

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: P518265

Luminaire Tested: HVL8-8-LD4-3HI-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: P518265
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3HI-50-UNV-O-EDD-90
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 5000K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26348.0 lumens
Efficiency: N/A
Efficacy: 104.6 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

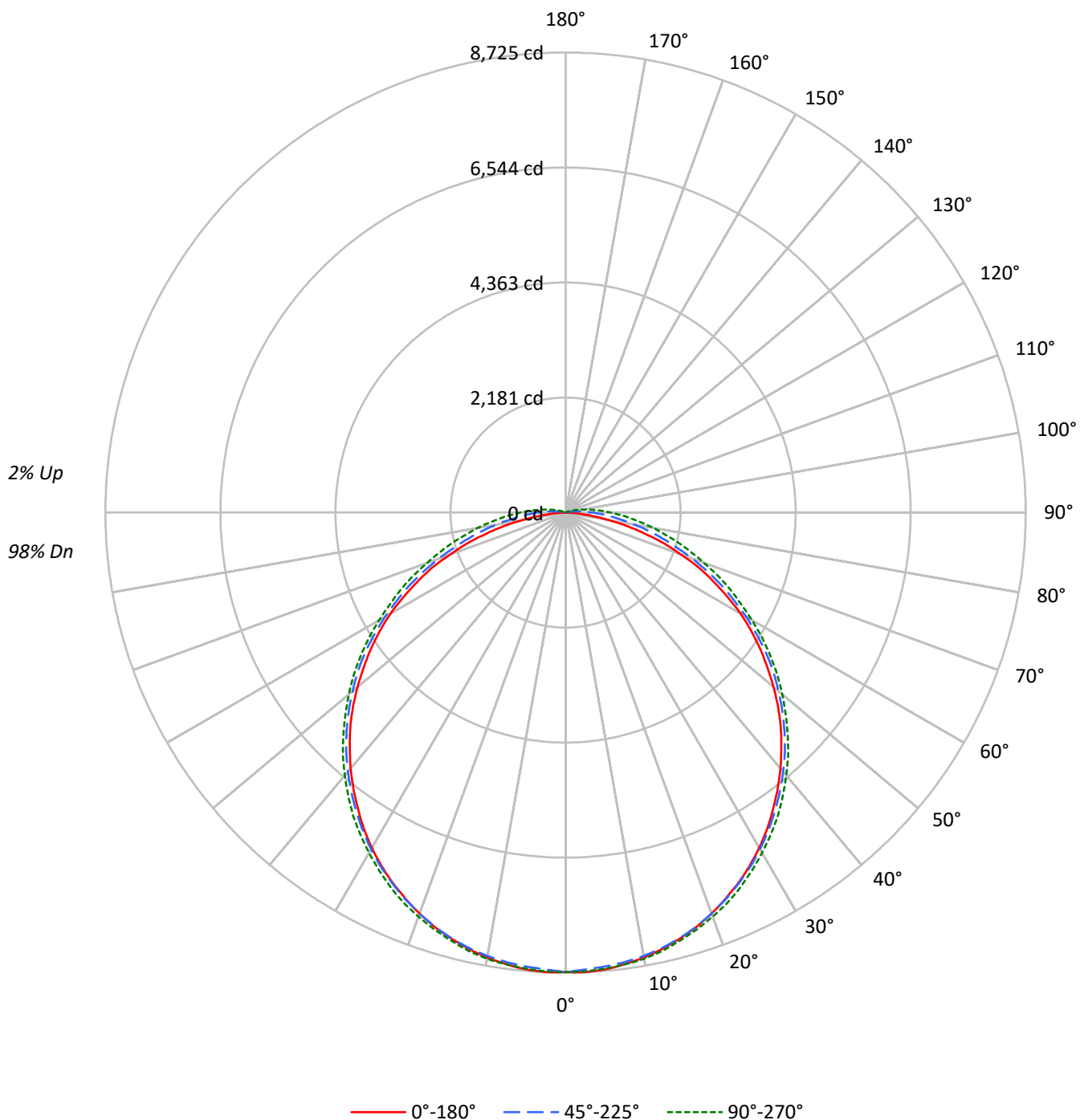
Input Watts (W): 251.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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°	17587	17587	17587
5°	17585	17216	17212
10°	17500	16929	16867
15°	17381	16609	16453
20°	17253	16247	16051
25°	17094	15874	15642
30°	16907	15475	15178
35°	16662	15035	14718
40°	16410	14571	14181
45°	16140	14064	13603
50°	15779	13475	12980
55°	15394	12827	12293
60°	14934	11980	11491
65°	14152	11029	10696
70°	13002	9904	9772
75°	11340	8669	8933
80°	8798	7462	8166
85°	5072	6250	7435

