

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: P520559

Luminaire Tested: **4WSLA-200-L835-UPL15-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: P520559  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-174-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/3/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4WSLA-200-L835-UPL15-UNV-U  
Description: 4 FOOT, 2000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3500K, 80 CRI  
LEDS WITH 15% UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

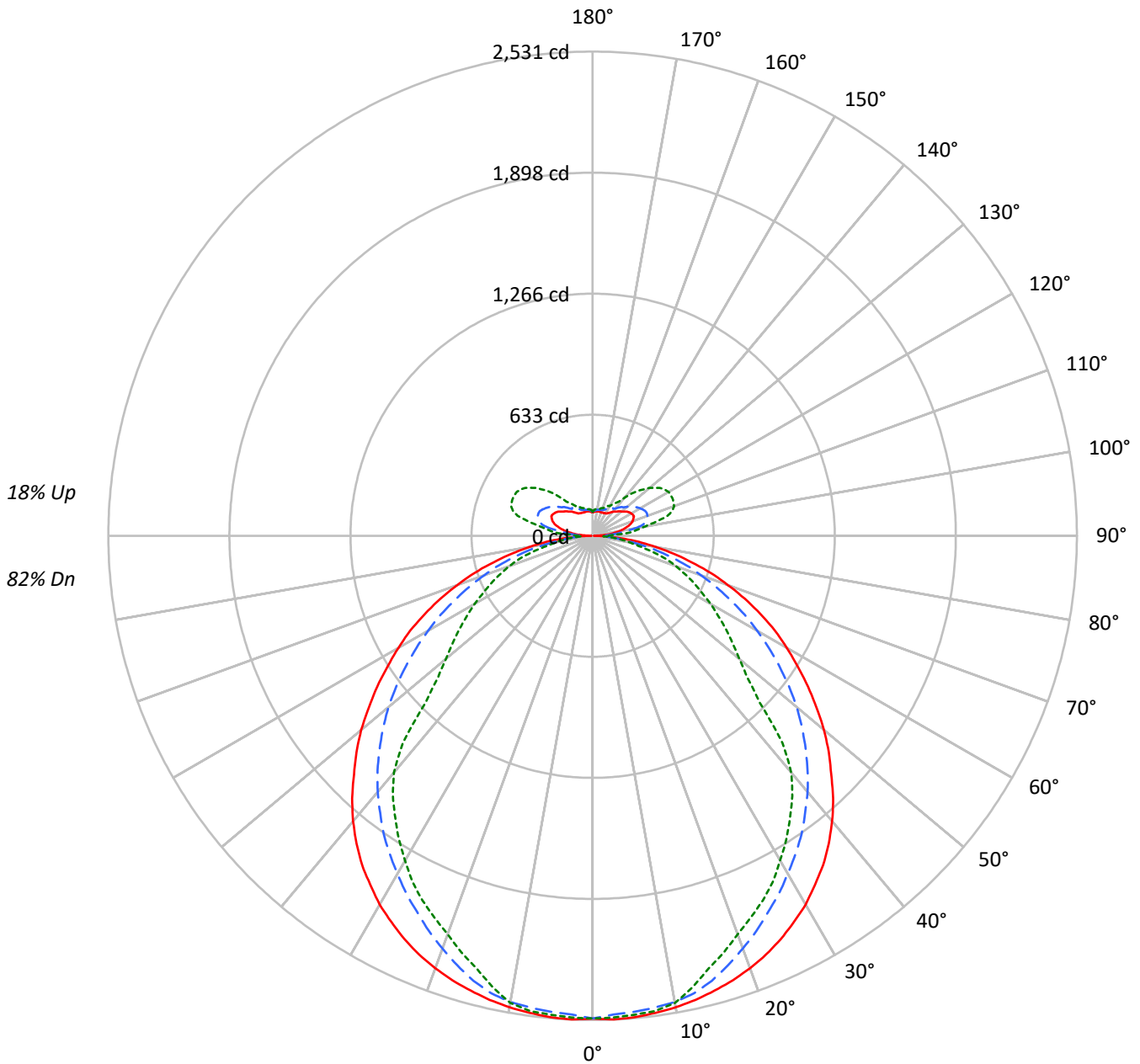
Lumens per Lamp: N/A  
Luminaire Lumens: 8172.0 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.16 / 1.33  
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 76.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	82																			
1	105	100	96	92	100	96	93	89	89	86	83	82	80	78	76	74	72	69																			
2	96	88	81	76	91	84	78	73	78	73	69	72	68	65	67	64	61	58																			
3	87	77	69	63	83	74	67	61	69	63	58	64	59	55	59	55	52	49																			
4	80	68	60	53	76	66	58	52	61	55	50	57	51	47	53	48	45	42																			
5	73	61	52	46	70	59	51	45	55	48	43	51	45	41	48	43	39	36																			
6	68	55	46	40	65	53	45	39	50	43	38	46	40	36	43	38	34	32																			
7	63	50	41	35	60	48	40	35	45	38	33	42	36	32	39	34	30	28																			
8	58	45	37	32	56	44	36	31	41	35	30	39	33	29	36	31	27	25																			
9	55	42	34	28	52	40	33	28	38	31	27	36	30	26	33	28	25	23																			
10	51	38	31	26	49	37	30	25	35	29	24	33	27	23	31	26	23	21																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13580	13580	13580
5°	13646	13494	13577
10°	13678	13524	13552
15°	13717	13417	13047
20°	13778	13147	12693
25°	13814	12887	12492
30°	13836	12675	12182
35°	13804	12510	11820
40°	13682	12280	11345
45°	13420	11979	9408
50°	13221	11657	8378
55°	12894	11189	7972
60°	12616	10687	7657
65°	12318	10103	7431
70°	11840	9464	7289
75°	11175	8673	6704
80°	10231	7296	5948
85°	9164	6323	6002



