

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: P520470

Luminaire Tested: **4WSLA-100-L850-UPL8-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: P520470  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-174-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/3/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4WSLA-100-L850-UPL8-UNV-U  
Description: 4 FOOT, 1000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 5000K, 80 CRI  
LEDS WITH 8% UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

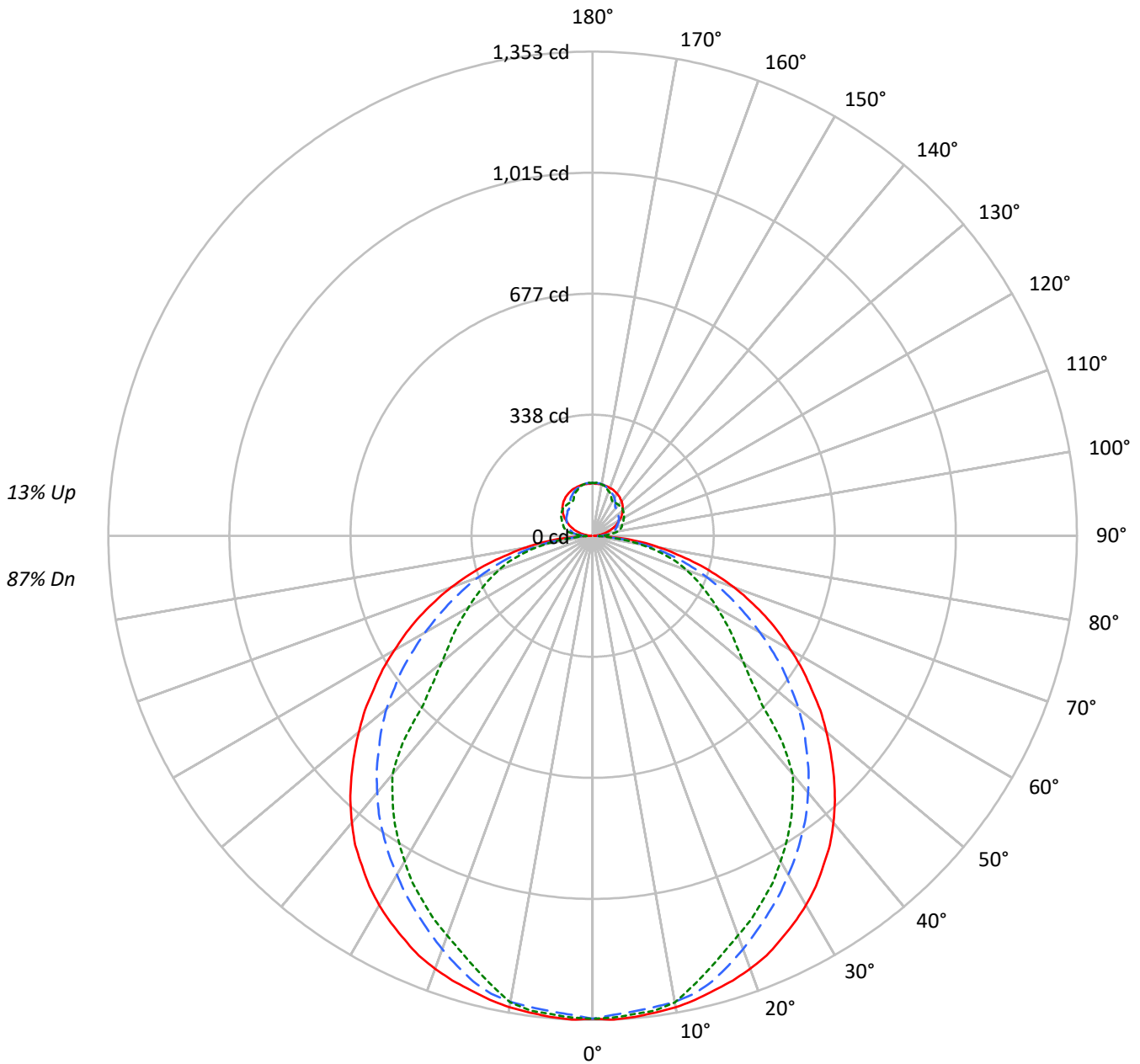
Lumens per Lamp: N/A  
Luminaire Lumens: 4200.0 lumens  
Efficiency: N/A  
Efficacy: 132.9 lumens/watt  
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33  
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 31.6  
Input Voltage (V): NR  
Input Current (Ain): 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	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87																			
1	106	101	97	93	102	98	94	90	91	88	85	85	83	80	79	78	76	73																			
2	96	88	82	76	92	85	79	74	80	75	70	74	70	67	70	66	64	61																			
3	88	78	70	63	84	75	68	62	70	64	59	66	61	56	62	58	54	51																			
4	80	69	60	54	77	67	59	53	62	56	50	59	53	48	55	50	46	44																			
5	74	61	53	46	71	60	51	45	56	49	44	53	47	42	50	45	40	38																			
6	68	55	47	40	66	54	46	40	51	44	38	48	42	37	45	40	36	33																			
7	63	50	42	36	61	49	41	35	46	39	34	43	37	33	41	36	32	30																			
8	59	46	37	32	57	44	37	31	42	35	30	40	34	29	38	32	28	26																			
9	55	42	34	28	53	41	33	28	39	32	27	37	31	26	35	30	26	24																			
10	52	39	31	26	50	38	30	25	36	29	25	34	28	24	32	27	23	22																			

