

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: P517742

Luminaire Tested: HVL8-1-LD4-1LO-30-UNV-O-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: P517742
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-1-LD4-1LO-30-UNV-O-EDD
Description: 1 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 615.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.17')
CIE Type: Direct

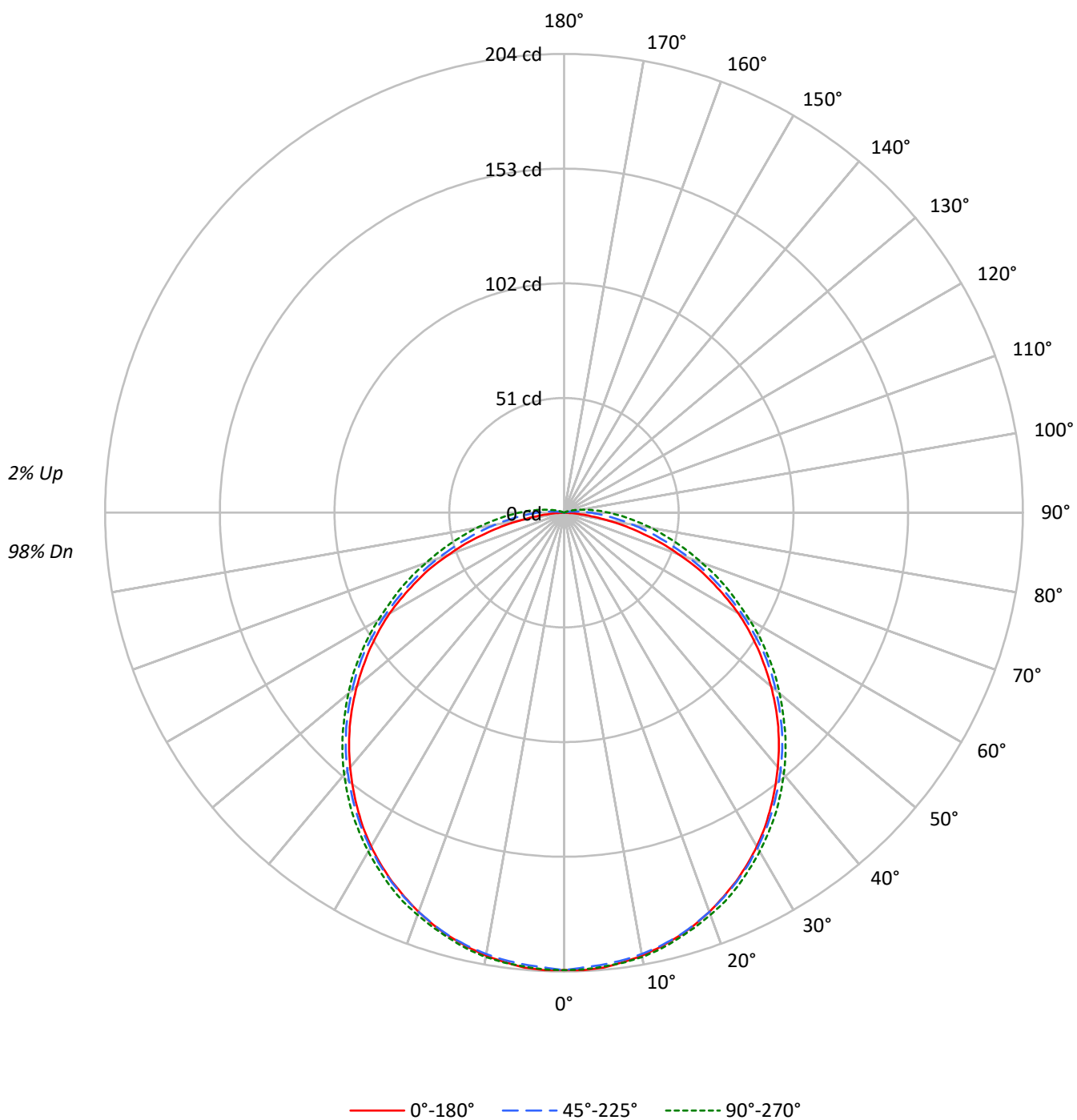
Input Watts (W): 5.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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	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°	3284	3284	3284
5°	3243	3187	3213
10°	3185	3106	3150
15°	3125	3023	3072
20°	3060	2931	2997
25°	2990	2840	2921
30°	2915	2742	2835
35°	2828	2639	2748
40°	2735	2531	2648
45°	2636	2416	2541
50°	2519	2287	2423
55°	2392	2148	2296
60°	2243	1973	2145
65°	2035	1779	1997
70°	1761	1560	1824
75°	1408	1322	1668
80°	946	1089	1527
85°	402	852	1388

