

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: P520461

Luminaire Tested: **4WSLA-100-L830-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: P520461  
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-L830-UPL8-UNV-U  
Description: 4 FOOT, 1000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 3000K, 80 CRI  
LEDS WITH 8% UPLIGHT  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

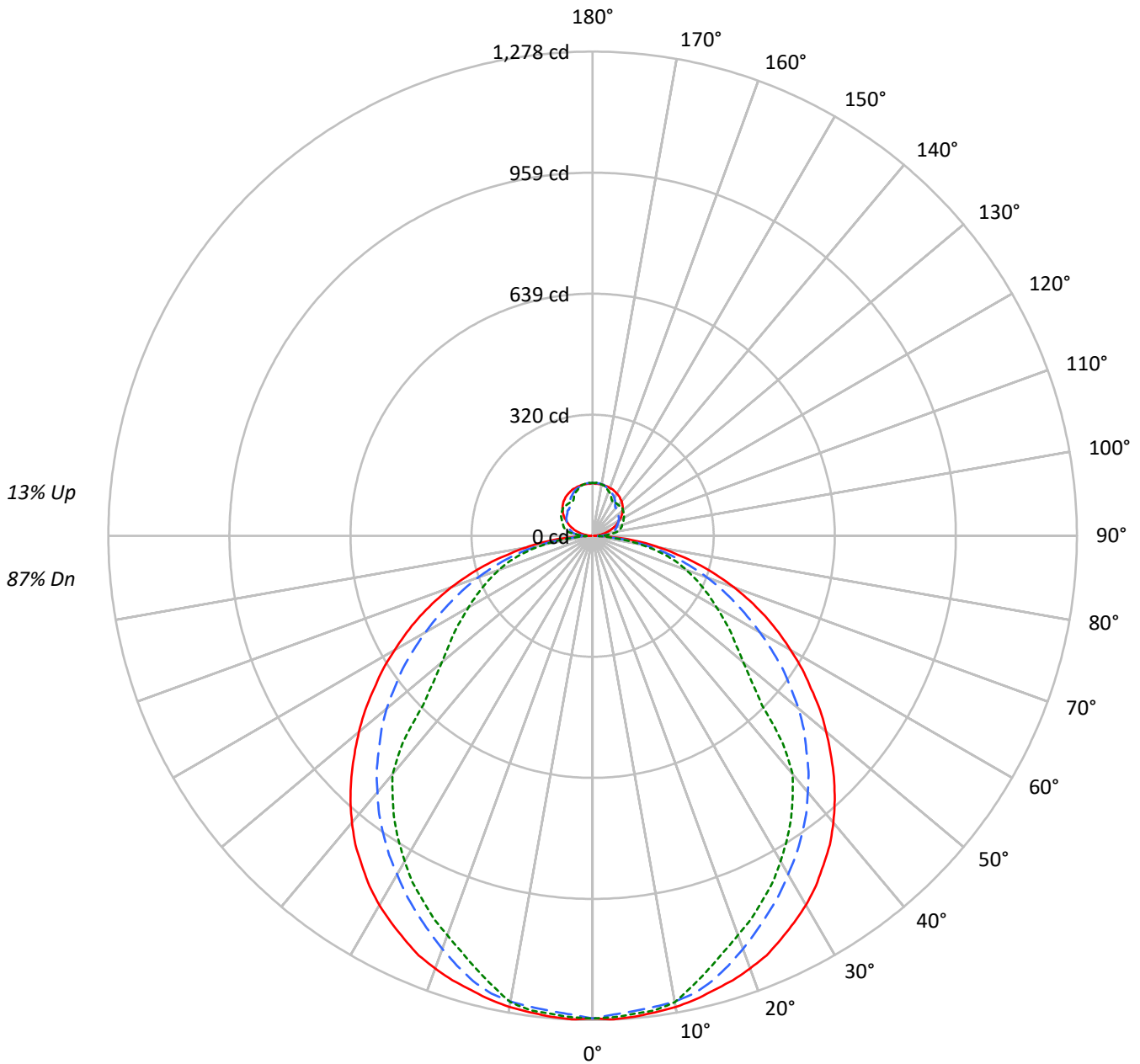
Lumens per Lamp: N/A  
Luminaire Lumens: 3965.1 lumens  
Efficiency: N/A  
Efficacy: 125.5 lumens/watt  
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33  
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')  
CIE Type: Semi-Direct

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

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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°	6857	6857	6857
5°	6883	6804	6843
10°	6902	6822	6832
15°	6915	6782	6598
20°	6961	6646	6426
25°	6978	6521	6303
30°	6995	6414	6163
35°	6974	6323	5998
40°	6942	6208	5770
45°	6851	6069	4813
50°	6738	5940	4344
55°	6605	5745	4180
60°	6492	5485	4064
65°	6397	5253	4062
70°	6231	5048	4124
75°	5947	4803	4155
80°	5566	4317	3865
85°	5094	3057	2606



