

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: P557645

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-81-96-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: P557645  
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-LD4-2STD-50-UNV-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

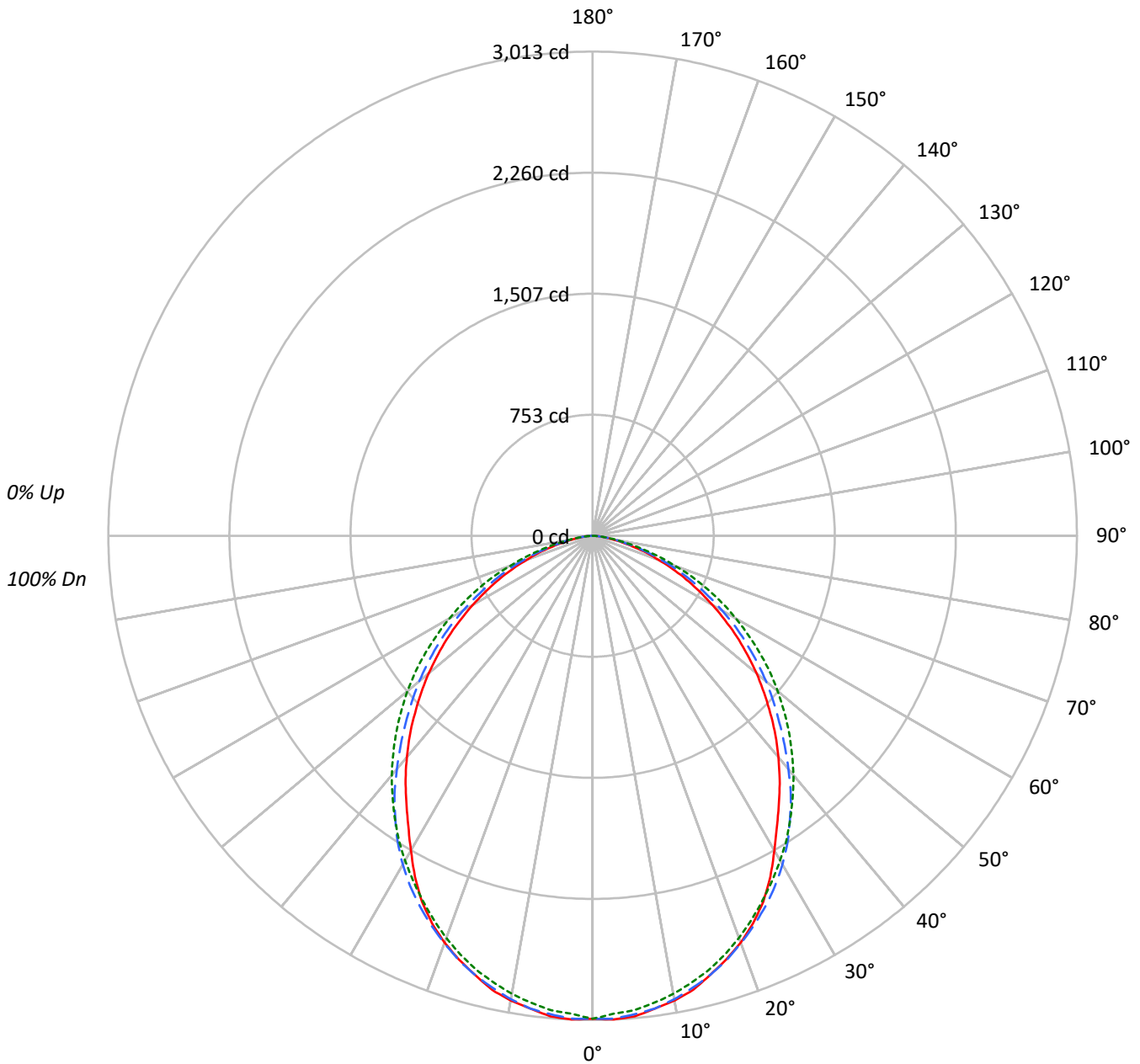
Lumens per Lamp: N/A  
Luminaire Lumens: 6949.0 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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	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°	8087	8087	8087
5°	8109	8074	8006
10°	8023	8000	7909
15°	7880	7880	7790
20°	7713	7723	7624
25°	7459	7552	7432
30°	7024	7340	7250
35°	6637	7036	7047
40°	6315	6655	6830
45°	5954	6252	6573
50°	5573	5892	6293
55°	5141	5482	5953
60°	4629	5002	5536
65°	4087	4448	5036
70°	3407	3788	4279
75°	2677	3025	3349
80°	1914	2129	2362
85°	1247	1247	1176



