

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: P517708

Luminaire Tested: HVL12-8-LD4-3STD-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: P517708
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-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: 18979.0 lumens
Efficiency: N/A
Efficacy: 96.7 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

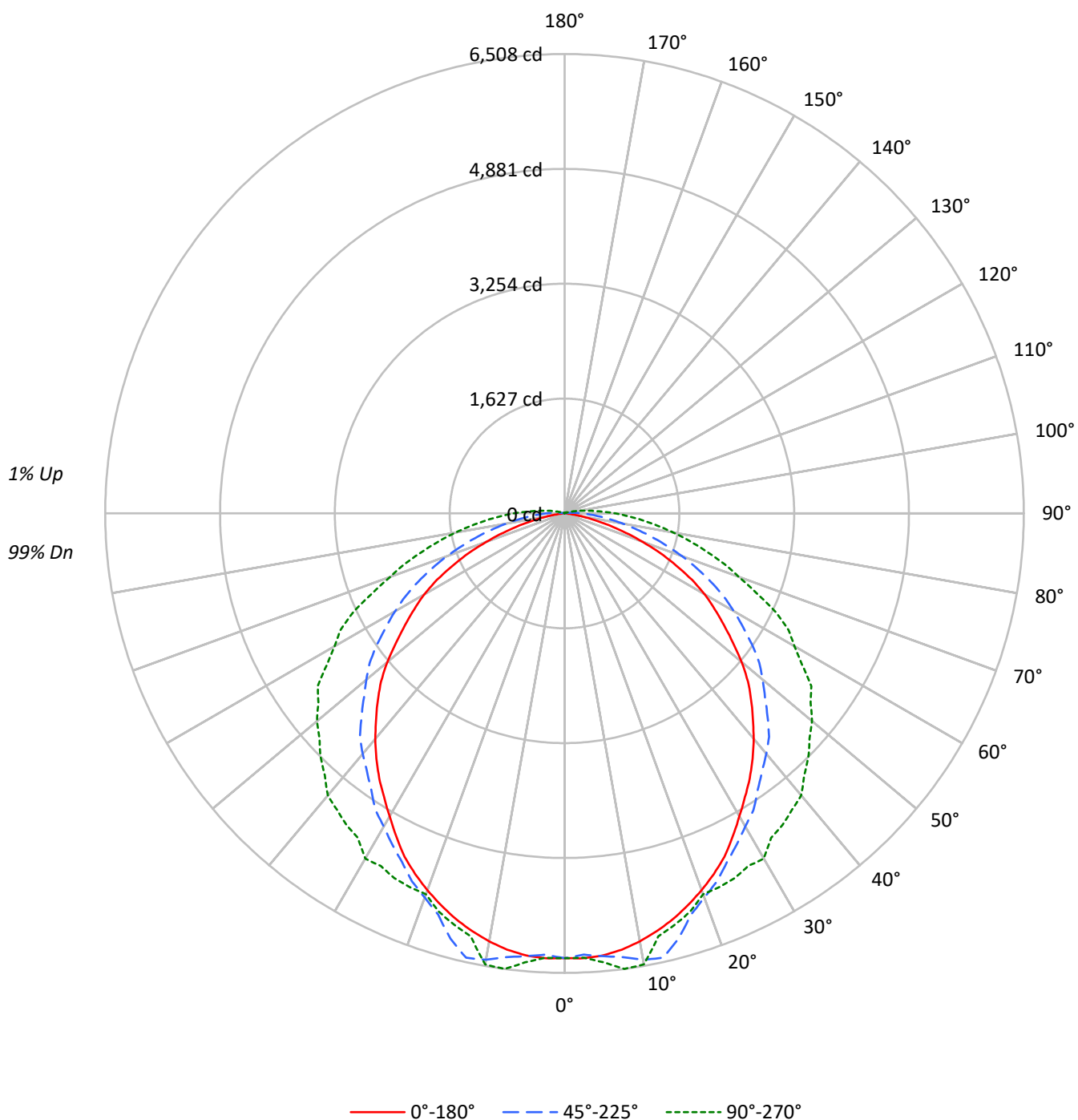
Input Watts (W): 196.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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

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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°	8477	8477	8477
5°	8473	8403	8496
10°	8377	8570	8609
15°	8240	8390	8046
20°	8070	7909	7749
25°	7889	7617	7855
30°	7607	7390	8001
35°	7411	7177	7922
40°	7200	7032	8040
45°	6973	6833	7970
50°	6695	6623	7994
55°	6277	6399	8087
60°	5966	6069	7854
65°	5315	5666	7738
70°	4384	5118	7095
75°	3182	4432	6671
80°	1841	3746	6246
85°	736	3048	5878

