

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: P518255

Luminaire Tested: HVL8-8-LD4-3HI-35-UNV-C-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: P518255
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3HI-35-UNV-C-EDD-90
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3500K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28330.0 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

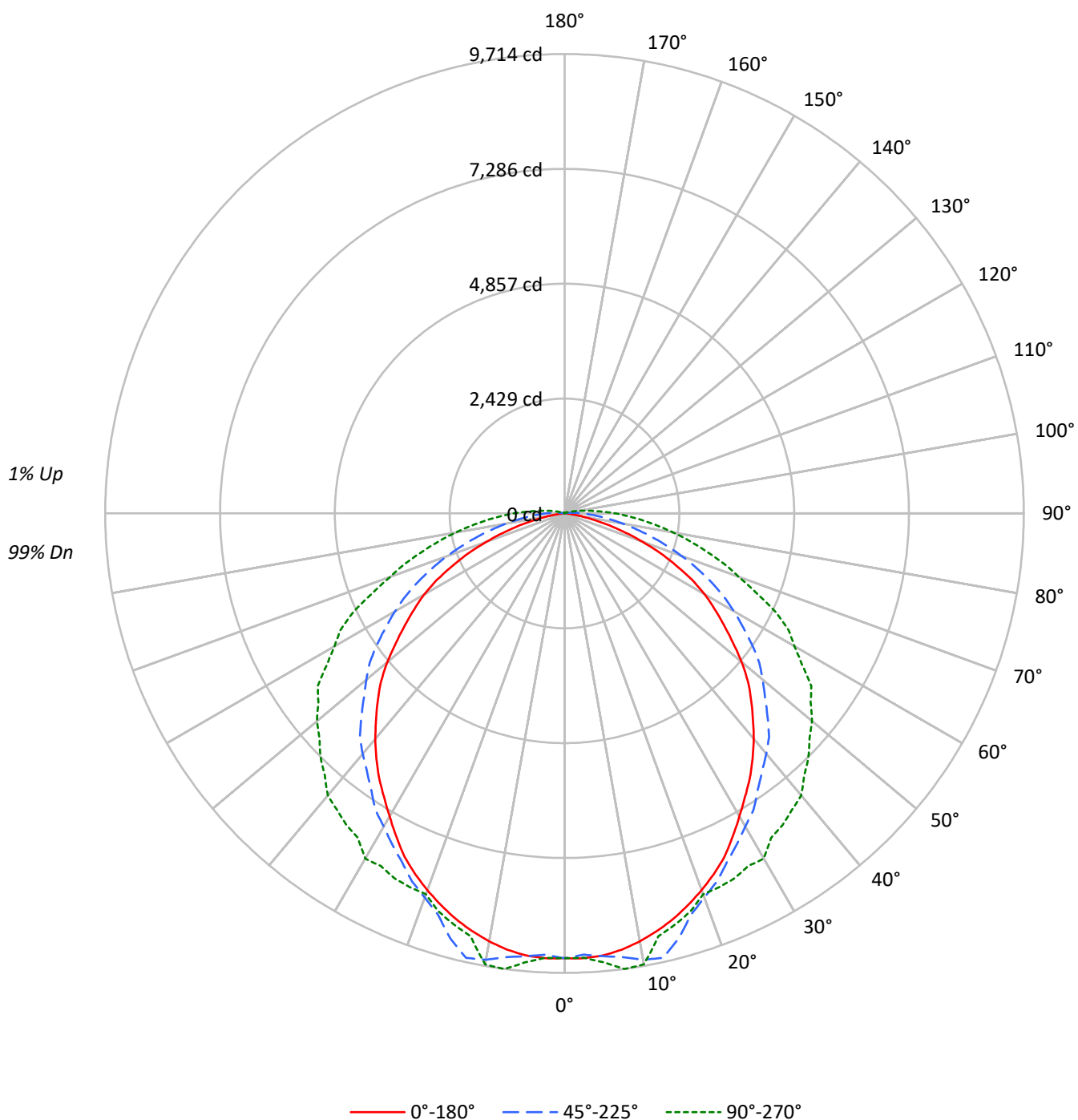
Input Watts (W): 251.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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: P518255

CATALOG NUMBER: HVL8-8-LD4-3HI-35-UNV-C-EDD-90

Luminous Intensity Polar Plot



TEST NUMBER: P518255

CATALOG NUMBER: HVL8-8-LD4-3HI-35-UNV-C-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			99
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	78	73	80	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	51	62	56	51	60	54	50			47
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	39	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°	18979	18979	18979
5°	18971	18719	18887
10°	18756	18996	19004
15°	18449	18503	17639
20°	18069	17354	16869
25°	17664	16624	16974
30°	17032	16039	17161
35°	16594	15486	16858
40°	16121	15075	16962
45°	15613	14542	16656
50°	14990	13981	16529
55°	14054	13380	16520
60°	13359	12547	15815
65°	11901	11549	15311
70°	9815	10243	13730
75°	7125	8650	12533
80°	4121	7043	11251
85°	1648	5383	9911

