

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: P557639

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-81-87-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: P557639  
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-81-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

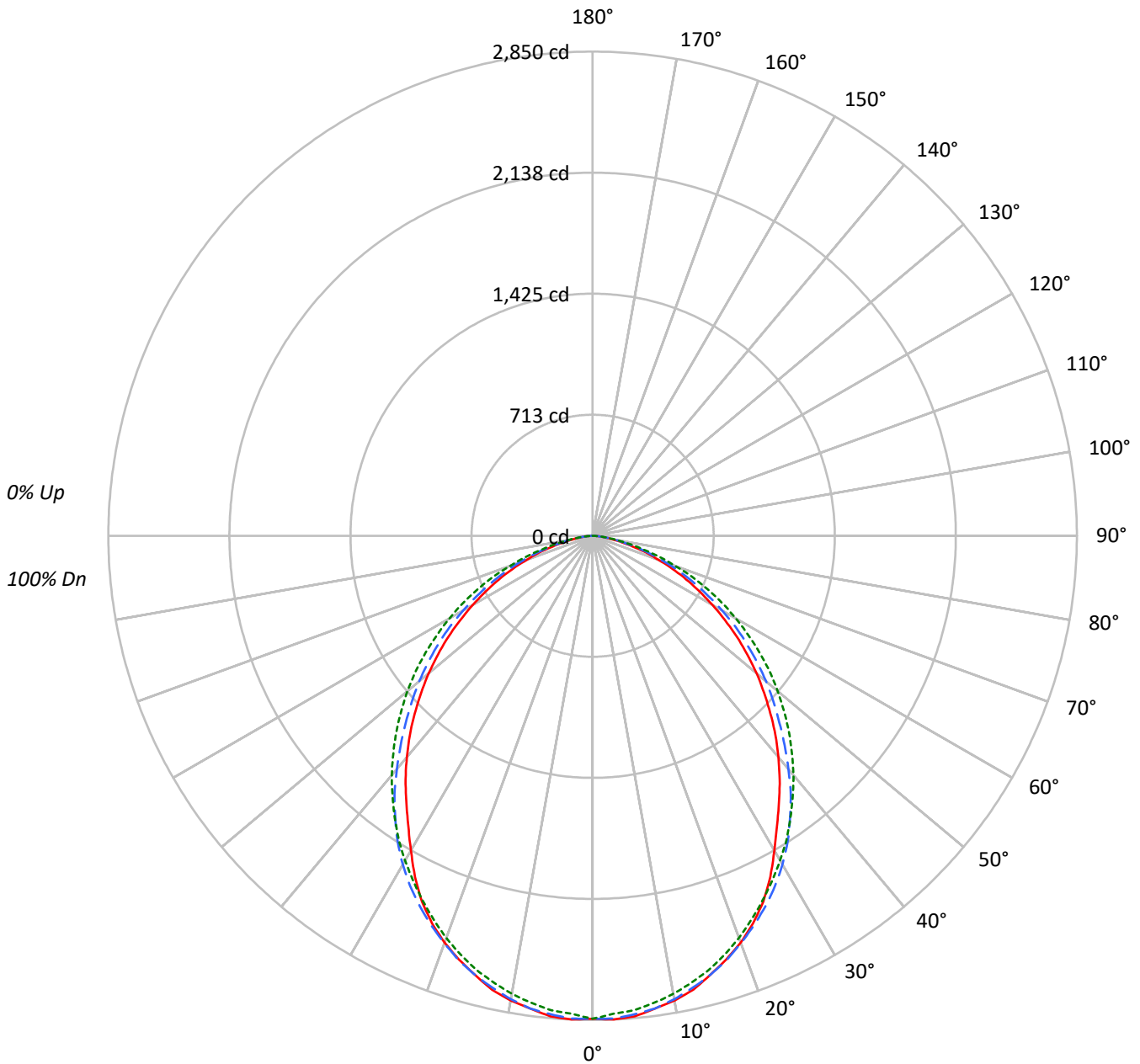
Lumens per Lamp: N/A  
Luminaire Lumens: 6573.0 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (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°	7650	7650	7650
5°	7670	7638	7572
10°	7588	7568	7481
15°	7454	7454	7369
20°	7296	7306	7212
25°	7056	7143	7030
30°	6644	6943	6858
35°	6278	6655	6666
40°	5973	6295	6460
45°	5632	5914	6217
50°	5272	5573	5953
55°	4862	5185	5631
60°	4379	4731	5237
65°	3866	4207	4763
70°	3222	3583	4047
75°	2532	2861	3168
80°	1812	2015	2235
85°	1179	1179	1112