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2636 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.2	3.1
10°-20°	55.2	9.0
20°-30°	83.8	13.6
30°-40°	101.3	16.5
40°-50°	105.7	17.2
50°-60°	96.6	15.7
60°-70°	75.3	12.3
70°-80°	47.1	7.7
80°-90°	21.4	3.5
90°-100°	7.2	1.2
100°-110°	1.8	0.3
110°-120°	0.3	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°	158.2	25.7
0°-40°	259.5	42.2
0°-60°	461.9	75.1
0°-90°	605.7	98.5
90°-120°	9.2	1.5
90°-150°	9.2	1.5
90°-180°	9.0	1.5
0°-180°	615.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	203	203	203	203	203	
5°	203	203	202	203	203	19
15°	195	196	195	196	196	55
25°	181	181	181	183	183	83
35°	160	161	162	163	164	100
45°	135	136	137	138	139	104
55°	105	106	108	110	111	94
65°	72	74	76	79	80	72
75°	37	39	44	50	52	39
85°	6	12	20	27	29	8
90°	0	4	12	18	20	0
95°	0	1	6	11	13	0
105°	0	0	1	3	4	0
115°	0	0	0	0	1	0
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

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CATALOG NUMBER: HVL8-1-LD4-1LO-30-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	203.4	203.4	203.4	203.4	203.4
2.5°	203.6	203.4	202.4	203.4	203.3
5°	203.0	202.6	201.7	202.6	202.6
7.5°	201.6	201.5	200.7	201.8	201.8
10°	200.0	200.0	199.3	200.5	200.6
12.5°	197.8	198.0	197.4	198.6	198.7
15°	195.3	195.6	195.1	196.2	196.1
17.5°	192.4	192.6	192.2	193.5	193.4
20°	188.9	189.2	188.9	190.2	190.3
22.5°	185.0	185.4	185.3	186.7	187.1
25°	180.9	181.1	181.3	182.8	183.1
27.5°	176.4	176.6	176.9	178.3	178.6
30°	171.4	171.8	172.1	173.6	174.0
32.5°	166.1	166.5	167.0	168.8	169.0
35°	160.2	160.9	161.5	163.2	163.8
37.5°	154.2	155.1	155.7	157.5	158.0
40°	147.9	148.8	149.8	151.7	152.0
42.5°	141.4	142.4	143.6	145.2	145.8
45°	134.7	135.9	137.0	138.4	139.1
47.5°	127.6	128.8	130.1	131.7	132.1
50°	120.2	121.6	123.0	124.5	125.2
52.5°	112.6	114.3	115.9	117.5	118.2
55°	105.2	106.4	108.4	109.9	110.7
57.5°	97.4	98.4	100.2	102.8	103.2
60°	89.5	90.4	92.3	94.4	95.2
62.5°	80.7	82.0	84.0	86.6	87.4
65°	72.3	73.5	76.0	79.1	80.3
67.5°	64.1	64.5	67.8	70.9	72.9
70°	54.4	56.0	59.8	63.7	65.2
72.5°	46.0	47.7	51.8	56.4	58.3
75°	36.6	38.8	44.5	49.8	51.7
77.5°	28.3	30.8	37.8	43.2	45.3
80°	19.8	23.6	31.3	37.3	39.7
82.5°	12.4	17.2	25.4	31.7	33.8
85°	6.3	11.7	20.1	26.6	28.9
87.5°	1.7	7.6	15.6	21.8	24.2
90°	0.0	4.4	11.8	17.8	19.9
92.5°	0.0	2.4	8.8	14.1	16.4
95°	0.0	1.2	6.1	11.1	12.9
97.5°	0.0	0.5	4.2	8.4	10.1
100°	0.0	0.2	2.7	6.1	7.6
102.5°	0.1	0.1	1.7	4.4	5.6
105°	0.1	0.1	1.0	3.0	4.0
107.5°	0.1	0.1	0.6	2.0	2.7
110°	0.1	0.1	0.3	1.2	1.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.1	0.1	0.2	0.8	1.2
115°	0.1	0.1	0.2	0.5	0.8
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)