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.2	2.9
10°-20°	679.3	8.3
20°-30°	1013.8	12.4
30°-40°	1208.0	14.8
40°-50°	1201.5	14.7
50°-60°	1029.8	12.6
60°-70°	775.5	9.5
70°-80°	449.2	5.5
80°-90°	135.0	1.7
90°-100°	144.9	1.8
100°-110°	297.6	3.6
110°-120°	314.7	3.9
120°-130°	262.5	3.2
130°-140°	183.4	2.2
140°-150°	114.1	1.4
150°-160°	70.8	0.9
160°-170°	39.9	0.5
170°-180°	12.8	0.2
0°-30°	1932.3	23.6
0°-40°	3140.3	38.4
0°-60°	5371.6	65.7
0°-90°	6731.3	82.4
90°-120°	757.2	9.3
90°-150°	1317.3	16.1
90°-180°	1441.0	17.6
0°-180°	8172.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2523	2523	2523	2523	2523	
5°	2526	2518	2498	2516	2513	240
15°	2462	2459	2408	2367	2342	696
25°	2326	2293	2170	2116	2104	1072
35°	2101	2045	1904	1830	1799	1312
45°	1763	1720	1574	1418	1236	1363
55°	1374	1354	1192	947	850	1229
65°	967	944	793	617	584	956
75°	537	520	417	333	322	569
85°	148	130	102	97	97	158
90°	8	36	61	77	82	15
95°	82	110	125	184	200	78
105°	192	200	287	384	407	199
115°	238	202	304	420	461	232
125°	220	194	264	386	435	196
135°	179	194	212	287	330	140
145°	146	169	184	197	210	93
155°	133	141	151	164	166	61
165°	130	136	141	146	146	37
175°	128	130	133	136	138	12
180°	125	125	125	125	125	



