

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P520570

Luminaire Tested: **4WSLA-200-L935-UNV-U**

Issue Date: 5/3/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P520570
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-689-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4WSLA-200-L935-UNV-U
Description: 4 FOOT, 2000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3500K, 90 CRI
LEDS WITH NO UPLIGHT
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

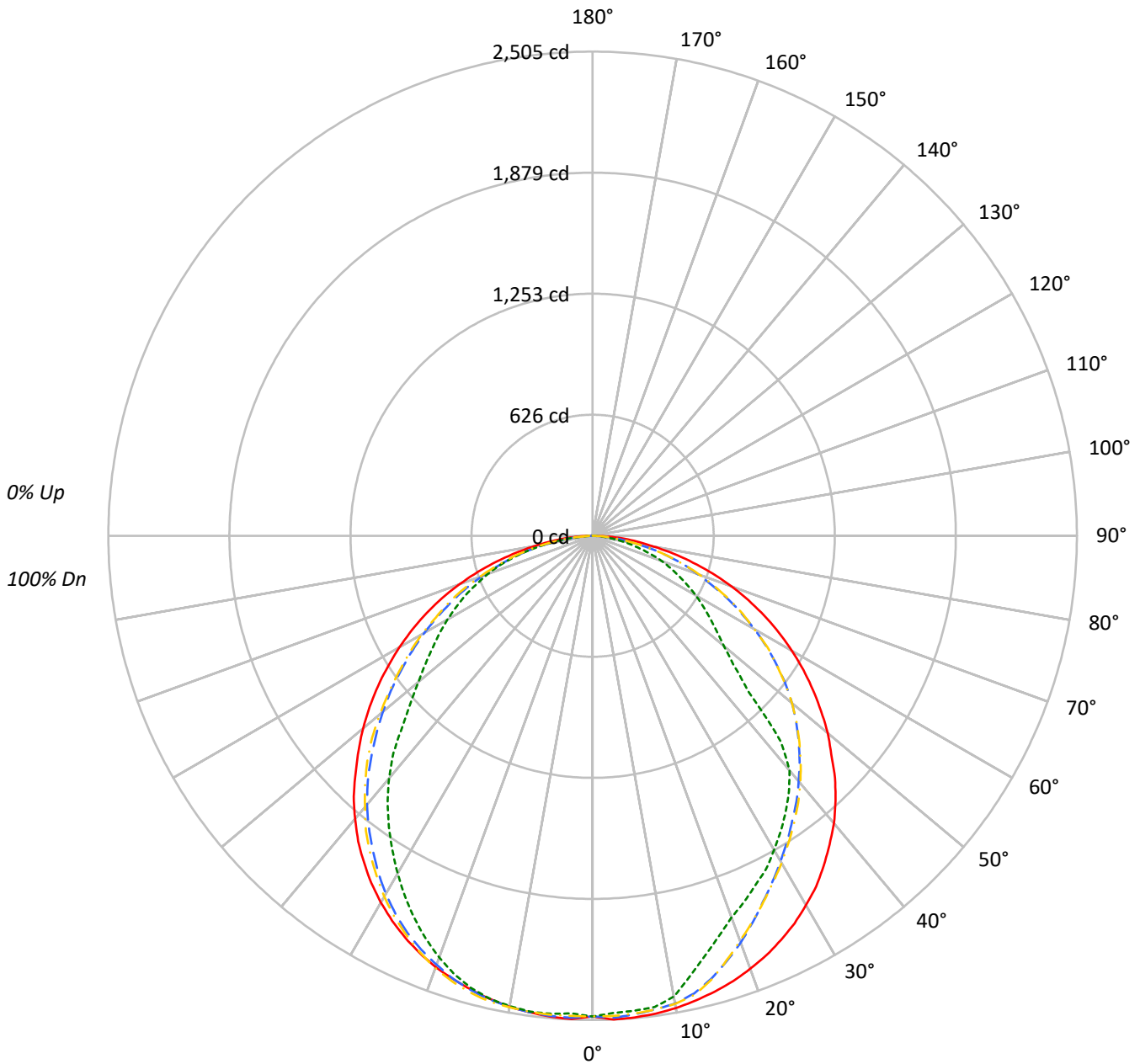
Lumens per Lamp: N/A
Luminaire Lumens: 6671.0 lumens
Efficiency: N/A
Efficacy: 87.4 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 76.3
Input Voltage (V): NR
Input Current (A_{in}): 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: 25 FT

