

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: P518290

Luminaire Tested: HVL8-8-LD4-3STD-35-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: P518290
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3STD-35-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3500K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16679.0 lumens
Efficiency: N/A
Efficacy: 87.3 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

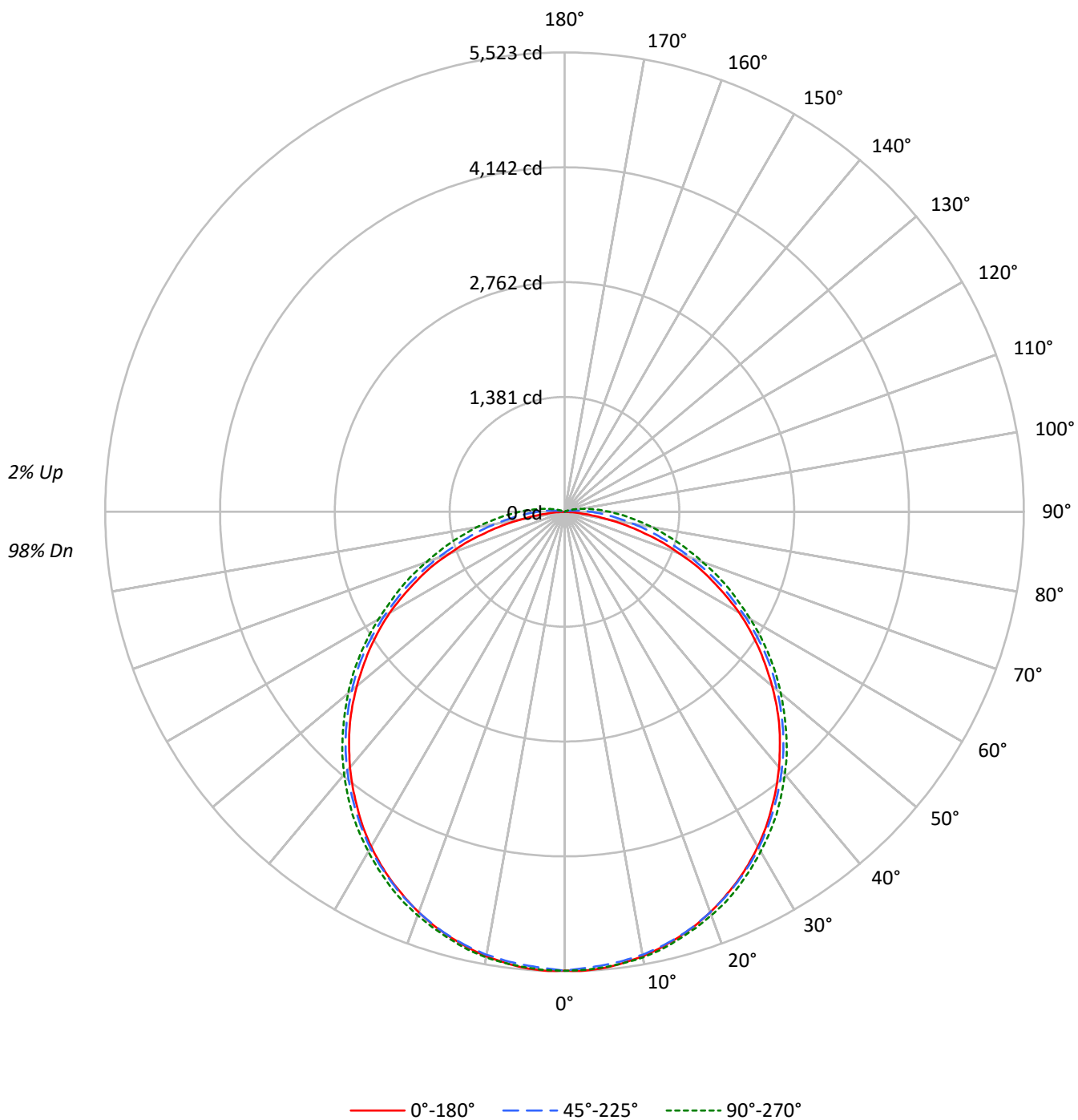
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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°	11133	11133	11133
5°	11132	10898	10895
10°	11078	10717	10677
15°	11003	10514	10415
20°	10922	10285	10161
25°	10821	10049	9902
30°	10703	9796	9608
35°	10547	9518	9317
40°	10388	9224	8977
45°	10217	8903	8611
50°	9988	8530	8217
55°	9745	8120	7782
60°	9454	7583	7274
65°	8958	6982	6771
70°	8231	6269	6186
75°	7179	5488	5655
80°	5569	4724	5169
85°	3211	3956	4707

