

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: P518280

Luminaire Tested: HVL8-8-LD4-3LO-50-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: P518280
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3LO-50-UNV-C-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15272.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

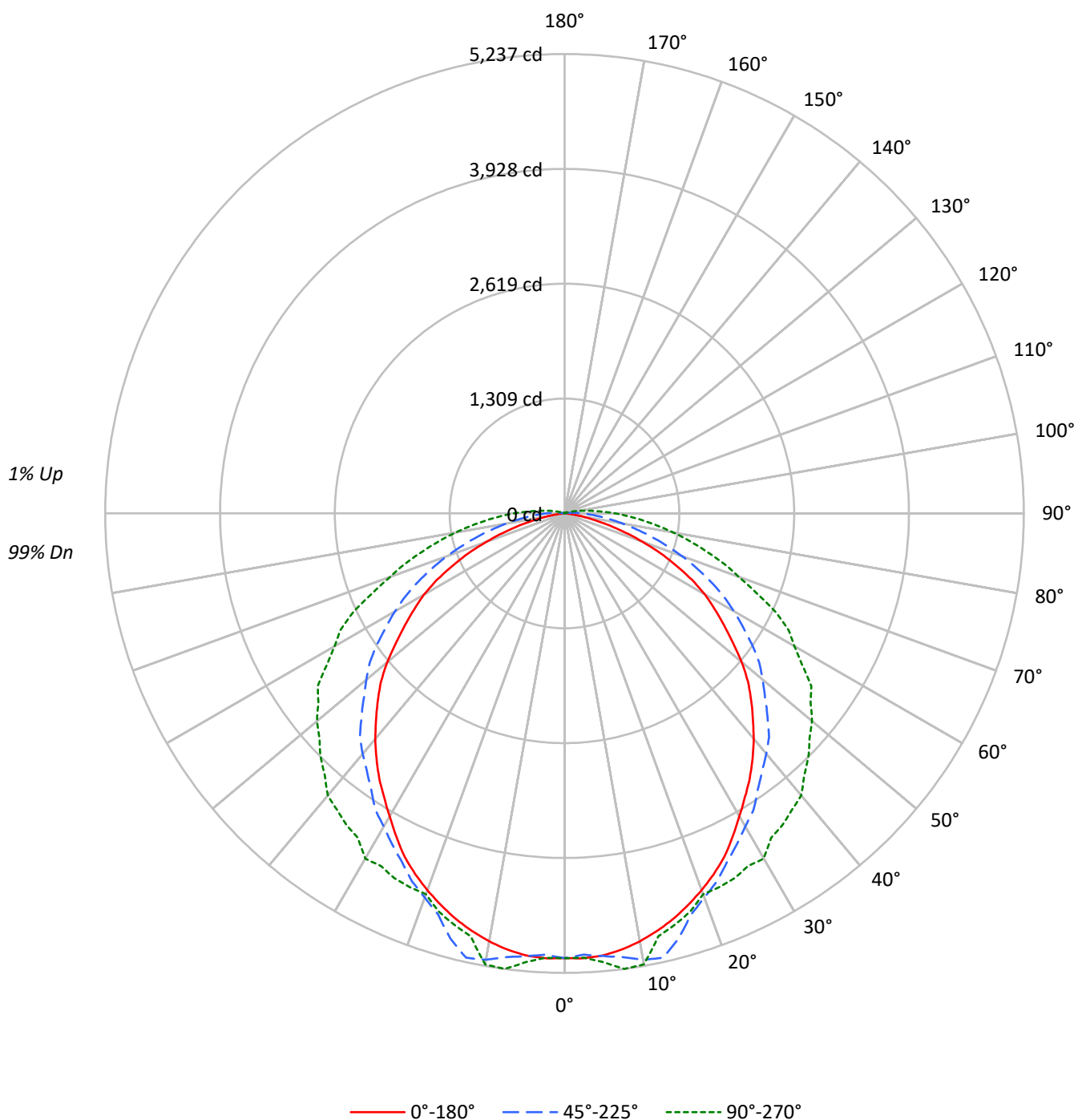
Input Watts (W): 134.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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	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°	10231	10231	10231
5°	10227	10091	10182
10°	10111	10240	10244
15°	9946	9975	9509
20°	9741	9355	9093
25°	9522	8962	9150
30°	9182	8646	9251
35°	8945	8348	9088
40°	8690	8127	9144
45°	8417	7839	8979
50°	8081	7537	8911
55°	7576	7213	8905
60°	7201	6764	8525
65°	6415	6226	8253
70°	5291	5522	7401
75°	3840	4663	6756
80°	2222	3797	6065
85°	888	2902	5343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 8979 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	487.2	3.2
10°-20°	1387.5	9.1
20°-30°	2064.5	13.5
30°-40°	2481.5	16.2
40°-50°	2611.9	17.1
50°-60°	2423.6	15.9
60°-70°	1916.3	12.5
70°-80°	1170.5	7.7
80°-90°	510.0	3.3
90°-100°	158.8	1.0
100°-110°	35.7	0.2
110°-120°	14.4	0.1
120°-130°	8.1	0.1
130°-140°	2.2	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°	3939.2	25.8
0°-40°	6420.7	42.0
0°-60°	11456.2	75.0
0°-90°	15053.0	98.6
90°-120°	208.8	1.4
90°-150°	219.0	1.4
90°-180°	219.0	1.4
0°-180°	15272.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5070	5070	5070	5070	5070	
5°	5057	5047	5064	5121	5136	479
15°	4786	4970	5019	4853	4856	1348
25°	4318	4593	4384	4515	4588	1982
35°	3684	3786	3843	4192	4334	2302
45°	3010	3024	3273	3791	3932	2320
55°	2217	2253	2611	3182	3435	1992
65°	1403	1448	1839	2434	2655	1390
75°	531	703	1026	1576	1675	579
85°	48	165	400	776	890	74
90°	1	50	210	492	579	2
95°	1	12	92	270	329	1
105°	1	7	19	53	74	1
115°	1	4	14	24	25	2
125°	1	2	6	16	22	2
135°	2	2	2	5	7	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5069.5	5069.5	5069.5	5069.5	5069.5
