

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: P558039

Luminaire Tested: **FUSL-12-4-LD4-3LO-35-UNV-82-87-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: P558039  
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-35-UNV-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

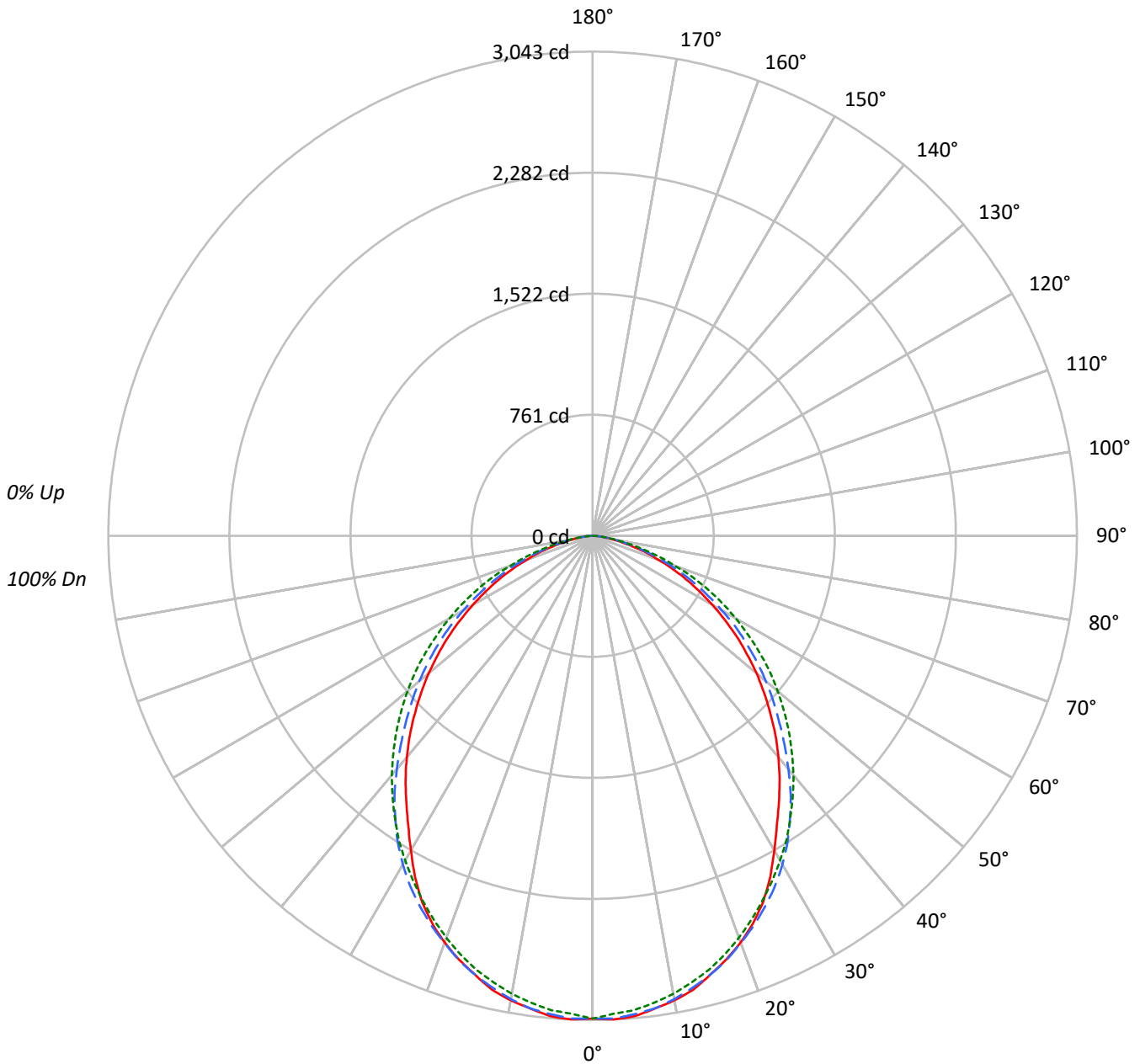
Lumens per Lamp: N/A  
Luminaire Lumens: 7017.0 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8166	8166	8166
5°	8188	8153	8084
10°	8101	8079	7987
15°	7957	7957	7867
20°	7789	7799	7699
25°	7532	7626	7505
30°	7093	7412	7321
35°	6702	7104	7116
40°	6376	6720	6897
45°	6012	6314	6637
50°	5627	5950	6355
55°	5191	5535	6011
60°	4674	5051	5591
65°	4127	4491	5085
70°	3440	3825	4320
75°	2703	3055	3382
80°	1932	2149	2385
85°	1260	1260	1189



