

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: P520467

Luminaire Tested: **4WSLA-100-L840-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: P520467  
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-L840-UPL8-UNV-U  
Description: 4 FOOT, 1000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 4000K, 80 CRI  
LEDS WITH 8% UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

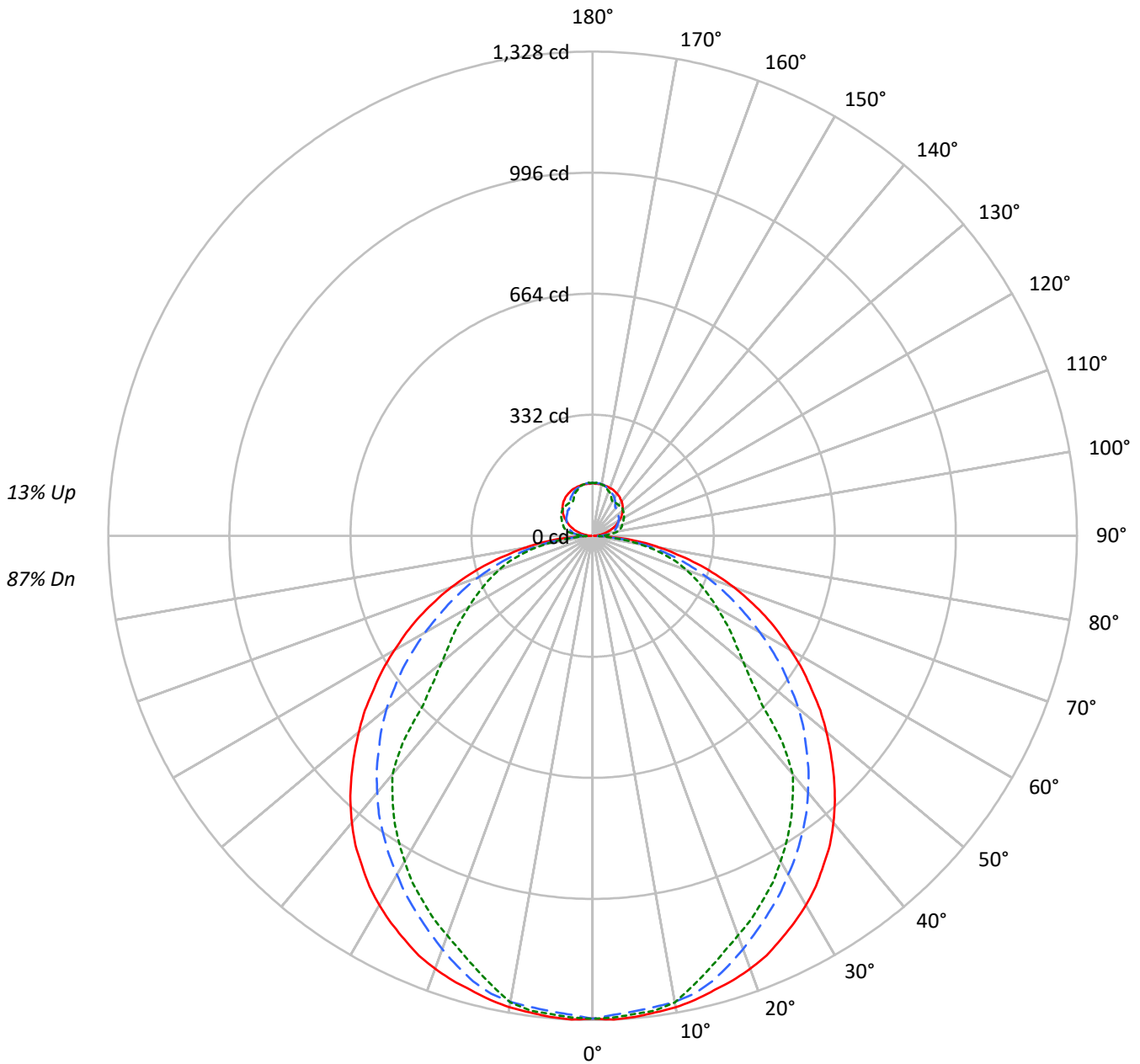
Lumens per Lamp: N/A  
Luminaire Lumens: 4122.0 lumens  
Efficiency: N/A  
Efficacy: 130.4 lumens/watt  
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33  
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 31.6  
Input Voltage (V): NR  
Input Current (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

