

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: P517666

Luminaire Tested: HVL12-8-LD4-2STD-35-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: P517666
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-2STD-35-UNV-O-EDD
Description: 8 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 3500K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

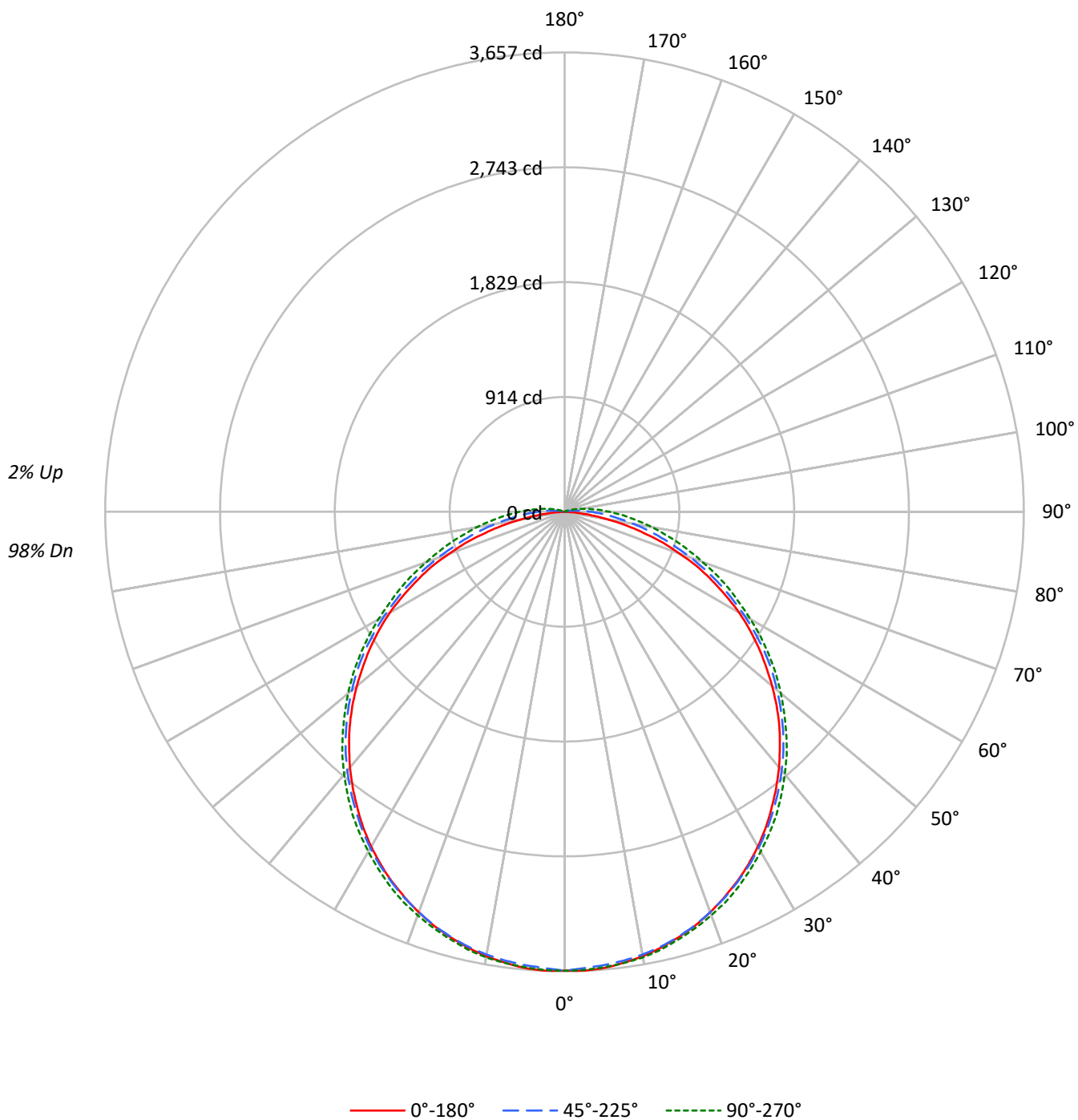
Lumens per Lamp: N/A
Luminaire Lumens: 11043.0 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

Input Watts (W): 134.3
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: P517666
CATALOG NUMBER: HVL12-8-LD4-2STD-35-UNV-O-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P517666

CATALOG NUMBER: HVL12-8-LD4-2STD-35-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°	4914	4914	4914
5°	4914	4835	4844
10°	4890	4778	4780
15°	4857	4711	4696
20°	4821	4632	4613
25°	4776	4550	4528
30°	4724	4461	4427
35°	4656	4360	4327
40°	4585	4253	4206
45°	4510	4134	4072
50°	4409	3993	3927
55°	4301	3838	3765
60°	4173	3625	3570
65°	3954	3385	3382
70°	3633	3096	3160
75°	3169	2779	2975
80°	2458	2483	2836
85°	1418	2214	2759