TEST NUMBER: P520570

CATALOG NUMBER: 4WSLA-200-L935-UNV-U

Luminous Intensity Polar Plot





TEST NUMBER: P520570

CATALOG NUMBER: 4WSLA-200-L935-UNV-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																			
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51																			
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44																			
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39																			
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																			
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31																			
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28																			
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	13383	13383	13383	13383
5°	13514	13326	13492	13413
10°	13561	13225	13524	13502
15°	13603	12525	13543	13499
20°	13654	12034	13601	13295
25°	13697	11836	13626	12961
30°	13713	11665	13614	12535
35°	13691	11439	13551	12069
40°	13647	11135	13431	11510
45°	13495	8651	13190	10560
50°	13293	7406	12969	9852
55°	13056	6935	12718	9476
60°	12809	6620	12422	9319
65°	12504	6269	12079	9209
70°	12008	5962	11504	9069
75°	11179	5242	10653	8628
80°	9924	4382	9304	7318
85°	9392	3131	8238	4199



TEST NUMBER: P520570

CATALOG NUMBER: 4WSLA-200-L935-UNV-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.3	3.5
10°-20°	673.9	10.1
20°-30°	1007.0	15.1
30°-40°	1198.7	18.0
40°-50°	1198.2	18.0
50°-60°	1031.0	15.5
60°-70°	776.0	11.6
70°-80°	442.2	6.6
80°-90°	107.6	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	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°	1917.2	28.7
0°-40°	3115.9	46.7
0°-60°	5345.2	80.1
0°-90°	6671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6671.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2487	2487	2487	2487	2487	
5°	2501	2467	2497	2483	2501	238
15°	2441	2248	2431	2423	2441	690
25°	2307	1993	2295	2183	2307	1064
35°	2084	1741	2062	1837	2084	1304
45°	1773	1137	1733	1387	1773	1365
55°	1391	739	1355	1010	1391	1244
65°	982	492	948	723	982	970
75°	538	252	512	415	538	569
85°	152	51	133	68	152	166
90°	0	0	0	0	0	



TEST NUMBER: P520570

CATALOG NUMBER: 4WSLA-200-L935-UNV-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7
2.5°	2505.4	2482.7	2496.1	2492.1	2470.7	2478.7	2486.7	2478.7	2502.7	2481.4	2496.1
5°	2501.4	2477.4	2485.4	2477.4	2466.7	2469.4	2481.4	2473.4	2497.4	2474.7	2493.4
7.5°	2493.4	2464.0	2472.1	2468.1	2458.7	2460.0	2472.1	2465.4	2486.7	2465.4	2486.7
10°	2481.4	2450.7	2457.4	2440.0	2420.0	2434.7	2458.7	2452.0	2474.7	2450.7	2474.7
12.5°	2462.7	2432.0	2425.4	2368.0	2332.0	2360.0	2433.4	2433.4	2454.7	2432.0	2457.4
15°	2441.4	2408.0	2372.0	2285.3	2247.9	2275.9	2377.3	2412.0	2430.7	2408.0	2433.4
17.5°	2416.0	2377.3	2308.0	2206.6	2171.9	2199.9	2304.0	2380.0	2404.0	2380.0	2402.7
20°	2384.0	2338.6	2239.9	2123.9	2101.2	2126.5	2230.6	2341.3	2374.7	2345.3	2361.3
22.5°	2349.3	2294.6	2163.9	2059.8	2049.1	2065.2	2159.9	2293.3	2337.3	2306.6	2317.3
25°	2306.6	2242.6	2087.8	2001.1	1993.1	2002.5	2090.5	2237.3	2294.6	2262.6	2266.6
27.5°	2261.3	2191.9	2015.8	1951.8	1943.8	1947.8	2021.1	2174.6	2245.3	2213.2	2206.6
30°	2206.6	2131.9	1943.8	1885.1	1877.1	1891.7	1954.4	2110.5	2190.6	2158.5	2138.5
32.5°	2151.9	2066.5	1873.1	1827.7	1811.7	1825.0	1885.1	2043.8	2130.5	2097.2	2063.8
35°	2083.8	1997.1	1799.7	1754.3	1741.0	1755.7	1815.7	1974.4	2062.5	2029.1	1983.8
37.5°	2013.1	1923.7	1733.0	1691.6	1667.6	1684.9	1745.0	1902.4	1991.8	1957.1	1901.1
40°	1942.4	1846.4	1658.3	1615.6	1584.9	1610.2	1671.6	1826.4	1911.7	1879.7	1815.7
42.5°	1859.7	1769.0	1584.9	1524.9	1438.1	1519.5	1592.9	1750.3	1829.0	1798.3	1721.0
45°	1773.0	1686.3	1507.5	1362.1	1136.6	1375.4	1512.8	1670.3	1733.0	1703.6	1619.6
47.5°	1674.3	1600.9	1428.8	1207.3	988.6	1220.7	1431.5	1594.2	1642.3	1610.2	1516.9
50°	1587.6	1515.5	1346.1	1076.6	884.5	1091.3	1344.8	1508.8	1548.9	1519.5	1415.5
52.5°	1488.8	1426.1	1256.7	960.5	807.1	975.2	1254.0	1420.8	1452.8	1418.1	1314.1
55°	1391.4	1335.4	1162.0	857.8	739.1	871.2	1159.3	1330.1	1355.4	1315.4	1207.3
57.5°	1292.7	1242.0	1064.6	765.8	676.4	780.4	1071.3	1236.7	1254.0	1203.3	1104.6
60°	1190.0	1147.3	965.9	684.4	615.0	696.4	963.2	1143.3	1154.0	1099.3	1004.6
62.5°	1087.3	1048.6	867.2	609.7	552.3	617.7	873.8	1044.6	1051.3	999.2	901.8
65°	981.9	945.9	771.1	531.0	492.3	544.3	777.8	941.9	948.5	889.8	801.8
67.5°	872.5	843.1	668.4	470.9	434.9	474.9	681.7	837.8	841.8	784.4	704.4
70°	763.1	737.7	577.7	405.6	378.9	406.9	587.0	723.1	731.1	669.7	605.7
72.5°	651.0	631.0	489.6	337.5	313.5	337.5	494.9	617.7	623.0	572.3	509.6
75°	537.6	523.0	400.2	270.8	252.1	269.5	402.9	512.3	512.3	464.3	414.9
77.5°	428.2	417.6	306.8	208.1	194.8	205.4	308.2	405.6	402.9	365.5	326.9
80°	320.2	312.2	220.1	150.8	141.4	146.7	220.1	300.2	300.2	273.5	226.8
82.5°	229.5	220.1	145.4	98.7	93.4	96.1	142.7	209.5	213.5	193.4	153.4
85°	152.1	130.7	78.7	54.7	50.7	52.0	74.7	121.4	133.4	112.1	80.0
87.5°	66.7	44.0	20.0	8.0	4.0	5.3	16.0	38.7	50.7	33.4	10.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P520570

