

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: P517694

Luminaire Tested: HVL12-8-LD4-3LO-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: P517694
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-3LO-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: 13340.0 lumens
Efficiency: N/A
Efficacy: 96.4 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

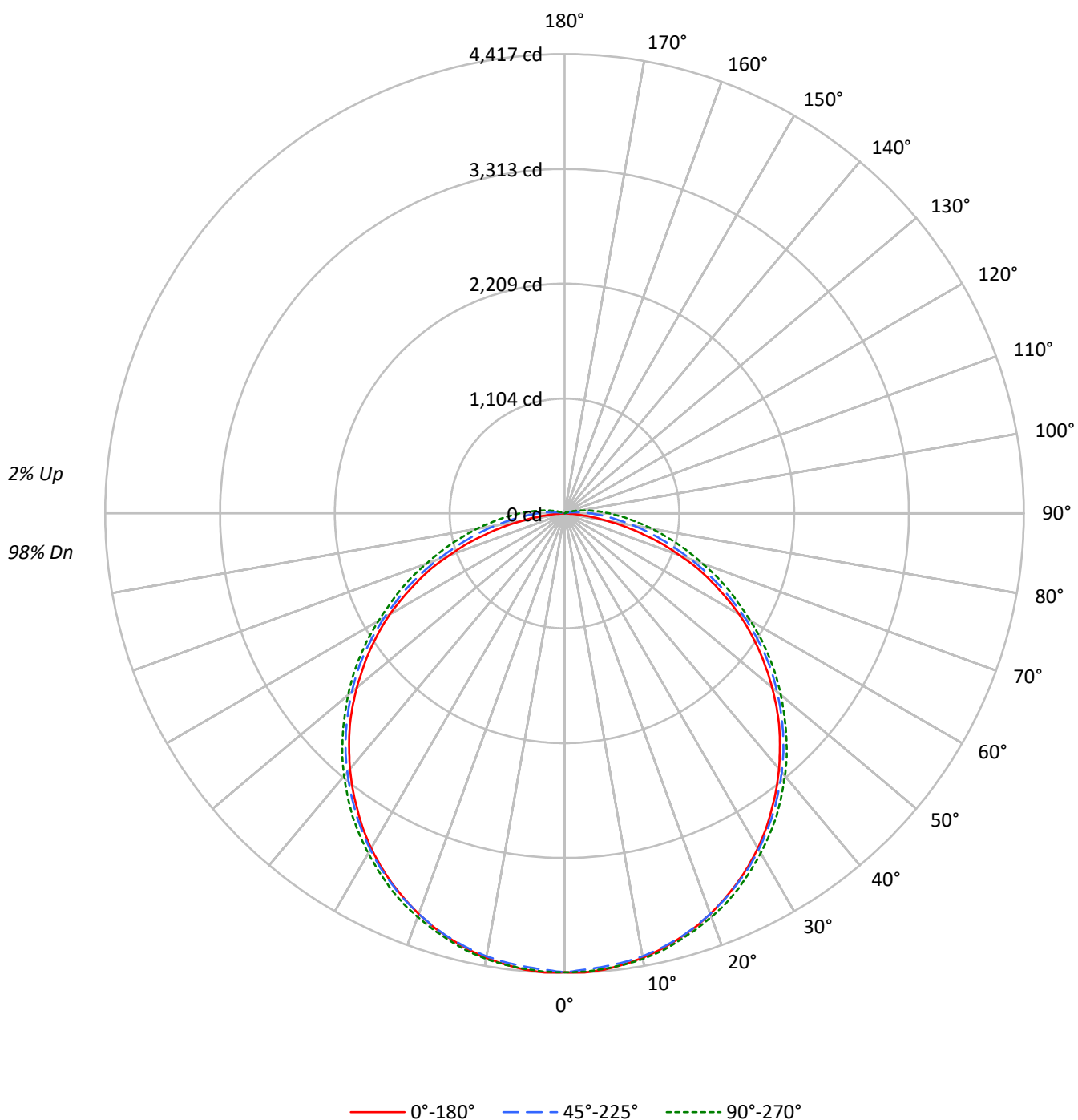
Input Watts (W): 138.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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: P517694

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

Luminous Intensity Polar Plot



TEST NUMBER: P517694

CATALOG NUMBER: HVL12-8-LD4-3LO-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
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110		105	105	105		101
1	108	102	98	94	105	100	96	92	95	92	89		91	88	86		87
2	98	89	82	76	95	87	80	75	83	77	73		79	75	71		76
3	89	78	69	63	86	76	68	62	73	66	61		70	64	59		67
4	81	69	60	53	79	67	59	52	65	57	52		62	56	51		60
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		54
6	69	55	46	40	67	54	46	39	52	45	39		50	44	38		49
7	64	50	41	35	62	49	41	35	47	40	34		46	39	34		44
8	59	46	37	31	58	45	37	31	43	36	31		42	35	30		41
9	55	42	34	28	54	41	33	28	40	33	28		39	32	27		38
10	52	39	31	25	51	38	30	25	37	30	25		36	29	25		35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5936	5936	5936
5°	5936	5841	5851
10°	5907	5772	5774
15°	5867	5691	5672
20°	5824	5596	5573
25°	5770	5497	5470
30°	5707	5389	5348
35°	5624	5267	5227
40°	5539	5137	5080
45°	5448	4994	4919
50°	5326	4824	4744
55°	5196	4636	4548
60°	5041	4379	4313
65°	4777	4089	4086
70°	4389	3740	3817
75°	3828	3357	3593
80°	2969	2999	3426
85°	1712	2674	3333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5448 cd/sqm

