

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: P517672

Luminaire Tested: HVL12-8-LD4-2STD-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: P517672
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-2STD-50-UNV-C-EDD
Description: 8 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

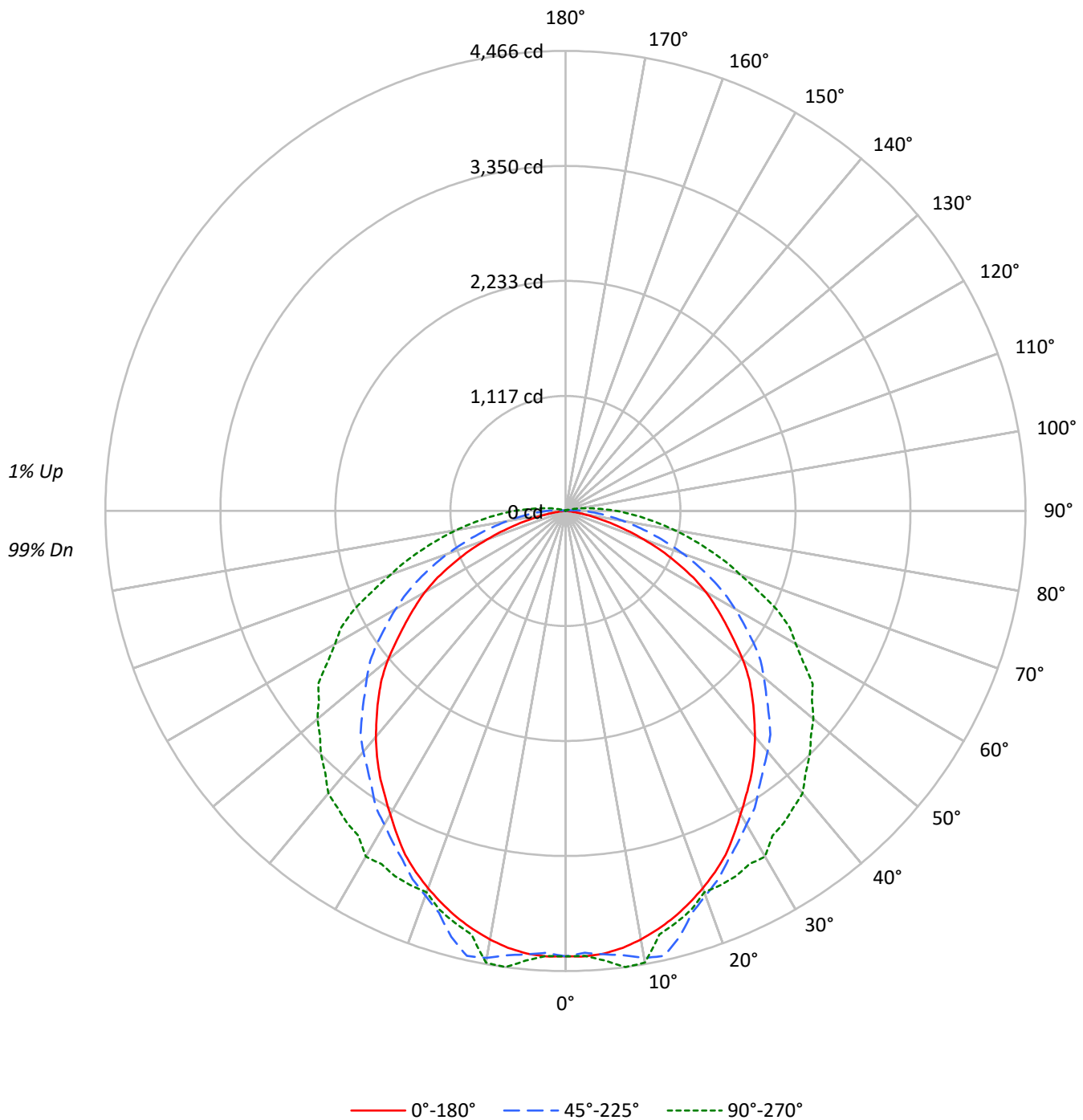
Lumens per Lamp: N/A
Luminaire Lumens: 13024.0 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

Input Watts (W): 134.3
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
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°	5817	5817	5817
5°	5814	5766	5830
10°	5748	5881	5908
15°	5654	5757	5522
20°	5538	5428	5318
25°	5414	5227	5390
30°	5220	5071	5491
35°	5086	4925	5437
40°	4941	4826	5518
45°	4785	4689	5469
50°	4594	4545	5486
55°	4307	4391	5550
60°	4094	4165	5390
65°	3647	3888	5310
70°	3008	3512	4869
75°	2184	3041	4578
80°	1263	2570	4286
85°	505	2091	4033

