

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: P518194

Luminaire Tested: HVL8-8-LD4-1STD-35-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: P518194
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-1STD-35-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3500K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5569.0 lumens
Efficiency: N/A
Efficacy: 85.4 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

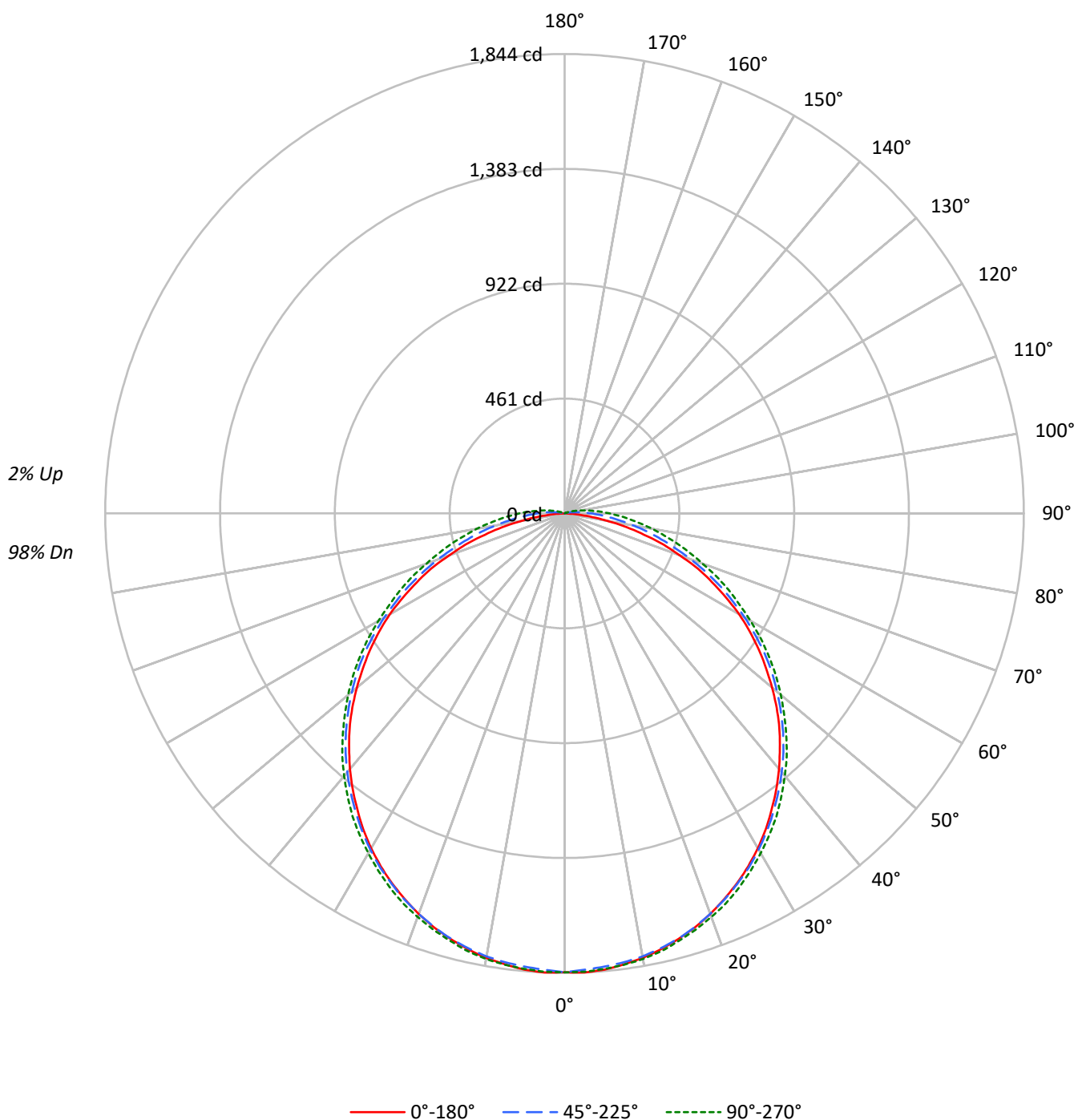
Input Watts (W): 65.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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°	3717	3717	3717
5°	3717	3639	3638
10°	3699	3578	3565
15°	3674	3510	3478
20°	3647	3434	3393
25°	3613	3355	3306
30°	3573	3271	3208
35°	3522	3178	3111
40°	3468	3080	2997
45°	3411	2973	2875
50°	3335	2848	2743
55°	3254	2711	2598
60°	3156	2532	2429
65°	2991	2331	2261
70°	2748	2094	2065
75°	2397	1832	1888
80°	1860	1577	1726
85°	1072	1321	1571

