

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: P518297

Luminaire Tested: HVL8-8-LD4-3STD-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: P518297
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3STD-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: 20474.0 lumens
Efficiency: N/A
Efficacy: 107.2 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

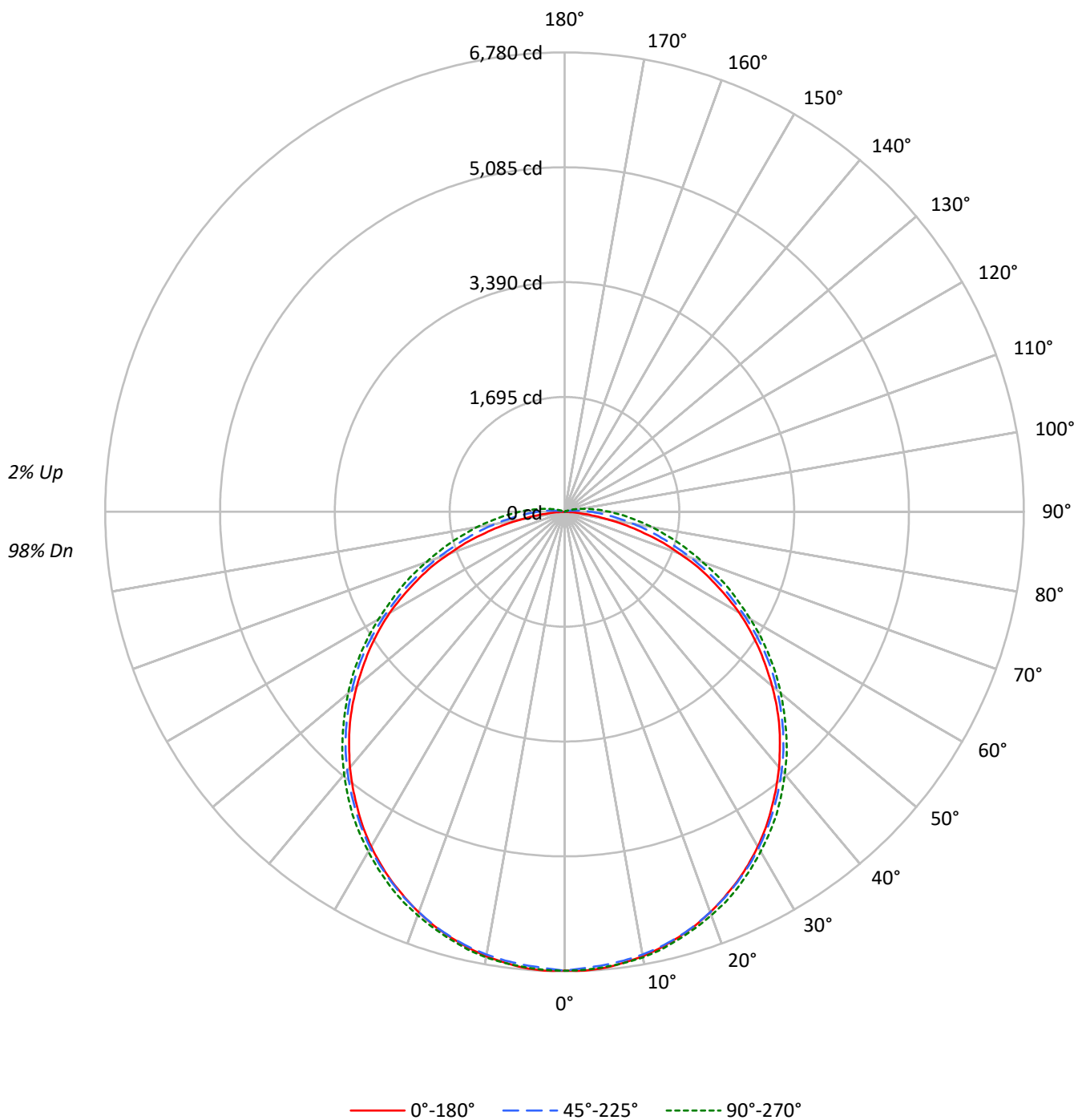
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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°	13667	13667	13667
5°	13665	13378	13374
10°	13598	13155	13107
15°	13506	12906	12785
20°	13407	12625	12473
25°	13283	12335	12155
30°	13138	12025	11794
35°	12947	11683	11437
40°	12751	11323	11020
45°	12542	10928	10570
50°	12261	10471	10086
55°	11962	9968	9553
60°	11605	9309	8929
65°	10997	8570	8312
70°	10103	7696	7594
75°	8812	6736	6941
80°	6836	5798	6346
85°	3941	4857	5778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12542 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	640.8	3.1
10°-20°	1838.1	9.0
20°-30°	2789.0	13.6
30°-40°	3372.4	16.5
40°-50°	3518.8	17.2
50°-60°	3217.2	15.7
60°-70°	2508.0	12.2
70°-80°	1568.9	7.7
80°-90°	712.6	3.5
90°-100°	238.8	1.2
100°-110°	60.0	0.3
110°-120°	9.5	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°	5267.9	25.7
0°-40°	8640.3	42.2
0°-60°	15376.3	75.1
0°-90°	20165.8	98.5
90°-120°	308.2	1.5
90°-150°	308.2	1.5
90°-180°	308.0	1.5
0°-180°	20474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6772	6772	6772	6772	6772	
5°	6757	6744	6714	6746	6746	642
15°	6500	6511	6494	6530	6529	1835
25°	6023	6028	6034	6085	6095	2775
35°	5332	5356	5378	5432	5455	3337
45°	4486	4526	4562	4607	4629	3456
55°	3501	3542	3608	3660	3684	3127
65°	2406	2447	2532	2632	2674	2380
75°	1218	1293	1481	1659	1721	1298
85°	211	390	669	884	963	267
90°	2	145	394	592	664	8
95°	2	38	204	370	428	1
105°	3	5	34	99	132	3
