

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: P520562

Luminaire Tested: **4WSLA-200-L840-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: P520562
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-L840-UPL15-UNV-U
Description: 4 FOOT, 2000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 4000K, 80 CRI
LEDS WITH 15% UPLIGHT
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

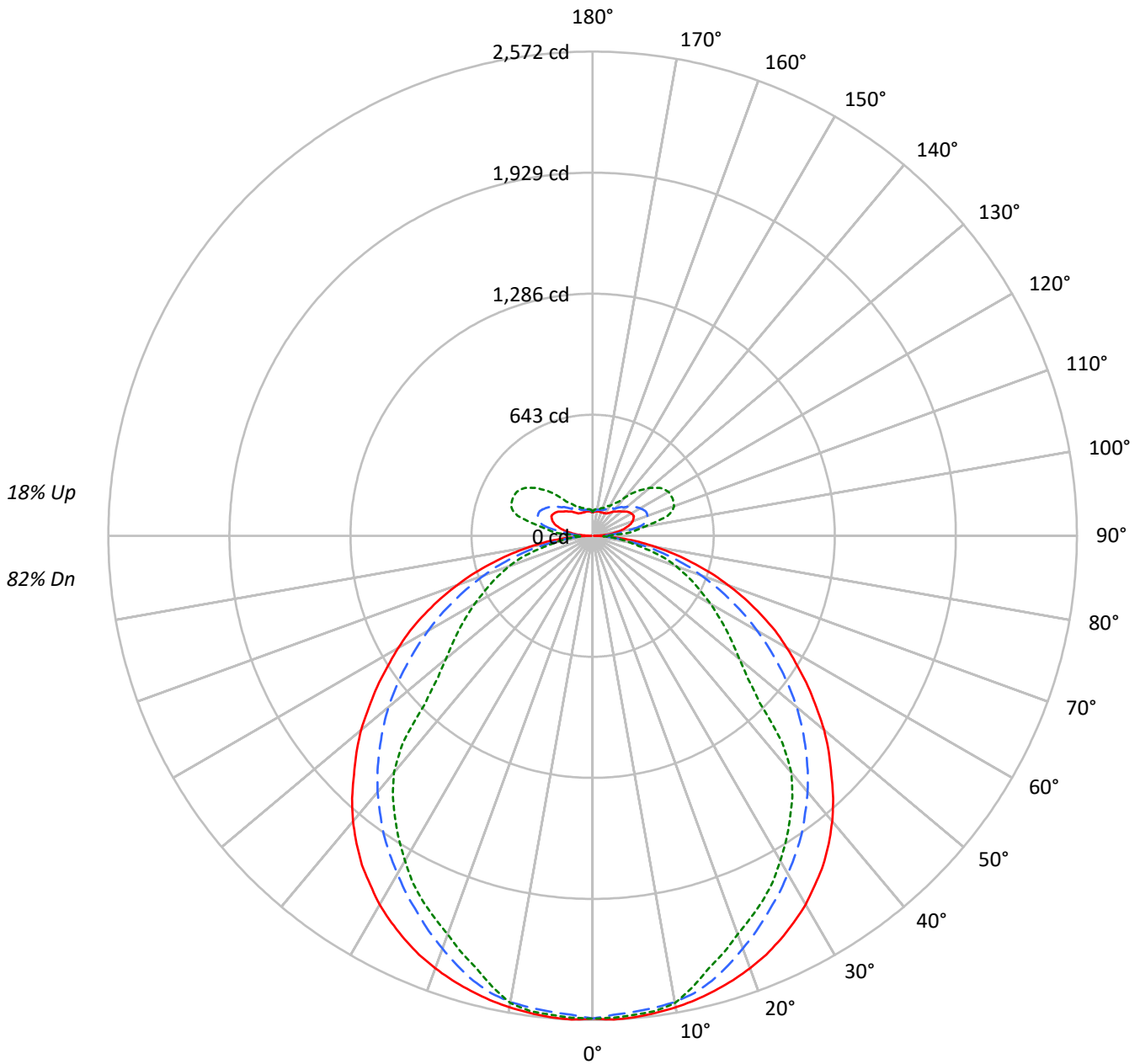
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8306.1 lumens
Efficiency: N/A
Efficacy: 108.9 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_{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	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°	13803	13803	13803
5°	13870	13715	13800
10°	13902	13746	13774
15°	13942	13638	13261
20°	14003	13363	12901
25°	14041	13098	12697
30°	14063	12883	12382
35°	14031	12715	12014
40°	13907	12481	11531
45°	13640	12176	9562
50°	13438	11848	8515
55°	13106	11373	8103
60°	12823	10863	7783
65°	12521	10268	7552
70°	12033	9619	7408
75°	11358	8817	6814
80°	10398	7417	6047
85°	9318	6422	6101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.1	2.9
10°-20°	690.5	8.3
20°-30°	1030.4	12.4
30°-40°	1227.8	14.8
40°-50°	1221.2	14.7
50°-60°	1046.7	12.6
60°-70°	788.3	9.5
70°-80°	456.5	5.5
80°-90°	137.2	1.7
90°-100°	147.3	1.8
100°-110°	302.5	3.6
110°-120°	319.8	3.9
120°-130°	266.8	3.2
130°-140°	186.4	2.2
140°-150°	116.0	1.4
150°-160°	71.9	0.9
160°-170°	40.5	0.5
170°-180°	13.1	0.2
0°-30°	1964.0	23.6
0°-40°	3191.7	38.4
0°-60°	5459.6	65.7
0°-90°	6841.6	82.4
90°-120°	769.6	9.3
90°-150°	1338.9	16.1
90°-180°	1464.0	17.6
0°-180°	8306.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2565	2565	2565	2565	2565	
5°	2567	2560	2539	2557	2554	244
15°	2502	2500	2448	2406	2380	707
25°	2364	2331	2206	2151	2138	1090
35°	2136	2078	1935	1860	1829	1334
45°	1792	1748	1600	1441	1256	1385
55°	1397	1376	1212	962	864	1249
65°	983	960	806	627	593	972
75°	546	528	424	338	328	579
85°	151	133	104	99	99	161
90°	8	36	62	78	83	15
95°	83	112	128	187	203	80
105°	195	203	291	390	414	202
115°	242	206	310	427	468	236
125°	224	198	268	393	442	199
135°	182	198	216	291	336	142
145°	148	172	187	200	213	94
155°	135	143	154	166	169	62
165°	133	138	143	148	148	38
175°	130	133	135	138	140	12
180°	128	128	128	128	128	



