

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: P518277

Luminaire Tested: HVL8-8-LD4-3LO-40-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: P518277
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-O-EDD-90
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 4000K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15629.0 lumens
Efficiency: N/A
Efficacy: 115.9 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

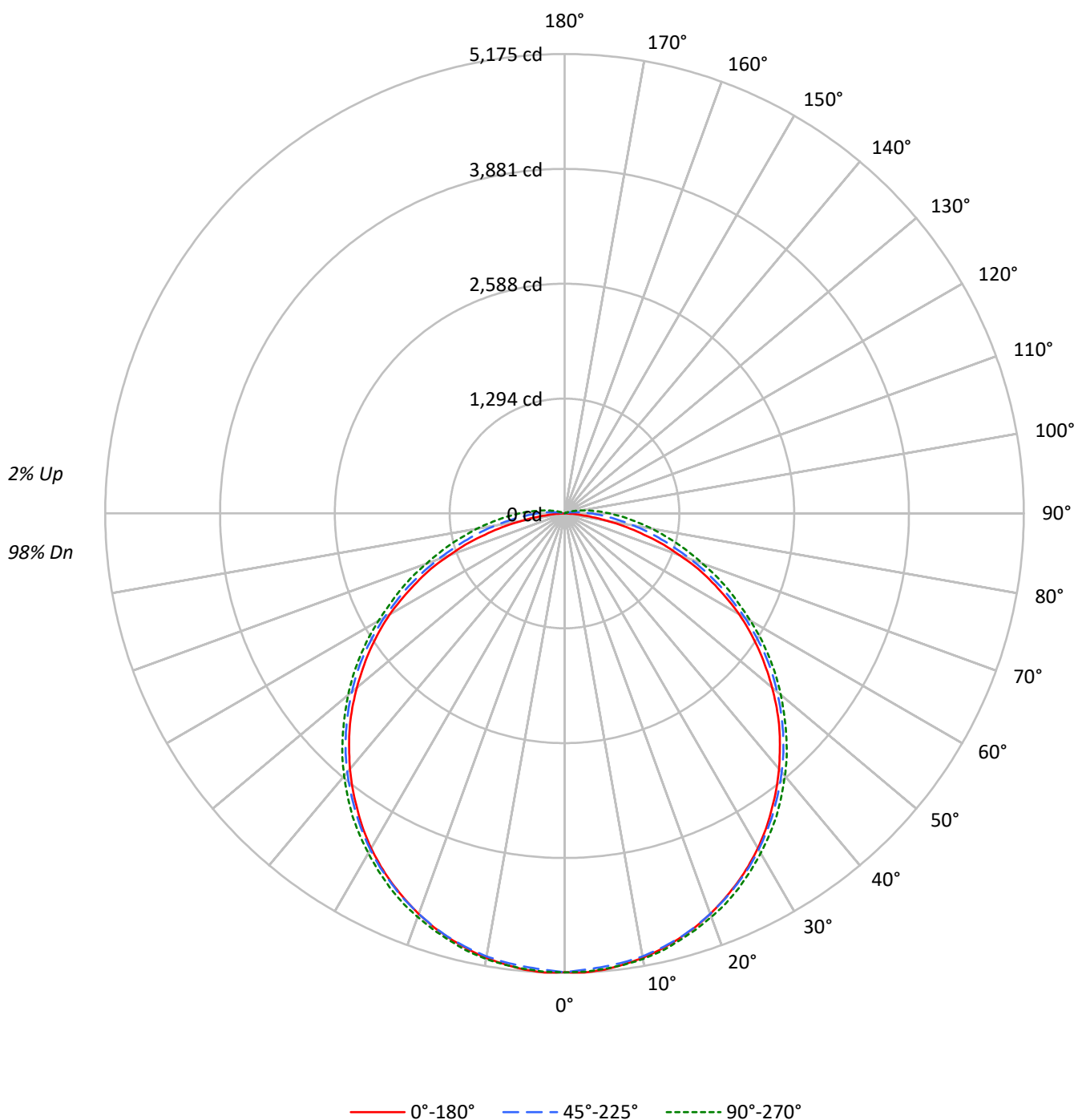
Input Watts (W): 134.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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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°	10432	10432	10432
5°	10431	10212	10209
10°	10380	10042	10005
15°	10310	9852	9760
20°	10234	9637	9521
25°	10140	9416	9279
30°	10029	9180	9003
35°	9883	8919	8730
40°	9734	8643	8412
45°	9574	8342	8069
50°	9359	7993	7699
55°	9131	7609	7292
60°	8858	7106	6816
65°	8395	6542	6345
70°	7712	5875	5797
75°	6727	5142	5299
80°	5218	4426	4843
85°	3007	3707	4410