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	267.6	4.1
10°-20°	751.9	11.4
20°-30°	1098.8	16.7
30°-40°	1247.2	19.0
40°-50°	1204.0	18.3
50°-60°	993.2	15.1
60°-70°	661.4	10.1
70°-80°	296.0	4.5
80°-90°	52.9	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°	2118.3	32.2
0°-40°	3365.5	51.2
0°-60°	5562.7	84.6
0°-90°	6573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6573.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2843	2843	2843	2843	2843	
5°	2839	2838	2827	2812	2803	269
15°	2676	2682	2676	2664	2645	754
25°	2376	2395	2406	2388	2368	1088
35°	1911	1937	2026	2037	2029	1197
45°	1480	1505	1554	1625	1634	1142
55°	1036	1054	1105	1166	1200	925
65°	607	624	661	708	748	602
75°	244	257	275	288	305	266
85°	38	38	38	36	36	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2842.7	2842.7	2842.7	2842.7	2842.7
2.5°	2850.3	2851.4	2844.8	2827.4	2816.4
5°	2839.4	2838.3	2827.4	2812.1	2803.3
7.5°	2807.7	2809.9	2806.6	2784.8	2772.8
10°	2777.1	2778.2	2769.5	2752.0	2737.8
12.5°	2737.8	2736.7	2724.7	2716.0	2693.0
15°	2675.6	2682.1	2675.6	2663.6	2645.0
17.5°	2615.5	2615.5	2619.9	2599.1	2584.9
20°	2547.8	2551.1	2551.1	2534.7	2518.3
22.5°	2469.2	2479.0	2482.3	2464.8	2445.1
25°	2376.3	2394.9	2405.8	2388.4	2367.6
27.5°	2263.9	2292.3	2325.0	2311.9	2289.0
30°	2138.3	2179.8	2234.4	2223.5	2207.1
32.5°	2019.2	2060.7	2136.1	2131.7	2123.0
35°	1911.1	1937.3	2025.8	2036.7	2029.1
37.5°	1808.5	1832.5	1915.5	1940.6	1934.1
40°	1700.3	1726.6	1792.1	1836.9	1839.0
42.5°	1593.3	1618.4	1672.0	1736.4	1736.4
45°	1479.8	1504.9	1554.0	1625.0	1633.7
47.5°	1368.4	1394.6	1442.6	1513.6	1527.8
50°	1259.2	1283.2	1331.2	1400.0	1421.9
52.5°	1145.6	1171.8	1218.7	1282.1	1313.8
55°	1036.4	1053.8	1105.2	1166.3	1200.2
57.5°	922.8	939.2	997.1	1049.5	1084.4
60°	813.6	834.3	879.1	932.6	973.0
62.5°	708.8	730.6	768.8	815.8	861.6
65°	607.2	623.6	660.7	707.7	748.1
67.5°	508.9	523.1	560.2	593.0	635.6
70°	409.5	428.1	455.4	487.1	514.4
72.5°	329.8	337.4	360.4	383.3	411.7
75°	243.5	256.6	275.2	288.3	304.7
77.5°	174.7	182.4	193.3	204.2	219.5
80°	116.9	120.1	130.0	132.1	144.2
82.5°	71.0	73.2	75.4	76.4	80.8
85°	38.2	38.2	38.2	36.0	36.0
87.5°	21.8	21.8	18.6	15.3	10.9
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)