

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: P518282

Luminaire Tested: HVL8-8-LD4-3LO-50-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: P518282
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3LO-50-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

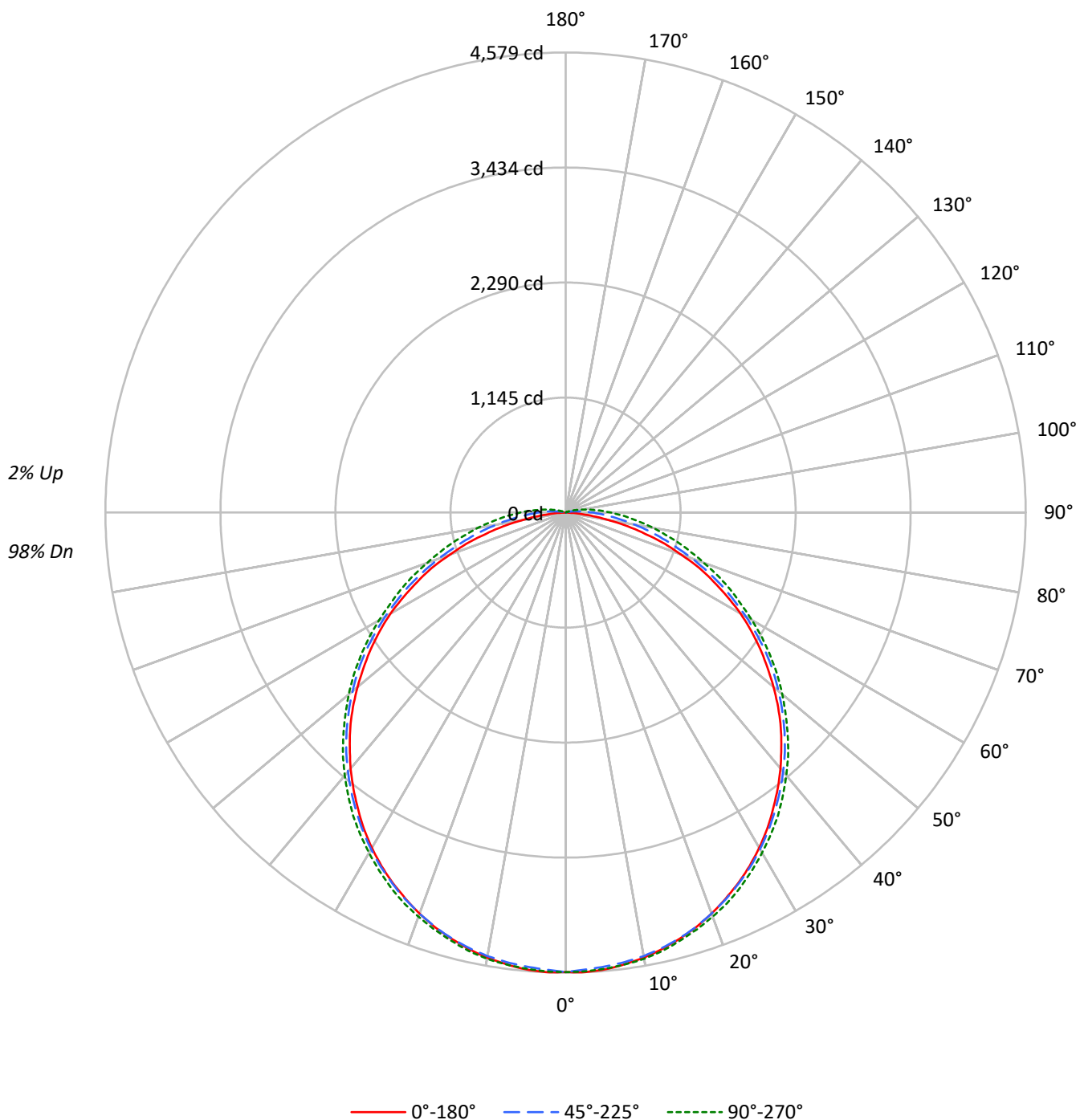
Lumens per Lamp: N/A
Luminaire Lumens: 13828.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

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°	9230	9230	9230
5°	9229	9036	9033
10°	9184	8885	8852
15°	9122	8717	8635
20°	9055	8527	8424
25°	8971	8331	8209
30°	8873	8122	7966
35°	8745	7891	7724
40°	8612	7647	7443
45°	8471	7381	7139
50°	8281	7072	6812
55°	8079	6732	6452
60°	7838	6287	6031
65°	7427	5788	5614
70°	6824	5198	5129
75°	5952	4549	4688
80°	4617	3916	4285
85°	2661	3280	3902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8471 cd/sqm