TEST NUMBER: P520467

CATALOG NUMBER: 4WSLA-100-L840-UPL8-UNV-U

### Luminous Intensity Polar Plot





TEST NUMBER: P520467

CATALOG NUMBER: 4WSLA-100-L840-UPL8-UNV-U

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

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

	0°	45°	90°
0°	7128	7128	7128
5°	7156	7073	7115
10°	7176	7092	7103
15°	7189	7051	6859
20°	7237	6909	6680
25°	7254	6779	6552
30°	7272	6668	6407
35°	7250	6573	6236
40°	7217	6454	5998
45°	7122	6310	5004
50°	7005	6175	4515
55°	6867	5972	4345
60°	6749	5703	4226
65°	6650	5461	4223
70°	6477	5248	4288
75°	6182	4993	4319
80°	5790	4488	4017
85°	5298	3180	2705



TEST NUMBER: P520467

CATALOG NUMBER: 4WSLA-100-L840-UPL8-UNV-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.4	3.0
10°-20°	356.5	8.6
20°-30°	532.7	12.9
30°-40°	635.8	15.4
40°-50°	635.9	15.4
50°-60°	550.3	13.4
60°-70°	422.4	10.2
70°-80°	258.8	6.3
80°-90°	72.9	1.8
90°-100°	41.2	1.0
100°-110°	65.4	1.6
110°-120°	76.4	1.9
120°-130°	82.5	2.0
130°-140°	81.3	2.0
140°-150°	71.9	1.7
150°-160°	59.2	1.4
160°-170°	39.6	1.0
170°-180°	13.8	0.3
0°-30°	1014.5	24.6
0°-40°	1650.4	40.0
0°-60°	2836.6	68.8
0°-90°	3590.7	87.1
90°-120°	183.0	4.4
90°-150°	418.7	10.2
90°-180°	531.0	12.9
0°-180°	4122.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1324	1321	1309	1319	1317	126
15°	1290	1288	1265	1242	1231	365
25°	1222	1206	1142	1111	1103	564
35°	1103	1075	1000	964	949	691
45°	936	909	829	755	658	722
55°	732	715	636	509	463	656
65°	522	503	429	345	332	516
75°	297	282	240	208	208	314
85°	86	70	52	44	44	90
90°	4	13	21	27	29	6
95°	15	32	44	46	46	15
105°	44	46	65	76	80	46
115°	72	61	76	88	93	71
125°	97	78	88	101	105	87
135°	116	105	97	107	112	90
145°	130	124	109	107	110	81
155°	137	135	128	122	120	63
165°	141	143	139	139	139	40
175°	143	145	145	147	147	14
180°	145	145	145	145	145	



