
80°	335.3	401.2	530.6	633.1	673.0
82.5°	210.8	292.1	430.5	537.9	572.9
85°	107.4	198.6	341.0	450.8	490.7
87.5°	28.5	128.6	265.3	370.3	410.9
90°	0.8	74.1	201.0	301.9	338.5
92.5°	0.8	41.5	149.7	240.1	277.5
95°	0.8	19.5	104.2	188.8	218.1
97.5°	0.8	8.1	71.6	142.4	171.7
100°	0.8	4.1	45.6	103.3	128.6
102.5°	1.6	2.4	28.5	74.1	94.4
105°	1.6	2.4	17.1	50.5	67.5
107.5°	1.6	2.4	9.8	34.2	46.4
110°	2.4	2.4	5.7	21.2	30.9

TEST NUMBER: P518237

CATALOG NUMBER: HVL8-8-LD4-2STD-30-UNV-O-EDD-90

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.4	2.4	3.3	13.8	20.3
115°	2.4	2.4	3.3	9.0	13.0
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)