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3411 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.3	3.1
10°-20°	500.0	9.0
20°-30°	758.6	13.6
30°-40°	917.3	16.5
40°-50°	957.1	17.2
50°-60°	875.1	15.7
60°-70°	682.2	12.2
70°-80°	426.7	7.7
80°-90°	193.8	3.5
90°-100°	64.9	1.2
100°-110°	16.3	0.3
110°-120°	2.6	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°	1432.9	25.7
0°-40°	2350.2	42.2
0°-60°	4182.4	75.1
0°-90°	5485.1	98.5
90°-120°	83.8	1.5
90°-150°	83.8	1.5
90°-180°	84.0	1.5
0°-180°	5569.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1842	1842	1842	1842	1842	
5°	1838	1834	1826	1835	1835	175
15°	1768	1771	1766	1776	1776	499
25°	1638	1640	1641	1655	1658	755
35°	1450	1457	1463	1478	1484	908
45°	1220	1231	1241	1253	1259	940
55°	952	964	981	996	1002	851
65°	654	666	689	716	727	647
75°	331	352	403	451	468	353
85°	57	106	182	240	262	73
90°	0	40	107	161	181	2
95°	0	10	56	101	116	0
105°	1	1	9	27	36	1
115°	1	1	2	5	7	1
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°	1841.9	1841.9	1841.9	1841.9	1841.9
2.5°	1844.1	1841.5	1833.2	1841.5	1841.0
5°	1838.0	1834.5	1826.3	1834.9	1834.9
7.5°	1825.8	1824.5	1817.1	1827.1	1827.1
10°	1811.5	1811.1	1805.0	1815.8	1816.3
12.5°	1791.5	1793.3	1787.6	1798.0	1799.3
15°	1768.1	1771.1	1766.3	1776.3	1775.9
17.5°	1742.5	1744.2	1740.7	1752.0	1751.6
20°	1710.8	1712.9	1710.3	1722.0	1723.4
22.5°	1675.6	1678.6	1678.2	1690.4	1693.8
25°	1638.2	1639.6	1641.3	1655.2	1657.8
27.5°	1597.0	1599.2	1602.2	1614.8	1617.4
30°	1551.8	1555.3	1558.8	1571.8	1575.3
32.5°	1504.1	1507.6	1511.9	1528.8	1530.6
35°	1450.2	1456.8	1462.8	1477.6	1483.7
37.5°	1396.4	1404.6	1410.3	1425.9	1430.7
40°	1339.5	1347.8	1356.9	1373.4	1376.4
42.5°	1280.0	1289.6	1300.4	1315.2	1320.4
45°	1220.1	1231.0	1241.0	1253.1	1259.2
47.5°	1155.4	1166.3	1178.4	1192.3	1196.2
50°	1088.5	1101.1	1114.2	1127.2	1134.1
52.5°	1019.9	1035.1	1049.9	1063.8	1070.3
55°	952.2	963.5	981.3	995.6	1002.1
57.5°	881.9	891.4	907.5	930.9	934.4
60°	810.2	818.9	835.4	854.5	862.3
62.5°	731.2	742.9	760.3	784.6	791.6
65°	654.3	665.6	688.6	716.0	727.3
67.5°	580.1	584.0	613.5	642.2	660.4
70°	492.4	507.1	541.5	576.6	590.5
72.5°	416.8	431.6	469.4	510.6	528.0
75°	331.3	351.7	402.9	451.1	468.1
77.5°	256.2	278.8	342.2	390.8	410.3
80°	178.9	214.1	283.1	337.8	359.1
82.5°	112.5	155.9	229.7	287.0	305.7
85°	57.3	105.9	181.9	240.5	261.8
87.5°	15.2	68.6	141.6	197.6	219.3
90°	0.4	39.5	107.2	161.1	180.6
92.5°	0.4	22.1	79.9	128.1	148.1
95°	0.4	10.4	55.6	100.7	116.4
97.5°	0.4	4.3	38.2	76.0	91.6
100°	0.4	2.2	24.3	55.1	68.6
102.5°	0.9	1.3	15.2	39.5	50.4
105°	0.9	1.3	9.1	26.9	36.0
107.5°	0.9	1.3	5.2	18.2	24.7
110°	1.3	1.3	3.0	11.3	16.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	1.3	1.7	7.4	10.9
115°	1.3	1.3	1.7	4.8	6.9
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)