

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: P520571

Luminaire Tested: **4WSLA-200-L935-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: P520571  
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-L935-UPL15-UNV-U  
Description: 4 FOOT, 2000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3500K, 90 CRI  
LEDS WITH 15% UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

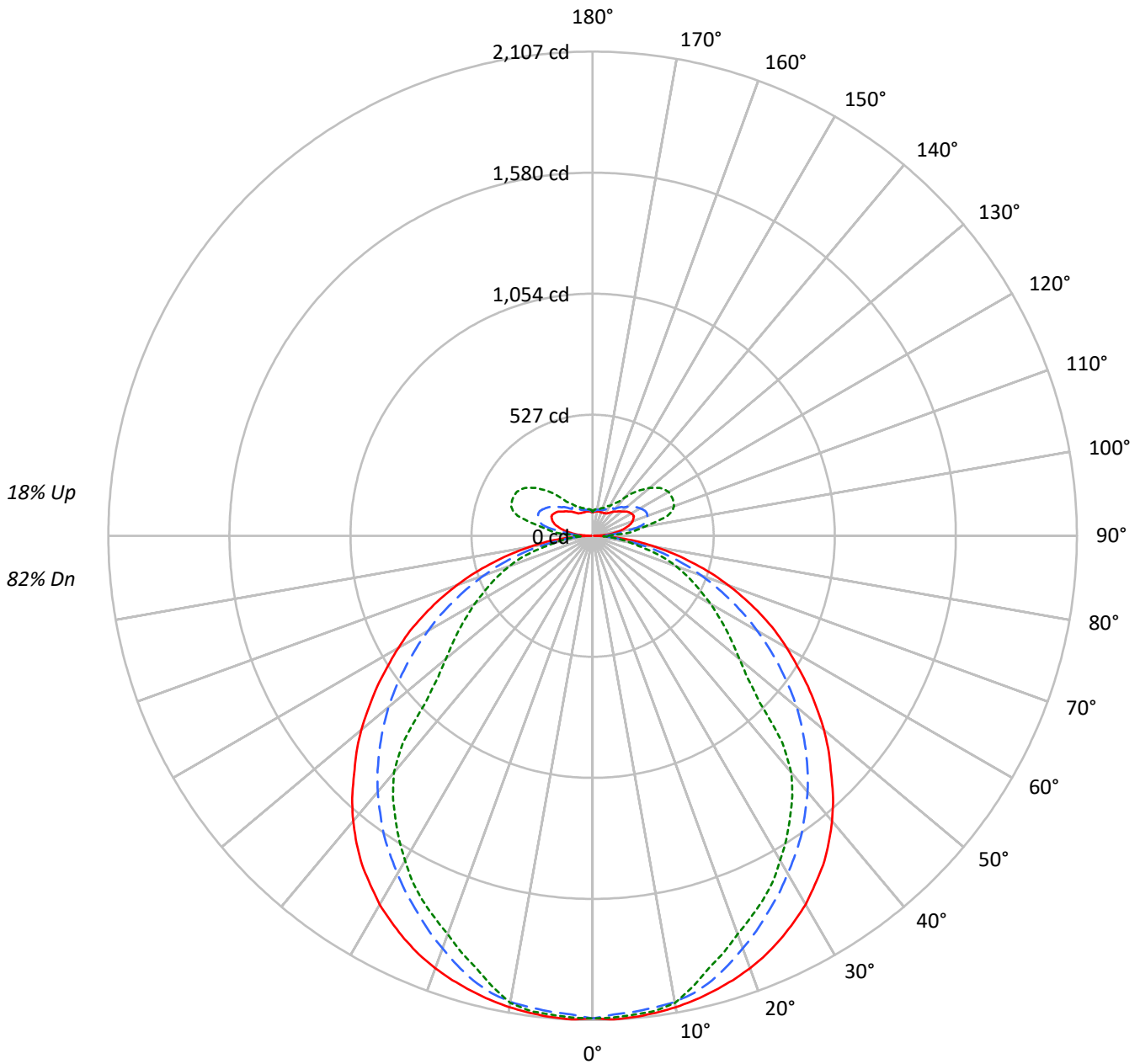
Lumens per Lamp: N/A  
Luminaire Lumens: 6802.0 lumens  
Efficiency: N/A  
Efficacy: 89.1 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.16 / 1.33  
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')  
CIE Type: Semi-Direct

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°	11304	11304	11304
5°	11358	11232	11300
10°	11385	11257	11280
15°	11417	11168	10859
20°	11468	10943	10565
25°	11498	10726	10397
30°	11517	10550	10140
35°	11490	10412	9839
40°	11389	10222	9443
45°	11170	9971	7830
50°	11004	9702	6974
55°	10733	9314	6636
60°	10501	8896	6374
65°	10254	8409	6185
70°	9854	7877	6066
75°	9301	7220	5581
80°	8517	6075	4953
85°	7626	5261	4996



