

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: P556555

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-81-94-EDD**

Issue Date: 7/16/2021

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: P556555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FUSL-12-4-LD4-1LO-40-UNV-81-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

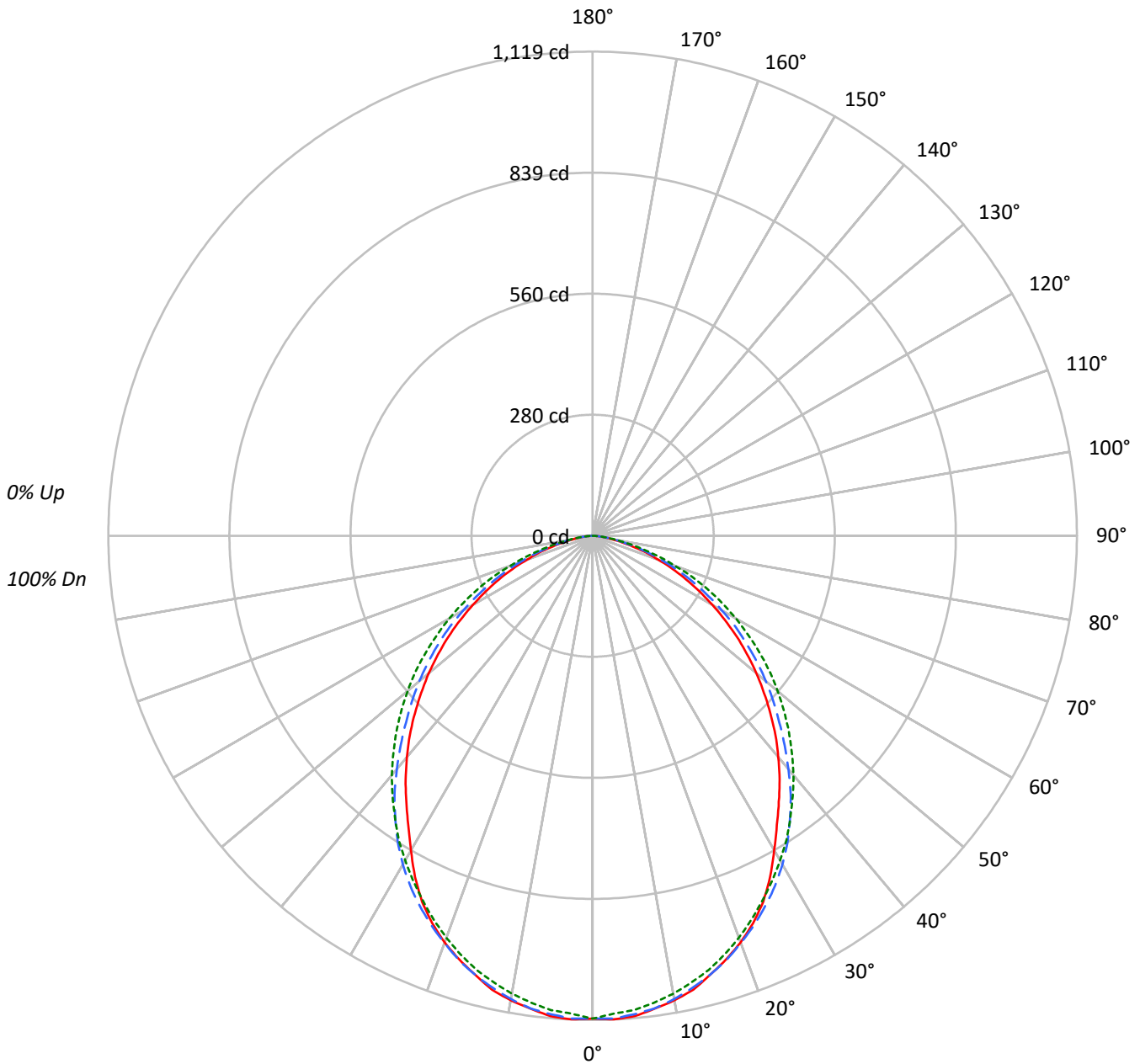
Lumens per Lamp: N/A  
Luminaire Lumens: 2580.0 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

