

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: P518270

Luminaire Tested: HVL8-8-LD4-3LO-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: P518270
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3LO-30-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

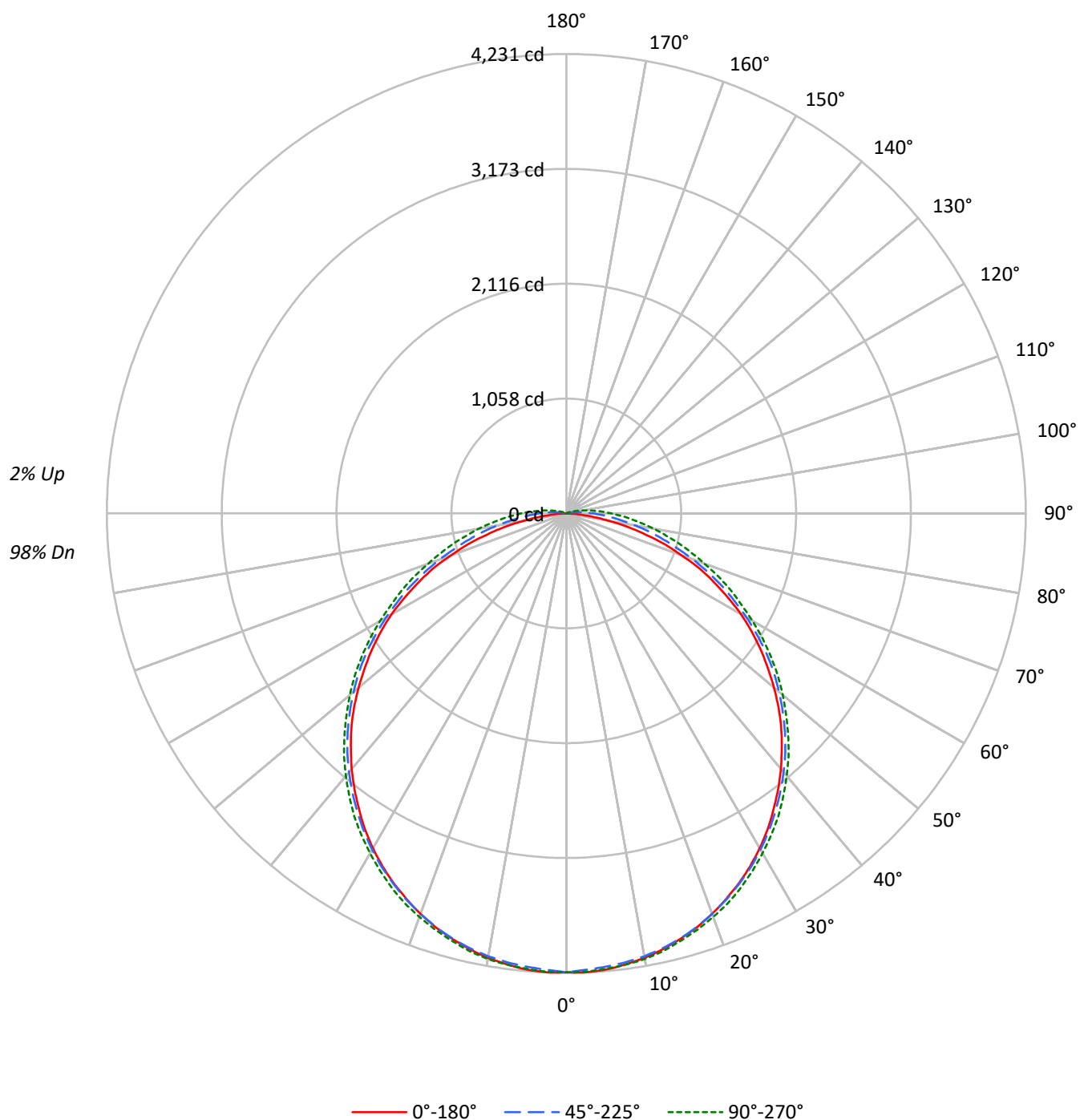
Lumens per Lamp: N/A
Luminaire Lumens: 12777.0 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

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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CATALOG NUMBER: HVL8-8-LD4-3LO-30-UNV-O-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		0
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110		105	105	105		98
1	108	102	98	94	105	100	96	92	95	92	89		91	88	86		81
2	98	89	82	76	95	87	80	75	83	77	73		79	75	71		67
3	89	78	69	63	86	76	68	62	73	66	61		70	64	59		56
4	81	69	60	53	79	67	59	52	65	57	52		62	56	51		47
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		41
6	69	55	46	40	67	54	46	39	52	45	39		50	44	38		36
7	64	50	41	35	62	49	41	35	47	40	34		46	39	34		32
8	59	46	37	31	58	45	37	31	43	36	31		42	35	30		28
9	55	42	34	28	54	41	33	28	40	33	28		39	32	27		25
10	52	39	31	25	51	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8529	8529	8529
5°	8528	8349	8346
10°	8486	8210	8179
15°	8429	8054	7979
20°	8367	7879	7784
25°	8289	7698	7585
30°	8199	7504	7360
35°	8080	7291	7137
40°	7958	7066	6877
45°	7827	6820	6596
50°	7652	6534	6294
55°	7465	6220	5961
60°	7242	5809	5572
65°	6863	5348	5187
70°	6305	4803	4739
75°	5499	4204	4332
80°	4266	3618	3960
85°	2459	3031	3605

