

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: P558185

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-93-88-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: P558185  
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-LD4-3LO-50-UNV-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

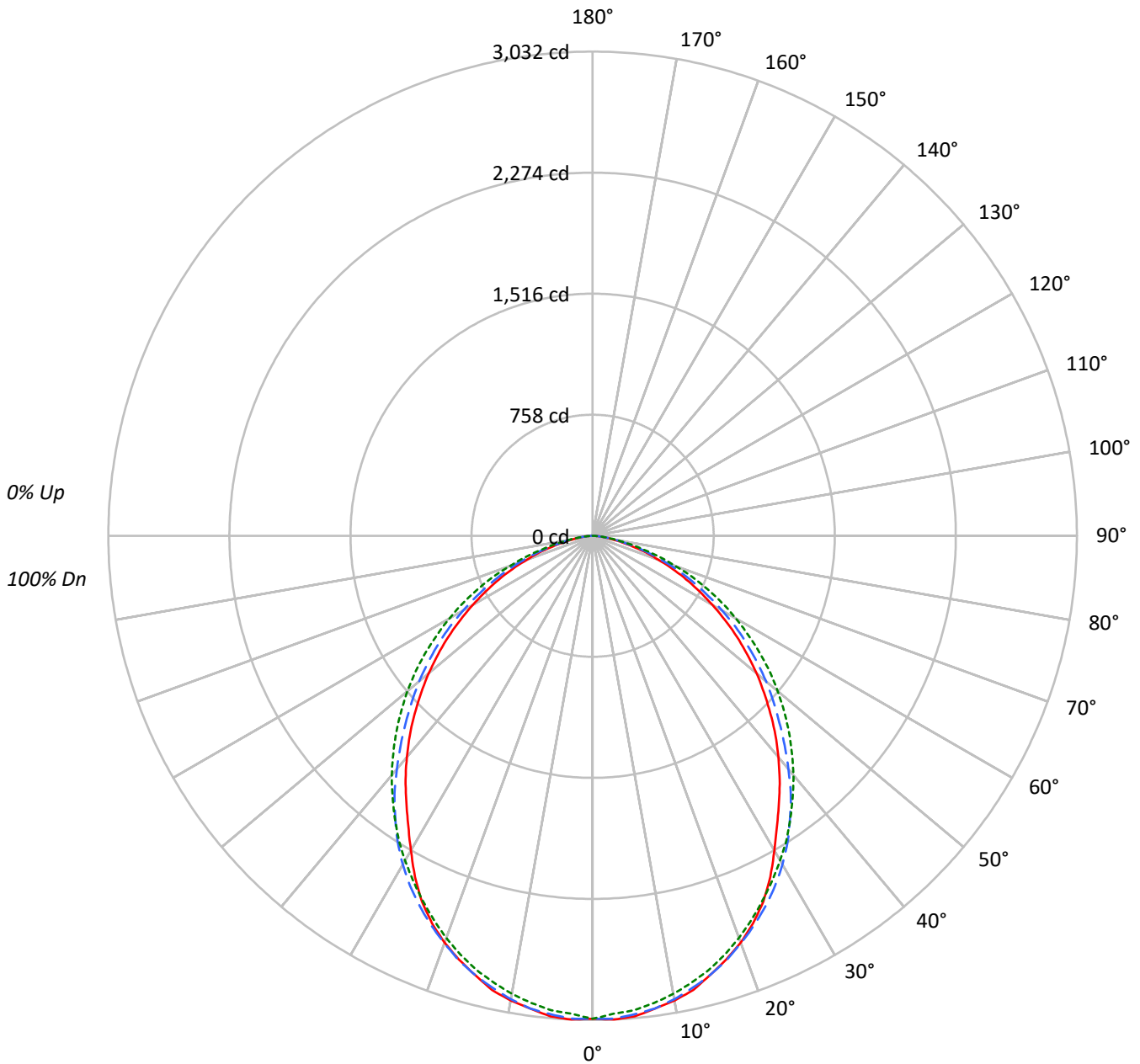
Lumens per Lamp: N/A  
Luminaire Lumens: 6993.0 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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				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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

