

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: P517710

Luminaire Tested: HVL12-8-LD4-3STD-30-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: P517710
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-3STD-30-UNV-O-EDD
Description: 8 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17185.0 lumens
Efficiency: N/A
Efficacy: 87.6 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

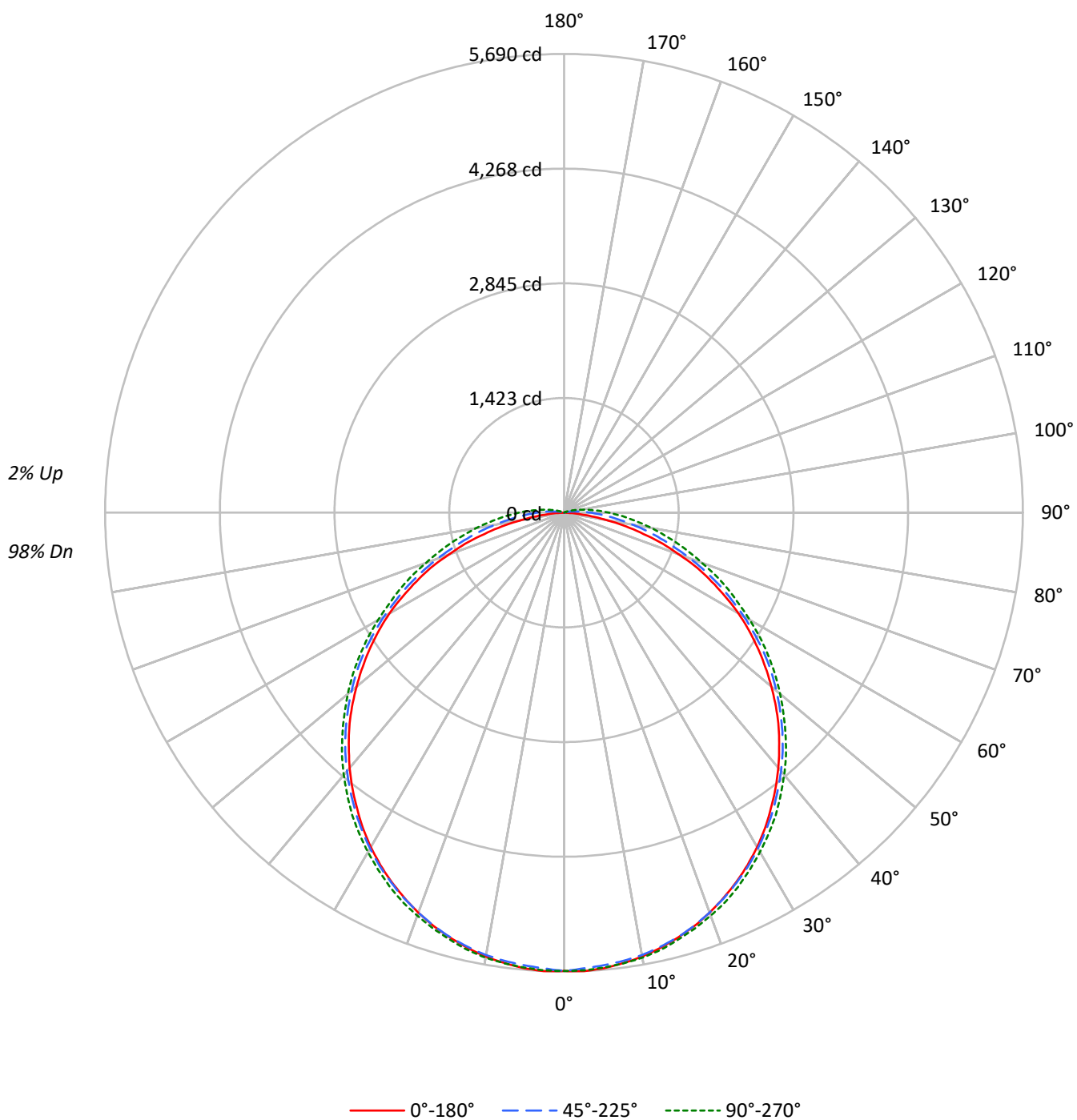
Input Watts (W): 196.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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: P517710

CATALOG NUMBER: HVL12-8-LD4-3STD-30-UNV-O-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P517710

CATALOG NUMBER: HVL12-8-LD4-3STD-30-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°	7647	7647	7647
5°	7646	7524	7538
10°	7609	7436	7439
15°	7558	7332	7307
20°	7502	7209	7179
25°	7433	7081	7047
30°	7351	6942	6889
35°	7245	6784	6734
40°	7135	6618	6545
45°	7018	6433	6337
50°	6861	6215	6112
55°	6694	5972	5859
60°	6494	5641	5556
65°	6154	5267	5264
70°	5654	4818	4917
75°	4931	4324	4629
80°	3825	3863	4413
85°	2206	3445	4293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7018 cd/sqm

