

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: P520555

Luminaire Tested: **4WSLA-200-L830-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: P520555
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-L830-UNV-U
Description: 4 FOOT, 2000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3000K, 80 CRI
LEDS WITH NO UPLIGHT
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

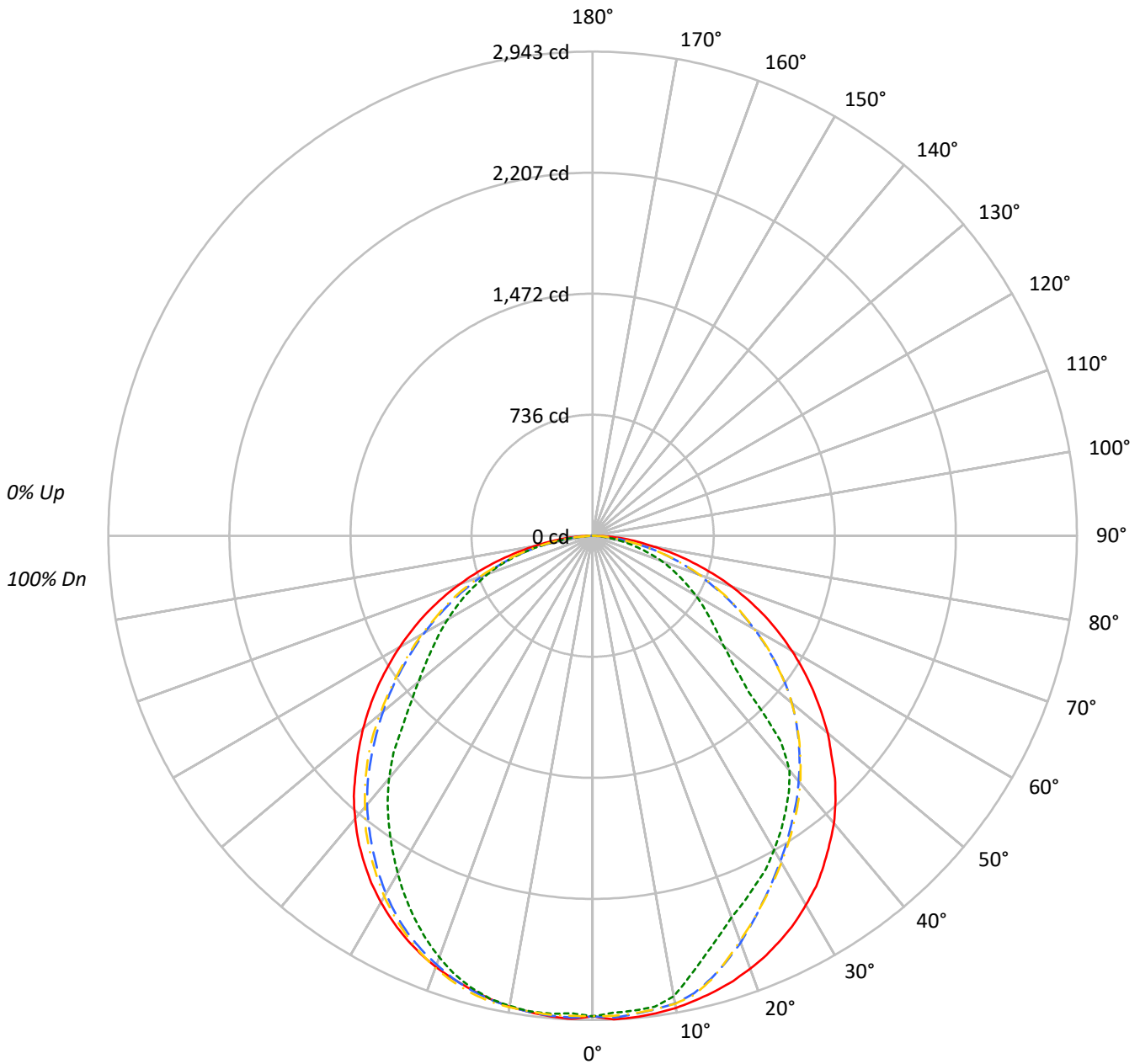
Lumens per Lamp: N/A
Luminaire Lumens: 7835.0 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	15719	15719	15719	15719
5°	15872	15652	15847	15753
10°	15927	15533	15884	15858
15°	15977	14711	15906	15854
20°	16037	14134	15974	15615
25°	16088	13901	16004	15222
30°	16106	13701	15989	14723
35°	16080	13435	15916	14176
40°	16028	13078	15775	13518
45°	15850	10161	15492	12403
50°	15612	8698	15231	11571
55°	15334	8145	14937	11129
60°	15044	7775	14588	10946
65°	14686	7363	14187	10814
70°	14102	7002	13511	10652
75°	13130	6157	12512	10133
80°	11654	5148	10925	8594
85°	11029	3674	9676	4934



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.5	3.5
10°-20°	791.5	10.1
20°-30°	1182.7	15.1
30°-40°	1407.9	18.0
40°-50°	1407.3	18.0
50°-60°	1210.9	15.5
60°-70°	911.4	11.6
70°-80°	519.4	6.6
80°-90°	126.4	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°	2251.8	28.7
0°-40°	3659.6	46.7
0°-60°	6277.8	80.1
0°-90°	7835.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7835.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2921	2921	2921	2921	2921	
5°	2938	2897	2933	2916	2938	280
15°	2867	2640	2855	2845	2867	810
25°	2709	2341	2695	2563	2709	1249
35°	2447	2045	2422	2158	2447	1531
45°	2082	1335	2035	1630	2082	1604
55°	1634	868	1592	1186	1634	1461
65°	1153	578	1114	849	1153	1139
75°	631	296	602	487	631	668
85°	179	60	157	80	179	194
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°	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6
2.5°	2942.6	2915.9	2931.6	2926.9	2901.8	2911.2	2920.6	2911.2	2939.4	2914.4	2931.6
5°	2937.9	2909.7	2919.1	2909.7	2897.1	2900.3	2914.4	2905.0	2933.2	2906.5	2928.5
7.5°	2928.5	2894.0	2903.4	2898.7	2887.7	2889.3	2903.4	2895.6	2920.6	2895.6	2920.6
