

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: P517850

Luminaire Tested: HVL8-1-LD4-3LO-50-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: P517850
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-1-LD4-3LO-50-UNV-O-EDD
Description: 1 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1987.0 lumens
Efficiency: N/A
Efficacy: 118.3 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

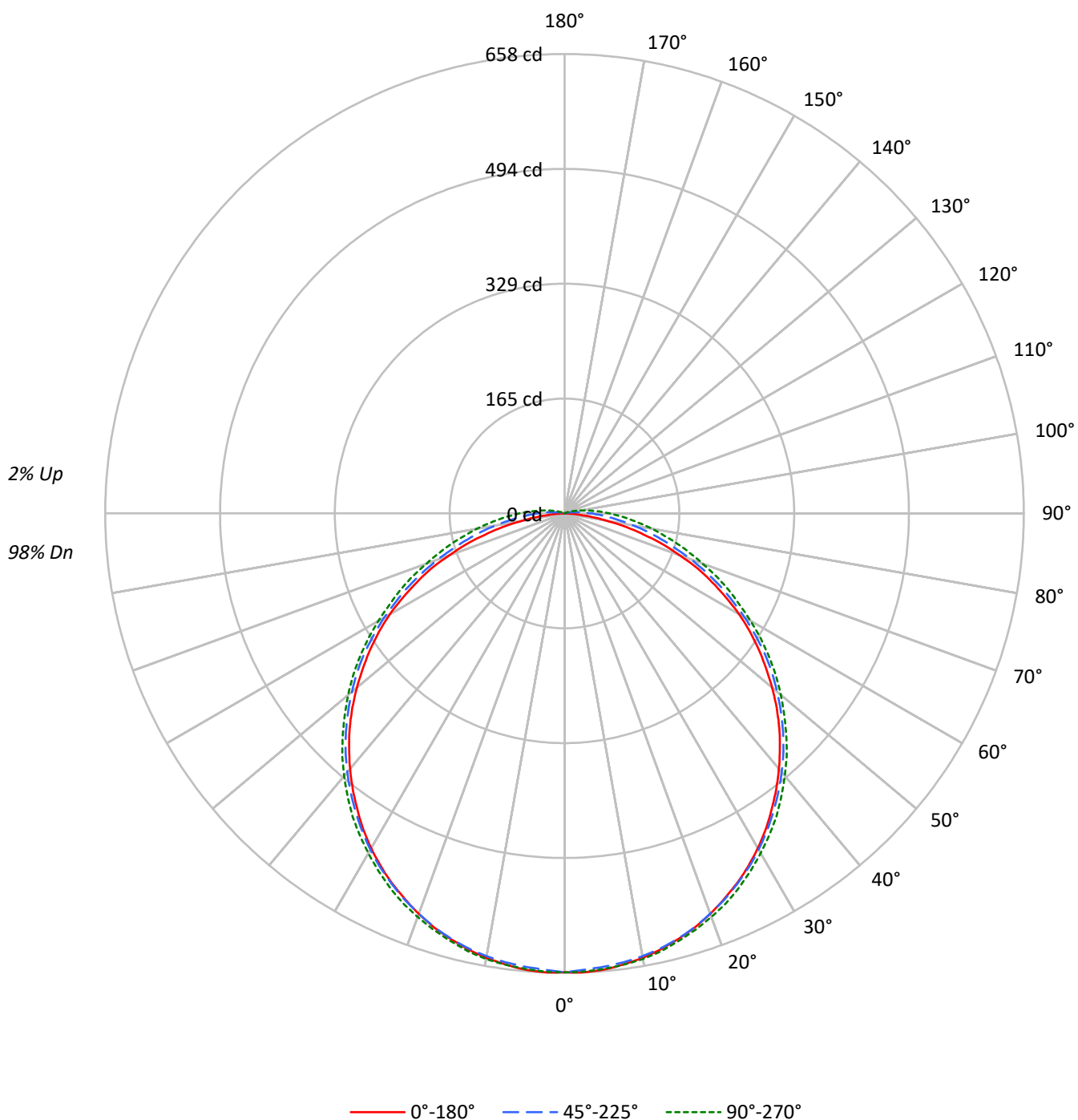
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101			98
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	77	73	79	75	71	76	72	69			67
3	89	78	69	63	86	76	68	62	73	66	61	70	64	59	67	62	58			56
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	54	50			47
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	40	67	54	46	39	52	45	39	50	44	38	49	43	38			36
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	34			32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30			28
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27			25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25			23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10611	10611	10611
5°	10476	10295	10384
10°	10293	10037	10175
15°	10093	9763	9926
20°	9888	9469	9684
25°	9662	9172	9437
30°	9417	8862	9158
35°	9132	8527	8880
40°	8837	8181	8556
45°	8519	7809	8207
50°	8139	7389	7832
55°	7724	6936	7417
60°	7244	6373	6933
65°	6571	5752	6453
70°	5689	5040	5896
75°	4546	4272	5389
80°	3049	3516	4926
85°	1301	2752	4485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8519 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.2	3.1
10°-20°	178.4	9.0
20°-30°	270.7	13.6
30°-40°	327.3	16.5
40°-50°	341.5	17.2
50°-60°	312.2	15.7
60°-70°	243.4	12.2
70°-80°	152.3	7.7
80°-90°	69.2	3.5
90°-100°	23.2	1.2
100°-110°	5.8	0.3
110°-120°	0.9	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°	511.2	25.7
0°-40°	838.5	42.2
0°-60°	1492.3	75.1
0°-90°	1957.1	98.5
90°-120°	29.9	1.5
90°-150°	29.9	1.5
90°-180°	30.0	1.5
0°-180°	1987.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	657	657	657	657	657	
5°	656	654	652	655	655	62
15°	631	632	630	634	634	178
25°	584	585	586	591	592	269
35°	517	520	522	527	529	324
45°	435	439	443	447	449	335
55°	340	344	350	355	358	304
65°	234	238	246	256	260	231
75°	118	126	144	161	167	126
85°	20	38	65	86	93	26
90°	0	14	38	58	64	1
95°	0	4	20	36	42	0
105°	0	0	3	10	13	0
115°	0	0	1	2	2	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

