

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: P558144

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-81-84-EDD-90**

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: P558144  
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-81-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

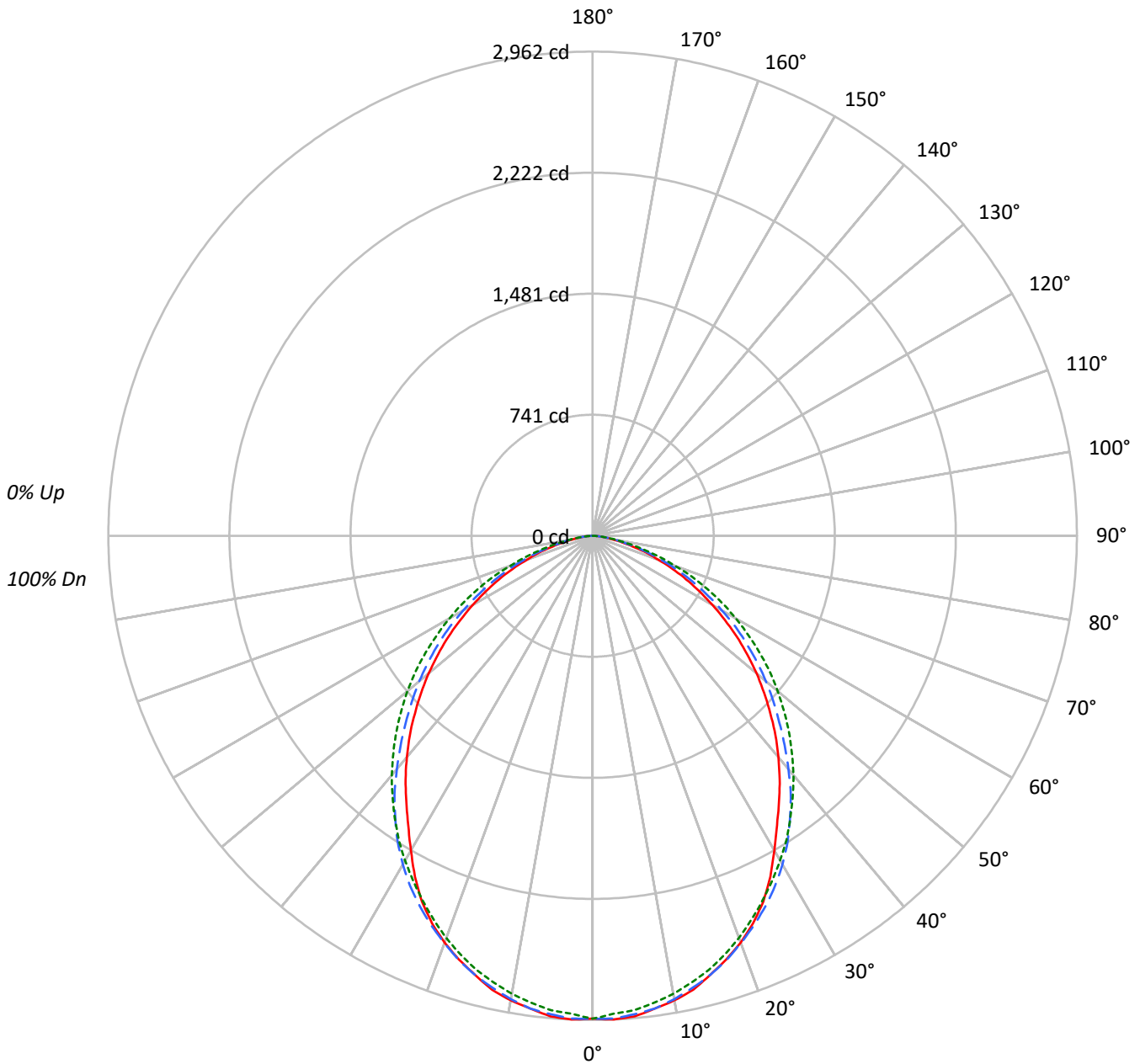
Lumens per Lamp: N/A  
Luminaire Lumens: 6831.0 lumens  
Efficiency: N/A  
Efficacy: 97.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (Ain): 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°	7950	7950	7950
5°	7971	7937	7870
10°	7886	7865	7775
15°	7746	7746	7658
20°	7582	7592	7495
25°	7333	7424	7306
30°	6905	7215	7127
35°	6524	6916	6927
40°	6208	6542	6714
45°	5852	6146	6462
50°	5478	5792	6186
55°	5053	5389	5852
60°	4550	4917	5442
65°	4018	4372	4950
70°	3349	3724	4206
75°	2632	2974	3292
80°	1881	2094	2321
85°	1226	1226	1158