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

	0°	45°	90°
0°	7263	7263	7263
5°	7291	7207	7249
10°	7312	7227	7237
15°	7325	7184	6989
20°	7373	7040	6806
25°	7391	6907	6676
30°	7410	6794	6528
35°	7387	6698	6353
40°	7353	6576	6112
45°	7257	6429	5099
50°	7138	6292	4601
55°	6997	6086	4428
60°	6877	5810	4306
65°	6776	5564	4303
70°	6600	5347	4370
75°	6299	5088	4402
80°	5898	4575	4091
85°	5397	3236	2760



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.8	3.0
10°-20°	363.2	8.6
20°-30°	542.7	12.9
30°-40°	647.9	15.4
40°-50°	647.9	15.4
50°-60°	560.8	13.4
60°-70°	430.4	10.2
70°-80°	263.7	6.3
80°-90°	74.3	1.8
90°-100°	42.0	1.0
100°-110°	66.6	1.6
110°-120°	77.9	1.9
120°-130°	84.1	2.0
130°-140°	82.8	2.0
140°-150°	73.3	1.7
150°-160°	60.3	1.4
160°-170°	40.4	1.0
170°-180°	14.1	0.3
0°-30°	1033.7	24.6
0°-40°	1681.6	40.0
0°-60°	2890.3	68.8
0°-90°	3658.7	87.1
90°-120°	186.4	4.4
90°-150°	426.6	10.2
90°-180°	541.0	12.9
0°-180°	4200.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1350	1346	1334	1344	1342	128
15°	1315	1313	1289	1266	1254	372
25°	1245	1229	1163	1132	1124	574
35°	1124	1095	1020	983	967	704
45°	953	926	845	769	670	735
55°	746	728	649	518	472	668
65°	532	513	437	352	338	526
75°	303	287	245	212	212	320
85°	87	72	52	45	45	91
90°	4	14	21	27	29	6
95°	16	33	45	47	47	15
105°	45	47	66	78	82	47
115°	74	62	78	89	95	72
125°	99	80	89	103	107	88
135°	118	107	99	109	115	91
145°	132	126	111	109	113	82
155°	140	138	130	124	122	65
165°	144	146	142	142	142	41
175°	146	148	148	150	150	14
180°	148	148	148	148	148	



