

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: P520561

Luminaire Tested: **4WSLA-200-L840-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: P520561
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-L840-UNV-U
Description: 4 FOOT, 2000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 4000K, 80 CRI
LEDS WITH NO UPLIGHT
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

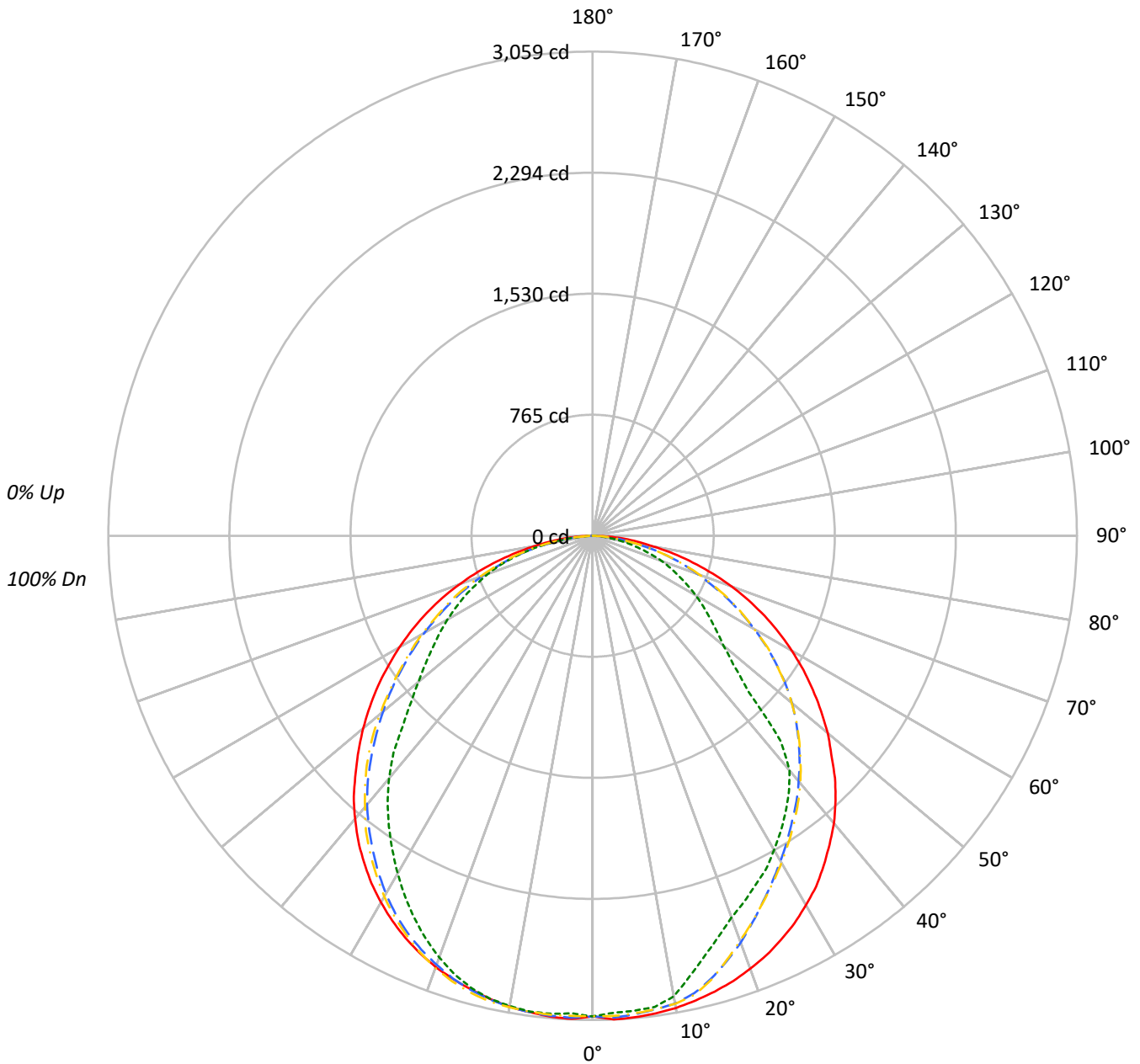
Lumens per Lamp: N/A
Luminaire Lumens: 8145.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')
CIE Type: Direct

