

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: P518276

Luminaire Tested: HVL8-8-LD4-3LO-40-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: P518276
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3LO-40-UNV-C-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 4000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14503.0 lumens
Efficiency: N/A
Efficacy: 107.6 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

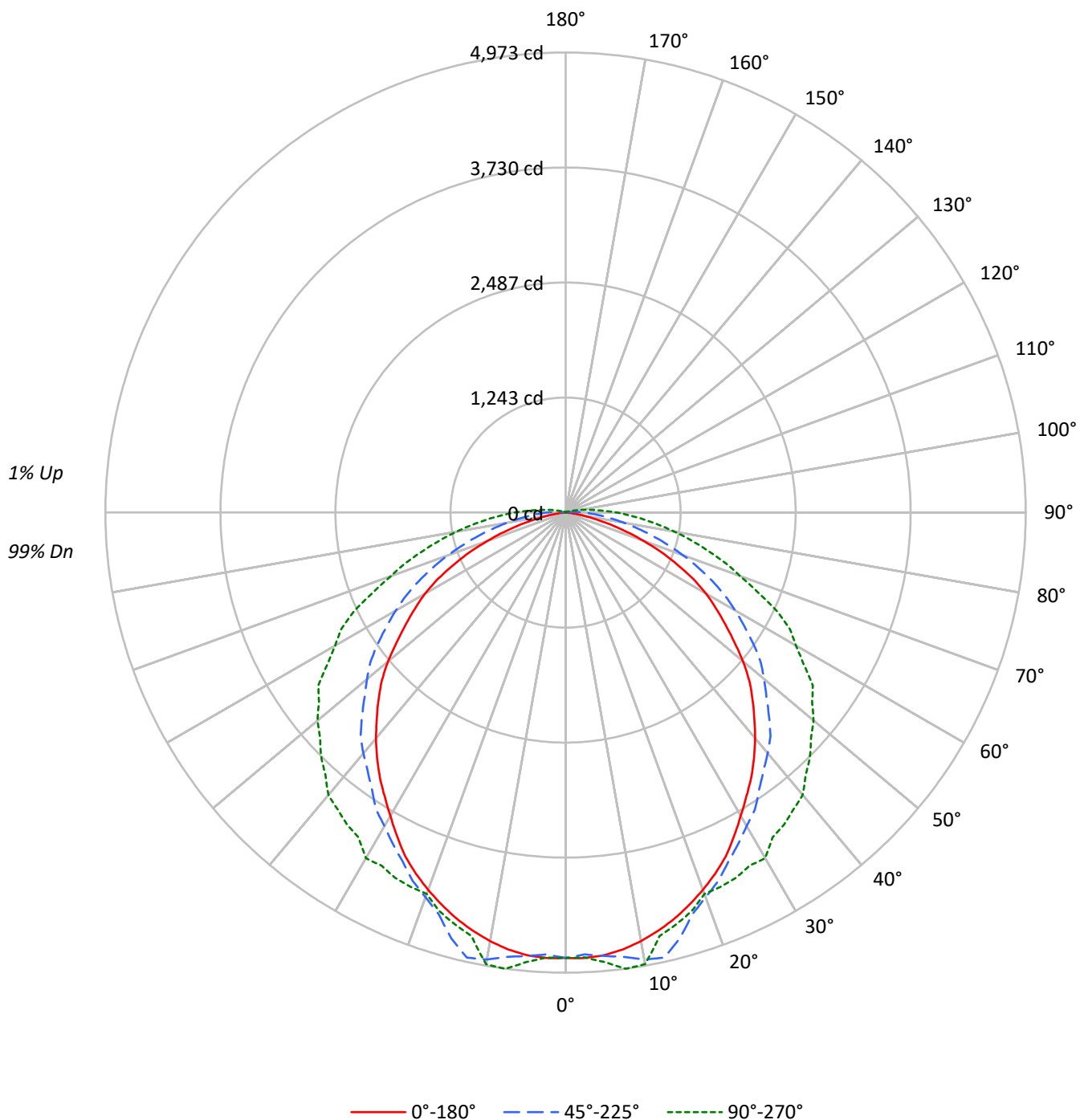
Input Watts (W): 134.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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

TEST NUMBER: P518276

CATALOG NUMBER: HVL8-8-LD4-3LO-40-UNV-C-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P518276

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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	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			99
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	78	73	80	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	51	62	56	51	60	54	50			47
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	39	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°	9716	9716	9716
5°	9712	9583	9669
10°	9602	9725	9729
15°	9445	9472	9030
20°	9250	8884	8635
25°	9043	8510	8690
30°	8719	8211	8785
35°	8495	7927	8630
40°	8253	7718	8684
45°	7993	7444	8527
50°	7674	7157	8462
55°	7194	6850	8457
60°	6839	6423	8096
65°	6093	5912	7838
70°	5025	5244	7029
75°	3647	4428	6416
80°	2110	3606	5760
85°	843	2755	5074

