

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: P520463

Luminaire Tested: **4WSLA-100-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: P520463  
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-100-L835-UPL15-UNV-U  
Description: 4 FOOT, 1000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3500K, 80 CRI  
LEDS WITH 15% UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

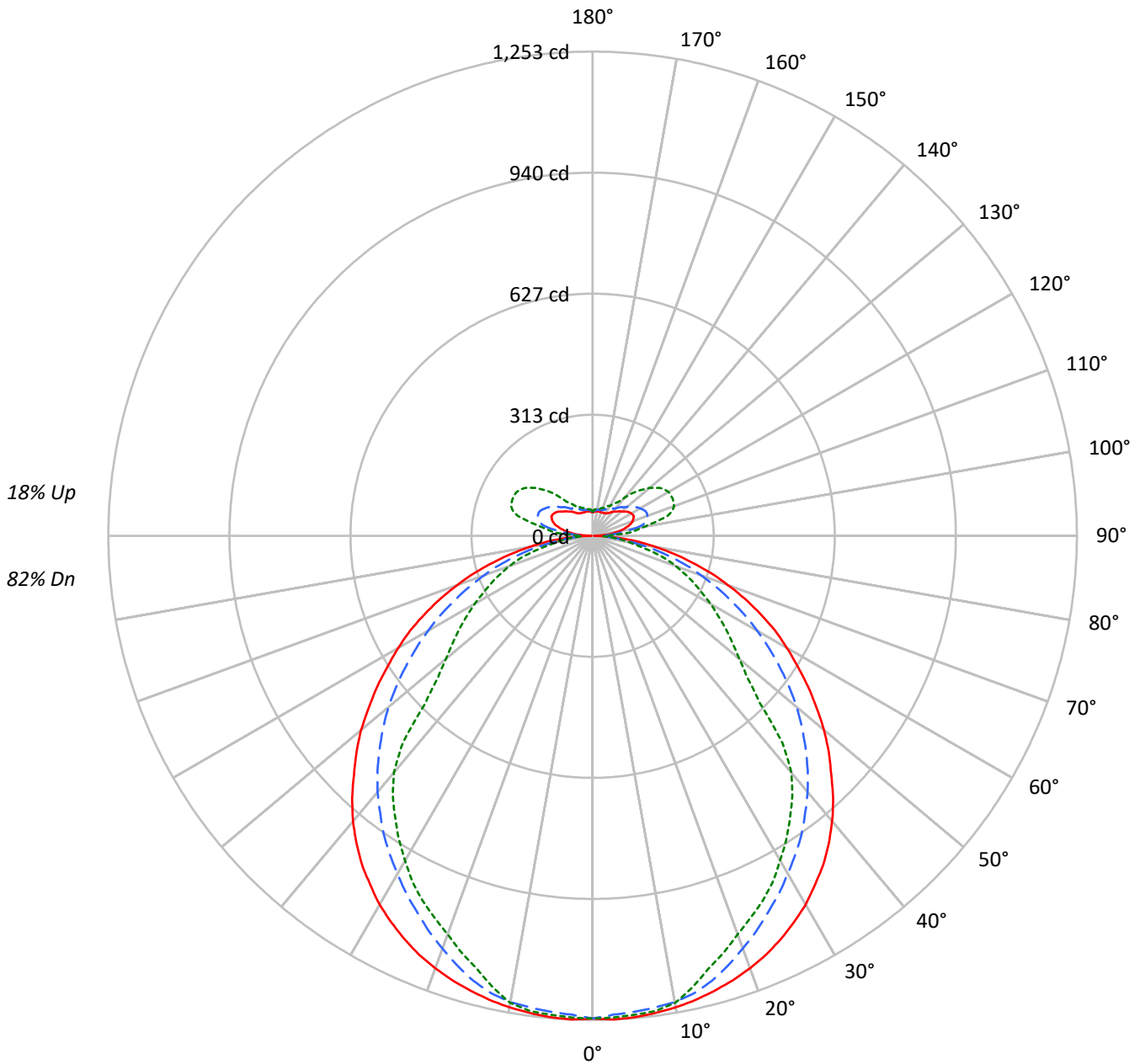
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4046.0 lumens  
Efficiency: N/A  
Efficacy: 128.0 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): 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

