

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: P518174

Luminaire Tested: HVL8-8-LD4-1LO-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: P518174
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-1LO-30-UNV-O-EDD
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

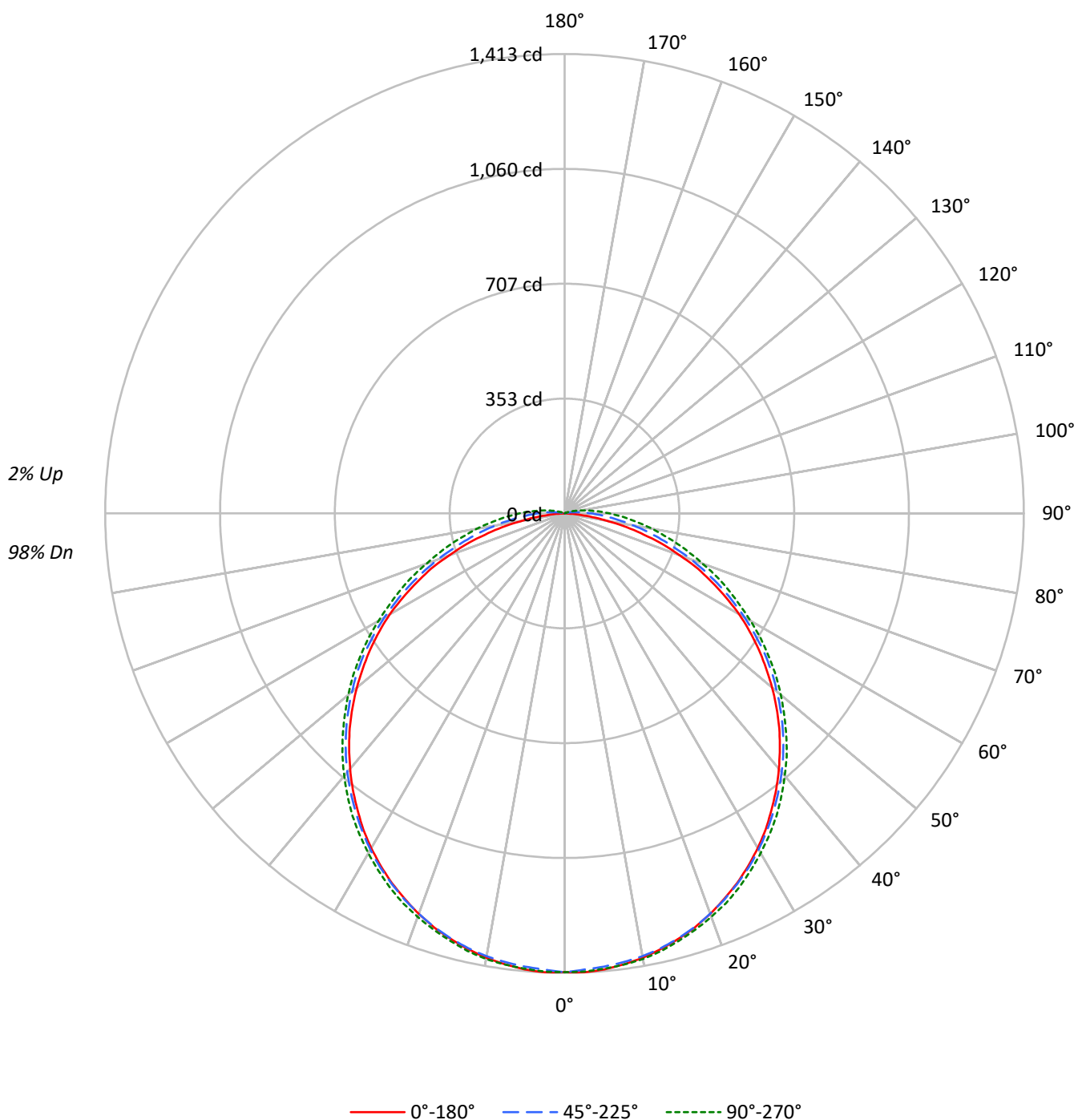
Lumens per Lamp: N/A
Luminaire Lumens: 4266.1 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

Input Watts (W): 46
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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CATALOG NUMBER: HVL8-8-LD4-1LO-30-UNV-O-EDD

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
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110		105	105	105		101
1	108	102	98	94	105	100	96	92	95	92	89		91	88	86		87
2	98	89	82	76	95	87	80	75	83	77	73		79	75	71		76
3	89	78	69	63	86	76	68	62	73	66	61		70	64	59		67
4	81	69	60	53	79	67	59	52	65	57	52		62	56	51		60
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		54
6	69	55	46	40	67	54	46	39	52	45	39		50	44	38		49
7	64	50	41	35	62	49	41	35	47	40	34		46	39	34		44
8	59	46	37	31	58	45	37	31	43	36	31		42	35	30		41
9	55	42	34	28	54	41	33	28	40	33	28		39	32	27		38
10	52	39	31	25	51	38	30	25	37	30	25		36	29	25		35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2848	2848	2848
5°	2847	2788	2787
10°	2833	2741	2731
15°	2814	2689	2664
20°	2793	2631	2599
25°	2768	2570	2533
30°	2738	2506	2457
35°	2698	2434	2383
40°	2657	2359	2296
45°	2613	2277	2202
50°	2555	2182	2102
55°	2492	2077	1990
60°	2418	1939	1861
65°	2291	1786	1732
70°	2105	1604	1582
75°	1836	1404	1446
80°	1424	1208	1322
85°	821	1012	1204

