

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: P517739

Luminaire Tested: HVL8-1-LD4-1LO-30-UNV-C-EDD-90

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: P517739
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-C-EDD-90
Description: 1 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 589.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.17')
CIE Type: Direct

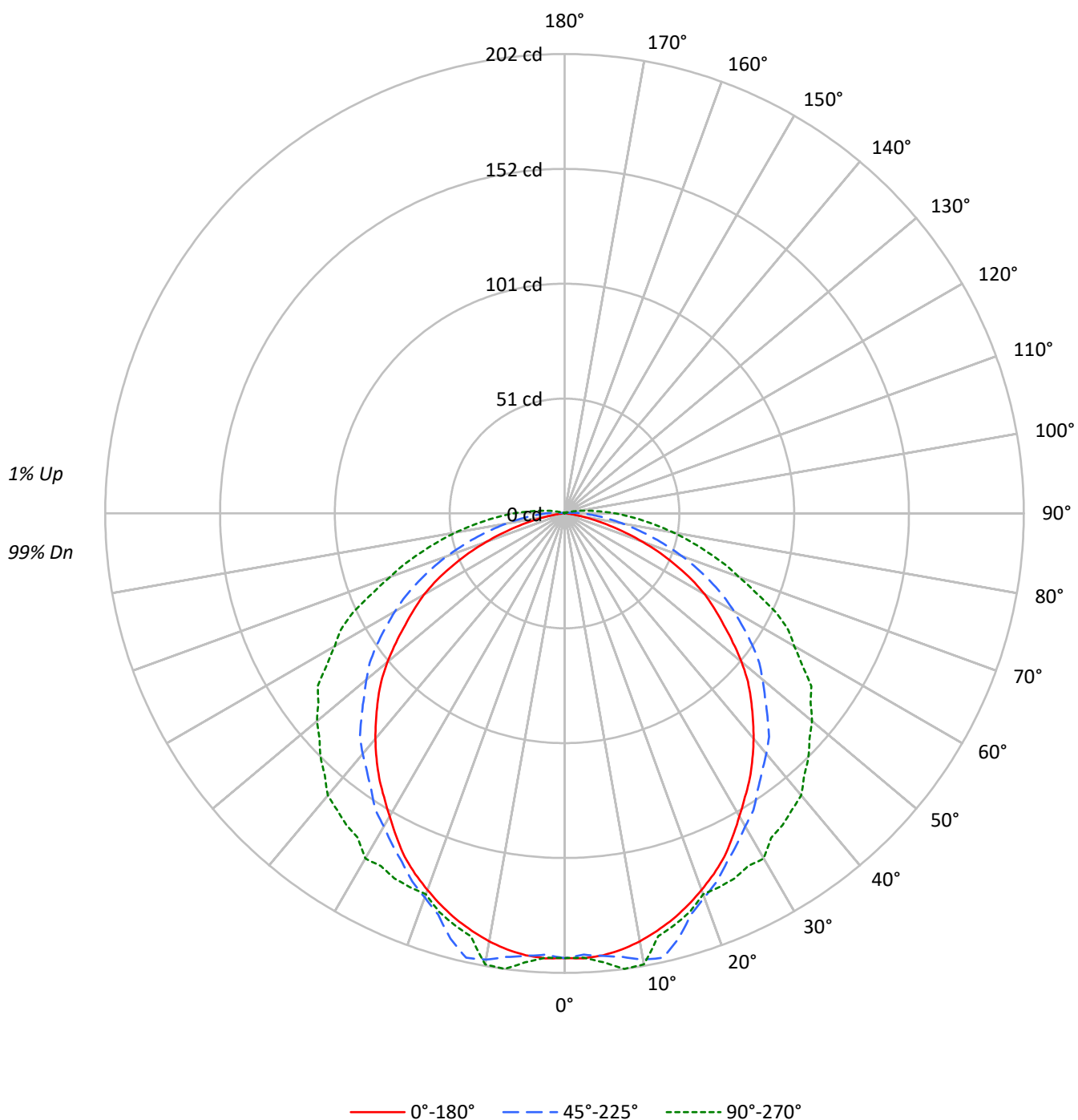
Input Watts (W): 5.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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	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	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°	3157	3157	3157
5°	3115	3086	3142
10°	3042	3105	3161
15°	2954	2999	2934
20°	2854	2789	2806
25°	2752	2649	2824
30°	2616	2532	2854
35°	2508	2421	2805
40°	2393	2334	2821
45°	2272	2226	2771
50°	2131	2114	2750
55°	1944	1995	2748
60°	1787	1841	2630
65°	1523	1660	2547
70°	1185	1437	2283
75°	788	1174	2085
80°	392	915	1873
85°	115	653	1647

