

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: P517722

Luminaire Tested: HVL12-8-LD4-3STD-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: P517722
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-3STD-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: 18596.9 lumens
Efficiency: N/A
Efficacy: 94.8 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

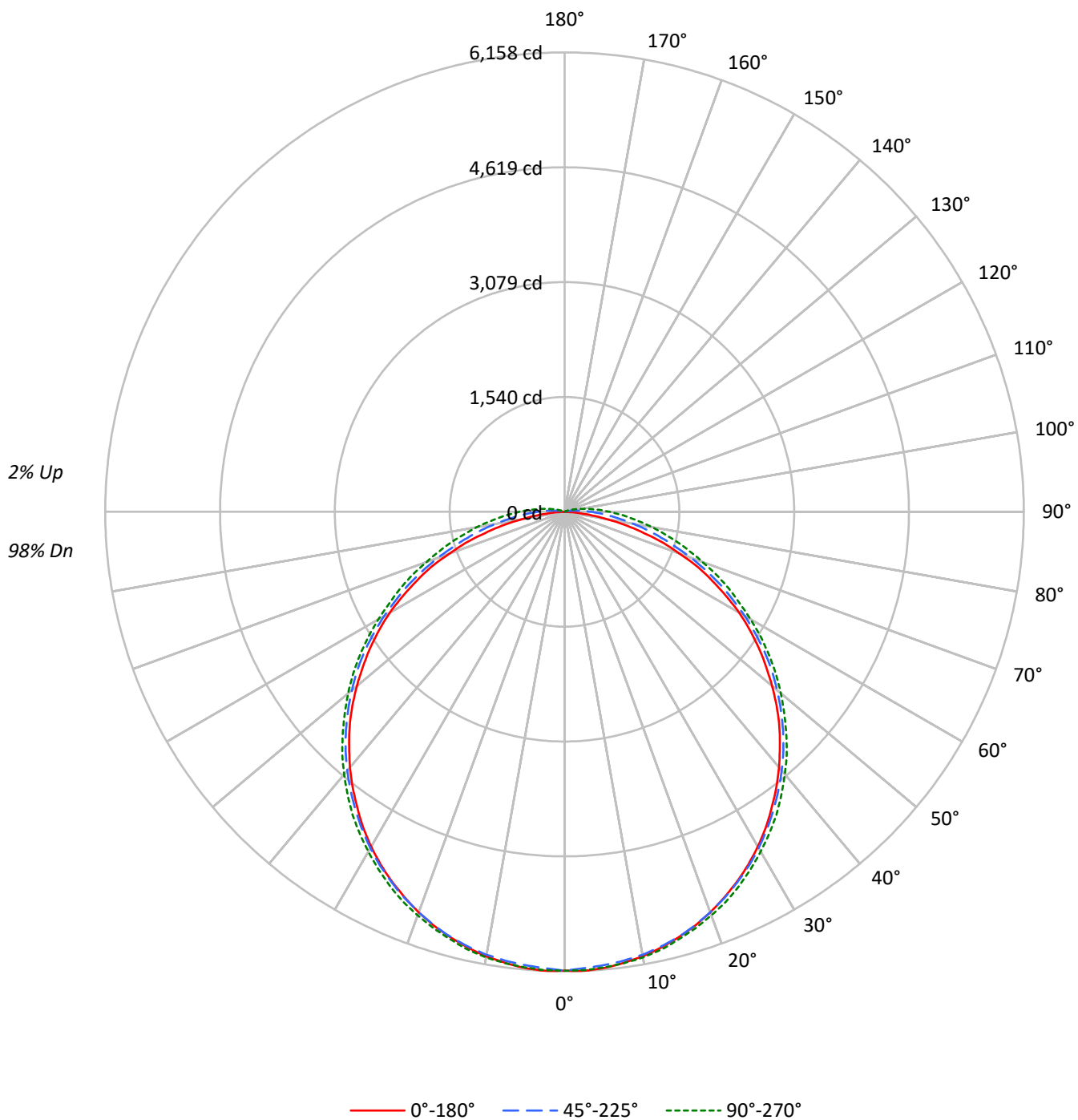
Input Watts (W): 196.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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

TEST NUMBER: P517722

CATALOG NUMBER: HVL12-8-LD4-3STD-50-UNV-O-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P517722

CATALOG NUMBER: HVL12-8-LD4-3STD-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°	8276	8276	8276
5°	8275	8142	8157
10°	8235	8047	8050
15°	8179	7934	7908
20°	8118	7801	7769
25°	8044	7663	7626
30°	7956	7512	7455
35°	7840	7342	7287
40°	7722	7162	7082
45°	7595	6962	6858
50°	7425	6725	6614
55°	7244	6463	6341
60°	7027	6105	6013
65°	6659	5700	5696
70°	6118	5213	5321
75°	5336	4679	5009
80°	4140	4181	4776
85°	2386	3728	4646