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 16656 cd/sqm

TEST NUMBER: P518255

CATALOG NUMBER: HVL8-8-LD4-3HI-35-UNV-C-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	903.8	3.2
10°-20°	2573.9	9.1
20°-30°	3829.7	13.5
30°-40°	4603.3	16.2
40°-50°	4845.2	17.1
50°-60°	4495.8	15.9
60°-70°	3554.7	12.5
70°-80°	2171.3	7.7
80°-90°	946.0	3.3
90°-100°	294.5	1.0
100°-110°	66.2	0.2
110°-120°	26.6	0.1
120°-130°	14.9	0.1
130°-140°	4.0	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°	7307.4	25.8
0°-40°	11910.6	42.0
0°-60°	21251.6	75.0
0°-90°	27923.7	98.6
90°-120°	387.3	1.4
90°-150°	406.3	1.4
90°-180°	406.0	1.4
0°-180°	28330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9404	9404	9404	9404	9404	
5°	9381	9362	9394	9500	9527	889
15°	8879	9220	9310	9002	9008	2501
25°	8009	8521	8132	8375	8511	3677
35°	6833	7023	7128	7776	8040	4271
45°	5584	5609	6071	7032	7295	4305
55°	4113	4180	4843	5902	6372	3696
65°	2603	2686	3412	4515	4925	2578
75°	985	1305	1902	2923	3107	1075
85°	88	306	741	1439	1651	136
90°	2	92	389	912	1075	4
95°	2	23	170	500	611	2
105°	2	13	34	98	138	3
115°	2	8	27	44	46	3
125°	2	4	12	29	40	3
135°	4	4	4	10	13	2
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: P518255

CATALOG NUMBER: HVL8-8-LD4-3HI-35-UNV-C-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9404.0	9404.0	9404.0	9404.0	9404.0
2.5°	9415.5	9390.6	9338.9	9388.7	9402.1
5°	9381.0	9361.9	9394.4	9499.8	9526.6
7.5°	9302.5	9375.3	9461.5	9653.1	9714.4
10°	9185.6	9323.6	9582.2	9745.0	9681.8
12.5°	9043.9	9277.6	9624.3	9306.3	9158.8
15°	8879.1	9220.1	9310.2	9001.7	9007.5
17.5°	8685.6	9172.2	8894.5	8886.8	8831.2
20°	8476.8	9011.3	8643.5	8628.2	8568.8
22.5°	8252.7	8798.7	8421.3	8390.6	8551.5
25°	8009.4	8520.9	8132.0	8375.3	8511.3
27.5°	7704.8	8156.9	7890.6	8235.5	8406.0
30°	7396.4	7781.4	7643.5	8124.4	8427.0
32.5°	7107.1	7388.7	7440.5	8082.2	8132.0
35°	6833.2	7022.8	7128.2	7775.7	8040.1
37.5°	6532.4	6584.2	6863.8	7647.4	7902.1
40°	6225.9	6193.4	6641.6	7436.6	7789.1
42.5°	5896.4	5884.9	6406.0	7331.3	7507.5
45°	5584.2	5609.1	6070.8	7032.4	7294.9
47.5°	5264.3	5296.8	5752.8	6704.8	7030.5
50°	4892.6	4934.8	5469.2	6413.7	6833.2
52.5°	4490.3	4570.8	5193.4	6137.8	6561.2
55°	4112.9	4180.0	4842.8	5902.2	6371.5
57.5°	3768.1	3808.3	4480.7	5605.2	5959.6
60°	3429.0	3438.6	4139.8	5275.8	5614.8
62.5°	3040.2	3057.4	3789.2	4886.9	5340.9
65°	2603.4	2685.8	3411.8	4515.2	4925.2
67.5°	2195.4	2339.0	3026.8	4174.2	4388.8
70°	1758.6	2001.9	2649.4	3773.9	3925.2
72.5°	1358.2	1643.6	2262.4	3325.6	3538.2
75°	984.7	1304.6	1902.3	2923.3	3107.2
77.5°	662.8	988.5	1565.1	2478.9	2722.2
80°	396.5	722.2	1264.3	2067.0	2340.9
82.5°	203.1	484.7	980.8	1733.7	1978.9
85°	88.1	306.5	741.4	1438.7	1651.3
87.5°	24.9	174.3	546.0	1162.8	1342.9
90°	1.9	92.0	388.9	911.9	1074.7
92.5°	1.9	44.1	273.9	689.6	814.2
95°	1.9	23.0	170.5	500.0	611.1
97.5°	1.9	13.4	103.4	354.4	448.3
100°	1.9	11.5	61.3	235.6	319.9
102.5°	1.9	13.4	42.1	149.4	208.8
105°	1.9	13.4	34.5	97.7	137.9
107.5°	3.8	13.4	30.7	72.8	95.8
110°	1.9	11.5	32.6	55.6	74.7

TEST NUMBER: P518255

CATALOG NUMBER: HVL8-8-LD4-3HI-35-UNV-C-EDD-90

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	9.6	30.7	46.0	55.6
115°	1.9	7.7	26.8	44.1	46.0
117.5°	3.8	5.7	21.1	44.1	46.0
120°	3.8	3.8	17.2	42.1	47.9
122.5°	3.8	3.8	13.4	38.3	46.0
125°	1.9	3.8	11.5	28.7	40.2
127.5°	3.8	3.8	9.6	23.0	30.7
130°	3.8	3.8	7.7	17.2	23.0
132.5°	3.8	3.8	5.7	13.4	17.2
135°	3.8	3.8	3.8	9.6	13.4
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)