

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: P517818

Luminaire Tested: HVL8-1-LD4-2STD-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: P517818
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-1-LD4-2STD-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: 1623.0 lumens
Efficiency: N/A
Efficacy: 99.6 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

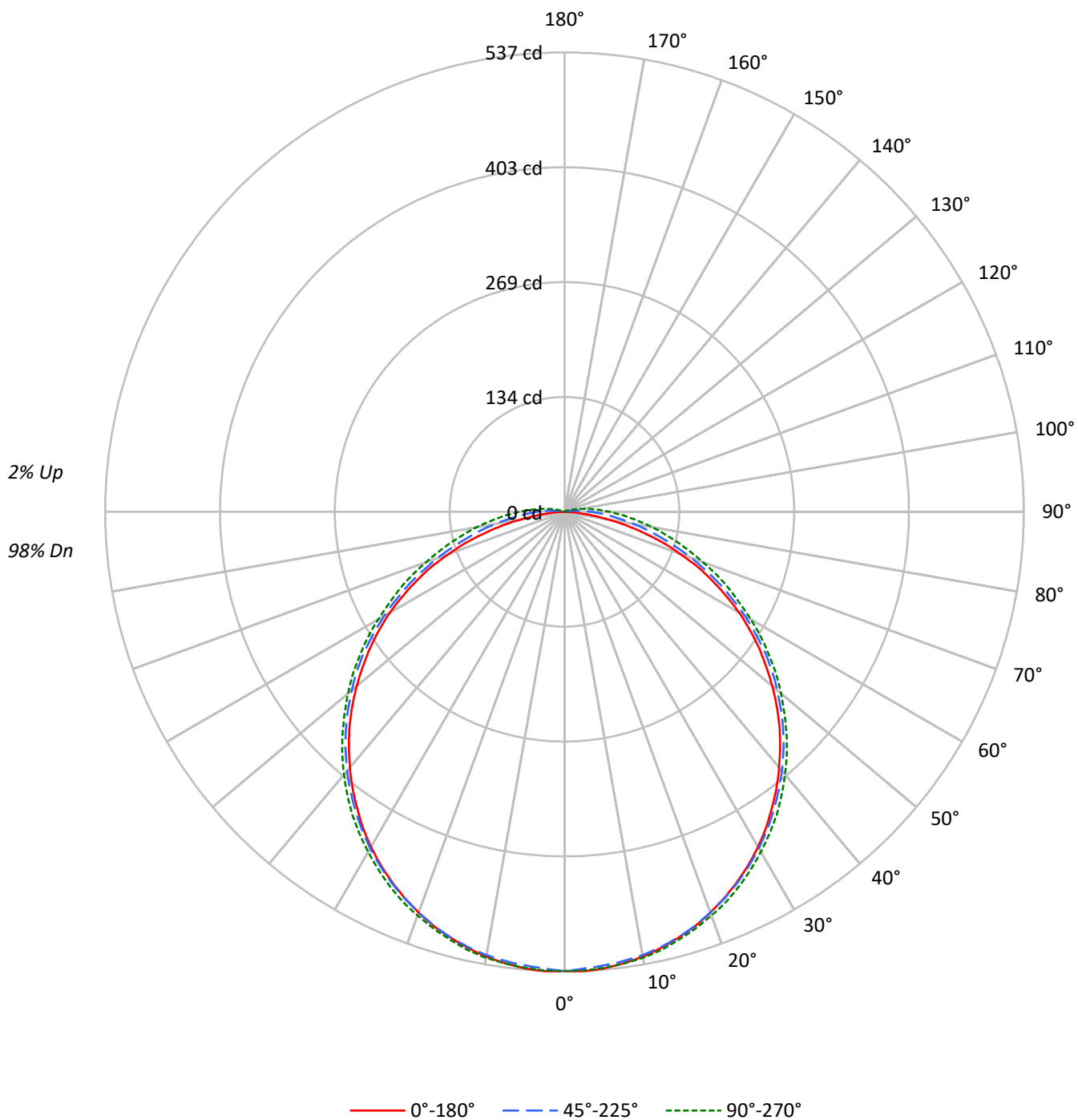
Input Watts (W): 16.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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°	8667	8667	8667
5°	8558	8409	8482
10°	8408	8198	8311
15°	8245	7975	8109
20°	8077	7734	7909
25°	7891	7491	7708
30°	7692	7238	7480
35°	7459	6965	7253
40°	7219	6682	6988
45°	6960	6379	6704
50°	6647	6036	6396
55°	6309	5666	6059
60°	5916	5206	5662
65°	5367	4698	5272
70°	4646	4116	4816
75°	3715	3488	4402
80°	2490	2872	4026
85°	1065	2248	3664