TEST NUMBER: P520470

CATALOG NUMBER: 4WSLA-100-L850-UPL8-UNV-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1349.6	1349.6	1349.6	1349.6	1349.6
2.5°	1353.4	1349.6	1339.8	1349.6	1347.6
5°	1349.6	1345.7	1334.0	1343.7	1341.8
7.5°	1343.7	1339.8	1328.2	1339.8	1337.9
10°	1337.9	1334.0	1322.4	1330.1	1324.3
12.5°	1328.2	1324.3	1310.7	1301.0	1289.4
15°	1314.6	1312.7	1289.4	1266.1	1254.4
17.5°	1303.0	1297.1	1260.2	1233.1	1219.5
20°	1287.4	1277.7	1229.2	1198.1	1188.4
22.5°	1269.9	1254.4	1196.2	1167.0	1159.3
25°	1244.7	1229.2	1163.1	1132.1	1124.3
27.5°	1219.5	1200.0	1130.1	1099.1	1091.3
30°	1192.3	1165.1	1093.2	1064.1	1050.5
32.5°	1161.2	1134.0	1058.3	1025.3	1009.7
35°	1124.3	1095.2	1019.5	982.6	967.0
37.5°	1089.4	1058.3	980.6	939.8	918.5
40°	1046.6	1015.6	936.0	891.3	869.9
42.5°	1002.0	972.8	893.2	838.9	786.4
45°	953.4	926.2	844.7	769.0	669.9
47.5°	902.9	879.6	800.0	697.1	602.0
50°	852.5	829.2	751.5	629.1	549.5
52.5°	802.0	782.5	697.1	572.8	506.8
55°	745.7	728.2	648.6	518.5	471.9
57.5°	695.2	677.7	592.3	473.8	435.0
60°	638.9	623.3	539.8	429.1	400.0
62.5°	586.4	569.0	487.4	390.3	368.9
65°	532.1	512.6	436.9	351.5	337.9
67.5°	475.7	456.3	388.4	316.5	308.7
70°	419.4	403.9	339.8	281.6	277.7
72.5°	361.2	343.7	291.3	248.6	248.6
75°	302.9	287.4	244.7	211.7	211.7
77.5°	242.7	235.0	196.1	172.8	174.8
80°	190.3	180.6	147.6	132.0	132.0
82.5°	139.8	128.2	99.0	87.4	91.3
85°	87.4	71.8	52.4	44.7	44.7
87.5°	27.2	21.4	15.5	17.5	17.5
90°	3.9	13.6	21.4	27.2	29.1
92.5°	9.7	25.2	31.1	36.9	38.8
95°	15.5	33.0	44.7	46.6	46.6
97.5°	21.4	36.9	54.4	62.1	62.1
100°	29.1	38.8	58.3	69.9	71.8
102.5°	36.9	42.7	62.1	73.8	77.7
105°	44.7	46.6	66.0	77.7	81.6



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CATALOG NUMBER: 4WSLA-100-L850-UPL8-UNV-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	66.0	58.3	73.8	87.4	91.3
115°	73.8	62.1	77.7	89.3	95.1
117.5°	79.6	68.0	81.6	93.2	97.1
120°	85.4	71.8	83.5	97.1	101.0
122.5°	93.2	75.7	87.4	99.0	104.9
125°	99.0	79.6	89.3	102.9	106.8
127.5°	104.9	87.4	91.3	104.9	108.7
130°	108.7	95.1	93.2	106.8	110.7
132.5°	114.6	101.0	95.1	108.7	112.6
135°	118.5	106.8	99.0	108.7	114.6
137.5°	122.3	112.6	99.0	108.7	112.6
140°	126.2	118.5	101.0	108.7	112.6
142.5°	128.2	122.3	102.9	108.7	112.6
145°	132.0	126.2	110.7	108.7	112.6
147.5°	134.0	130.1	116.5	108.7	112.6
150°	135.9	134.0	122.3	110.7	110.7
152.5°	137.9	135.9	126.2	118.5	114.6
155°	139.8	137.9	130.1	124.3	122.3
157.5°	141.8	141.8	134.0	130.1	128.2
160°	141.8	143.7	137.9	134.0	132.0
162.5°	143.7	145.6	139.8	137.9	135.9
165°	143.7	145.6	141.8	141.8	141.8
167.5°	145.6	147.6	145.6	143.7	143.7
170°	145.6	147.6	145.6	145.6	145.6
172.5°	145.6	147.6	147.6	147.6	147.6
175°	145.6	147.6	147.6	149.5	149.5
177.5°	145.6	147.6	147.6	147.6	147.6
180°	147.6	147.6	147.6	147.6	147.6



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







107.5°	52.4	50.5	68.0	81.6	85.4
110°	58.3	54.4	71.8	83.5	87.4



(END OF REPORT)