10°	2914.4	2878.3	2886.2	2865.8	2842.3	2859.5	2887.7	2879.9	2906.5	2878.3	2906.5
12.5°	2892.4	2856.4	2848.6	2781.2	2738.9	2771.8	2858.0	2858.0	2883.0	2856.4	2886.2
15°	2867.4	2828.2	2785.9	2684.0	2640.2	2673.1	2792.1	2832.9	2854.8	2828.2	2858.0
17.5°	2837.6	2792.1	2710.7	2591.6	2550.8	2583.8	2706.0	2795.3	2823.5	2795.3	2821.9
20°	2800.0	2746.7	2630.8	2494.4	2467.8	2497.6	2619.8	2749.8	2789.0	2754.5	2773.3
22.5°	2759.2	2695.0	2541.4	2419.2	2406.7	2425.5	2536.7	2693.4	2745.1	2709.1	2721.6
25°	2709.1	2633.9	2452.1	2350.3	2340.9	2351.9	2455.3	2627.6	2695.0	2657.4	2662.1
27.5°	2655.8	2574.4	2367.5	2292.3	2282.9	2287.6	2373.8	2554.0	2637.0	2599.4	2591.6
30°	2591.6	2503.8	2282.9	2214.0	2204.6	2221.8	2295.5	2478.8	2572.8	2535.2	2511.7
32.5°	2527.3	2427.1	2199.9	2146.6	2127.8	2143.5	2214.0	2400.4	2502.3	2463.1	2423.9
35°	2447.4	2345.6	2113.7	2060.4	2044.8	2062.0	2132.5	2319.0	2422.4	2383.2	2329.9
37.5°	2364.4	2259.4	2035.4	1986.8	1958.6	1978.9	2049.5	2234.3	2339.3	2298.6	2232.8
40°	2281.3	2168.5	1947.6	1897.5	1861.4	1891.2	1963.3	2145.0	2245.3	2207.7	2132.5
42.5°	2184.2	2077.7	1861.4	1790.9	1689.1	1784.7	1870.8	2055.7	2148.2	2112.1	2021.3
45°	2082.4	1980.5	1770.6	1599.8	1335.0	1615.4	1776.8	1961.7	2035.4	2000.9	1902.2
47.5°	1966.4	1880.2	1678.1	1418.0	1161.0	1433.7	1681.2	1872.4	1928.8	1891.2	1781.5
50°	1864.6	1780.0	1581.0	1264.5	1038.8	1281.7	1579.4	1772.1	1819.1	1784.7	1662.4
52.5°	1748.6	1675.0	1476.0	1128.1	948.0	1145.4	1472.8	1668.7	1706.3	1665.6	1543.4
55°	1634.2	1568.4	1364.7	1007.5	868.0	1023.2	1361.6	1562.2	1591.9	1544.9	1418.0
57.5°	1518.3	1458.7	1250.4	899.4	794.4	916.6	1258.2	1452.5	1472.8	1413.3	1297.4
60°	1397.6	1347.5	1134.4	803.8	722.3	817.9	1131.3	1342.8	1355.3	1291.1	1179.8
62.5°	1277.0	1231.6	1018.5	716.1	648.7	725.5	1026.3	1226.9	1234.7	1173.6	1059.2
65°	1153.2	1110.9	905.6	623.6	578.2	639.3	913.5	1106.2	1114.0	1045.1	941.7
67.5°	1024.7	990.3	785.0	553.1	510.8	557.8	800.7	984.0	988.7	921.3	827.3
70°	896.2	866.5	678.5	476.3	445.0	477.9	689.4	849.2	858.6	786.6	711.4
72.5°	764.6	741.1	575.0	396.4	368.2	396.4	581.3	725.5	731.7	672.2	598.5