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7827 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.9	3.1
10°-20°	1147.1	9.0
20°-30°	1740.5	13.6
30°-40°	2104.6	16.5
40°-50°	2196.0	17.2
50°-60°	2007.8	15.7
60°-70°	1565.1	12.2
70°-80°	979.1	7.7
80°-90°	444.7	3.5
90°-100°	149.1	1.2
100°-110°	37.4	0.3
110°-120°	5.9	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°	3287.5	25.7
0°-40°	5392.0	42.2
0°-60°	9595.7	75.1
0°-90°	12584.7	98.5
90°-120°	192.4	1.5
90°-150°	192.4	1.5
90°-180°	192.0	1.5
0°-180°	12777.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4226	4226	4226	4226	4226	
5°	4217	4209	4190	4210	4210	400
15°	4056	4064	4052	4075	4074	1145
25°	3759	3762	3766	3798	3804	1732
35°	3327	3342	3356	3390	3404	2083
45°	2799	2824	2847	2875	2889	2157
55°	2185	2211	2251	2284	2299	1952
65°	1501	1527	1580	1643	1669	1485
75°	760	807	924	1035	1074	810
85°	132	243	417	552	601	166
90°	1	91	246	370	414	5
95°	1	24	128	231	267	1
105°	2	3	21	62	83	2
115°	3	3	4	11	16	2
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: HVL8-8-LD4-3LO-30-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4225.9	4225.9	4225.9	4225.9	4225.9
2.5°	4230.8	4224.9	4205.9	4224.9	4223.9
5°	4216.9	4208.9	4190.0	4209.9	4209.9
7.5°	4189.0	4186.0	4169.1	4192.0	4192.0
10°	4156.1	4155.1	4141.2	4166.1	4167.1
12.5°	4110.3	4114.3	4101.3	4125.2	4128.2
15°	4056.5	4063.5	4052.5	4075.4	4074.4
17.5°	3997.7	4001.7	3993.7	4019.6	4018.7
20°	3925.0	3930.0	3924.0	3950.9	3953.9
22.5°	3844.3	3851.3	3850.3	3878.2	3886.2
25°	3758.6	3761.6	3765.6	3797.5	3803.5
27.5°	3664.0	3669.0	3676.0	3704.8	3710.8
30°	3560.4	3568.4	3576.3	3606.2	3614.2
32.5°	3450.8	3458.8	3468.8	3507.6	3511.6
35°	3327.3	3342.2	3356.2	3390.1	3404.0
37.5°	3203.8	3222.7	3235.6	3271.5	3282.5
40°	3073.3	3092.2	3113.1	3151.0	3157.9
42.5°	2936.8	2958.7	2983.6	3017.5	3029.4
45°	2799.3	2824.2	2847.1	2875.0	2889.0
47.5°	2650.9	2675.8	2703.7	2735.6	2744.5
50°	2497.5	2526.4	2556.2	2586.1	2602.1
52.5°	2340.1	2374.9	2408.8	2440.7	2455.6
55°	2184.7	2210.6	2251.4	2284.3	2299.2
57.5°	2023.3	2045.2	2082.0	2135.8	2143.8
60°	1858.9	1878.8	1916.7	1960.5	1978.4
62.5°	1677.6	1704.5	1744.3	1800.1	1816.1
65°	1501.3	1527.2	1580.0	1642.7	1668.6
67.5°	1330.9	1339.9	1407.6	1473.4	1515.2
70°	1129.7	1163.6	1242.3	1322.9	1354.8
72.5°	956.3	990.2	1076.9	1171.5	1211.4
75°	760.1	806.9	924.5	1035.0	1073.9
77.5°	587.8	639.6	785.0	896.6	941.4
80°	410.4	491.1	649.5	775.0	823.9
82.5°	258.0	357.6	527.0	658.5	701.3
85°	131.5	243.1	417.4	551.9	600.7
87.5°	34.9	157.4	324.8	453.3	503.1
90°	1.0	90.7	246.1	369.6	414.4
92.5°	1.0	50.8	183.3	293.9	339.7
95°	1.0	23.9	127.5	231.1	267.0
97.5°	1.0	10.0	87.7	174.3	210.2
100°	1.0	5.0	55.8	126.5	157.4
102.5°	2.0	3.0	34.9	90.7	115.6
105°	2.0	3.0	20.9	61.8	82.7
107.5°	2.0	3.0	12.0	41.8	56.8
110°	3.0	3.0	7.0	25.9	37.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	3.0	4.0	16.9	24.9
115°	3.0	3.0	4.0	11.0	15.9
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)