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CATALOG NUMBER: HVL8-8-LD4-3LO-50-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	432.8	3.1
10°-20°	1241.4	9.0
20°-30°	1883.7	13.6
30°-40°	2277.7	16.5
40°-50°	2376.6	17.2
50°-60°	2172.9	15.7
60°-70°	1693.9	12.2
70°-80°	1059.6	7.7
80°-90°	481.3	3.5
90°-100°	161.3	1.2
100°-110°	40.5	0.3
110°-120°	6.4	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°	3557.9	25.7
0°-40°	5835.6	42.2
0°-60°	10385.1	75.1
0°-90°	13619.8	98.5
90°-120°	208.2	1.5
90°-150°	208.2	1.5
90°-180°	208.0	1.5
0°-180°	13828.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4574	4574	4574	4574	4574	
5°	4564	4555	4535	4556	4556	433
15°	4390	4398	4386	4411	4410	1239
25°	4068	4071	4075	4110	4116	1874
35°	3601	3617	3632	3669	3684	2254
45°	3030	3056	3081	3112	3127	2334
55°	2364	2392	2437	2472	2488	2112
65°	1625	1653	1710	1778	1806	1608
75°	823	873	1000	1120	1162	877
85°	142	263	452	597	650	180
90°	1	98	266	400	448	6
95°	1	26	138	250	289	1
105°	2	3	23	67	90	2
115°	3	3	4	12	17	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°	4573.5	4573.5	4573.5	4573.5	4573.5
2.5°	4578.9	4572.4	4551.9	4572.4	4571.3
5°	4563.8	4555.1	4534.7	4556.2	4556.2
7.5°	4533.6	4530.3	4512.0	4536.8	4536.8
10°	4498.0	4496.9	4481.8	4508.8	4509.9
12.5°	4448.4	4452.7	4438.7	4464.6	4467.8
15°	4390.2	4397.7	4385.9	4410.7	4409.6
17.5°	4326.6	4330.9	4322.3	4350.3	4349.2
20°	4247.9	4253.3	4246.8	4275.9	4279.1
22.5°	4160.5	4168.1	4167.0	4197.2	4205.8
25°	4067.8	4071.1	4075.4	4109.9	4116.3
27.5°	3965.4	3970.8	3978.3	4009.6	4016.1
30°	3853.3	3861.9	3870.5	3902.9	3911.5
32.5°	3734.7	3743.3	3754.1	3796.1	3800.4
35°	3601.0	3617.2	3632.3	3668.9	3684.0
37.5°	3467.3	3487.8	3501.8	3540.6	3552.5
40°	3326.1	3346.5	3369.2	3410.2	3417.7
42.5°	3178.4	3202.1	3229.0	3265.7	3278.6
45°	3029.6	3056.5	3081.3	3111.5	3126.6
47.5°	2868.9	2895.9	2926.1	2960.6	2970.3
50°	2702.9	2734.2	2766.5	2798.8	2816.1
52.5°	2532.5	2570.3	2606.9	2641.4	2657.6
55°	2364.4	2392.4	2436.6	2472.2	2488.3
57.5°	2189.7	2213.4	2253.3	2311.5	2320.2
60°	2011.8	2033.4	2074.3	2121.8	2141.2
62.5°	1815.6	1844.7	1887.8	1948.2	1965.4
65°	1624.8	1652.8	1709.9	1777.9	1805.9
67.5°	1440.4	1450.1	1523.4	1594.6	1639.8
70°	1222.6	1259.3	1344.4	1431.8	1466.3
72.5°	1035.0	1071.7	1165.5	1267.9	1311.0
75°	822.6	873.3	1000.5	1120.2	1162.2
77.5°	636.1	692.2	849.6	970.3	1018.8
80°	444.2	531.5	702.9	838.8	891.6
82.5°	279.2	387.1	570.3	712.7	759.0
85°	142.3	263.1	451.7	597.3	650.1
87.5°	37.7	170.3	351.5	490.6	544.5
90°	1.1	98.1	266.3	400.0	448.5
92.5°	1.1	55.0	198.4	318.1	367.6
95°	1.1	25.9	138.0	250.1	288.9
97.5°	1.1	10.8	94.9	188.7	227.5
100°	1.1	5.4	60.4	136.9	170.3
102.5°	2.2	3.2	37.7	98.1	125.1
105°	2.2	3.2	22.6	66.8	89.5
107.5°	2.2	3.2	12.9	45.3	61.5
110°	3.2	3.2	7.5	28.0	41.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	3.2	4.3	18.3	27.0
115°	3.2	3.2	4.3	11.9	17.3
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)