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.7	4.1
10°-20°	802.7	11.4
20°-30°	1173.0	16.7
30°-40°	1331.5	19.0
40°-50°	1285.3	18.3
50°-60°	1060.3	15.1
60°-70°	706.1	10.1
70°-80°	316.0	4.5
80°-90°	56.5	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°	2261.4	32.2
0°-40°	3592.8	51.2
0°-60°	5938.5	84.6
0°-90°	7017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7017.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3035	3035	3035	3035	3035	
5°	3031	3030	3018	3002	2993	287
15°	2856	2863	2856	2844	2824	805
25°	2537	2557	2568	2550	2528	1162
35°	2040	2068	2163	2174	2166	1278
45°	1580	1606	1659	1735	1744	1219
55°	1106	1125	1180	1245	1281	987
65°	648	666	705	756	799	643
75°	260	274	294	308	325	284
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°	3034.7	3034.7	3034.7	3034.7	3034.7
2.5°	3042.8	3044.0	3037.0	3018.3	3006.7
5°	3031.2	3030.0	3018.3	3002.0	2992.7
7.5°	2997.4	2999.7	2996.2	2972.9	2960.1
10°	2964.7	2965.9	2956.6	2937.9	2922.8
12.5°	2922.8	2921.6	2908.8	2899.4	2875.0
15°	2856.3	2863.3	2856.3	2843.5	2823.7
17.5°	2792.2	2792.2	2796.8	2774.7	2759.5
20°	2719.9	2723.4	2723.4	2705.9	2688.4
22.5°	2636.0	2646.4	2649.9	2631.3	2610.3
25°	2536.9	2556.7	2568.3	2549.7	2527.5
27.5°	2416.8	2447.1	2482.1	2468.1	2443.6
30°	2282.7	2327.0	2385.3	2373.6	2356.2
32.5°	2155.6	2199.9	2280.4	2275.7	2266.4
35°	2040.2	2068.2	2162.6	2174.3	2166.1
37.5°	1930.6	1956.3	2044.9	2071.7	2064.7
40°	1815.2	1843.2	1913.1	1960.9	1963.3
42.5°	1701.0	1727.8	1784.9	1853.7	1853.7
45°	1579.7	1606.5	1659.0	1734.8	1744.1
47.5°	1460.8	1488.8	1540.1	1615.8	1631.0
50°	1344.2	1369.9	1421.2	1494.6	1517.9
52.5°	1223.0	1250.9	1301.1	1368.7	1402.5
55°	1106.4	1125.0	1179.8	1245.1	1281.3
57.5°	985.1	1002.6	1064.4	1120.4	1157.7
60°	868.5	890.7	938.5	995.6	1038.8
62.5°	756.6	779.9	820.7	870.9	919.8
65°	648.2	665.7	705.3	755.5	798.6
67.5°	543.3	558.4	598.1	633.0	678.5
70°	437.2	457.0	486.2	520.0	549.1
72.5°	352.1	360.2	384.7	409.2	439.5
75°	260.0	274.0	293.8	307.8	325.3
77.5°	186.5	194.7	206.4	218.0	234.3
80°	124.7	128.2	138.7	141.1	153.9
82.5°	75.8	78.1	80.4	81.6	86.3
85°	40.8	40.8	40.8	38.5	38.5
87.5°	23.3	23.3	19.8	16.3	11.7
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)