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 55°

Luminance: 5550 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	415.5	3.2
10°-20°	1183.3	9.1
20°-30°	1760.6	13.5
30°-40°	2116.2	16.2
40°-50°	2227.5	17.1
50°-60°	2066.8	15.9
60°-70°	1634.2	12.5
70°-80°	998.2	7.7
80°-90°	434.9	3.3
90°-100°	135.4	1.0
100°-110°	30.4	0.2
110°-120°	12.2	0.1
120°-130°	6.9	0.1
130°-140°	1.9	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°	3359.4	25.8
0°-40°	5475.6	42.0
0°-60°	9769.9	75.0
0°-90°	12837.2	98.6
90°-120°	178.1	1.4
90°-150°	186.8	1.4
90°-180°	187.0	1.4
0°-180°	13024.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4323	4323	4323	4323	4323	
5°	4313	4304	4319	4367	4380	409
15°	4082	4239	4280	4138	4141	1150
25°	3682	3917	3738	3850	3913	1690
35°	3141	3229	3277	3575	3696	1963
45°	2567	2579	2791	3233	3354	1979
55°	1891	1922	2226	2713	2929	1699
65°	1197	1235	1568	2076	2264	1185
75°	453	600	874	1344	1428	494
85°	40	141	341	661	759	63
90°	1	42	179	419	494	2
95°	1	11	78	230	281	1
105°	1	6	16	45	63	1
115°	1	4	12	20	21	1
125°	1	2	5	13	18	1
135°	2	2	2	4	6	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

TEST NUMBER: P517672

CATALOG NUMBER: HVL12-8-LD4-2STD-50-UNV-C-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4323.3	4323.3	4323.3	4323.3	4323.3
2.5°	4328.5	4317.1	4293.3	4316.2	4322.4
5°	4312.7	4303.9	4318.9	4367.3	4379.6
7.5°	4276.6	4310.0	4349.7	4437.7	4465.9
10°	4222.9	4286.3	4405.2	4480.0	4451.0
12.5°	4157.7	4265.1	4424.5	4278.3	4210.5
15°	4082.0	4238.7	4280.1	4138.3	4141.0
17.5°	3993.0	4216.7	4089.0	4085.5	4059.9
20°	3897.0	4142.7	3973.6	3966.6	3939.3
22.5°	3794.0	4045.0	3871.5	3857.4	3931.4
25°	3682.1	3917.3	3738.5	3850.3	3912.9
27.5°	3542.1	3749.9	3627.5	3786.0	3864.4
30°	3400.3	3577.3	3513.9	3735.0	3874.1
32.5°	3267.3	3396.8	3420.6	3715.6	3738.5
35°	3141.4	3228.6	3277.0	3574.7	3696.2
37.5°	3003.1	3026.9	3155.5	3515.7	3632.8
40°	2862.2	2847.2	3053.3	3418.8	3580.8
42.5°	2710.7	2705.4	2945.0	3370.4	3451.4
45°	2567.2	2578.6	2790.9	3233.0	3353.6
47.5°	2420.1	2435.1	2644.7	3082.4	3232.1
50°	2249.3	2268.6	2514.3	2948.5	3141.4
52.5°	2064.3	2101.3	2387.5	2821.7	3016.3
55°	1890.8	1921.6	2226.4	2713.4	2929.1
57.5°	1732.3	1750.8	2059.9	2576.9	2739.8
60°	1576.4	1580.8	1903.2	2425.4	2581.3
62.5°	1397.6	1405.6	1742.0	2246.6	2455.3
65°	1196.8	1234.7	1568.5	2075.8	2264.2
67.5°	1009.3	1075.3	1391.5	1919.0	2017.6
70°	808.5	920.3	1218.0	1734.9	1804.5
72.5°	624.4	755.6	1040.1	1528.9	1626.6
75°	452.7	599.7	874.5	1343.9	1428.5
77.5°	304.7	454.4	719.5	1139.6	1251.4
80°	182.3	332.0	581.2	950.3	1076.2
82.5°	93.4	222.8	450.9	797.0	909.7
85°	40.5	140.9	340.8	661.4	759.1
87.5°	11.4	80.1	251.0	534.6	617.4
90°	0.9	42.3	178.8	419.2	494.1
92.5°	0.9	20.3	125.9	317.0	374.3
95°	0.9	10.6	78.4	229.9	280.9
97.5°	0.9	6.2	47.6	162.9	206.1
100°	0.9	5.3	28.2	108.3	147.1
102.5°	0.9	6.2	19.4	68.7	96.0
105°	0.9	6.2	15.9	44.9	63.4
107.5°	1.8	6.2	14.1	33.5	44.0
110°	0.9	5.3	15.0	25.5	34.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	4.4	14.1	21.1	25.5
115°	0.9	3.5	12.3	20.3	21.1
117.5°	1.8	2.6	9.7	20.3	21.1
120°	1.8	1.8	7.9	19.4	22.0
122.5°	1.8	1.8	6.2	17.6	21.1
125°	0.9	1.8	5.3	13.2	18.5
127.5°	1.8	1.8	4.4	10.6	14.1
130°	1.8	1.8	3.5	7.9	10.6
132.5°	1.8	1.8	2.6	6.2	7.9
135°	1.8	1.8	1.8	4.4	6.2
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)