

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: P517657

Luminaire Tested: HVL12-8-LD4-2LO-50-UNV-O-EDD-90

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: P517657
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-2LO-50-UNV-O-EDD-90
Description: 8 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10523.0 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

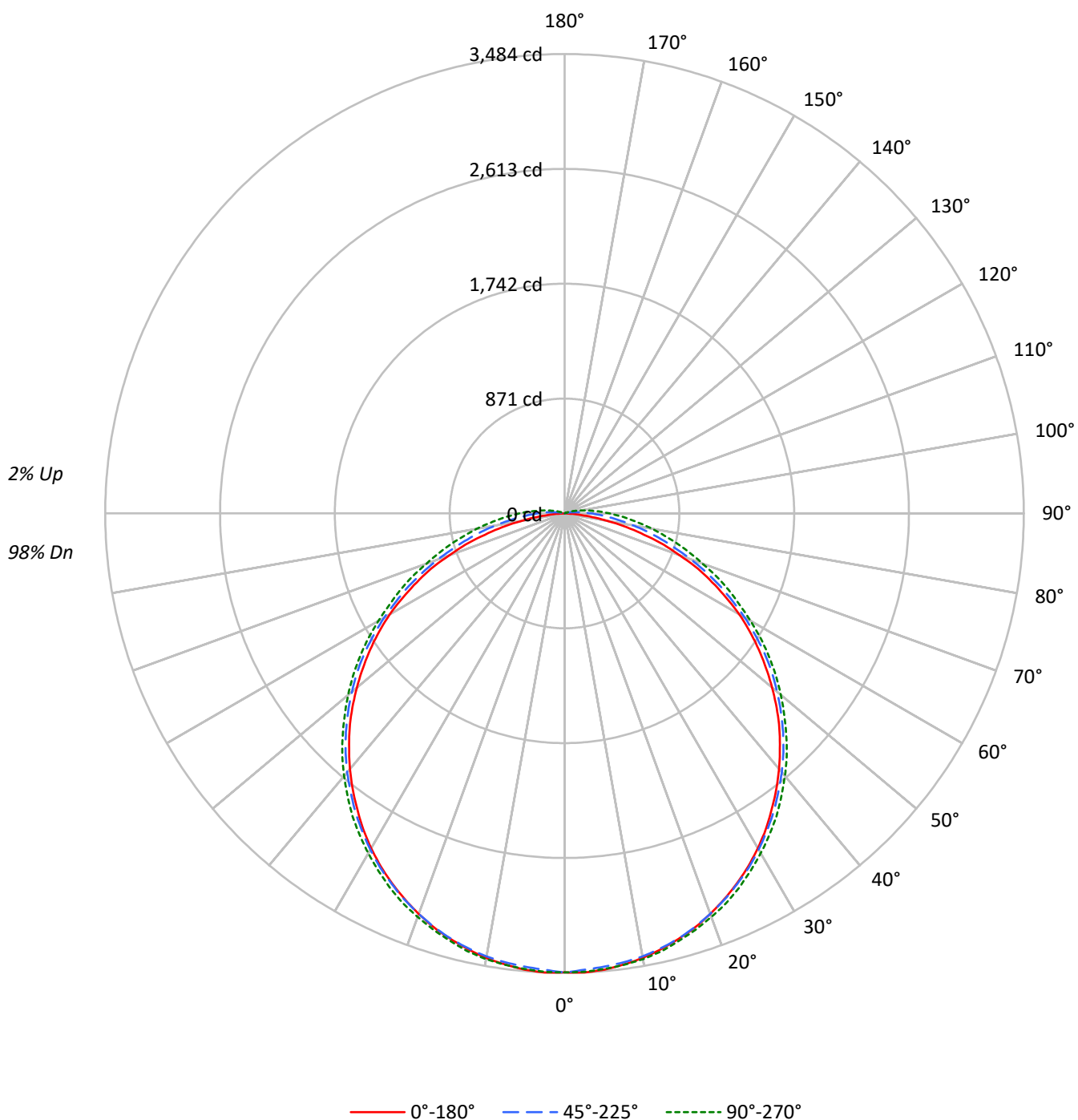
Input Watts (W): 94.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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°	4683	4683	4683
5°	4682	4607	4616
10°	4659	4553	4555
15°	4628	4490	4474
20°	4594	4414	4396
25°	4551	4336	4315
30°	4502	4251	4219
35°	4436	4154	4124
40°	4369	4052	4008
45°	4297	3939	3880
50°	4201	3805	3742
55°	4099	3657	3588
60°	3976	3455	3402
65°	3768	3225	3223
70°	3462	2950	3011
75°	3019	2648	2835
80°	2342	2366	2702
85°	1350	2110	2629