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	283.0	4.1
10°-20°	794.9	11.4
20°-30°	1161.6	16.7
30°-40°	1318.6	19.0
40°-50°	1272.9	18.3
50°-60°	1050.0	15.1
60°-70°	699.2	10.1
70°-80°	312.9	4.5
80°-90°	56.0	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°	2239.5	32.2
0°-40°	3558.0	51.2
0°-60°	5880.9	84.6
0°-90°	6949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6949.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3005	3005	3005	3005	3005	
5°	3002	3001	2989	2973	2964	284
15°	2829	2836	2829	2816	2796	797
25°	2512	2532	2543	2525	2503	1151
35°	2020	2048	2142	2153	2145	1266
45°	1564	1591	1643	1718	1727	1207
55°	1096	1114	1168	1233	1269	978
65°	642	659	698	748	791	636
75°	258	271	291	305	322	282
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3005.3	3005.3	3005.3	3005.3	3005.3
2.5°	3013.3	3014.5	3007.6	2989.1	2977.6
5°	3001.8	3000.6	2989.1	2972.9	2963.7
7.5°	2968.3	2970.6	2967.2	2944.1	2931.4
10°	2936.0	2937.1	2927.9	2909.4	2894.4
12.5°	2894.4	2893.3	2880.6	2871.3	2847.1
15°	2828.6	2835.5	2828.6	2815.9	2796.3
17.5°	2765.1	2765.1	2769.7	2747.8	2732.8
20°	2693.5	2697.0	2697.0	2679.7	2662.4
22.5°	2610.4	2620.8	2624.3	2605.8	2585.0
25°	2512.3	2531.9	2543.4	2525.0	2503.0
27.5°	2393.4	2423.4	2458.0	2444.2	2419.9
30°	2260.6	2304.5	2362.2	2350.6	2333.3
32.5°	2134.7	2178.6	2258.3	2253.7	2244.4
35°	2020.4	2048.2	2141.7	2153.2	2145.1
37.5°	1911.9	1937.3	2025.1	2051.6	2044.7
40°	1797.6	1825.3	1894.6	1941.9	1944.2
42.5°	1684.5	1711.0	1767.6	1835.7	1835.7
45°	1564.4	1591.0	1642.9	1718.0	1727.2
47.5°	1446.6	1474.3	1525.1	1600.2	1615.2
50°	1331.2	1356.6	1407.4	1480.1	1503.2
52.5°	1211.1	1238.8	1288.5	1355.4	1388.9
55°	1095.7	1114.1	1168.4	1233.0	1268.8
57.5°	975.6	992.9	1054.1	1109.5	1146.5
60°	860.1	882.1	929.4	986.0	1028.7
62.5°	749.3	772.4	812.8	862.4	910.9
65°	641.9	659.2	698.5	748.1	790.9
67.5°	538.0	553.0	592.3	626.9	671.9
70°	433.0	452.6	481.4	514.9	543.8
72.5°	348.7	356.8	381.0	405.2	435.3
75°	257.5	271.3	290.9	304.8	322.1
77.5°	184.7	192.8	204.4	215.9	232.1
80°	123.5	127.0	137.4	139.7	152.4
82.5°	75.0	77.4	79.7	80.8	85.4
85°	40.4	40.4	40.4	38.1	38.1
87.5°	23.1	23.1	19.6	16.2	11.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







(END OF REPORT)