

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: P517692

Luminaire Tested: HVL12-8-LD4-3LO-30-UNV-C-EDD

Issue Date: 4/27/2021

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

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Test Information

Test Method: LM-79-2019
Report Number: P517692
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-C-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: 14733.0 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

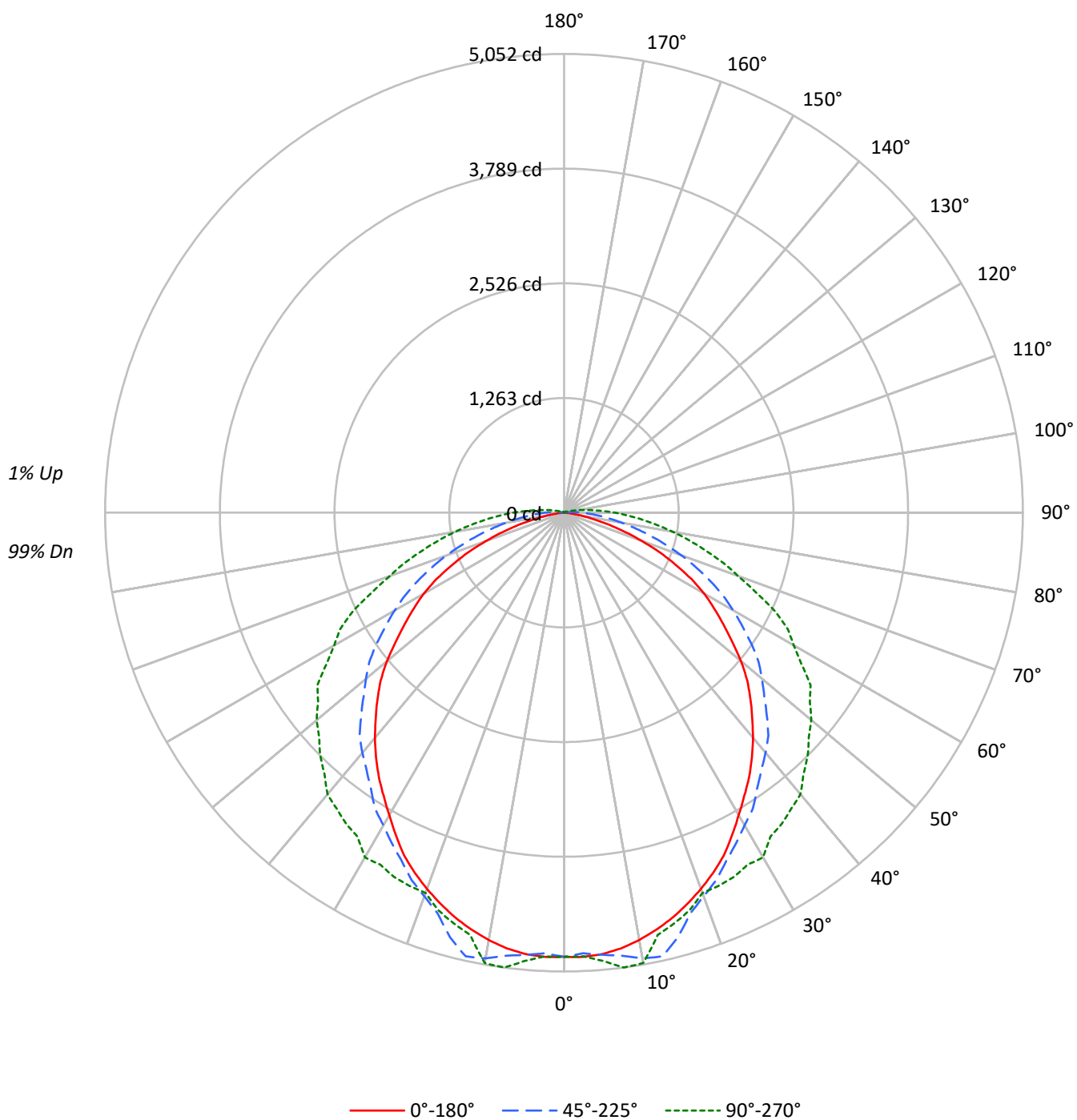
Input Watts (W): 138.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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

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Luminous Intensity Polar Plot



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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	103	98	94	105	100	96	92	96	92	89		91	89	86		87
2	98	89	82	76	95	87	80	75	83	78	73		80	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	51		62	56	51		60
5	75	61	52	45	72	60	51	45	58	50	44		56	49	44		54
6	69	55	46	39	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°	6580	6580	6580
5°	6577	6523	6595
10°	6503	6653	6683
15°	6396	6513	6246
20°	6265	6140	6016
25°	6124	5913	6097
30°	5905	5737	6211
35°	5753	5572	6150
40°	5589	5459	6242
45°	5413	5304	6187
50°	5197	5141	6206
55°	4872	4967	6278
60°	4632	4711	6097
65°	4126	4398	6007
70°	3403	3973	5508
75°	2470	3440	5179
80°	1429	2908	4849
85°	571	2366	4563