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 2771 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.8	3.2
10°-20°	53.5	9.1
20°-30°	79.6	13.5
30°-40°	95.7	16.2
40°-50°	100.7	17.1
50°-60°	93.5	15.9
60°-70°	73.9	12.5
70°-80°	45.1	7.7
80°-90°	19.7	3.3
90°-100°	6.1	1.0
100°-110°	1.4	0.2
110°-120°	0.6	0.1
120°-130°	0.3	0.1
130°-140°	0.1	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°	151.9	25.8
0°-40°	247.6	42.0
0°-60°	441.8	75.0
0°-90°	580.5	98.6
90°-120°	8.1	1.4
90°-150°	8.5	1.4
90°-180°	8.0	1.4
0°-180°	589.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	196	196	196	196	196	
5°	195	195	195	198	198	18
15°	185	192	194	187	187	52
25°	166	177	169	174	177	76
35°	142	146	148	162	167	89
45°	116	117	126	146	152	89
55°	86	87	101	123	132	77
65°	54	56	71	94	102	54
75°	20	27	40	61	65	22
85°	2	6	15	30	34	3
90°	0	2	8	19	22	0
95°	0	0	4	10	13	0
105°	0	0	1	2	3	0
115°	0	0	1	1	1	0
125°	0	0	0	1	1	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	195.5	195.5	195.5	195.5	195.5
2.5°	195.8	195.2	194.2	195.2	195.5
5°	195.0	194.6	195.3	197.5	198.1
7.5°	193.4	194.9	196.7	200.7	202.0
10°	191.0	193.8	199.2	202.6	201.3
12.5°	188.0	192.9	200.1	193.5	190.4
15°	184.6	191.7	193.6	187.2	187.3
17.5°	180.6	190.7	184.9	184.8	183.6
20°	176.2	187.4	179.7	179.4	178.2
22.5°	171.6	182.9	175.1	174.4	177.8
25°	166.5	177.2	169.1	174.1	177.0
27.5°	160.2	169.6	164.1	171.2	174.8
30°	153.8	161.8	158.9	168.9	175.2
32.5°	147.8	153.6	154.7	168.0	169.1
35°	142.1	146.0	148.2	161.7	167.2
37.5°	135.8	136.9	142.7	159.0	164.3
40°	129.4	128.8	138.1	154.6	161.9
42.5°	122.6	122.4	133.2	152.4	156.1
45°	116.1	116.6	126.2	146.2	151.7
47.5°	109.4	110.1	119.6	139.4	146.2
50°	101.7	102.6	113.7	133.3	142.1
52.5°	93.4	95.0	108.0	127.6	136.4
55°	85.5	86.9	100.7	122.7	132.5
57.5°	78.3	79.2	93.2	116.5	123.9
60°	71.3	71.5	86.1	109.7	116.7
62.5°	63.2	63.6	78.8	101.6	111.0
65°	54.1	55.8	70.9	93.9	102.4
67.5°	45.6	48.6	62.9	86.8	91.2
70°	36.6	41.6	55.1	78.5	81.6
72.5°	28.2	34.2	47.0	69.1	73.6
75°	20.5	27.1	39.5	60.8	64.6
77.5°	13.8	20.6	32.5	51.5	56.6
80°	8.2	15.0	26.3	43.0	48.7
82.5°	4.2	10.1	20.4	36.0	41.1
85°	1.8	6.4	15.4	29.9	34.3
87.5°	0.5	3.6	11.4	24.2	27.9
90°	0.0	1.9	8.1	19.0	22.3
92.5°	0.0	0.9	5.7	14.3	16.9
95°	0.0	0.5	3.5	10.4	12.7
97.5°	0.0	0.3	2.2	7.4	9.3
100°	0.0	0.2	1.3	4.9	6.7
102.5°	0.0	0.3	0.9	3.1	4.3
105°	0.0	0.3	0.7	2.0	2.9
107.5°	0.1	0.3	0.6	1.5	2.0
110°	0.0	0.2	0.7	1.2	1.6

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CATALOG NUMBER: HVL8-1-LD4-1LO-30-UNV-C-EDD-90

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.1	0.2	0.6	1.0	1.2
115°	0.0	0.2	0.6	0.9	1.0
117.5°	0.1	0.1	0.4	0.9	1.0
120°	0.1	0.1	0.4	0.9	1.0
122.5°	0.1	0.1	0.3	0.8	1.0
125°	0.0	0.1	0.2	0.6	0.8
127.5°	0.1	0.1	0.2	0.5	0.6
130°	0.1	0.1	0.2	0.4	0.5
132.5°	0.1	0.1	0.1	0.3	0.4
135°	0.1	0.1	0.1	0.2	0.3
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)