TEST NUMBER: P517694

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.5	3.1
10°-20°	1197.6	9.0
20°-30°	1817.2	13.6
30°-40°	2197.3	16.5
40°-50°	2292.7	17.2
50°-60°	2096.2	15.7
60°-70°	1634.1	12.2
70°-80°	1022.2	7.7
80°-90°	464.3	3.5
90°-100°	155.6	1.2
100°-110°	39.1	0.3
110°-120°	6.2	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°	3432.3	25.7
0°-40°	5629.6	42.2
0°-60°	10018.6	75.1
0°-90°	13139.2	98.5
90°-120°	200.8	1.5
90°-150°	200.8	1.5
90°-180°	201.0	1.5
0°-180°	13340.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4412	4412	4412	4412	4412	
5°	4403	4394	4375	4395	4395	418
15°	4235	4242	4231	4255	4254	1196
25°	3924	3927	3932	3965	3971	1808
35°	3474	3490	3504	3539	3554	2174
45°	2923	2949	2973	3002	3016	2252
55°	2281	2308	2351	2385	2400	2038
65°	1567	1594	1650	1715	1742	1551
75°	794	842	965	1081	1121	846
85°	137	254	436	576	627	174
90°	1	95	257	386	433	5
95°	1	25	133	241	279	1
105°	2	3	22	64	86	2
115°	3	3	4	11	17	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: P517694

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4412.1	4412.1	4412.1	4412.1	4412.1
2.5°	4417.3	4411.0	4391.3	4411.0	4410.0
5°	4402.7	4394.4	4374.6	4395.4	4395.4
7.5°	4373.6	4370.5	4352.8	4376.7	4376.7
10°	4339.3	4338.2	4323.7	4349.7	4350.7
12.5°	4291.4	4295.6	4282.1	4307.0	4310.1
15°	4235.3	4242.5	4231.1	4255.0	4254.0
17.5°	4173.9	4178.0	4169.7	4196.8	4195.7
20°	4098.0	4103.2	4096.9	4125.0	4128.1
22.5°	4013.7	4021.0	4020.0	4049.1	4057.4
25°	3924.3	3927.4	3931.5	3964.8	3971.1
27.5°	3825.5	3830.7	3837.9	3868.1	3874.3
30°	3717.3	3725.6	3733.9	3765.1	3773.5
32.5°	3602.9	3611.2	3621.6	3662.2	3666.3
35°	3473.9	3489.5	3504.1	3539.4	3554.0
37.5°	3344.9	3364.7	3378.2	3415.7	3427.1
40°	3208.7	3228.4	3250.3	3289.8	3297.1
42.5°	3066.2	3089.1	3115.1	3150.4	3162.9
45°	2922.7	2948.7	2972.6	3001.7	3016.3
47.5°	2767.7	2793.7	2822.8	2856.1	2865.5
50°	2607.5	2637.7	2668.9	2700.1	2716.7
52.5°	2443.2	2479.6	2514.9	2548.2	2563.8
55°	2280.9	2308.0	2350.6	2384.9	2400.5
57.5°	2112.4	2135.3	2173.8	2230.0	2238.3
60°	1940.8	1961.6	2001.1	2046.9	2065.6
62.5°	1751.5	1779.6	1821.2	1879.4	1896.1
65°	1567.4	1594.5	1649.6	1715.1	1742.2
67.5°	1389.6	1398.9	1469.6	1538.3	1582.0
70°	1179.5	1214.8	1297.0	1381.2	1414.5
72.5°	998.5	1033.9	1124.3	1223.1	1264.8
75°	793.6	842.5	965.2	1080.7	1121.2
77.5°	613.7	667.7	819.6	936.1	982.9
80°	428.5	512.8	678.1	809.2	860.2
82.5°	269.4	373.4	550.2	687.5	732.2
85°	137.3	253.8	435.8	576.2	627.2
87.5°	36.4	164.3	339.1	473.2	525.2
90°	1.0	94.6	256.9	385.9	432.7
92.5°	1.0	53.0	191.4	306.8	354.7
95°	1.0	25.0	133.1	241.3	278.7
97.5°	1.0	10.4	91.5	182.0	219.5
100°	1.0	5.2	58.2	132.1	164.3
102.5°	2.1	3.1	36.4	94.6	120.7
105°	2.1	3.1	21.8	64.5	86.3
107.5°	2.1	3.1	12.5	43.7	59.3
110°	3.1	3.1	7.3	27.0	39.5

TEST NUMBER: P517694

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.1	3.1	4.2	17.7	26.0
115°	3.1	3.1	4.2	11.4	16.6
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)