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

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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			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°	16341	16341	16341	16341
5°	16500	16271	16473	16377
10°	16557	16147	16512	16486
15°	16608	15292	16536	16481
20°	16671	14693	16606	16232
25°	16724	14451	16637	15824
30°	16743	14243	16621	15305
35°	16716	13966	16545	14736
40°	16662	13595	16399	14053
45°	16476	10563	16105	12893
50°	16229	9042	15834	12029
55°	15941	8467	15528	11569
60°	15639	8083	15166	11379
65°	15266	7654	14748	11242
70°	14661	7279	14046	11073
75°	13649	6403	13007	10534
80°	12115	5353	11359	8935
85°	11467	3822	10059	5132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.5	3.5
10°-20°	822.8	10.1
20°-30°	1229.5	15.1
30°-40°	1463.6	18.0
40°-50°	1462.9	18.0
50°-60°	1258.8	15.5
60°-70°	947.5	11.6
70°-80°	539.9	6.6
80°-90°	131.4	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°	2340.9	28.7
0°-40°	3804.4	46.7
0°-60°	6526.2	80.1
0°-90°	8145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8145.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3036	3036	3036	3036	3036	
5°	3054	3012	3049	3031	3054	291
15°	2981	2745	2968	2958	2981	842
25°	2816	2434	2802	2665	2816	1299
35°	2544	2126	2518	2243	2544	1592
45°	2165	1388	2116	1694	2165	1667
55°	1699	902	1655	1233	1699	1519
65°	1199	601	1158	883	1199	1184
75°	656	308	626	507	656	695
85°	186	62	163	83	186	202
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2
2.5°	3059.0	3031.3	3047.6	3042.7	3016.6	3026.4	3036.2	3026.4	3055.7	3029.7	3047.6
5°	3054.1	3024.8	3034.6	3024.8	3011.8	3015.0	3029.7	3019.9	3049.2	3021.5	3044.3
7.5°	3044.3	3008.5	3018.3	3013.4	3002.0	3003.6	3018.3	3010.1	3036.2	3010.1	3036.2
10°	3029.7	2992.2	3000.4	2979.2	2954.7	2972.7	3002.0	2993.8	3021.5	2992.2	3021.5
12.5°	3006.9	2969.4	2961.3	2891.2	2847.2	2881.4	2971.0	2971.0	2997.1	2969.4	3000.4
15°	2980.8	2940.1	2896.1	2790.2	2744.6	2778.8	2902.6	2945.0	2967.8	2940.1	2971.0
17.5°	2949.9	2902.6	2817.9	2694.1	2651.8	2686.0	2813.0	2905.9	2935.2	2905.9	2933.6
20°	2910.8	2855.4	2734.8	2593.1	2565.4	2596.4	2723.4	2858.6	2899.4	2863.5	2883.1
22.5°	2868.4	2801.6	2642.0	2515.0	2501.9	2521.5	2637.1	2800.0	2853.8	2816.3	2829.3
25°	2816.3	2738.1	2549.2	2443.3	2433.5	2444.9	2552.4	2731.6	2801.6	2762.5	2767.4
27.5°	2760.9	2676.2	2461.2	2383.0	2373.2	2378.1	2467.7	2655.0	2741.4	2702.3	2694.1
30°	2694.1	2602.9	2373.2	2301.6	2291.8	2309.7	2386.3	2576.8	2674.6	2635.5	2611.1
32.5°	2627.3	2523.1	2286.9	2231.5	2212.0	2228.3	2301.6	2495.4	2601.3	2560.6	2519.8
35°	2544.3	2438.4	2197.3	2141.9	2125.7	2143.6	2216.9	2410.7	2518.2	2477.5	2422.1
37.5°	2457.9	2348.8	2115.9	2065.4	2036.1	2057.2	2130.5	2322.7	2431.9	2389.5	2321.1
40°	2371.6	2254.3	2024.7	1972.5	1935.1	1966.0	2041.0	2229.9	2334.2	2295.1	2216.9
42.5°	2270.6	2159.9	1935.1	1861.8	1755.9	1855.3	1944.9	2137.1	2233.2	2195.7	2101.2
45°	2164.7	2058.9	1840.6	1663.1	1387.8	1679.4	1847.1	2039.3	2115.9	2080.0	1977.4