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

	0°	45°	90°
0°	8138	8138	8138
5°	8160	8125	8057
10°	8073	8051	7959
15°	7930	7930	7840
20°	7762	7772	7672
25°	7507	7600	7479
30°	7069	7386	7296
35°	6679	7080	7091
40°	6355	6698	6873
45°	5991	6292	6615
50°	5608	5929	6333
55°	5173	5516	5991
60°	4659	5034	5571
65°	4113	4476	5068
70°	3428	3812	4305
75°	2694	3044	3371
80°	1926	2143	2377
85°	1257	1257	1183



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	284.7	4.1
10°-20°	799.9	11.4
20°-30°	1169.0	16.7
30°-40°	1326.9	19.0
40°-50°	1280.9	18.3
50°-60°	1056.7	15.1
60°-70°	703.7	10.1
70°-80°	314.9	4.5
80°-90°	56.3	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°	2253.6	32.2
0°-40°	3580.5	51.2
0°-60°	5918.1	84.6
0°-90°	6993.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6993.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3024	3024	3024	3024	3024	
5°	3021	3020	3008	2992	2982	286
15°	2846	2854	2846	2834	2814	802
25°	2528	2548	2560	2541	2519	1158
35°	2033	2061	2155	2167	2159	1274
45°	1574	1601	1653	1729	1738	1215
55°	1103	1121	1176	1241	1277	984
65°	646	663	703	753	796	641
75°	259	273	293	307	324	283
85°	41	41	41	38	38	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3024.3	3024.3	3024.3	3024.3	3024.3
2.5°	3032.4	3033.6	3026.6	3008.0	2996.4
5°	3020.8	3019.6	3008.0	2991.8	2982.5
7.5°	2987.1	2989.4	2986.0	2962.7	2949.9
10°	2954.6	2955.7	2946.4	2927.9	2912.8
12.5°	2912.8	2911.6	2898.8	2889.5	2865.1
15°	2846.5	2853.5	2846.5	2833.7	2814.0
17.5°	2782.6	2782.6	2787.3	2765.2	2750.1
20°	2710.6	2714.1	2714.1	2696.7	2679.2
22.5°	2626.9	2637.4	2640.9	2622.3	2601.4
25°	2528.2	2547.9	2559.6	2541.0	2518.9
27.5°	2408.5	2438.7	2473.6	2459.6	2435.2
30°	2274.9	2319.0	2377.1	2365.5	2348.1
32.5°	2148.3	2192.4	2272.6	2267.9	2258.6
35°	2033.2	2061.1	2155.2	2166.8	2158.7
37.5°	1924.0	1949.6	2037.9	2064.6	2057.6
40°	1809.0	1836.9	1906.6	1954.2	1956.6
42.5°	1695.1	1721.9	1778.8	1847.3	1847.3
45°	1574.3	1601.0	1653.3	1728.8	1738.1
47.5°	1455.8	1483.7	1534.8	1610.3	1625.4
50°	1339.6	1365.2	1416.3	1489.5	1512.7
52.5°	1218.8	1246.7	1296.6	1364.0	1397.7
55°	1102.6	1121.2	1175.8	1240.9	1276.9
57.5°	981.8	999.2	1060.8	1116.5	1153.7
60°	865.6	887.7	935.3	992.2	1035.2
62.5°	754.0	777.3	817.9	867.9	916.7
65°	646.0	663.4	702.9	752.9	795.9
67.5°	541.4	556.5	596.0	630.9	676.2
70°	435.7	455.4	484.5	518.2	547.2
72.5°	350.9	359.0	383.4	407.8	438.0
75°	259.1	273.0	292.8	306.7	324.2
77.5°	185.9	194.0	205.6	217.3	233.5
80°	124.3	127.8	138.3	140.6	153.4
82.5°	75.5	77.8	80.2	81.3	86.0
85°	40.7	40.7	40.7	38.3	38.3
87.5°	23.2	23.2	19.8	16.3	11.6
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)