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 16140 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	824.6	3.1
10°-20°	2365.4	9.0
20°-30°	3589.2	13.6
30°-40°	4339.9	16.5
40°-50°	4528.4	17.2
50°-60°	4140.3	15.7
60°-70°	3227.5	12.2
70°-80°	2019.0	7.7
80°-90°	917.0	3.5
90°-100°	307.4	1.2
100°-110°	77.2	0.3
110°-120°	12.2	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°	6779.3	25.7
0°-40°	11119.2	42.2
0°-60°	19787.8	75.1
0°-90°	25951.3	98.5
90°-120°	396.7	1.5
90°-150°	396.7	1.5
90°-180°	397.0	1.5
0°-180°	26348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8714	8714	8714	8714	8714	
5°	8696	8679	8640	8682	8682	826
15°	8365	8380	8357	8404	8402	2361
25°	7751	7757	7765	7831	7843	3572
35°	6861	6892	6921	6991	7020	4295
45°	5773	5824	5871	5929	5958	4448
55°	4505	4558	4643	4710	4741	4025
65°	3096	3149	3258	3388	3441	3063
75°	1567	1664	1906	2134	2214	1671
85°	271	501	861	1138	1239	343
90°	2	187	507	762	855	11
95°	2	49	263	477	551	2
105°	4	6	43	127	170	4
115°	6	6	8	23	33	4
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°	8714.3	8714.3	8714.3	8714.3	8714.3
2.5°	8724.6	8712.3	8673.2	8712.3	8710.2
5°	8695.8	8679.4	8640.4	8681.5	8681.5
7.5°	8638.3	8632.2	8597.2	8644.5	8644.5
10°	8570.5	8568.5	8539.7	8591.1	8593.1
12.5°	8476.0	8484.2	8457.5	8506.8	8513.0
15°	8365.1	8379.5	8356.9	8404.1	8402.1
17.5°	8243.9	8252.1	8235.7	8289.1	8287.0
20°	8093.9	8104.2	8091.9	8147.3	8153.5
22.5°	7927.5	7941.9	7939.9	7997.4	8013.8
25°	7750.9	7757.0	7765.2	7831.0	7843.3
27.5°	7555.7	7566.0	7580.4	7639.9	7652.3
30°	7342.1	7358.5	7374.9	7436.6	7453.0
32.5°	7116.1	7132.5	7153.1	7233.2	7241.4
35°	6861.4	6892.2	6920.9	6990.8	7019.5
37.5°	6606.6	6645.7	6672.4	6746.3	6768.9
40°	6337.5	6376.5	6419.7	6497.7	6512.1
42.5°	6056.1	6101.3	6152.6	6222.5	6247.1
45°	5772.6	5823.9	5871.2	5928.7	5957.5
47.5°	5466.5	5517.8	5575.4	5641.1	5659.6
50°	5150.1	5209.7	5271.3	5333.0	5365.8
52.5°	4825.5	4897.4	4967.3	5033.0	5063.8
55°	4505.1	4558.5	4642.7	4710.5	4741.3
57.5°	4172.3	4217.5	4293.5	4404.4	4420.8
60°	3833.3	3874.4	3952.5	4042.9	4079.8
62.5°	3459.4	3514.9	3597.1	3712.1	3745.0
65°	3095.8	3149.2	3258.1	3387.5	3440.9
67.5°	2744.5	2763.0	2902.7	3038.3	3124.6
70°	2329.6	2399.4	2561.7	2728.1	2793.8
72.5°	1972.1	2042.0	2220.7	2415.9	2498.0
75°	1567.4	1664.0	1906.4	2134.4	2214.5
77.5°	1212.0	1318.9	1618.8	1848.9	1941.3
80°	846.4	1012.8	1339.4	1598.2	1698.9
82.5°	532.1	737.5	1086.7	1357.9	1446.2
85°	271.2	501.2	860.8	1138.1	1238.7
87.5°	71.9	324.6	669.7	934.7	1037.4
90°	2.1	186.9	507.4	762.1	854.6
92.5°	2.1	104.8	378.0	606.0	700.5
95°	2.1	49.3	262.9	476.6	550.6
97.5°	2.1	20.5	180.8	359.5	433.5
100°	2.1	10.3	115.0	260.9	324.6
102.5°	4.1	6.2	71.9	186.9	238.3
105°	4.1	6.2	43.1	127.4	170.5
107.5°	4.1	6.2	24.7	86.3	117.1
110°	6.2	6.2	14.4	53.4	78.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	6.2	8.2	34.9	51.4
115°	6.2	6.2	8.2	22.6	32.9
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)