47.5°	2044.2	1954.6	1744.5	1474.1	1207.0	1490.4	1747.8	1946.5	2005.1	1966.0	1852.0
50°	1938.3	1850.4	1643.5	1314.5	1079.9	1332.4	1641.9	1842.2	1891.1	1855.3	1728.2
52.5°	1817.8	1741.2	1534.4	1172.8	985.5	1190.7	1531.1	1734.7	1773.8	1731.5	1604.4
55°	1698.9	1630.5	1418.7	1047.4	902.4	1063.6	1415.5	1624.0	1654.9	1606.1	1474.1
57.5°	1578.4	1516.5	1299.8	935.0	825.8	952.9	1308.0	1509.9	1531.1	1469.2	1348.7
60°	1452.9	1400.8	1179.3	835.6	750.9	850.3	1176.0	1395.9	1409.0	1342.2	1226.5
62.5°	1327.5	1280.3	1058.8	744.4	674.3	754.2	1066.9	1275.4	1283.5	1220.0	1101.1
65°	1198.8	1154.9	941.5	648.3	601.0	664.6	949.6	1150.0	1158.1	1086.4	978.9
67.5°	1065.3	1029.4	816.1	575.0	531.0	579.9	832.3	1022.9	1027.8	957.8	860.0
70°	931.7	900.8	705.3	495.2	462.6	496.8	716.7	882.8	892.6	817.7	739.5
72.5°	794.9	770.4	597.8	412.1	382.8	412.1	604.3	754.2	760.7	698.8	622.2
75°	656.4	638.5	488.7	330.7	307.9	329.0	491.9	625.5	625.5	566.8	506.6
77.5°	522.9	509.8	374.6	254.1	237.8	250.8	376.3	495.2	491.9	446.3	399.1
80°	390.9	381.2	268.8	184.1	172.7	179.2	268.8	366.5	366.5	333.9	276.9
82.5°	280.2	268.8	177.5	120.5	114.0	117.3	174.3	255.7	260.6	236.2	187.3
85°	185.7	159.6	96.1	66.8	61.9	63.5	91.2	148.2	162.9	136.8	97.7
87.5°	81.4	53.8	24.4	9.8	4.9	6.5	19.5	47.2	61.9	40.7	13.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3036.2	3036.2	3036.2	3036.2	3036.2	3036.2
2.5°	3046.0	3019.9	3029.7	3036.2	3029.7	3059.0
5°	3042.7	3031.3	3029.7	3037.8	3024.8	3054.1
7.5°	3037.8	3031.3	3029.7	3032.9	3016.6	3044.3
10°	3026.4	3016.6	3019.9	3024.8	3003.6	3029.7
12.5°	3005.2	2995.5	2997.1	3013.4	2984.1	3006.9
15°	2969.4	2958.0	2969.4	2987.3	2961.3	2980.8
17.5°	2922.2	2904.2	2923.8	2951.5	2931.9	2949.9
20°	2861.9	2834.2	2855.4	2905.9	2888.0	2910.8
22.5°	2788.6	2754.4	2775.6	2848.9	2844.0	2868.4
25°	2705.5	2664.8	2694.1	2783.7	2793.5	2816.3
27.5°	2612.7	2567.1	2606.2	2712.0	2734.8	2760.9
30°	2511.7	2462.8	2508.4	2632.2	2666.4	2694.1
32.5°	2407.4	2353.7	2405.8	2542.6	2591.5	2627.3
35°	2298.3	2242.9	2301.6	2449.8	2508.4	2544.3
37.5°	2181.0	2127.3	2190.8	2352.1	2422.1	2457.9
40°	2060.5	2000.2	2071.9	2236.4	2329.3	2371.6
42.5°	1936.7	1861.8	1949.7	2127.3	2228.3	2270.6
45°	1798.3	1694.0	1812.9	2011.6	2117.5	2164.7
47.5°	1659.8	1555.6	1676.1	1887.8	2001.9	2044.2
50°	1526.2	1436.7	1532.8	1752.6	1884.6	1938.3
52.5°	1404.1	1330.8	1412.2	1620.7	1764.1	1817.8
55°	1290.1	1233.0	1299.8	1490.4	1637.0	1698.9
57.5°	1182.5	1146.7	1192.3	1366.6	1519.7	1578.4
60°	1081.6	1057.1	1089.7	1244.4	1381.3	1452.9
62.5°	982.2	969.2	993.6	1115.8	1252.6	1327.5
65°	886.1	882.8	895.9	1003.4	1117.4	1198.8
67.5°	790.0	788.4	796.5	884.5	985.5	1065.3
70°	693.9	703.7	698.8	755.8	853.5	931.7
72.5°	596.2	610.8	602.7	638.5	733.0	794.9
75°	487.0	506.6	490.3	531.0	589.6	656.4
77.5°	374.6	395.8	376.3	412.1	475.6	522.9
80°	268.8	288.3	272.0	299.7	355.1	390.9
82.5°	169.4	184.1	171.0	198.7	254.1	280.2
85°	74.9	83.1	86.3	107.5	156.4	185.7
87.5°	3.3	1.6	3.3	21.2	55.4	81.4
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)