TEST NUMBER: P517850

CATALOG NUMBER: HVL8-1-LD4-3LO-50-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	657.2	657.2	657.2	657.2	657.2
2.5°	658.0	657.0	654.1	657.0	656.9
5°	655.8	654.5	651.6	654.7	654.7
7.5°	651.4	651.0	648.3	651.9	651.9
10°	646.3	646.2	644.0	647.9	648.0
12.5°	639.2	639.8	637.8	641.5	642.0
15°	630.8	631.9	630.2	633.8	633.6
17.5°	621.7	622.3	621.1	625.1	625.0
20°	610.4	611.2	610.2	614.4	614.9
22.5°	597.8	598.9	598.8	603.1	604.4
25°	584.5	585.0	585.6	590.6	591.5
27.5°	569.8	570.6	571.7	576.2	577.1
30°	553.7	554.9	556.2	560.8	562.1
32.5°	536.7	537.9	539.4	545.5	546.1
35°	517.4	519.8	521.9	527.2	529.4
37.5°	498.2	501.2	503.2	508.8	510.5
40°	477.9	480.9	484.1	490.0	491.1
42.5°	456.7	460.1	464.0	469.3	471.1
45°	435.3	439.2	442.8	447.1	449.3
47.5°	412.2	416.1	420.5	425.4	426.8
50°	388.4	392.9	397.5	402.2	404.7
52.5°	363.9	369.3	374.6	379.6	381.9
55°	339.7	343.8	350.1	355.2	357.6
57.5°	314.6	318.1	323.8	332.2	333.4
60°	289.1	292.2	298.1	304.9	307.7
62.5°	260.9	265.1	271.3	279.9	282.4
65°	233.5	237.5	245.7	255.5	259.5
67.5°	207.0	208.4	218.9	229.1	235.6
70°	175.7	180.9	193.2	205.7	210.7
72.5°	148.7	154.0	167.5	182.2	188.4
75°	118.2	125.5	143.8	161.0	167.0
77.5°	91.4	99.5	122.1	139.4	146.4
80°	63.8	76.4	101.0	120.5	128.1
82.5°	40.1	55.6	82.0	102.4	109.1
85°	20.4	37.8	64.9	85.8	93.4
87.5°	5.4	24.5	50.5	70.5	78.2
90°	0.2	14.1	38.3	57.5	64.4
92.5°	0.2	7.9	28.5	45.7	52.8
95°	0.2	3.7	19.8	35.9	41.5
97.5°	0.2	1.5	13.6	27.1	32.7
100°	0.2	0.8	8.7	19.7	24.5
102.5°	0.3	0.5	5.4	14.1	18.0
105°	0.3	0.5	3.3	9.6	12.9
107.5°	0.3	0.5	1.9	6.5	8.8
110°	0.5	0.5	1.1	4.0	5.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	0.5	0.6	2.6	3.9
115°	0.5	0.5	0.6	1.7	2.5
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)