75°	631.4	614.2	470.1	318.1	296.1	316.5	473.2	601.7	601.7	545.3	487.3
77.5°	503.0	490.4	360.4	244.4	228.8	241.3	361.9	476.3	473.2	429.3	383.9
80°	376.0	366.6	258.5	177.1	166.1	172.4	258.5	352.5	352.5	321.2	266.4
82.5°	269.5	258.5	170.8	115.9	109.7	112.8	167.7	246.0	250.7	227.2	180.2
85°	178.6	153.6	92.4	64.2	59.5	61.1	87.7	142.6	156.7	131.6	94.0
87.5°	78.3	51.7	23.5	9.4	4.7	6.3	18.8	45.4	59.5	39.2	12.5
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°	2920.6	2920.6	2920.6	2920.6	2920.6	2920.6
2.5°	2930.0	2905.0	2914.4	2920.6	2914.4	2942.6
5°	2926.9	2915.9	2914.4	2922.2	2909.7	2937.9
7.5°	2922.2	2915.9	2914.4	2917.5	2901.8	2928.5
10°	2911.2	2901.8	2905.0	2909.7	2889.3	2914.4
12.5°	2890.9	2881.5	2883.0	2898.7	2870.5	2892.4
15°	2856.4	2845.4	2856.4	2873.6	2848.6	2867.4
17.5°	2810.9	2793.7	2812.5	2839.2	2820.4	2837.6
20°	2753.0	2726.3	2746.7	2795.3	2778.0	2800.0
22.5°	2682.5	2649.6	2669.9	2740.4	2735.7	2759.2
25°	2602.6	2563.4	2591.6	2677.8	2687.2	2709.1
27.5°	2513.2	2469.4	2507.0	2608.8	2630.8	2655.8
30°	2416.1	2369.1	2413.0	2532.0	2565.0	2591.6
32.5°	2315.8	2264.1	2314.3	2445.9	2492.9	2527.3
35°	2210.8	2157.6	2214.0	2356.6	2413.0	2447.4
37.5°	2098.0	2046.3	2107.4	2262.5	2329.9	2364.4
40°	1982.1	1924.1	1993.0	2151.3	2240.6	2281.3
42.5°	1863.0	1790.9	1875.5	2046.3	2143.5	2184.2
45°	1729.8	1629.5	1743.9	1935.1	2036.9	2082.4
47.5°	1596.6	1496.4	1612.3	1816.0	1925.7	1966.4
50°	1468.1	1382.0	1474.4	1685.9	1812.9	1864.6
52.5°	1350.6	1280.1	1358.5	1559.0	1696.9	1748.6
55°	1241.0	1186.1	1250.4	1433.7	1574.7	1634.2
57.5°	1137.5	1103.1	1146.9	1314.6	1461.9	1518.3
60°	1040.4	1016.9	1048.2	1197.1	1328.7	1397.6
62.5°	944.8	932.3	955.8	1073.3	1204.9	1277.0
65°	852.4	849.2	861.8	965.2	1074.9	1153.2
67.5°	759.9	758.4	766.2	850.8	948.0	1024.7
70°	667.5	676.9	672.2	727.0	821.0	896.2
72.5°	573.5	587.6	579.7	614.2	705.1	764.6
75°	468.5	487.3	471.6	510.8	567.2	631.4
77.5°	360.4	380.7	361.9	396.4	457.5	503.0
80°	258.5	277.3	261.7	288.3	341.6	376.0
82.5°	163.0	177.1	164.5	191.2	244.4	269.5
85°	72.1	79.9	83.0	103.4	150.4	178.6
87.5°	3.1	1.6	3.1	20.4	53.3	78.3
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)