115°	5	5	6	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°	6771.6	6771.6	6771.6	6771.6	6771.6
2.5°	6779.5	6770.0	6739.6	6770.0	6768.4
5°	6757.2	6744.4	6714.1	6746.0	6746.0
7.5°	6712.5	6707.7	6680.6	6717.3	6717.3
10°	6659.8	6658.2	6635.9	6675.8	6677.4
12.5°	6586.4	6592.8	6572.0	6610.3	6615.1
15°	6500.2	6511.4	6493.8	6530.5	6528.9
17.5°	6406.0	6412.4	6399.6	6441.1	6439.5
20°	6289.5	6297.5	6287.9	6331.0	6335.8
22.5°	6160.2	6171.3	6169.8	6214.4	6227.2
25°	6022.9	6027.7	6034.1	6085.1	6094.7
27.5°	5871.2	5879.2	5890.4	5936.7	5946.3
30°	5705.2	5718.0	5730.8	5778.7	5791.4
32.5°	5529.6	5542.4	5558.4	5620.6	5627.0
35°	5331.7	5355.6	5378.0	5432.3	5454.6
37.5°	5133.7	5164.1	5184.8	5242.3	5259.9
40°	4924.6	4955.0	4988.5	5049.1	5060.3
42.5°	4705.9	4741.1	4781.0	4835.2	4854.4
45°	4485.6	4525.5	4562.3	4607.0	4629.3
47.5°	4247.8	4287.7	4332.4	4383.5	4397.8
50°	4002.0	4048.3	4096.1	4144.0	4169.6
52.5°	3749.7	3805.6	3859.9	3911.0	3934.9
55°	3500.7	3542.2	3607.7	3660.3	3684.3
57.5°	3242.1	3277.2	3336.3	3422.5	3435.3
60°	2978.7	3010.6	3071.3	3141.5	3170.3
62.5°	2688.2	2731.3	2795.1	2884.5	2910.1
65°	2405.6	2447.1	2531.8	2632.3	2673.8
67.5°	2132.7	2147.0	2255.6	2360.9	2428.0
70°	1810.2	1864.5	1990.6	2119.9	2171.0
72.5°	1532.5	1586.7	1725.6	1877.3	1941.1
75°	1218.0	1293.0	1481.4	1658.6	1720.8
77.5°	941.8	1024.8	1257.9	1436.7	1508.5
80°	657.7	787.0	1040.8	1241.9	1320.2
82.5°	413.4	573.1	844.4	1055.2	1123.8
85°	210.7	389.5	668.9	884.4	962.6
87.5°	55.9	252.2	520.4	726.3	806.1
90°	1.6	145.3	394.3	592.2	664.1
92.5°	1.6	81.4	293.7	470.9	544.3
95°	1.6	38.3	204.3	370.3	427.8
97.5°	1.6	16.0	140.5	279.4	336.8
100°	1.6	8.0	89.4	202.7	252.2
102.5°	3.2	4.8	55.9	145.3	185.2
105°	3.2	4.8	33.5	99.0	132.5
107.5°	3.2	4.8	19.2	67.0	91.0
110°	4.8	4.8	11.2	41.5	60.7

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	4.8	6.4	27.1	39.9
115°	4.8	4.8	6.4	17.6	25.5
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)