

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: P518254

Luminaire Tested: HVL8-8-LD4-3HI-30-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: P518254
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3HI-30-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

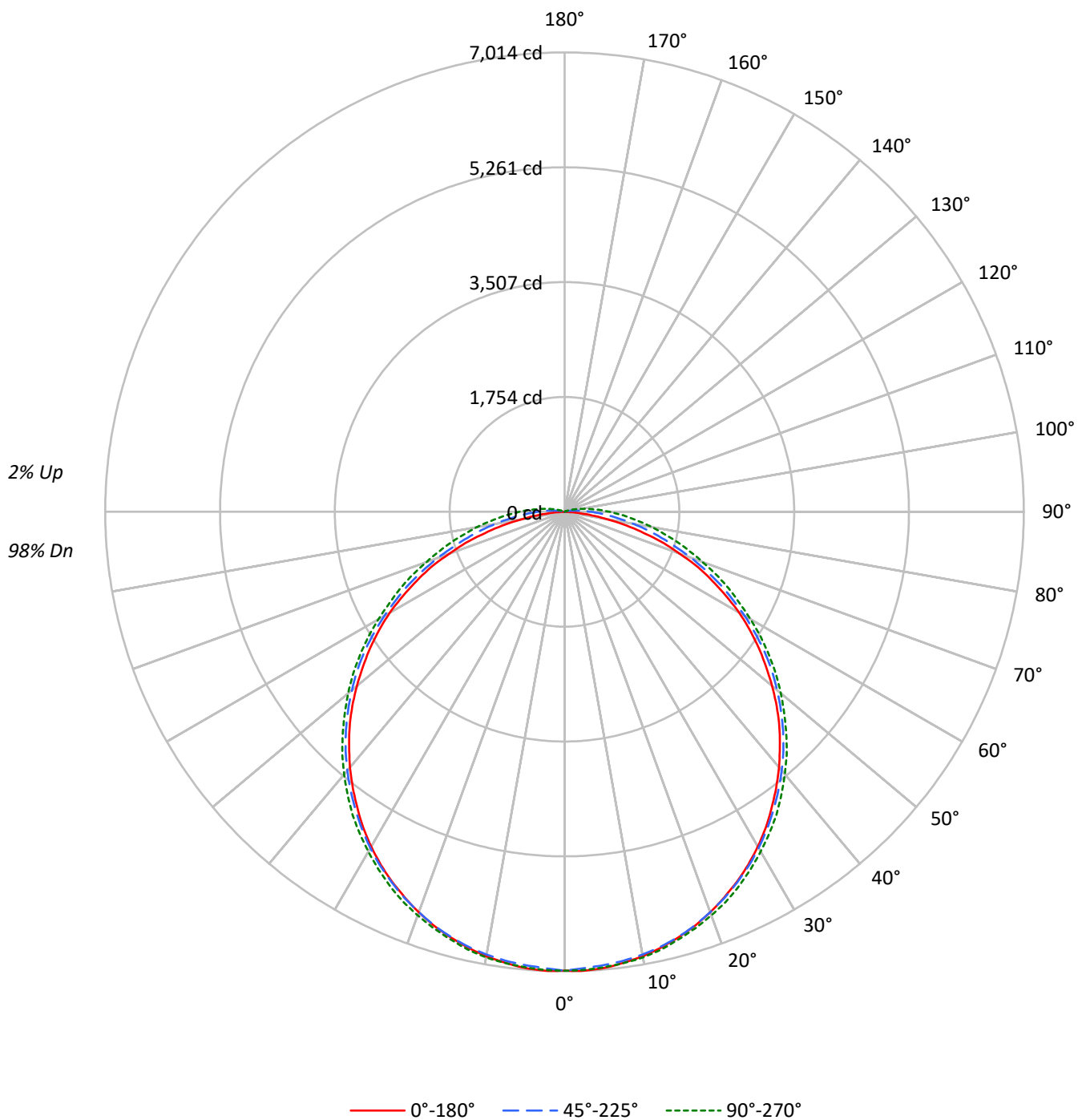
Lumens per Lamp: N/A
Luminaire Lumens: 21181.0 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

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°	14139	14139	14139
5°	14137	13840	13836
10°	14068	13609	13559
15°	13973	13352	13227
20°	13870	13061	12903
25°	13742	12761	12575
30°	13591	12441	12201
35°	13394	12087	11832
40°	13192	11714	11400
45°	12975	11306	10935
50°	12684	10832	10434
55°	12375	10312	9882
60°	12005	9630	9238
65°	11377	8866	8599
70°	10452	7962	7856
75°	9116	6969	7181
80°	7072	5998	6564
85°	4077	5024	5977