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 55°

Luminance: 6278 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	470.0	3.2
10°-20°	1338.6	9.1
20°-30°	1991.6	13.5
30°-40°	2393.9	16.2
40°-50°	2519.7	17.1
50°-60°	2338.0	15.9
60°-70°	1848.6	12.5
70°-80°	1129.2	7.7
80°-90°	492.0	3.3
90°-100°	153.2	1.0
100°-110°	34.4	0.2
110°-120°	13.8	0.1
120°-130°	7.8	0.1
130°-140°	2.1	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°	3800.2	25.8
0°-40°	6194.1	42.0
0°-60°	11051.9	75.0
0°-90°	14521.7	98.6
90°-120°	201.4	1.4
90°-150°	211.3	1.4
90°-180°	211.0	1.4
0°-180°	14733.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4891	4891	4891	4891	4891	
5°	4879	4869	4886	4940	4954	462
15°	4618	4795	4842	4681	4684	1301
25°	4165	4431	4229	4356	4426	1912
35°	3554	3652	3707	4044	4181	2221
45°	2904	2917	3157	3657	3794	2239
55°	2139	2174	2518	3069	3314	1922
65°	1354	1397	1774	2348	2561	1341
75°	512	678	989	1520	1616	559
85°	46	159	386	748	859	71
90°	1	48	202	474	559	2
95°	1	12	89	260	318	1
105°	1	7	18	51	72	1
115°	1	4	14	23	24	2
125°	1	2	6	15	21	2
135°	2	2	2	5	7	1
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: P517692

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4890.6	4890.6	4890.6	4890.6	4890.6
2.5°	4896.5	4883.6	4856.7	4882.6	4889.6
5°	4878.6	4868.6	4885.6	4940.4	4954.3
7.5°	4837.8	4875.6	4920.4	5020.1	5051.9
10°	4777.0	4848.7	4983.2	5067.9	5035.0
12.5°	4703.3	4824.8	5005.1	4839.7	4763.0
15°	4617.6	4794.9	4841.7	4681.3	4684.3
17.5°	4517.0	4770.0	4625.6	4621.6	4592.7
20°	4408.4	4686.3	4495.0	4487.1	4456.2
22.5°	4291.8	4575.7	4379.5	4363.5	4447.2
25°	4165.3	4431.3	4229.0	4355.6	4426.3
27.5°	4006.9	4242.0	4103.5	4282.8	4371.5
30°	3846.5	4046.7	3975.0	4225.1	4382.5
32.5°	3696.1	3842.5	3869.4	4203.1	4229.0
35°	3553.6	3652.2	3707.0	4043.7	4181.2
37.5°	3397.2	3424.1	3569.5	3977.0	4109.5
40°	3237.8	3220.9	3454.0	3867.4	4050.7
42.5°	3066.4	3060.5	3331.4	3812.6	3904.3
45°	2904.0	2917.0	3157.1	3657.2	3793.7
47.5°	2737.7	2754.6	2991.7	3486.8	3656.2
50°	2544.4	2566.3	2844.3	3335.4	3553.6
52.5°	2335.2	2377.0	2700.8	3192.0	3412.1
55°	2138.9	2173.8	2518.5	3069.4	3313.5
57.5°	1959.6	1980.5	2330.2	2915.0	3099.3
60°	1783.3	1788.3	2152.9	2743.7	2920.0
62.5°	1581.0	1590.0	1970.6	2541.4	2777.5
65°	1353.9	1396.7	1774.3	2348.1	2561.3
67.5°	1141.7	1216.4	1574.1	2170.8	2282.4
70°	914.6	1041.1	1377.8	1962.6	2041.3
72.5°	706.3	854.8	1176.6	1729.5	1840.1
75°	512.1	678.4	989.3	1520.3	1615.9
77.5°	344.7	514.1	813.9	1289.1	1415.7
80°	206.2	375.6	657.5	1074.9	1217.4
82.5°	105.6	252.0	510.1	901.6	1029.1
85°	45.8	159.4	385.5	748.2	858.8
87.5°	13.0	90.7	283.9	604.7	698.4
90°	1.0	47.8	202.2	474.2	558.9
92.5°	1.0	22.9	142.5	358.6	423.4
95°	1.0	12.0	88.7	260.0	317.8
97.5°	1.0	7.0	53.8	184.3	233.1
100°	1.0	6.0	31.9	122.5	166.4
102.5°	1.0	7.0	21.9	77.7	108.6
105°	1.0	7.0	17.9	50.8	71.7
107.5°	2.0	7.0	15.9	37.9	49.8
110°	1.0	6.0	16.9	28.9	38.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.0	5.0	15.9	23.9	28.9
115°	1.0	4.0	13.9	22.9	23.9
117.5°	2.0	3.0	11.0	22.9	23.9
120°	2.0	2.0	9.0	21.9	24.9
122.5°	2.0	2.0	7.0	19.9	23.9
125°	1.0	2.0	6.0	14.9	20.9
127.5°	2.0	2.0	5.0	12.0	15.9
130°	2.0	2.0	4.0	9.0	12.0
132.5°	2.0	2.0	3.0	7.0	9.0
135°	2.0	2.0	2.0	5.0	7.0
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)