TEST NUMBER: P517710

CATALOG NUMBER: HVL12-8-LD4-3STD-30-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	537.9	3.1
10°-20°	1542.8	9.0
20°-30°	2341.0	13.6
30°-40°	2830.6	16.5
40°-50°	2953.5	17.2
50°-60°	2700.4	15.7
60°-70°	2105.1	12.2
70°-80°	1316.8	7.7
80°-90°	598.1	3.5
90°-100°	200.5	1.2
100°-110°	50.3	0.3
110°-120°	7.9	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°	4421.6	25.7
0°-40°	7252.3	42.2
0°-60°	12906.2	75.1
0°-90°	16926.3	98.5
90°-120°	258.7	1.5
90°-150°	258.7	1.5
90°-180°	259.0	1.5
0°-180°	17185.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5684	5684	5684	5684	5684	
5°	5672	5661	5636	5662	5662	539
15°	5456	5465	5451	5481	5480	1540
25°	5055	5059	5065	5108	5116	2329
35°	4475	4495	4514	4560	4578	2801
45°	3765	3799	3829	3867	3886	2901
55°	2938	2973	3028	3072	3092	2625
65°	2019	2054	2125	2210	2244	1998
75°	1022	1085	1243	1392	1444	1090
85°	177	327	561	742	808	224
90°	1	122	331	497	557	7
95°	1	32	172	311	359	1
105°	3	4	28	83	111	3
115°	4	4	5	15	21	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: P517710

CATALOG NUMBER: HVL12-8-LD4-3STD-30-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5683.8	5683.8	5683.8	5683.8	5683.8
2.5°	5690.5	5682.4	5657.0	5682.4	5681.1
5°	5671.7	5661.0	5635.5	5662.3	5662.3
7.5°	5634.2	5630.2	5607.4	5638.2	5638.2
10°	5590.0	5588.6	5569.9	5603.4	5604.7
12.5°	5528.3	5533.7	5516.3	5548.4	5552.5
15°	5456.0	5465.4	5450.6	5481.4	5480.1
17.5°	5376.9	5382.3	5371.6	5406.4	5405.1
20°	5279.1	5285.8	5277.8	5314.0	5318.0
22.5°	5170.6	5180.0	5178.6	5216.1	5226.9
25°	5055.4	5059.4	5064.7	5107.6	5115.7
27.5°	4928.1	4934.8	4944.1	4983.0	4991.0
30°	4788.7	4799.4	4810.2	4850.4	4861.1
32.5°	4641.3	4652.1	4665.5	4717.7	4723.1
35°	4475.2	4495.3	4514.0	4559.6	4578.4
37.5°	4309.0	4334.5	4351.9	4400.2	4414.9
40°	4133.5	4159.0	4187.1	4238.0	4247.4
42.5°	3950.0	3979.4	4012.9	4058.5	4074.6
45°	3765.1	3798.6	3829.4	3866.9	3885.6
47.5°	3565.4	3598.9	3636.4	3679.3	3691.4
50°	3359.1	3397.9	3438.1	3478.3	3499.8
52.5°	3147.4	3194.3	3239.8	3282.7	3302.8
55°	2938.4	2973.2	3028.1	3072.3	3092.4
57.5°	2721.3	2750.8	2800.3	2872.7	2883.4
60°	2500.2	2527.0	2577.9	2636.9	2661.0
62.5°	2256.4	2292.5	2346.1	2421.2	2442.6
65°	2019.2	2054.0	2125.0	2209.5	2244.3
67.5°	1790.1	1802.1	1893.2	1981.7	2038.0
70°	1519.4	1565.0	1670.8	1779.4	1822.2
72.5°	1286.3	1331.8	1448.4	1575.7	1629.3
75°	1022.3	1085.3	1243.4	1392.1	1444.4
77.5°	790.5	860.2	1055.8	1205.9	1266.2
80°	552.0	660.6	873.6	1042.4	1108.1
82.5°	347.0	481.0	708.8	885.7	943.3
85°	176.9	326.9	561.4	742.3	807.9
87.5°	46.9	211.7	436.8	609.6	676.6
90°	1.3	121.9	330.9	497.1	557.4
92.5°	1.3	68.3	246.5	395.3	456.9
95°	1.3	32.2	171.5	310.9	359.1
97.5°	1.3	13.4	117.9	234.5	282.7
100°	1.3	6.7	75.0	170.2	211.7
102.5°	2.7	4.0	46.9	121.9	155.4
105°	2.7	4.0	28.1	83.1	111.2
107.5°	2.7	4.0	16.1	56.3	76.4
110°	4.0	4.0	9.4	34.8	50.9

TEST NUMBER: P517710

CATALOG NUMBER: HVL12-8-LD4-3STD-30-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	4.0	5.4	22.8	33.5
115°	4.0	4.0	5.4	14.7	21.4
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)