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4510 cd/sqm

TEST NUMBER: P517666

CATALOG NUMBER: HVL12-8-LD4-2STD-35-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.6	3.1
10°-20°	991.4	9.0
20°-30°	1504.3	13.6
30°-40°	1818.9	16.5
40°-50°	1897.9	17.2
50°-60°	1735.3	15.7
60°-70°	1352.7	12.2
70°-80°	846.2	7.7
80°-90°	384.3	3.5
90°-100°	128.8	1.2
100°-110°	32.3	0.3
110°-120°	5.1	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°	2841.3	25.7
0°-40°	4660.3	42.2
0°-60°	8293.5	75.1
0°-90°	10876.8	98.5
90°-120°	166.3	1.5
90°-150°	166.3	1.5
90°-180°	166.0	1.5
0°-180°	11043.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3652	3652	3652	3652	3652	
5°	3645	3638	3621	3639	3639	346
15°	3506	3512	3502	3522	3522	990
25°	3248	3251	3255	3282	3287	1497
35°	2876	2889	2901	2930	2942	1800
45°	2419	2441	2461	2485	2497	1864
55°	1888	1911	1946	1974	1987	1687
65°	1298	1320	1366	1420	1442	1284
75°	657	697	799	895	928	700
85°	114	210	361	477	519	144
90°	1	78	213	319	358	4
95°	1	21	110	200	231	1
105°	2	3	18	53	72	2
115°	3	3	3	10	14	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: P517666

CATALOG NUMBER: HVL12-8-LD4-2STD-35-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3652.4	3652.4	3652.4	3652.4	3652.4
2.5°	3656.7	3651.5	3635.1	3651.5	3650.6
5°	3644.6	3637.7	3621.4	3638.6	3638.6
7.5°	3620.5	3617.9	3603.3	3623.1	3623.1
10°	3592.1	3591.2	3579.2	3600.7	3601.6
12.5°	3552.5	3555.9	3544.7	3565.4	3568.0
15°	3506.0	3512.0	3502.5	3522.3	3521.5
17.5°	3455.2	3458.6	3451.7	3474.1	3473.3
20°	3392.3	3396.6	3391.5	3414.7	3417.3
22.5°	3322.6	3328.6	3327.8	3351.9	3358.8
25°	3248.5	3251.1	3254.6	3282.1	3287.3
27.5°	3166.8	3171.1	3177.1	3202.1	3207.2
30°	3077.2	3084.1	3091.0	3116.8	3123.7
32.5°	2982.5	2989.4	2998.0	3031.6	3035.0
35°	2875.7	2888.7	2900.7	2930.0	2942.0
37.5°	2769.0	2785.3	2796.5	2827.5	2837.0
40°	2656.2	2672.5	2690.6	2723.3	2729.4
42.5°	2538.2	2557.2	2578.7	2608.0	2618.3
45°	2419.4	2440.9	2460.7	2484.8	2496.9
47.5°	2291.1	2312.6	2336.8	2364.3	2372.1
50°	2158.5	2183.5	2209.3	2235.2	2248.9
52.5°	2022.5	2052.6	2081.9	2109.4	2122.4
55°	1888.2	1910.6	1945.9	1974.3	1987.2
57.5°	1748.7	1767.6	1799.5	1846.0	1852.9
60°	1606.6	1623.8	1656.6	1694.4	1709.9
62.5°	1449.9	1473.2	1507.6	1555.8	1569.6
65°	1297.5	1319.9	1365.5	1419.8	1442.2
67.5°	1150.3	1158.0	1216.6	1273.4	1309.6
70°	976.4	1005.6	1073.7	1143.4	1171.0
72.5°	826.6	855.8	930.7	1012.5	1047.0
75°	656.9	697.4	799.0	894.6	928.2
77.5°	508.0	552.8	678.5	774.9	813.6
80°	354.7	424.5	561.4	669.9	712.0
82.5°	223.0	309.1	455.5	569.1	606.1
85°	113.7	210.1	360.8	477.0	519.2
87.5°	30.1	136.0	280.7	391.8	434.8
90°	0.9	78.4	212.7	319.4	358.2
92.5°	0.9	43.9	158.4	254.0	293.6
95°	0.9	20.7	110.2	199.8	230.7
97.5°	0.9	8.6	75.8	150.7	181.7
100°	0.9	4.3	48.2	109.3	136.0
102.5°	1.7	2.6	30.1	78.4	99.9
105°	1.7	2.6	18.1	53.4	71.5
107.5°	1.7	2.6	10.3	36.2	49.1
110°	2.6	2.6	6.0	22.4	32.7

TEST NUMBER: P517666

CATALOG NUMBER: HVL12-8-LD4-2STD-35-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	2.6	3.4	14.6	21.5
115°	2.6	2.6	3.4	9.5	13.8
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)