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 9574 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	489.2	3.1
10°-20°	1403.1	9.0
20°-30°	2129.0	13.6
30°-40°	2574.3	16.5
40°-50°	2686.1	17.2
50°-60°	2455.9	15.7
60°-70°	1914.5	12.2
70°-80°	1197.6	7.7
80°-90°	543.9	3.5
90°-100°	182.3	1.2
100°-110°	45.8	0.3
110°-120°	7.2	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°	4021.3	25.7
0°-40°	6595.6	42.2
0°-60°	11737.6	75.1
0°-90°	15393.7	98.5
90°-120°	235.3	1.5
90°-150°	235.3	1.5
90°-180°	235.0	1.5
0°-180°	15629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5169	5169	5169	5169	5169	
5°	5158	5148	5125	5150	5150	490
15°	4962	4970	4957	4985	4984	1401
25°	4598	4601	4606	4645	4652	2119
35°	4070	4088	4105	4147	4164	2547
45°	3424	3455	3483	3517	3534	2639
55°	2672	2704	2754	2794	2812	2387
65°	1836	1868	1933	2009	2041	1817
75°	930	987	1131	1266	1314	991
85°	161	297	511	675	735	203
90°	1	111	301	452	507	6
95°	1	29	156	283	327	1
105°	2	4	26	76	101	3
115°	4	4	5	13	20	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

TEST NUMBER: P518277

CATALOG NUMBER: HVL8-8-LD4-3LO-40-UNV-O-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5169.1	5169.1	5169.1	5169.1	5169.1
2.5°	5175.2	5167.9	5144.8	5167.9	5166.7
5°	5158.2	5148.4	5125.3	5149.6	5149.6
7.5°	5124.0	5120.4	5099.7	5127.7	5127.7
10°	5083.8	5082.6	5065.6	5096.0	5097.2
12.5°	5027.8	5032.7	5016.8	5046.1	5049.7
15°	4962.0	4970.5	4957.1	4985.1	4983.9
17.5°	4890.1	4895.0	4885.2	4916.9	4915.7
20°	4801.1	4807.2	4799.9	4832.8	4836.5
22.5°	4702.4	4711.0	4709.7	4743.9	4753.6
25°	4597.6	4601.3	4606.2	4645.1	4652.5
27.5°	4481.9	4488.0	4496.5	4531.8	4539.1
30°	4355.1	4364.9	4374.6	4411.2	4420.9
32.5°	4221.1	4230.8	4243.0	4290.5	4295.4
35°	4070.0	4088.3	4105.3	4146.8	4163.8
37.5°	3918.9	3942.0	3957.9	4001.7	4015.2
40°	3759.3	3782.4	3808.0	3854.3	3862.8
42.5°	3592.3	3619.1	3649.6	3691.0	3705.6
45°	3424.2	3454.6	3482.6	3516.8	3533.8
47.5°	3242.6	3273.1	3307.2	3346.2	3357.1
50°	3054.9	3090.3	3126.8	3163.4	3182.9
52.5°	2862.4	2905.0	2946.5	2985.5	3003.7
55°	2672.3	2704.0	2753.9	2794.2	2812.4
57.5°	2474.9	2501.7	2546.8	2612.6	2622.3
60°	2273.8	2298.2	2344.5	2398.1	2420.1
62.5°	2052.1	2085.0	2133.7	2201.9	2221.4
65°	1836.4	1868.1	1932.6	2009.4	2041.1
67.5°	1628.0	1639.0	1721.8	1802.2	1853.4
70°	1381.8	1423.3	1519.5	1618.2	1657.2
72.5°	1169.8	1211.2	1317.3	1433.0	1481.8
75°	929.8	987.0	1130.8	1266.1	1313.6
77.5°	719.0	782.3	960.2	1096.7	1151.5
80°	502.0	600.7	794.5	948.0	1007.7
82.5°	315.6	437.5	644.6	805.5	857.9
85°	160.8	297.3	510.6	675.1	734.8
87.5°	42.6	192.5	397.3	554.4	615.4
90°	1.2	110.9	301.0	452.1	506.9
92.5°	1.2	62.1	224.2	359.5	415.5
95°	1.2	29.2	156.0	282.7	326.6
97.5°	1.2	12.2	107.2	213.2	257.1
100°	1.2	6.1	68.2	154.8	192.5
102.5°	2.4	3.7	42.6	110.9	141.4
105°	2.4	3.7	25.6	75.6	101.1
107.5°	2.4	3.7	14.6	51.2	69.5
110°	3.7	3.7	8.5	31.7	46.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.7	3.7	4.9	20.7	30.5
115°	3.7	3.7	4.9	13.4	19.5
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)