TEST NUMBER: P520463  
CATALOG NUMBER: 4WSLA-100-L835-UPL15-UNV-U

### Luminous Intensity Polar Plot





TEST NUMBER: P520463

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				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	86	86	86	82
1	105	100	96	92	100	96	93	89	89	86	83	82	80	78	76	74	72	72	72	72	69
2	96	88	81	76	91	84	78	73	78	73	69	72	68	65	67	64	61	61	61	61	58
3	87	77	69	63	83	74	67	61	69	63	58	64	59	55	59	55	52	52	52	52	49
4	80	68	60	53	76	66	58	52	61	55	50	57	51	47	53	48	45	45	45	45	42
5	73	61	52	46	70	59	51	45	55	48	43	51	45	41	48	43	39	39	39	39	36
6	68	55	46	40	65	53	45	39	50	43	38	46	40	36	43	38	34	34	34	34	32
7	63	50	41	35	60	48	40	35	45	38	33	42	36	32	39	34	30	30	30	30	28
8	58	45	37	32	56	44	36	31	41	35	30	39	33	29	36	31	27	27	27	27	25
9	55	42	34	28	52	40	33	28	38	31	27	36	30	26	33	28	25	25	25	25	23
10	51	38	31	26	49	37	30	25	35	29	24	33	27	23	31	26	23	23	23	23	21

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

	0°	45°	90°
0°	6724	6724	6724
5°	6756	6681	6722
10°	6772	6696	6710
15°	6791	6643	6459
20°	6821	6509	6284
25°	6839	6380	6185
30°	6850	6275	6031
35°	6834	6194	5852
40°	6774	6080	5617
45°	6645	5931	4658
50°	6546	5771	4148
55°	6384	5540	3947
60°	6246	5292	3791
65°	6099	5002	3679
70°	5862	4686	3608
75°	5533	4294	3319
80°	5064	3614	2944
85°	4539	3131	2970



TEST NUMBER: P520463

CATALOG NUMBER: 4WSLA-100-L835-UPL15-UNV-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.4	2.9
10°-20°	336.3	8.3
20°-30°	501.9	12.4
30°-40°	598.1	14.8
40°-50°	594.9	14.7
50°-60°	509.8	12.6
60°-70°	384.0	9.5
70°-80°	222.4	5.5
80°-90°	66.8	1.7
90°-100°	71.7	1.8
100°-110°	147.4	3.6
110°-120°	155.8	3.9
120°-130°	130.0	3.2
130°-140°	90.8	2.2
140°-150°	56.5	1.4
150°-160°	35.0	0.9
160°-170°	19.7	0.5
170°-180°	6.4	0.2
0°-30°	956.7	23.6
0°-40°	1554.8	38.4
0°-60°	2659.5	65.7
0°-90°	3332.7	82.4
90°-120°	374.9	9.3
90°-150°	652.2	16.1
90°-180°	713.0	17.6
0°-180°	4046.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1251	1247	1237	1246	1244	119
15°	1219	1218	1192	1172	1159	344
25°	1152	1135	1074	1048	1042	531
35°	1040	1012	943	906	891	650
45°	873	851	779	702	612	675
55°	680	670	590	469	421	608
65°	479	468	393	305	289	473
75°	266	257	206	165	160	282
85°	74	65	51	48	48	78
90°	4	18	30	38	40	7
95°	40	54	62	91	99	39
105°	95	99	142	190	202	99
115°	118	100	151	208	228	115
125°	109	96	130	191	215	97
135°	89	96	105	142	163	69
145°	72	84	91	98	104	46
155°	66	70	75	81	82	30
165°	65	67	70	72	72	18
175°	63	65	66	67	68	6
180°	62	62	62	62	62	