TEST NUMBER: P520562

CATALOG NUMBER: 4WSLA-200-L840-UPL15-UNV-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2564.7	2564.7	2564.7	2564.7	2564.7
2.5°	2572.5	2567.3	2546.5	2567.3	2562.1
5°	2567.3	2559.5	2538.7	2556.9	2554.3
7.5°	2556.9	2551.7	2528.2	2549.1	2546.5
10°	2543.9	2536.1	2515.2	2530.8	2520.4
12.5°	2525.6	2520.4	2489.2	2476.2	2455.4
15°	2502.2	2499.6	2447.6	2406.0	2380.0
17.5°	2476.2	2465.8	2393.0	2343.6	2320.2
20°	2445.0	2429.4	2333.2	2275.9	2252.5
22.5°	2408.6	2385.2	2273.3	2218.7	2195.3
25°	2364.4	2330.6	2205.7	2151.1	2138.1
27.5°	2315.0	2275.9	2143.3	2088.7	2073.1
30°	2262.9	2213.5	2073.1	2021.0	1992.4
32.5°	2197.9	2151.1	2005.4	1945.6	1914.4
35°	2135.5	2078.3	1935.2	1859.8	1828.6
37.5°	2060.1	2002.8	1854.6	1779.1	1742.7
40°	1979.4	1922.2	1776.5	1688.1	1641.3
42.5°	1891.0	1839.0	1690.7	1584.1	1493.0
45°	1792.1	1747.9	1599.7	1441.0	1256.3
47.5°	1701.1	1659.5	1508.6	1303.1	1113.3
50°	1604.9	1565.8	1415.0	1173.1	1017.0
52.5°	1498.2	1469.6	1313.5	1061.2	936.4
55°	1396.8	1376.0	1212.1	962.4	863.6
57.5°	1290.1	1269.3	1110.7	868.8	790.7
60°	1191.3	1170.5	1009.2	785.5	723.1
62.5°	1092.5	1063.8	910.4	704.9	652.9
65°	983.2	959.8	806.3	626.9	593.0
67.5°	874.0	853.2	710.1	554.0	530.6
70°	764.7	746.5	611.3	483.8	470.8
72.5°	658.1	634.7	522.8	413.6	408.4
75°	546.2	528.0	424.0	338.1	327.7
77.5°	439.6	424.0	332.9	257.5	249.7
80°	335.5	319.9	239.3	187.3	195.1
82.5°	247.1	226.3	161.3	145.7	153.5
85°	150.9	132.7	104.0	98.8	98.8
87.5°	52.0	49.4	46.8	54.6	57.2
90°	7.8	36.4	62.4	78.0	83.2
92.5°	44.2	65.0	85.8	101.4	106.6
95°	83.2	111.8	127.5	187.3	202.9
97.5°	114.4	148.3	166.5	221.1	236.7
100°	145.7	176.9	234.1	262.7	280.9
102.5°	171.7	195.1	275.7	332.9	343.3
105°	195.1	202.9	291.3	390.2	413.6



TEST NUMBER: P520562

CATALOG NUMBER: 4WSLA-200-L840-UPL15-UNV-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	234.1	208.1	312.1	424.0	465.6
115°	241.9	205.5	309.5	426.6	468.2
117.5°	241.9	205.5	301.7	426.6	468.2
120°	236.7	208.1	291.3	421.4	465.6
122.5°	231.5	202.9	280.9	411.0	455.2
125°	223.7	197.7	267.9	392.8	442.2
127.5°	210.7	202.9	254.9	369.4	418.8
130°	200.3	205.5	239.3	345.9	395.4
132.5°	192.5	200.3	223.7	319.9	364.2
135°	182.1	197.7	215.9	291.3	335.5
137.5°	174.3	189.9	202.9	265.3	301.7
140°	166.5	184.7	189.9	231.5	262.7
142.5°	156.1	176.9	179.5	215.9	228.9
145°	148.3	171.7	187.3	200.3	213.3
147.5°	140.5	161.3	182.1	184.7	197.7
150°	137.9	150.9	174.3	176.9	182.1
152.5°	135.3	145.7	161.3	176.9	179.5
155°	135.3	143.1	153.5	166.5	169.1
157.5°	132.7	143.1	148.3	158.7	161.3
160°	132.7	140.5	145.7	153.5	156.1
162.5°	132.7	140.5	143.1	150.9	153.5
165°	132.7	137.9	143.1	148.3	148.3
167.5°	132.7	137.9	140.5	145.7	145.7
170°	132.7	135.3	140.5	143.1	143.1
172.5°	130.1	135.3	137.9	143.1	143.1
175°	130.1	132.7	135.3	137.9	140.5
177.5°	124.9	132.7	135.3	137.9	135.3
180°	127.5	127.5	127.5	127.5	127.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	213.3	205.5	301.7	411.0	444.8
110°	226.3	208.1	309.5	418.8	460.4



(END OF REPORT)