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12975 cd/sqm

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CATALOG NUMBER: HVL8-8-LD4-3HI-30-UNV-O-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	662.9	3.1
10°-20°	1901.6	9.0
20°-30°	2885.3	13.6
30°-40°	3488.8	16.5
40°-50°	3640.3	17.2
50°-60°	3328.3	15.7
60°-70°	2594.6	12.2
70°-80°	1623.0	7.7
80°-90°	737.2	3.5
90°-100°	247.1	1.2
100°-110°	62.0	0.3
110°-120°	9.8	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°	5449.8	25.7
0°-40°	8938.6	42.2
0°-60°	15907.3	75.1
0°-90°	20862.1	98.5
90°-120°	318.9	1.5
90°-150°	318.9	1.5
90°-180°	319.0	1.5
0°-180°	21181.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7005	7005	7005	7005	7005	
5°	6990	6977	6946	6979	6979	664
15°	6725	6736	6718	6756	6754	1898
25°	6231	6236	6242	6295	6305	2871
35°	5516	5541	5564	5620	5643	3452
45°	4640	4682	4720	4766	4789	3576
55°	3622	3664	3732	3787	3812	3235
65°	2489	2532	2619	2723	2766	2462
75°	1260	1338	1532	1716	1780	1343
85°	218	403	692	915	996	276
90°	2	150	408	613	687	9
95°	2	40	211	383	443	1
105°	3	5	35	102	137	3
115°	5	5	7	18	26	3
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°	7005.4	7005.4	7005.4	7005.4	7005.4
2.5°	7013.7	7003.7	6972.4	7003.7	7002.1
5°	6990.5	6977.3	6945.9	6979.0	6979.0
7.5°	6944.3	6939.3	6911.3	6949.2	6949.2
10°	6889.8	6888.1	6865.0	6906.3	6908.0
12.5°	6813.8	6820.4	6799.0	6838.6	6843.6
15°	6724.7	6736.2	6718.0	6756.0	6754.4
17.5°	6627.2	6633.8	6620.6	6663.5	6661.9
20°	6506.7	6514.9	6505.0	6549.6	6554.6
22.5°	6372.9	6384.5	6382.8	6429.0	6442.3
25°	6230.9	6235.8	6242.4	6295.3	6305.2
27.5°	6074.0	6082.2	6093.8	6141.7	6151.6
30°	5902.2	5915.4	5928.7	5978.2	5991.4
32.5°	5720.6	5733.8	5750.3	5814.7	5821.3
35°	5515.8	5540.6	5563.7	5619.8	5643.0
37.5°	5311.0	5342.4	5363.9	5423.3	5441.5
40°	5094.7	5126.1	5160.7	5223.5	5235.1
42.5°	4868.4	4904.8	4946.1	5002.2	5022.0
45°	4640.5	4681.8	4719.8	4766.0	4789.2
47.5°	4394.5	4435.8	4482.0	4534.8	4549.7
50°	4140.2	4188.0	4237.6	4287.1	4313.6
52.5°	3879.2	3937.0	3993.2	4046.0	4070.8
55°	3621.6	3664.5	3732.2	3786.7	3811.5
57.5°	3354.1	3390.4	3451.5	3540.7	3553.9
60°	3081.6	3114.6	3177.4	3250.0	3279.8
62.5°	2781.0	2825.6	2891.7	2984.1	3010.6
65°	2488.7	2531.7	2619.2	2723.2	2766.2
67.5°	2206.3	2221.2	2333.5	2442.5	2511.8
70°	1872.7	1928.9	2059.3	2193.1	2246.0
72.5°	1585.4	1641.5	1785.2	1942.1	2008.1
75°	1260.0	1337.7	1532.5	1715.8	1780.2
77.5°	974.3	1060.2	1301.3	1486.3	1560.6
80°	680.4	814.2	1076.7	1284.8	1365.7
82.5°	427.7	592.9	873.6	1091.6	1162.6
85°	218.0	403.0	692.0	914.9	995.8
87.5°	57.8	260.9	538.4	751.4	834.0
90°	1.7	150.3	407.9	612.7	687.0
92.5°	1.7	84.2	303.9	487.2	563.1
95°	1.7	39.6	211.4	383.1	442.6
97.5°	1.7	16.5	145.3	289.0	348.5
100°	1.7	8.3	92.5	209.7	260.9
102.5°	3.3	5.0	57.8	150.3	191.6
105°	3.3	5.0	34.7	102.4	137.1
107.5°	3.3	5.0	19.8	69.4	94.1
110°	5.0	5.0	11.6	42.9	62.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	5.0	6.6	28.1	41.3
115°	5.0	5.0	6.6	18.2	26.4
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)