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 8527 cd/sqm

TEST NUMBER: P518276

CATALOG NUMBER: HVL8-8-LD4-3LO-40-UNV-C-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	462.7	3.2
10°-20°	1317.7	9.1
20°-30°	1960.5	13.5
30°-40°	2356.5	16.2
40°-50°	2480.4	17.1
50°-60°	2301.5	15.9
60°-70°	1819.8	12.5
70°-80°	1111.6	7.7
80°-90°	484.3	3.3
90°-100°	150.8	1.0
100°-110°	33.9	0.2
110°-120°	13.6	0.1
120°-130°	7.7	0.1
130°-140°	2.1	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°	3740.9	25.8
0°-40°	6097.4	42.0
0°-60°	10879.4	75.0
0°-90°	14295.0	98.6
90°-120°	198.3	1.4
90°-150°	208.0	1.4
90°-180°	208.0	1.4
0°-180°	14503.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4814	4814	4814	4814	4814	
5°	4802	4793	4809	4863	4877	455
15°	4546	4720	4766	4608	4611	1280
25°	4100	4362	4163	4288	4357	1882
35°	3498	3595	3649	3981	4116	2186
45°	2859	2872	3108	3600	3734	2204
55°	2106	2140	2479	3022	3262	1892
65°	1333	1375	1747	2312	2521	1320
75°	504	668	974	1496	1591	550
85°	45	157	380	736	845	70
90°	1	47	199	467	550	2
95°	1	12	87	256	313	1
105°	1	7	18	50	71	1
115°	1	4	14	23	24	2
125°	1	2	6	15	21	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

TEST NUMBER: P518276

CATALOG NUMBER: HVL8-8-LD4-3LO-40-UNV-C-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4814.2	4814.2	4814.2	4814.2	4814.2
2.5°	4820.1	4807.3	4780.9	4806.4	4813.2
5°	4802.4	4792.6	4809.3	4863.2	4877.0
7.5°	4762.2	4799.5	4843.6	4941.7	4973.1
10°	4702.4	4773.0	4905.4	4988.8	4956.4
12.5°	4629.8	4749.5	4927.0	4764.2	4688.7
15°	4545.5	4720.1	4766.2	4608.3	4611.2
17.5°	4446.4	4695.5	4553.3	4549.4	4521.0
20°	4339.6	4613.2	4424.9	4417.0	4386.6
22.5°	4224.8	4504.3	4311.1	4295.4	4377.8
25°	4100.3	4362.1	4163.0	4287.6	4357.2
27.5°	3944.3	4175.8	4039.5	4216.0	4303.3
30°	3786.4	3983.6	3913.0	4159.1	4314.1
32.5°	3638.4	3782.5	3809.0	4137.5	4163.0
35°	3498.1	3595.2	3649.1	3980.6	4116.0
37.5°	3344.2	3370.6	3513.8	3914.9	4045.3
40°	3187.2	3170.6	3400.1	3807.0	3987.5
42.5°	3018.6	3012.7	3279.4	3753.1	3843.3
45°	2858.7	2871.5	3107.8	3600.1	3734.5
47.5°	2694.9	2711.6	2945.0	3432.4	3599.1
50°	2504.7	2526.3	2799.9	3283.4	3498.1
52.5°	2298.7	2339.9	2658.7	3142.1	3358.9
55°	2105.5	2139.9	2479.2	3021.5	3261.8
57.5°	1929.0	1949.6	2293.8	2869.5	3050.9
60°	1755.4	1760.3	2119.3	2700.8	2874.4
62.5°	1556.4	1565.2	1939.8	2501.7	2734.2
65°	1332.8	1374.9	1746.6	2311.5	2521.4
67.5°	1123.9	1197.4	1549.5	2136.9	2246.8
70°	900.3	1024.8	1356.3	1932.0	2009.4
72.5°	695.3	841.4	1158.2	1702.5	1811.3
75°	504.1	667.8	973.8	1496.5	1590.7
77.5°	339.3	506.0	801.2	1269.0	1393.6
80°	203.0	369.7	647.3	1058.2	1198.4
82.5°	104.0	248.1	502.1	887.5	1013.1
85°	45.1	156.9	379.5	736.5	845.4
87.5°	12.7	89.2	279.5	595.3	687.5
90°	1.0	47.1	199.1	466.8	550.2
92.5°	1.0	22.6	140.2	353.0	416.8
95°	1.0	11.8	87.3	256.0	312.8
97.5°	1.0	6.9	53.0	181.4	229.5
100°	1.0	5.9	31.4	120.6	163.8
102.5°	1.0	6.9	21.6	76.5	106.9
105°	1.0	6.9	17.7	50.0	70.6
107.5°	2.0	6.9	15.7	37.3	49.0
110°	1.0	5.9	16.7	28.4	38.2

TEST NUMBER: P518276

CATALOG NUMBER: HVL8-8-LD4-3LO-40-UNV-C-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.0	4.9	15.7	23.5	28.4
115°	1.0	3.9	13.7	22.6	23.5
117.5°	2.0	2.9	10.8	22.6	23.5
120°	2.0	2.0	8.8	21.6	24.5
122.5°	2.0	2.0	6.9	19.6	23.5
125°	1.0	2.0	5.9	14.7	20.6
127.5°	2.0	2.0	4.9	11.8	15.7
130°	2.0	2.0	3.9	8.8	11.8
132.5°	2.0	2.0	2.9	6.9	8.8
135°	2.0	2.0	2.0	4.9	6.9
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)