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	278.1	4.1
10°-20°	781.4	11.4
20°-30°	1141.9	16.7
30°-40°	1296.2	19.0
40°-50°	1251.2	18.3
50°-60°	1032.2	15.1
60°-70°	687.4	10.1
70°-80°	307.6	4.5
80°-90°	55.0	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°	2201.4	32.2
0°-40°	3497.6	51.2
0°-60°	5781.0	84.6
0°-90°	6831.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6831.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2954	2954	2954	2954	2954	
5°	2951	2950	2938	2922	2913	279
15°	2781	2787	2781	2768	2749	784
25°	2470	2489	2500	2482	2460	1131
35°	1986	2013	2105	2117	2109	1244
45°	1538	1564	1615	1689	1698	1187
55°	1077	1095	1149	1212	1247	961
65°	631	648	687	735	777	626
75°	253	267	286	300	317	277
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°	2954.2	2954.2	2954.2	2954.2	2954.2
2.5°	2962.2	2963.3	2956.5	2938.3	2927.0
5°	2950.8	2949.7	2938.3	2922.5	2913.4
7.5°	2917.9	2920.2	2916.8	2894.1	2881.6
10°	2886.1	2887.3	2878.2	2860.0	2845.3
12.5°	2845.3	2844.1	2831.7	2822.6	2798.7
15°	2780.6	2787.4	2780.6	2768.1	2748.8
17.5°	2718.2	2718.2	2722.7	2701.1	2686.4
20°	2647.8	2651.2	2651.2	2634.2	2617.2
22.5°	2566.1	2576.3	2579.7	2561.5	2541.1
25°	2469.6	2488.9	2500.3	2482.1	2460.5
27.5°	2352.7	2382.2	2416.3	2402.7	2378.8
30°	2222.2	2265.3	2322.1	2310.7	2293.7
32.5°	2098.5	2141.6	2219.9	2215.4	2206.3
35°	1986.1	2013.4	2105.3	2116.7	2108.7
37.5°	1879.4	1904.4	1990.7	2016.8	2010.0
40°	1767.1	1794.3	1862.4	1909.0	1911.2
42.5°	1655.9	1682.0	1737.6	1804.5	1804.5
45°	1537.8	1563.9	1615.0	1688.8	1697.9
47.5°	1422.1	1449.3	1499.2	1573.0	1587.8
50°	1308.6	1333.5	1383.5	1455.0	1477.7
52.5°	1190.5	1217.8	1266.6	1332.4	1365.3
55°	1077.1	1095.2	1148.6	1212.1	1247.3
57.5°	959.0	976.0	1036.2	1090.7	1127.0
60°	845.5	867.1	913.6	969.2	1011.2
62.5°	736.6	759.3	799.0	847.8	895.5
65°	631.0	648.0	686.6	735.4	777.4
67.5°	528.9	543.6	582.2	616.3	660.5
70°	425.6	444.9	473.3	506.2	534.6
72.5°	342.7	350.7	374.5	398.4	427.9
75°	253.1	266.7	286.0	299.6	316.6
77.5°	181.6	189.5	200.9	212.2	228.1
80°	121.4	124.8	135.1	137.3	149.8
82.5°	73.8	76.0	78.3	79.4	84.0
85°	39.7	39.7	39.7	37.5	37.5
87.5°	22.7	22.7	19.3	15.9	11.3
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)