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 10217 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	522.0	3.1
10°-20°	1497.4	9.0
20°-30°	2272.0	13.6
30°-40°	2747.3	16.5
40°-50°	2866.6	17.2
50°-60°	2620.9	15.7
60°-70°	2043.1	12.2
70°-80°	1278.1	7.7
80°-90°	580.5	3.5
90°-100°	194.6	1.2
100°-110°	48.8	0.3
110°-120°	7.7	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°	4291.4	25.7
0°-40°	7038.7	42.2
0°-60°	12526.2	75.1
0°-90°	16427.9	98.5
90°-120°	251.1	1.5
90°-150°	251.1	1.5
90°-180°	251.0	1.5
0°-180°	16679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5516	5516	5516	5516	5516	
5°	5505	5494	5470	5496	5496	523
15°	5295	5304	5290	5320	5319	1495
25°	4906	4910	4916	4957	4965	2261
35°	4343	4363	4381	4425	4444	2719
45°	3654	3687	3717	3753	3771	2816
55°	2852	2886	2939	2982	3001	2548
65°	1960	1994	2062	2144	2178	1939
75°	992	1053	1207	1351	1402	1058
85°	172	317	545	720	784	217
90°	1	118	321	482	541	7
95°	1	31	166	302	348	1
105°	3	4	27	81	108	3
115°	4	4	5	14	21	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5516.4	5516.4	5516.4	5516.4	5516.4
2.5°	5522.9	5515.1	5490.4	5515.1	5513.8
5°	5504.7	5494.3	5469.6	5495.6	5495.6
7.5°	5468.3	5464.4	5442.3	5472.2	5472.2
10°	5425.4	5424.1	5405.9	5438.4	5439.7
12.5°	5365.6	5370.8	5353.9	5385.1	5389.0
15°	5295.3	5304.4	5290.1	5320.0	5318.7
17.5°	5218.6	5223.8	5213.4	5247.2	5245.9
20°	5123.7	5130.2	5122.4	5157.5	5161.4
22.5°	5018.3	5027.4	5026.1	5062.6	5073.0
25°	4906.5	4910.4	4915.6	4957.2	4965.0
27.5°	4783.0	4789.5	4798.6	4836.3	4844.1
30°	4647.7	4658.1	4668.5	4707.5	4717.9
32.5°	4504.7	4515.1	4528.1	4578.8	4584.0
35°	4343.4	4362.9	4381.1	4425.3	4443.6
37.5°	4182.2	4206.9	4223.8	4270.6	4284.9
40°	4011.8	4036.5	4063.8	4113.2	4122.3
42.5°	3833.7	3862.3	3894.8	3939.0	3954.6
45°	3654.2	3686.7	3716.6	3753.0	3771.2
47.5°	3460.4	3492.9	3529.4	3571.0	3582.7
50°	3260.2	3297.9	3336.9	3375.9	3396.7
52.5°	3054.7	3100.2	3144.4	3186.0	3205.5
55°	2851.8	2885.6	2939.0	2981.9	3001.4
57.5°	2641.2	2669.8	2717.9	2788.1	2798.5
60°	2426.6	2452.6	2502.0	2559.2	2582.6
62.5°	2189.9	2225.0	2277.0	2349.9	2370.7
65°	1959.7	1993.6	2062.5	2144.4	2178.2
67.5°	1737.4	1749.1	1837.5	1923.3	1977.9
70°	1474.7	1518.9	1621.6	1727.0	1768.6
72.5°	1248.4	1292.6	1405.8	1529.3	1581.3
75°	992.2	1053.3	1206.8	1351.1	1401.9
77.5°	767.3	834.9	1024.7	1170.4	1228.9
80°	535.8	641.1	847.9	1011.7	1075.5
82.5°	336.8	466.9	687.9	859.6	915.5
85°	171.7	317.3	544.9	720.4	784.2
87.5°	45.5	205.5	423.9	591.7	656.7
90°	1.3	118.3	321.2	482.5	541.0
92.5°	1.3	66.3	239.3	383.6	443.4
95°	1.3	31.2	166.5	301.7	348.5
97.5°	1.3	13.0	114.4	227.6	274.4
100°	1.3	6.5	72.8	165.2	205.5
102.5°	2.6	3.9	45.5	118.3	150.8
105°	2.6	3.9	27.3	80.6	107.9
107.5°	2.6	3.9	15.6	54.6	74.1
110°	3.9	3.9	9.1	33.8	49.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.9	3.9	5.2	22.1	32.5
115°	3.9	3.9	5.2	14.3	20.8
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)