TEST NUMBER: P520463

CATALOG NUMBER: 4WSLA-100-L835-UPL15-UNV-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1249.3	1249.3	1249.3	1249.3	1249.3
2.5°	1253.1	1250.6	1240.4	1250.6	1248.0
5°	1250.6	1246.8	1236.6	1245.5	1244.2
7.5°	1245.5	1243.0	1231.6	1241.7	1240.4
10°	1239.2	1235.4	1225.2	1232.8	1227.8
12.5°	1230.3	1227.8	1212.5	1206.2	1196.1
15°	1218.9	1217.6	1192.3	1172.0	1159.3
17.5°	1206.2	1201.1	1165.7	1141.6	1130.2
20°	1191.0	1183.4	1136.5	1108.7	1097.2
22.5°	1173.3	1161.9	1107.4	1080.8	1069.4
25°	1151.7	1135.3	1074.4	1047.8	1041.5
27.5°	1127.7	1108.7	1044.0	1017.4	1009.8
30°	1102.3	1078.2	1009.8	984.5	970.5
32.5°	1070.6	1047.8	976.9	947.7	932.5
35°	1040.2	1012.4	942.7	905.9	890.7
37.5°	1003.5	975.6	903.4	866.6	848.9
40°	964.2	936.3	865.4	822.3	799.5
42.5°	921.1	895.8	823.6	771.6	727.3
45°	873.0	851.4	779.2	701.9	612.0
47.5°	828.6	808.4	734.9	634.8	542.3
50°	781.8	762.8	689.3	571.4	495.4
52.5°	729.8	715.9	639.9	516.9	456.1
55°	680.4	670.3	590.4	468.8	420.7
57.5°	628.4	618.3	541.0	423.2	385.2
60°	580.3	570.2	491.6	382.6	352.2
62.5°	532.2	518.2	443.5	343.4	318.0
65°	478.9	467.5	392.8	305.4	288.9
67.5°	425.7	415.6	345.9	269.9	258.5
70°	372.5	363.6	297.8	235.7	229.3
72.5°	320.6	309.2	254.7	201.5	198.9
75°	266.1	257.2	206.5	164.7	159.6
77.5°	214.1	206.5	162.2	125.4	121.6
80°	163.4	155.8	116.6	91.2	95.0
82.5°	120.4	110.2	78.6	71.0	74.8
85°	73.5	64.6	50.7	48.1	48.1
87.5°	25.3	24.1	22.8	26.6	27.9
90°	3.8	17.7	30.4	38.0	40.5
92.5°	21.5	31.7	41.8	49.4	51.9
95°	40.5	54.5	62.1	91.2	98.8
97.5°	55.7	72.2	81.1	107.7	115.3
100°	71.0	86.2	114.0	128.0	136.8
102.5°	83.6	95.0	134.3	162.2	167.2
105°	95.0	98.8	141.9	190.1	201.5



TEST NUMBER: P520463

CATALOG NUMBER: 4WSLA-100-L835-UPL15-UNV-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	114.0	101.4	152.0	206.5	226.8
115°	117.8	100.1	150.8	207.8	228.1
117.5°	117.8	100.1	147.0	207.8	228.1
120°	115.3	101.4	141.9	205.3	226.8
122.5°	112.8	98.8	136.8	200.2	221.7
125°	109.0	96.3	130.5	191.3	215.4
127.5°	102.6	98.8	124.2	179.9	204.0
130°	97.6	100.1	116.6	168.5	192.6
132.5°	93.8	97.6	109.0	155.8	177.4
135°	88.7	96.3	105.2	141.9	163.4
137.5°	84.9	92.5	98.8	129.2	147.0
140°	81.1	90.0	92.5	112.8	128.0
142.5°	76.0	86.2	87.4	105.2	111.5
145°	72.2	83.6	91.2	97.6	103.9
147.5°	68.4	78.6	88.7	90.0	96.3
150°	67.2	73.5	84.9	86.2	88.7
152.5°	65.9	71.0	78.6	86.2	87.4
155°	65.9	69.7	74.8	81.1	82.4
157.5°	64.6	69.7	72.2	77.3	78.6
160°	64.6	68.4	71.0	74.8	76.0
162.5°	64.6	68.4	69.7	73.5	74.8
165°	64.6	67.2	69.7	72.2	72.2
167.5°	64.6	67.2	68.4	71.0	71.0
170°	64.6	65.9	68.4	69.7	69.7
172.5°	63.4	65.9	67.2	69.7	69.7
175°	63.4	64.6	65.9	67.2	68.4
177.5°	60.8	64.6	65.9	67.2	65.9
180°	62.1	62.1	62.1	62.1	62.1



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







107.5°	103.9	100.1	147.0	200.2	216.7
110°	110.2	101.4	150.8	204.0	224.3



(END OF REPORT)