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2613 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.5	3.1
10°-20°	383.0	9.0
20°-30°	581.1	13.6
30°-40°	702.7	16.5
40°-50°	733.2	17.2
50°-60°	670.4	15.7
60°-70°	522.6	12.2
70°-80°	326.9	7.7
80°-90°	148.5	3.5
90°-100°	49.8	1.2
100°-110°	12.5	0.3
110°-120°	2.0	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°	1097.6	25.7
0°-40°	1800.3	42.2
0°-60°	3203.9	75.1
0°-90°	4201.8	98.5
90°-120°	64.2	1.5
90°-150°	64.2	1.5
90°-180°	64.0	1.5
0°-180°	4266.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1411	1411	1411	1411	1411	
5°	1408	1405	1399	1406	1406	134
15°	1354	1357	1353	1361	1360	382
25°	1255	1256	1257	1268	1270	578
35°	1111	1116	1121	1132	1136	695
45°	935	943	951	960	965	720
55°	729	738	752	763	768	652
65°	501	510	528	548	557	496
75°	254	269	309	346	359	271
85°	44	81	139	184	201	56
90°	0	30	82	123	138	2
95°	0	8	43	77	89	0
105°	1	1	7	21	28	1
115°	1	1	1	4	5	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

TEST NUMBER: P518174

CATALOG NUMBER: HVL8-8-LD4-1LO-30-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1410.9	1410.9	1410.9	1410.9	1410.9
2.5°	1412.6	1410.6	1404.3	1410.6	1410.3
5°	1407.9	1405.3	1399.0	1405.6	1405.6
7.5°	1398.6	1397.6	1392.0	1399.6	1399.6
10°	1387.7	1387.3	1382.7	1391.0	1391.3
12.5°	1372.4	1373.7	1369.4	1377.3	1378.3
15°	1354.4	1356.7	1353.1	1360.7	1360.4
17.5°	1334.8	1336.1	1333.4	1342.1	1341.8
20°	1310.5	1312.1	1310.2	1319.1	1320.1
22.5°	1283.5	1285.9	1285.5	1294.9	1297.5
25°	1254.9	1255.9	1257.3	1267.9	1269.9
27.5°	1223.3	1225.0	1227.3	1237.0	1239.0
30°	1188.8	1191.4	1194.1	1204.1	1206.7
32.5°	1152.2	1154.8	1158.2	1171.1	1172.5
35°	1110.9	1115.9	1120.6	1131.9	1136.5
37.5°	1069.7	1076.0	1080.3	1092.3	1096.0
40°	1026.1	1032.4	1039.4	1052.0	1054.4
42.5°	980.5	987.9	996.2	1007.5	1011.5
45°	934.6	943.0	950.6	959.9	964.6
47.5°	885.1	893.4	902.7	913.3	916.3
50°	833.9	843.5	853.5	863.5	868.8
52.5°	781.3	792.9	804.3	814.9	819.9
55°	729.4	738.1	751.7	762.7	767.7
57.5°	675.5	682.9	695.2	713.1	715.8
60°	620.7	627.3	639.9	654.6	660.6
62.5°	560.1	569.1	582.4	601.0	606.3
65°	501.2	509.9	527.5	548.5	557.1
67.5°	444.4	447.4	470.0	491.9	505.9
70°	377.2	388.5	414.8	441.7	452.4
72.5°	319.3	330.6	359.6	391.2	404.5
75°	253.8	269.4	308.7	345.6	358.6
77.5°	196.2	213.5	262.1	299.3	314.3
80°	137.0	164.0	216.9	258.8	275.1
82.5°	86.1	119.4	176.0	219.9	234.2
85°	43.9	81.2	139.4	184.3	200.6
87.5°	11.6	52.6	108.4	151.3	168.0
90°	0.3	30.3	82.2	123.4	138.4
92.5°	0.3	17.0	61.2	98.1	113.4
95°	0.3	8.0	42.6	77.2	89.1
97.5°	0.3	3.3	29.3	58.2	70.2
100°	0.3	1.7	18.6	42.2	52.6
102.5°	0.7	1.0	11.6	30.3	38.6
105°	0.7	1.0	7.0	20.6	27.6
107.5°	0.7	1.0	4.0	14.0	19.0
110°	1.0	1.0	2.3	8.6	12.6

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CATALOG NUMBER: HVL8-8-LD4-1LO-30-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	1.0	1.3	5.7	8.3
115°	1.0	1.0	1.3	3.7	5.3
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)