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4297 cd/sqm

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CATALOG NUMBER: HVL12-8-LD4-2LO-50-UNV-O-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.4	3.1
10°-20°	944.7	9.0
20°-30°	1433.5	13.6
30°-40°	1733.3	16.5
40°-50°	1808.6	17.2
50°-60°	1653.6	15.7
60°-70°	1289.0	12.2
70°-80°	806.4	7.7
80°-90°	366.2	3.5
90°-100°	122.7	1.2
100°-110°	30.8	0.3
110°-120°	4.9	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°	2707.5	25.7
0°-40°	4440.8	42.2
0°-60°	7903.0	75.1
0°-90°	10364.6	98.5
90°-120°	158.4	1.5
90°-150°	158.4	1.5
90°-180°	158.0	1.5
0°-180°	10523.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3480	3480	3480	3480	3480	
5°	3473	3466	3451	3467	3467	330
15°	3341	3347	3338	3356	3356	943
25°	3096	3098	3101	3128	3132	1426
35°	2740	2753	2764	2792	2804	1715
45°	2306	2326	2345	2368	2379	1777
55°	1799	1821	1854	1881	1894	1607
65°	1236	1258	1301	1353	1374	1223
75°	626	665	761	852	884	667
85°	108	200	344	454	495	137
90°	1	75	203	304	341	4
95°	1	20	105	190	220	1
105°	2	2	17	51	68	2
115°	2	2	3	9	13	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°	3480.4	3480.4	3480.4	3480.4	3480.4
2.5°	3484.5	3479.6	3464.0	3479.6	3478.7
5°	3473.0	3466.4	3450.8	3467.2	3467.2
7.5°	3450.0	3447.6	3433.6	3452.5	3452.5
10°	3422.9	3422.1	3410.6	3431.1	3432.0
12.5°	3385.2	3388.5	3377.8	3397.5	3400.0
15°	3340.9	3346.6	3337.6	3356.5	3355.7
17.5°	3292.5	3295.8	3289.2	3310.5	3309.7
20°	3232.6	3236.7	3231.8	3253.9	3256.4
22.5°	3166.1	3171.9	3171.1	3194.0	3200.6
25°	3095.6	3098.0	3101.3	3127.6	3132.5
27.5°	3017.6	3021.7	3027.5	3051.3	3056.2
30°	2932.3	2938.9	2945.4	2970.0	2976.6
32.5°	2842.1	2848.6	2856.8	2888.8	2892.1
35°	2740.3	2752.6	2764.1	2792.0	2803.5
37.5°	2638.6	2654.2	2664.8	2694.4	2703.4
40°	2531.1	2546.7	2563.9	2595.1	2600.8
42.5°	2418.7	2436.8	2457.3	2485.2	2495.0
45°	2305.5	2326.0	2344.9	2367.8	2379.3
47.5°	2183.2	2203.7	2226.7	2253.0	2260.4
50°	2056.9	2080.7	2105.3	2129.9	2143.0
52.5°	1927.3	1956.0	1983.9	2010.1	2022.4
55°	1799.3	1820.6	1854.2	1881.3	1893.6
57.5°	1666.3	1684.4	1714.8	1759.1	1765.6
60°	1531.0	1547.4	1578.6	1614.7	1629.4
62.5°	1381.6	1403.8	1436.6	1482.6	1495.7
65°	1236.4	1257.8	1301.2	1352.9	1374.3
67.5°	1096.1	1103.5	1159.3	1213.5	1247.9
70°	930.4	958.3	1023.1	1089.6	1115.8
72.5°	787.6	815.5	886.9	964.9	997.7
75°	626.0	664.6	761.4	852.5	884.5
77.5°	484.1	526.7	646.5	738.4	775.3
80°	338.0	404.5	534.9	638.3	678.5
82.5°	212.5	294.5	434.0	542.3	577.6
85°	108.3	200.2	343.8	454.5	494.7
87.5°	28.7	129.6	267.5	373.3	414.3
90°	0.8	74.7	202.7	304.4	341.3
92.5°	0.8	41.8	151.0	242.0	279.8
95°	0.8	19.7	105.0	190.3	219.9
97.5°	0.8	8.2	72.2	143.6	173.1
100°	0.8	4.1	45.9	104.2	129.6
102.5°	1.6	2.5	28.7	74.7	95.2
105°	1.6	2.5	17.2	50.9	68.1
107.5°	1.6	2.5	9.8	34.5	46.8
110°	2.5	2.5	5.7	21.3	31.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	2.5	3.3	13.9	20.5
115°	2.5	2.5	3.3	9.0	13.1
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)