CATALOG NUMBER: 4WSLA-200-L935-UNV-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7
2.5°	2494.7	2473.4	2481.4	2486.7	2481.4	2505.4
5°	2492.1	2482.7	2481.4	2488.1	2477.4	2501.4
7.5°	2488.1	2482.7	2481.4	2484.1	2470.7	2493.4
10°	2478.7	2470.7	2473.4	2477.4	2460.0	2481.4
12.5°	2461.4	2453.4	2454.7	2468.1	2444.0	2462.7
15°	2432.0	2422.7	2432.0	2446.7	2425.4	2441.4
17.5°	2393.3	2378.7	2394.7	2417.4	2401.3	2416.0
20°	2344.0	2321.3	2338.6	2380.0	2365.3	2384.0
22.5°	2283.9	2255.9	2273.3	2333.3	2329.3	2349.3
25°	2215.9	2182.6	2206.6	2279.9	2288.0	2306.6
27.5°	2139.9	2102.5	2134.5	2221.2	2239.9	2261.3
30°	2057.2	2017.1	2054.5	2155.9	2183.9	2206.6
32.5°	1971.8	1927.7	1970.4	2082.5	2122.5	2151.9
35°	1882.4	1837.0	1885.1	2006.5	2054.5	2083.8
37.5°	1786.3	1742.3	1794.3	1926.4	1983.8	2013.1
40°	1687.6	1638.3	1697.0	1831.7	1907.7	1942.4
42.5°	1586.2	1524.9	1596.9	1742.3	1825.0	1859.7
45°	1472.8	1387.4	1484.8	1647.6	1734.3	1773.0
47.5°	1359.4	1274.0	1372.8	1546.2	1639.6	1674.3
50°	1250.0	1176.7	1255.4	1435.5	1543.5	1587.6
52.5°	1150.0	1089.9	1156.6	1327.4	1444.8	1488.8
55°	1056.6	1009.9	1064.6	1220.7	1340.8	1391.4
57.5°	968.5	939.2	976.5	1119.3	1244.7	1292.7
60°	885.8	865.8	892.5	1019.2	1131.3	1190.0
62.5°	804.5	793.8	813.8	913.8	1025.9	1087.3
65°	725.7	723.1	733.7	821.8	915.2	981.9
67.5°	647.0	645.7	652.4	724.4	807.1	872.5
70°	568.3	576.3	572.3	619.0	699.1	763.1
72.5°	488.3	500.3	493.6	523.0	600.3	651.0
75°	398.9	414.9	401.6	434.9	482.9	537.6
77.5°	306.8	324.2	308.2	337.5	389.6	428.2
80°	220.1	236.1	222.8	245.5	290.8	320.2
82.5°	138.7	150.8	140.1	162.8	208.1	229.5
85°	61.4	68.0	70.7	88.0	128.1	152.1
87.5°	2.7	1.3	2.7	17.3	45.4	66.7
90°	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°









(END OF REPORT)