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 55°

Luminance: 8087 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	605.5	3.2
10°-20°	1724.3	9.1
20°-30°	2565.6	13.5
30°-40°	3083.8	16.2
40°-50°	3245.9	17.1
50°-60°	3011.9	15.9
60°-70°	2381.4	12.5
70°-80°	1454.6	7.7
80°-90°	633.8	3.3
90°-100°	197.3	1.0
100°-110°	44.3	0.2
110°-120°	17.8	0.1
120°-130°	10.0	0.1
130°-140°	2.7	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°	4895.4	25.8
0°-40°	7979.2	42.0
0°-60°	14237.0	75.0
0°-90°	18706.8	98.6
90°-120°	259.5	1.4
90°-150°	272.2	1.4
90°-180°	272.0	1.4
0°-180°	18979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6300	6300	6300	6300	6300	
5°	6285	6272	6294	6364	6382	596
15°	5948	6177	6237	6030	6034	1676
25°	5366	5708	5448	5611	5702	2463
35°	4578	4705	4775	5209	5386	2861
45°	3741	3758	4067	4711	4887	2884
55°	2755	2800	3244	3954	4268	2476
65°	1744	1799	2286	3025	3300	1727
75°	660	874	1274	1958	2082	720
85°	59	205	497	964	1106	91
90°	1	62	260	611	720	3
95°	1	15	114	335	409	1
105°	1	9	23	66	92	2
115°	1	5	18	30	31	2
125°	1	3	8	19	27	2
135°	3	3	3	6	9	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

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6300.0	6300.0	6300.0	6300.0	6300.0
2.5°	6307.7	6291.0	6256.4	6289.7	6298.7
5°	6284.6	6271.8	6293.6	6364.2	6382.1
7.5°	6232.0	6280.7	6338.5	6466.8	6507.9
10°	6153.7	6246.1	6419.3	6528.4	6486.1
12.5°	6058.7	6215.3	6447.6	6234.5	6135.7
15°	5948.4	6176.8	6237.1	6030.5	6034.3
17.5°	5818.7	6144.7	5958.6	5953.5	5916.3
20°	5678.9	6036.9	5790.5	5780.2	5740.5
22.5°	5528.7	5894.5	5641.6	5621.1	5728.9
25°	5365.7	5708.4	5447.8	5610.8	5702.0
27.5°	5161.7	5464.5	5286.1	5517.1	5631.4
30°	4955.0	5213.0	5120.6	5442.7	5645.5
32.5°	4761.3	4949.9	4984.6	5414.5	5447.8
35°	4577.7	4704.8	4775.4	5209.1	5386.2
37.5°	4376.2	4410.9	4598.3	5123.2	5293.8
40°	4170.9	4149.1	4449.4	4982.0	5218.1
42.5°	3950.2	3942.5	4291.5	4911.4	5029.5
45°	3741.0	3757.7	4067.0	4711.2	4887.0
47.5°	3526.7	3548.5	3853.9	4491.7	4709.9
50°	3277.7	3305.9	3664.0	4296.7	4577.7
52.5°	3008.2	3062.1	3479.2	4111.9	4395.5
55°	2755.4	2800.3	3244.3	3954.0	4268.4
57.5°	2524.4	2551.3	3001.8	3755.1	3992.5
60°	2297.2	2303.6	2773.3	3534.4	3761.5
62.5°	2036.7	2048.2	2538.5	3273.8	3578.0
65°	1744.1	1799.3	2285.7	3024.9	3299.5
67.5°	1470.7	1567.0	2027.7	2796.4	2940.2
70°	1178.1	1341.1	1774.9	2528.2	2629.6
72.5°	909.9	1101.1	1515.6	2227.9	2370.4
75°	659.6	874.0	1274.4	1958.4	2081.6
77.5°	444.0	662.2	1048.5	1660.7	1823.6
80°	265.7	483.8	847.0	1384.7	1568.3
82.5°	136.0	324.7	657.1	1161.4	1325.7
85°	59.0	205.3	496.7	963.8	1106.3
87.5°	16.7	116.8	365.8	779.0	899.6
90°	1.3	61.6	260.5	610.9	720.0
92.5°	1.3	29.5	183.5	462.0	545.4
95°	1.3	15.4	114.2	335.0	409.4
97.5°	1.3	9.0	69.3	237.4	300.3
100°	1.3	7.7	41.1	157.9	214.3
102.5°	1.3	9.0	28.2	100.1	139.9
105°	1.3	9.0	23.1	65.5	92.4
107.5°	2.6	9.0	20.5	48.8	64.2
110°	1.3	7.7	21.8	37.2	50.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	6.4	20.5	30.8	37.2
115°	1.3	5.1	18.0	29.5	30.8
117.5°	2.6	3.9	14.1	29.5	30.8
120°	2.6	2.6	11.6	28.2	32.1
122.5°	2.6	2.6	9.0	25.7	30.8
125°	1.3	2.6	7.7	19.3	27.0
127.5°	2.6	2.6	6.4	15.4	20.5
130°	2.6	2.6	5.1	11.6	15.4
132.5°	2.6	2.6	3.9	9.0	11.6
135°	2.6	2.6	2.6	6.4	9.0
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)