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.1	2.9
10°-20°	565.4	8.3
20°-30°	843.9	12.4
30°-40°	1005.5	14.8
40°-50°	1000.1	14.7
50°-60°	857.1	12.6
60°-70°	645.5	9.5
70°-80°	373.9	5.5
80°-90°	112.4	1.7
90°-100°	120.6	1.8
100°-110°	247.7	3.6
110°-120°	261.9	3.9
120°-130°	218.5	3.2
130°-140°	152.6	2.2
140°-150°	95.0	1.4
150°-160°	58.9	0.9
160°-170°	33.2	0.5
170°-180°	10.7	0.2
0°-30°	1608.3	23.6
0°-40°	2613.8	38.4
0°-60°	4471.1	65.7
0°-90°	5602.8	82.4
90°-120°	630.3	9.3
90°-150°	1096.4	16.1
90°-180°	1199.0	17.6
0°-180°	6802.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2100	2100	2100	2100	2100	
5°	2102	2096	2079	2094	2092	200
15°	2049	2047	2004	1970	1949	579
25°	1936	1909	1806	1762	1751	893
35°	1749	1702	1585	1523	1498	1092
45°	1468	1431	1310	1180	1029	1135
55°	1144	1127	993	788	707	1023
65°	805	786	660	513	486	796
75°	447	432	347	277	268	474
85°	124	109	85	81	81	132
90°	6	30	51	64	68	13
95°	68	92	104	153	166	65
105°	160	166	239	320	339	166
115°	198	168	254	349	383	193
125°	183	162	219	322	362	163
135°	149	162	177	239	275	116
145°	121	141	153	164	175	77
155°	111	117	126	136	138	51
165°	109	113	117	121	121	31
175°	106	109	111	113	115	10
180°	104	104	104	104	104	



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CATALOG NUMBER: 4WSLA-200-L935-UPL15-UNV-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2100.3	2100.3	2100.3	2100.3	2100.3
2.5°	2106.7	2102.4	2085.4	2102.4	2098.1
5°	2102.4	2096.0	2079.0	2093.9	2091.7
7.5°	2093.9	2089.6	2070.4	2087.5	2085.4
10°	2083.2	2076.8	2059.8	2072.6	2064.1
12.5°	2068.3	2064.1	2038.5	2027.8	2010.8
15°	2049.1	2047.0	2004.4	1970.3	1949.0
17.5°	2027.8	2019.3	1959.7	1919.2	1900.0
20°	2002.3	1989.5	1910.7	1863.8	1844.7
22.5°	1972.5	1953.3	1861.7	1817.0	1797.8
25°	1936.3	1908.6	1806.3	1761.6	1750.9
27.5°	1895.8	1863.8	1755.2	1710.5	1697.7
30°	1853.2	1812.7	1697.7	1655.1	1631.6
32.5°	1799.9	1761.6	1642.3	1593.3	1567.7
35°	1748.8	1701.9	1584.8	1523.0	1497.5
37.5°	1687.0	1640.2	1518.8	1457.0	1427.2
40°	1621.0	1574.1	1454.9	1382.4	1344.1
42.5°	1548.6	1506.0	1384.6	1297.2	1222.7
45°	1467.6	1431.4	1310.0	1180.1	1028.8
47.5°	1393.1	1359.0	1235.5	1067.2	911.7
50°	1314.3	1282.3	1158.8	960.7	832.9
52.5°	1226.9	1203.5	1075.7	869.1	766.8
55°	1143.9	1126.8	992.6	788.1	707.2
57.5°	1056.5	1039.5	909.5	711.5	647.5
60°	975.6	958.5	826.5	643.3	592.2
62.5°	894.6	871.2	745.5	577.3	534.7
65°	805.2	786.0	660.3	513.4	485.7
67.5°	715.7	698.7	581.5	453.7	434.5
70°	626.2	611.3	500.6	396.2	385.5
72.5°	538.9	519.7	428.1	338.7	334.4
75°	447.3	432.4	347.2	276.9	268.4
77.5°	360.0	347.2	272.7	210.9	204.5
80°	274.8	262.0	196.0	153.4	159.8
82.5°	202.4	185.3	132.1	119.3	125.7
85°	123.5	108.6	85.2	80.9	80.9
87.5°	42.6	40.5	38.3	44.7	46.9
90°	6.4	29.8	51.1	63.9	68.2
92.5°	36.2	53.3	70.3	83.1	87.3
95°	68.2	91.6	104.4	153.4	166.1
97.5°	93.7	121.4	136.3	181.1	193.8
100°	119.3	144.8	191.7	215.1	230.0
102.5°	140.6	159.8	225.8	272.7	281.2
105°	159.8	166.1	238.6	319.5	338.7



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CATALOG NUMBER: 4WSLA-200-L935-UPL15-UNV-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	191.7	170.4	255.6	347.2	381.3
115°	198.1	168.3	253.5	349.3	383.4
117.5°	198.1	168.3	247.1	349.3	383.4
120°	193.8	170.4	238.6	345.1	381.3
122.5°	189.6	166.1	230.0	336.6	372.8
125°	183.2	161.9	219.4	321.6	362.1
127.5°	172.5	166.1	208.7	302.5	342.9
130°	164.0	168.3	196.0	283.3	323.8
132.5°	157.6	164.0	183.2	262.0	298.2
135°	149.1	161.9	176.8	238.6	274.8
137.5°	142.7	155.5	166.1	217.3	247.1
140°	136.3	151.2	155.5	189.6	215.1
142.5°	127.8	144.8	147.0	176.8	187.4
145°	121.4	140.6	153.4	164.0	174.7
147.5°	115.0	132.1	149.1	151.2	161.9
150°	112.9	123.5	142.7	144.8	149.1
152.5°	110.8	119.3	132.1	144.8	147.0
155°	110.8	117.2	125.7	136.3	138.5
157.5°	108.6	117.2	121.4	129.9	132.1
160°	108.6	115.0	119.3	125.7	127.8
162.5°	108.6	115.0	117.2	123.5	125.7
165°	108.6	112.9	117.2	121.4	121.4
167.5°	108.6	112.9	115.0	119.3	119.3
170°	108.6	110.8	115.0	117.2	117.2
172.5°	106.5	110.8	112.9	117.2	117.2
175°	106.5	108.6	110.8	112.9	115.0
177.5°	102.2	108.6	110.8	112.9	110.8
180°	104.4	104.4	104.4	104.4	104.4



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







107.5°	174.7	168.3	247.1	336.6	364.2
110°	185.3	170.4	253.5	342.9	377.0



(END OF REPORT)