TEST NUMBER: P520467

CATALOG NUMBER: 4WSLA-100-L840-UPL8-UNV-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1324.5	1324.5	1324.5	1324.5	1324.5
2.5°	1328.3	1324.5	1315.0	1324.5	1322.6
5°	1324.5	1320.7	1309.2	1318.8	1316.9
7.5°	1318.8	1315.0	1303.5	1315.0	1313.1
10°	1313.1	1309.2	1297.8	1305.4	1299.7
12.5°	1303.5	1299.7	1286.4	1276.9	1265.4
15°	1290.2	1288.3	1265.4	1242.5	1231.1
17.5°	1278.8	1273.0	1236.8	1210.2	1196.8
20°	1263.5	1254.0	1206.3	1175.8	1166.3
22.5°	1246.4	1231.1	1173.9	1145.4	1137.7
25°	1221.6	1206.3	1141.5	1111.1	1103.4
27.5°	1196.8	1177.8	1109.1	1078.7	1071.0
30°	1170.1	1143.4	1072.9	1044.4	1031.0
32.5°	1139.6	1113.0	1038.6	1006.2	991.0
35°	1103.4	1074.8	1000.5	964.3	949.1
37.5°	1069.1	1038.6	962.4	922.4	901.4
40°	1027.2	996.7	918.6	874.7	853.8
42.5°	983.4	954.8	876.6	823.3	771.8
45°	935.7	909.0	829.0	754.7	657.5
47.5°	886.2	863.3	785.2	684.2	590.8
50°	836.6	813.8	737.5	617.5	539.3
52.5°	787.1	768.0	684.2	562.2	497.4
55°	731.8	714.7	636.5	508.8	463.1
57.5°	682.3	665.1	581.3	465.0	426.9
60°	627.0	611.7	529.8	421.2	392.6
62.5°	575.5	558.4	478.3	383.1	362.1
65°	522.2	503.1	428.8	344.9	331.6
67.5°	466.9	447.9	381.1	310.6	303.0
70°	411.6	396.4	333.5	276.3	272.5
72.5°	354.5	337.3	285.9	243.9	243.9
75°	297.3	282.1	240.1	207.7	207.7
77.5°	238.2	230.6	192.5	169.6	171.5
80°	186.8	177.2	144.8	129.6	129.6
82.5°	137.2	125.8	97.2	85.8	89.6
85°	85.8	70.5	51.5	43.8	43.8
87.5°	26.7	21.0	15.2	17.2	17.2
90°	3.8	13.3	21.0	26.7	28.6
92.5°	9.5	24.8	30.5	36.2	38.1
95°	15.2	32.4	43.8	45.7	45.7
97.5°	21.0	36.2	53.4	61.0	61.0
100°	28.6	38.1	57.2	68.6	70.5
102.5°	36.2	41.9	61.0	72.4	76.2
105°	43.8	45.7	64.8	76.2	80.0



TEST NUMBER: P520467

CATALOG NUMBER: 4WSLA-100-L840-UPL8-UNV-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	64.8	57.2	72.4	85.8	89.6
115°	72.4	61.0	76.2	87.7	93.4
117.5°	78.1	66.7	80.0	91.5	95.3
120°	83.9	70.5	81.9	95.3	99.1
122.5°	91.5	74.3	85.8	97.2	102.9
125°	97.2	78.1	87.7	101.0	104.8
127.5°	102.9	85.8	89.6	102.9	106.7
130°	106.7	93.4	91.5	104.8	108.6
132.5°	112.4	99.1	93.4	106.7	110.5
135°	116.3	104.8	97.2	106.7	112.4
137.5°	120.1	110.5	97.2	106.7	110.5
140°	123.9	116.3	99.1	106.7	110.5
142.5°	125.8	120.1	101.0	106.7	110.5
145°	129.6	123.9	108.6	106.7	110.5
147.5°	131.5	127.7	114.3	106.7	110.5
150°	133.4	131.5	120.1	108.6	108.6
152.5°	135.3	133.4	123.9	116.3	112.4
155°	137.2	135.3	127.7	122.0	120.1
157.5°	139.1	139.1	131.5	127.7	125.8
160°	139.1	141.0	135.3	131.5	129.6
162.5°	141.0	142.9	137.2	135.3	133.4
165°	141.0	142.9	139.1	139.1	139.1
167.5°	142.9	144.8	142.9	141.0	141.0
170°	142.9	144.8	142.9	142.9	142.9
172.5°	142.9	144.8	144.8	144.8	144.8
175°	142.9	144.8	144.8	146.7	146.7
177.5°	142.9	144.8	144.8	144.8	144.8
180°	144.8	144.8	144.8	144.8	144.8



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







107.5°	51.5	49.5	66.7	80.0	83.9
110°	57.2	53.4	70.5	81.9	85.8



(END OF REPORT)