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.6	3.0
10°-20°	342.9	8.6
20°-30°	512.4	12.9
30°-40°	611.6	15.4
40°-50°	611.7	15.4
50°-60°	529.4	13.4
60°-70°	406.3	10.2
70°-80°	249.0	6.3
80°-90°	70.1	1.8
90°-100°	39.6	1.0
100°-110°	62.9	1.6
110°-120°	73.5	1.9
120°-130°	79.4	2.0
130°-140°	78.2	2.0
140°-150°	69.2	1.7
150°-160°	56.9	1.4
160°-170°	38.1	1.0
170°-180°	13.3	0.3
0°-30°	975.9	24.6
0°-40°	1587.5	40.0
0°-60°	2728.6	68.8
0°-90°	3454.0	87.1
90°-120°	176.0	4.4
90°-150°	402.8	10.2
90°-180°	511.0	12.9
0°-180°	3965.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1274	1274	1274	1274	1274	
5°	1274	1270	1259	1268	1267	121
15°	1241	1239	1217	1195	1184	351
25°	1175	1160	1098	1069	1061	542
35°	1061	1034	962	928	913	665
45°	900	874	797	726	632	694
55°	704	687	612	490	446	631
65°	502	484	412	332	319	496
75°	286	271	231	200	200	302
85°	82	68	50	42	42	86
90°	4	13	20	26	28	6
95°	15	31	42	44	44	14
105°	42	44	62	73	77	44
115°	70	59	73	84	90	68
125°	94	75	84	97	101	83
135°	112	101	94	103	108	86
145°	125	119	104	103	106	78
155°	132	130	123	117	116	61
165°	136	138	134	134	134	39
175°	138	139	139	141	141	13
180°	139	139	139	139	139	



TEST NUMBER: P520461

CATALOG NUMBER: 4WSLA-100-L830-UPL8-UNV-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1274.0	1274.0	1274.0	1274.0	1274.0
2.5°	1277.7	1274.0	1264.9	1274.0	1272.2
5°	1274.0	1270.4	1259.4	1268.5	1266.7
7.5°	1268.5	1264.9	1253.9	1264.9	1263.0
10°	1263.0	1259.4	1248.4	1255.7	1250.2
12.5°	1253.9	1250.2	1237.4	1228.2	1217.2
15°	1241.1	1239.2	1217.2	1195.2	1184.2
17.5°	1230.1	1224.6	1189.7	1164.1	1151.2
20°	1215.4	1206.2	1160.4	1131.1	1121.9
22.5°	1198.9	1184.2	1129.2	1101.7	1094.4
25°	1175.1	1160.4	1098.1	1068.7	1061.4
27.5°	1151.2	1132.9	1066.9	1037.6	1030.2
30°	1125.6	1099.9	1032.1	1004.6	991.7
32.5°	1096.2	1070.6	999.1	967.9	953.2
35°	1061.4	1033.9	962.4	927.6	912.9
37.5°	1028.4	999.1	925.7	887.3	867.1
40°	988.1	958.7	883.6	841.4	821.3
42.5°	945.9	918.4	843.3	791.9	742.4
45°	900.1	874.4	797.4	725.9	632.4
47.5°	852.4	830.4	755.3	658.1	568.3
50°	804.8	782.8	709.4	593.9	518.8
52.5°	757.1	738.8	658.1	540.8	478.5
55°	703.9	687.4	612.3	489.5	445.5
57.5°	656.3	639.8	559.1	447.3	410.6
60°	603.1	588.4	509.6	405.1	377.6
62.5°	553.6	537.1	460.1	368.5	348.3
65°	502.3	484.0	412.5	331.8	319.0
67.5°	449.1	430.8	366.6	298.8	291.5
70°	396.0	381.3	320.8	265.8	262.1
72.5°	341.0	324.5	275.0	234.6	234.6
75°	286.0	271.3	231.0	199.8	199.8
77.5°	229.1	221.8	185.1	163.2	165.0
80°	179.6	170.5	139.3	124.7	124.7
82.5°	132.0	121.0	93.5	82.5	86.2
85°	82.5	67.8	49.5	42.2	42.2
87.5°	25.7	20.2	14.7	16.5	16.5
90°	3.7	12.8	20.2	25.7	27.5
92.5°	9.2	23.8	29.3	34.8	36.7
95°	14.7	31.2	42.2	44.0	44.0
97.5°	20.2	34.8	51.3	58.7	58.7
100°	27.5	36.7	55.0	66.0	67.8
102.5°	34.8	40.3	58.7	69.7	73.3
105°	42.2	44.0	62.3	73.3	77.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	62.3	55.0	69.7	82.5	86.2
115°	69.7	58.7	73.3	84.3	89.8
117.5°	75.2	64.2	77.0	88.0	91.7
120°	80.7	67.8	78.8	91.7	95.3
122.5°	88.0	71.5	82.5	93.5	99.0
125°	93.5	75.2	84.3	97.2	100.8
127.5°	99.0	82.5	86.2	99.0	102.7
130°	102.7	89.8	88.0	100.8	104.5
132.5°	108.2	95.3	89.8	102.7	106.3
135°	111.8	100.8	93.5	102.7	108.2
137.5°	115.5	106.3	93.5	102.7	106.3
140°	119.2	111.8	95.3	102.7	106.3
142.5°	121.0	115.5	97.2	102.7	106.3
145°	124.7	119.2	104.5	102.7	106.3
147.5°	126.5	122.8	110.0	102.7	106.3
150°	128.3	126.5	115.5	104.5	104.5
152.5°	130.2	128.3	119.2	111.8	108.2
155°	132.0	130.2	122.8	117.3	115.5
157.5°	133.8	133.8	126.5	122.8	121.0
160°	133.8	135.7	130.2	126.5	124.7
162.5°	135.7	137.5	132.0	130.2	128.3
165°	135.7	137.5	133.8	133.8	133.8
167.5°	137.5	139.3	137.5	135.7	135.7
170°	137.5	139.3	137.5	137.5	137.5
172.5°	137.5	139.3	139.3	139.3	139.3
175°	137.5	139.3	139.3	141.2	141.2
177.5°	137.5	139.3	139.3	139.3	139.3
180°	139.3	139.3	139.3	139.3	139.3



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







107.5°	49.5	47.7	64.2	77.0	80.7
110°	55.0	51.3	67.8	78.8	82.5



(END OF REPORT)