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7595 cd/sqm

TEST NUMBER: P517722

CATALOG NUMBER: HVL12-8-LD4-3STD-50-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	582.1	3.1
10°-20°	1669.6	9.0
20°-30°	2533.3	13.6
30°-40°	3063.2	16.5
40°-50°	3196.2	17.2
50°-60°	2922.3	15.7
60°-70°	2278.1	12.2
70°-80°	1425.1	7.7
80°-90°	647.2	3.5
90°-100°	216.9	1.2
100°-110°	54.4	0.3
110°-120°	8.6	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°	4784.9	25.7
0°-40°	7848.1	42.2
0°-60°	13966.6	75.1
0°-90°	18317.0	98.5
90°-120°	279.9	1.5
90°-150°	279.9	1.5
90°-180°	280.0	1.5
0°-180°	18596.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6151	6151	6151	6151	6151	
5°	6138	6126	6099	6128	6128	583
15°	5904	5914	5898	5932	5930	1667
25°	5471	5475	5481	5527	5536	2521
35°	4843	4865	4885	4934	4954	3031
45°	4074	4111	4144	4185	4205	3140
55°	3180	3218	3277	3325	3346	2841
65°	2185	2223	2300	2391	2429	2162
75°	1106	1174	1346	1506	1563	1179
85°	191	354	608	803	874	242
90°	1	132	358	538	603	8
95°	1	35	186	336	389	1
105°	3	4	30	90	120	3
115°	4	4	6	16	23	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: P517722

CATALOG NUMBER: HVL12-8-LD4-3STD-50-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6150.8	6150.8	6150.8	6150.8	6150.8
2.5°	6158.0	6149.3	6121.8	6149.3	6147.9
5°	6137.7	6126.1	6098.6	6127.6	6127.6
7.5°	6097.1	6092.8	6068.1	6101.5	6101.5
10°	6049.3	6047.8	6027.5	6063.8	6065.2
12.5°	5982.6	5988.4	5969.5	6004.3	6008.7
15°	5904.3	5914.4	5898.5	5931.8	5930.4
17.5°	5818.7	5824.5	5812.9	5850.6	5849.2
20°	5712.9	5720.1	5711.4	5750.6	5754.9
22.5°	5595.4	5605.6	5604.1	5644.7	5656.3
25°	5470.7	5475.1	5480.9	5527.3	5536.0
27.5°	5333.0	5340.2	5350.4	5392.4	5401.1
30°	5182.2	5193.8	5205.4	5248.9	5260.5
32.5°	5022.7	5034.3	5048.8	5105.3	5111.1
35°	4842.9	4864.6	4884.9	4934.2	4954.5
37.5°	4663.1	4690.6	4709.5	4761.7	4777.6
40°	4473.2	4500.7	4531.1	4586.2	4596.4
42.5°	4274.5	4306.4	4342.7	4392.0	4409.4
45°	4074.4	4110.7	4144.0	4184.6	4204.9
47.5°	3858.4	3894.6	3935.2	3981.6	3994.7
50°	3635.1	3677.1	3720.6	3764.1	3787.3
52.5°	3406.0	3456.7	3506.0	3552.4	3574.2
55°	3179.8	3217.5	3276.9	3324.8	3346.5
57.5°	2944.9	2976.8	3030.4	3108.7	3120.3
60°	2705.6	2734.6	2789.7	2853.5	2879.6
62.5°	2441.7	2480.9	2538.9	2620.1	2643.3
65°	2185.1	2222.8	2299.6	2391.0	2428.7
67.5°	1937.2	1950.2	2048.8	2144.5	2205.4
70°	1644.3	1693.6	1808.1	1925.6	1972.0
72.5°	1392.0	1441.3	1567.4	1705.2	1763.2
75°	1106.3	1174.5	1345.6	1506.5	1563.1
77.5°	855.5	930.9	1142.6	1305.0	1370.2
80°	597.4	714.8	945.4	1128.1	1199.1
82.5°	375.5	520.5	767.0	958.4	1020.8
85°	191.4	353.8	607.5	803.3	874.3
87.5°	50.7	229.1	472.7	659.7	732.2
90°	1.4	131.9	358.1	537.9	603.2
92.5°	1.4	73.9	266.8	427.7	494.4
95°	1.4	34.8	185.6	336.4	388.6
97.5°	1.4	14.5	127.6	253.7	305.9
100°	1.4	7.2	81.2	184.1	229.1
102.5°	2.9	4.3	50.7	131.9	168.2
105°	2.9	4.3	30.4	89.9	120.3
107.5°	2.9	4.3	17.4	60.9	82.6
110°	4.3	4.3	10.1	37.7	55.1

TEST NUMBER: P517722

CATALOG NUMBER: HVL12-8-LD4-3STD-50-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.3	4.3	5.8	24.6	36.2
115°	4.3	4.3	5.8	15.9	23.2
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)