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CATALOG NUMBER: 4WSLA-200-L835-UPL15-UNV-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2523.3	2523.3	2523.3	2523.3	2523.3
2.5°	2531.0	2525.8	2505.4	2525.8	2520.7
5°	2525.8	2518.2	2497.7	2515.6	2513.1
7.5°	2515.6	2510.5	2487.5	2507.9	2505.4
10°	2502.8	2495.1	2474.7	2490.0	2479.8
12.5°	2484.9	2479.8	2449.1	2436.3	2415.8
15°	2461.9	2459.3	2408.1	2367.2	2341.6
17.5°	2436.3	2426.0	2354.4	2305.8	2282.7
20°	2405.6	2390.2	2295.5	2239.2	2216.2
22.5°	2369.7	2346.7	2236.7	2182.9	2159.9
25°	2326.2	2293.0	2170.1	2116.4	2103.6
27.5°	2277.6	2239.2	2108.7	2055.0	2039.6
30°	2226.4	2177.8	2039.6	1988.4	1960.3
32.5°	2162.5	2116.4	1973.1	1914.2	1883.5
35°	2101.0	2044.7	1904.0	1829.8	1799.1
37.5°	2026.8	1970.5	1824.6	1750.4	1714.6
40°	1947.5	1891.2	1747.9	1660.9	1614.8
42.5°	1860.5	1809.3	1663.4	1558.5	1468.9
45°	1763.2	1719.7	1573.9	1417.7	1236.1
47.5°	1673.7	1632.7	1484.3	1282.1	1095.3
50°	1579.0	1540.6	1392.2	1154.2	1000.6
52.5°	1474.0	1445.9	1292.4	1044.1	921.3
55°	1374.2	1353.8	1192.5	946.9	849.6
57.5°	1269.3	1248.8	1092.7	854.7	778.0
60°	1172.1	1151.6	992.9	772.9	711.4
62.5°	1074.8	1046.7	895.7	693.5	642.3
65°	967.3	944.3	793.3	616.7	583.5
67.5°	859.9	839.4	698.6	545.1	522.1
70°	752.4	734.5	601.4	476.0	463.2
72.5°	647.5	624.4	514.4	406.9	401.8
75°	537.4	519.5	417.1	332.7	322.4
77.5°	432.5	417.1	327.6	253.4	245.7
80°	330.1	314.8	235.4	184.3	191.9
82.5°	243.1	222.6	158.7	143.3	151.0
85°	148.4	130.5	102.4	97.2	97.2
87.5°	51.2	48.6	46.1	53.7	56.3
90°	7.7	35.8	61.4	76.8	81.9
92.5°	43.5	64.0	84.5	99.8	104.9
95°	81.9	110.0	125.4	184.3	199.6
97.5°	112.6	145.9	163.8	217.5	232.9
100°	143.3	174.0	230.3	258.5	276.4
102.5°	168.9	191.9	271.3	327.6	337.8
105°	191.9	199.6	286.6	383.9	406.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	230.3	204.7	307.1	417.1	458.1
115°	238.0	202.2	304.5	419.7	460.6
117.5°	238.0	202.2	296.9	419.7	460.6
120°	232.9	204.7	286.6	414.6	458.1
122.5°	227.8	199.6	276.4	404.3	447.8
125°	220.1	194.5	263.6	386.4	435.0
127.5°	207.3	199.6	250.8	363.4	412.0
130°	197.1	202.2	235.4	340.4	389.0
132.5°	189.4	197.1	220.1	314.8	358.3
135°	179.1	194.5	212.4	286.6	330.1
137.5°	171.5	186.8	199.6	261.0	296.9
140°	163.8	181.7	186.8	227.8	258.5
142.5°	153.5	174.0	176.6	212.4	225.2
145°	145.9	168.9	184.3	197.1	209.8
147.5°	138.2	158.7	179.1	181.7	194.5
150°	135.6	148.4	171.5	174.0	179.1
152.5°	133.1	143.3	158.7	174.0	176.6
155°	133.1	140.8	151.0	163.8	166.3
157.5°	130.5	140.8	145.9	156.1	158.7
160°	130.5	138.2	143.3	151.0	153.5
162.5°	130.5	138.2	140.8	148.4	151.0
165°	130.5	135.6	140.8	145.9	145.9
167.5°	130.5	135.6	138.2	143.3	143.3
170°	130.5	133.1	138.2	140.8	140.8
172.5°	128.0	133.1	135.6	140.8	140.8
175°	128.0	130.5	133.1	135.6	138.2
177.5°	122.8	130.5	133.1	135.6	133.1
180°	125.4	125.4	125.4	125.4	125.4



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	209.8	202.2	296.9	404.3	437.6
110°	222.6	204.7	304.5	412.0	453.0



(END OF REPORT)