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

	0°	45°	90°
0°	3003	3003	3003
5°	3011	2998	2972
10°	2979	2970	2936
15°	2926	2926	2892
20°	2864	2867	2831
25°	2769	2804	2759
30°	2608	2725	2692
35°	2464	2612	2616
40°	2344	2471	2536
45°	2210	2321	2441
50°	2069	2187	2336
55°	1909	2035	2210
60°	1718	1857	2055
65°	1517	1651	1869
70°	1264	1406	1589
75°	994	1123	1243
80°	711	790	877
85°	463	463	435



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.1	4.1
10°-20°	295.1	11.4
20°-30°	431.3	16.7
30°-40°	489.5	19.0
40°-50°	472.6	18.3
50°-60°	389.8	15.1
60°-70°	259.6	10.1
70°-80°	116.2	4.5
80°-90°	20.8	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	831.5	32.2
0°-40°	1321.0	51.2
0°-60°	2183.4	84.6
0°-90°	2580.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2580.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1114	1114	1110	1104	1100	105
15°	1050	1053	1050	1046	1038	296
25°	933	940	944	938	929	427
35°	750	760	795	799	796	470
45°	581	591	610	638	641	448
55°	407	414	434	458	471	363
65°	238	245	259	278	294	236
75°	96	101	108	113	120	105
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1115.8	<i>1115.8</i>	1115.8	1115.8	1115.8
2.5°	<i>1118.8</i>	<i>1119.2</i>	<i>1116.6</i>	<i>1109.8</i>	<i>1105.5</i>
5°	1114.5	<i>1114.1</i>	1109.8	1103.8	1100.4
7.5°	1102.1	<i>1102.9</i>	1101.6	1093.1	1088.3
10°	1090.1	<i>1090.5</i>	1087.1	1080.2	1074.6
12.5°	1074.6	<i>1074.2</i>	1069.5	1066.1	1057.1
15°	1050.2	<i>1052.8</i>	1050.2	1045.5	1038.2
17.5°	1026.6	<i>1026.6</i>	1028.3	1020.2	1014.6
20°	1000.0	<i>1001.3</i>	1001.3	994.9	988.5
22.5°	969.2	<i>973.0</i>	974.3	967.5	959.8
25°	932.7	<i>940.0</i>	944.3	937.5	929.3
27.5°	888.6	<i>899.7</i>	912.6	907.5	898.5
30°	839.3	<i>855.6</i>	877.0	872.7	866.3
32.5°	792.6	<i>808.9</i>	838.4	836.7	833.3
35°	750.1	<i>760.4</i>	795.2	799.4	796.4
37.5°	709.8	<i>719.3</i>	751.9	761.7	759.1
40°	667.4	<i>677.7</i>	703.4	721.0	721.9
42.5°	625.4	<i>635.3</i>	656.3	681.6	681.6
45°	580.8	<i>590.7</i>	610.0	637.8	641.3
47.5°	537.1	<i>547.4</i>	566.3	594.1	599.7
50°	494.2	<i>503.7</i>	522.5	549.5	558.1
52.5°	449.7	<i>459.9</i>	478.4	503.2	515.7
55°	406.8	<i>413.7</i>	433.8	457.8	471.1
57.5°	362.2	<i>368.6</i>	391.4	411.9	425.7
60°	319.3	<i>327.5</i>	345.1	366.1	381.9
62.5°	278.2	<i>286.8</i>	301.8	320.2	338.2
65°	238.3	<i>244.8</i>	259.3	277.8	293.6
67.5°	199.8	<i>205.3</i>	219.9	232.8	249.5
70°	160.7	<i>168.0</i>	178.7	191.2	201.9
72.5°	129.5	<i>132.5</i>	141.5	150.5	161.6
75°	95.6	<i>100.7</i>	108.0	113.2	119.6
77.5°	68.6	<i>71.6</i>	75.9	80.2	86.2
80°	45.9	<i>47.2</i>	51.0	51.9	56.6
82.5°	27.9	<i>28.7</i>	29.6	30.0	31.7
85°	15.0	<i>15.0</i>	15.0	14.1	14.1
87.5°	8.6	<i>8.6</i>	7.3	6.0	4.3
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







(END OF REPORT)