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6960 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.8	3.1
10°-20°	145.7	9.0
20°-30°	221.1	13.6
30°-40°	267.3	16.5
40°-50°	278.9	17.2
50°-60°	255.0	15.7
60°-70°	198.8	12.3
70°-80°	124.4	7.7
80°-90°	56.5	3.5
90°-100°	18.9	1.2
100°-110°	4.8	0.3
110°-120°	0.8	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°	417.6	25.7
0°-40°	684.9	42.2
0°-60°	1218.9	75.1
0°-90°	1598.6	98.5
90°-120°	24.4	1.5
90°-150°	24.4	1.5
90°-180°	24.0	1.5
0°-180°	1623.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	537	537	537	537	537	
5°	536	535	532	535	535	51
15°	515	516	515	518	518	145
25°	477	478	478	482	483	220
35°	423	424	426	431	432	265
45°	356	359	362	365	367	274
55°	278	281	286	290	292	248
65°	191	194	201	209	212	189
75°	97	102	117	132	136	103
85°	17	31	53	70	76	21
90°	0	12	31	47	53	1
95°	0	3	16	29	34	0
105°	0	0	3	8	10	0
115°	0	0	0	1	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	536.8	536.8	536.8	536.8	536.8
2.5°	537.4	536.7	534.3	536.7	536.5
5°	535.7	534.6	532.2	534.8	534.8
7.5°	532.1	531.7	529.6	532.5	532.5
10°	527.9	527.8	526.0	529.2	529.3
12.5°	522.1	522.6	521.0	524.0	524.4
15°	515.3	516.2	514.8	517.7	517.6
17.5°	507.8	508.3	507.3	510.6	510.5
20°	498.6	499.2	498.4	501.9	502.2
22.5°	488.3	489.2	489.1	492.6	493.6
25°	477.4	477.8	478.3	482.4	483.1
27.5°	465.4	466.1	466.9	470.6	471.4
30°	452.3	453.3	454.3	458.1	459.1
32.5°	438.3	439.4	440.6	445.6	446.1
35°	422.6	424.5	426.3	430.6	432.4
37.5°	407.0	409.4	411.0	415.6	417.0
40°	390.4	392.8	395.4	400.3	401.1
42.5°	373.0	375.8	379.0	383.3	384.8
45°	355.6	358.7	361.7	365.2	367.0
47.5°	336.7	339.9	343.4	347.5	348.6
50°	317.2	320.9	324.7	328.5	330.5
52.5°	297.2	301.7	306.0	310.0	311.9
55°	277.5	280.8	286.0	290.2	292.1
57.5°	257.0	259.8	264.5	271.3	272.3
60°	236.1	238.7	243.5	249.0	251.3
62.5°	213.1	216.5	221.6	228.7	230.7
65°	190.7	194.0	200.7	208.7	212.0
67.5°	169.1	170.2	178.8	187.2	192.5
70°	143.5	147.8	157.8	168.0	172.1
72.5°	121.5	125.8	136.8	148.8	153.9
75°	96.6	102.5	117.4	131.5	136.4
77.5°	74.7	81.2	99.7	113.9	119.6
80°	52.1	62.4	82.5	98.4	104.7
82.5°	32.8	45.4	66.9	83.6	89.1
85°	16.7	30.9	53.0	70.1	76.3
87.5°	4.4	20.0	41.3	57.6	63.9
90°	0.1	11.5	31.3	46.9	52.6
92.5°	0.1	6.5	23.3	37.3	43.2
95°	0.1	3.0	16.2	29.4	33.9
97.5°	0.1	1.3	11.1	22.1	26.7
100°	0.1	0.6	7.1	16.1	20.0
102.5°	0.3	0.4	4.4	11.5	14.7
105°	0.3	0.4	2.7	7.8	10.5
107.5°	0.3	0.4	1.5	5.3	7.2
110°	0.4	0.4	0.9	3.3	4.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.4	0.5	2.2	3.2
115°	0.4	0.4	0.5	1.4	2.0
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)