2.5°	5075.7	5062.2	5034.4	5061.2	5068.4
5°	5057.1	5046.8	5064.3	5121.1	5135.6
7.5°	5014.7	5054.0	5100.5	5203.7	5236.8
10°	4951.7	5026.1	5165.5	5253.3	5219.2
12.5°	4875.3	5001.3	5188.2	5016.8	4937.3
15°	4786.5	4970.3	5018.9	4852.6	4855.7
17.5°	4682.2	4944.5	4794.8	4790.6	4760.7
20°	4569.7	4857.8	4659.5	4651.2	4619.2
22.5°	4448.8	4743.1	4539.7	4523.2	4609.9
25°	4317.7	4593.4	4383.8	4514.9	4588.2
27.5°	4153.5	4397.2	4253.6	4439.5	4531.4
30°	3987.2	4194.8	4120.4	4379.6	4542.8
32.5°	3831.3	3983.1	4011.0	4356.9	4383.8
35°	3683.6	3785.8	3842.6	4191.7	4334.2
37.5°	3521.5	3549.4	3700.1	4122.5	4259.8
40°	3356.2	3338.7	3580.3	4008.9	4198.9
42.5°	3178.6	3172.4	3453.3	3952.1	4047.1
45°	3010.3	3023.7	3272.6	3791.0	3932.5
47.5°	2837.8	2855.4	3101.2	3614.4	3790.0
50°	2637.5	2660.2	2948.3	3457.4	3683.6
52.5°	2420.6	2464.0	2799.6	3308.7	3537.0
55°	2217.2	2253.3	2610.6	3181.7	3434.7
57.5°	2031.3	2053.0	2415.5	3021.6	3212.7
60°	1848.5	1853.7	2231.6	2844.0	3026.8
62.5°	1638.9	1648.2	2042.7	2634.4	2879.1
65°	1403.4	1447.8	1839.2	2434.0	2655.0
67.5°	1183.5	1260.9	1631.6	2250.2	2365.9
70°	948.0	1079.2	1428.2	2034.4	2116.0
72.5°	732.2	886.0	1219.6	1792.7	1907.4
75°	530.8	703.3	1025.5	1575.9	1675.0
77.5°	357.3	532.9	843.7	1336.3	1467.5
80°	213.8	389.3	681.6	1114.3	1261.9
82.5°	109.5	261.3	528.7	934.6	1066.8
85°	47.5	165.2	399.7	775.5	890.2
87.5°	13.4	94.0	294.3	626.8	723.9
90°	1.0	49.6	209.6	491.6	579.3
92.5°	1.0	23.8	147.7	371.8	438.9
95°	1.0	12.4	91.9	269.5	329.4
97.5°	1.0	7.2	55.8	191.0	241.6
100°	1.0	6.2	33.0	127.0	172.5
102.5°	1.0	7.2	22.7	80.5	112.6
105°	1.0	7.2	18.6	52.7	74.4
107.5°	2.1	7.2	16.5	39.2	51.6
110°	1.0	6.2	17.6	29.9	40.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	5.2	16.5	24.8	29.9
115°	1.0	4.1	14.5	23.8	24.8
117.5°	2.1	3.1	11.4	23.8	24.8
120°	2.1	2.1	9.3	22.7	25.8
122.5°	2.1	2.1	7.2	20.7	24.8
125°	1.0	2.1	6.2	15.5	21.7
127.5°	2.1	2.1	5.2	12.4	16.5
130°	2.1	2.1	4.1	9.3	12.4
132.5°	2.1	2.1	3.1	7.2	9.3
135°	2.1	2.1	2.1	5.2	7.2
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)