

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: P557477

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-UNV-93-86-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: P557477  
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-30-UNV-93-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

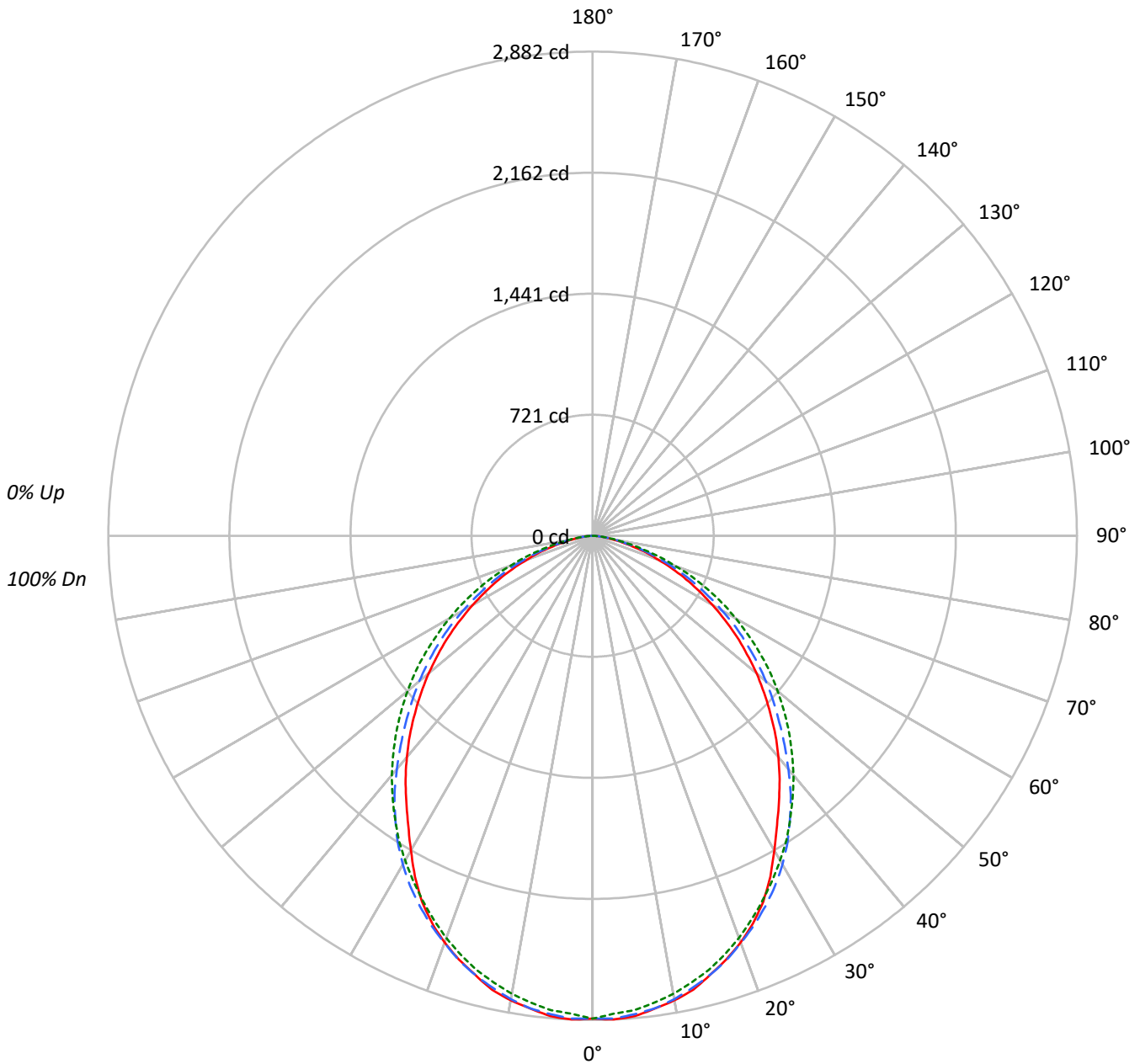
Lumens per Lamp: N/A  
Luminaire Lumens: 6646.0 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7734	7734	7734
5°	7755	7722	7657
10°	7673	7652	7564
15°	7537	7537	7451
20°	7377	7387	7292
25°	7134	7222	7108
30°	6718	7020	6934
35°	6348	6729	6740
40°	6039	6365	6532
45°	5694	5980	6287
50°	5330	5635	6019
55°	4916	5242	5693
60°	4427	4784	5295
65°	3909	4253	4816
70°	3258	3622	4092
75°	2560	2894	3203
80°	1830	2036	2259
85°	1192	1192	1124



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	270.6	4.1
10°-20°	760.2	11.4
20°-30°	1111.0	16.7
30°-40°	1261.1	19.0
40°-50°	1217.4	18.3
50°-60°	1004.2	15.1
60°-70°	668.7	10.1
70°-80°	299.3	4.5
80°-90°	53.5	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°	2141.8	32.2
0°-40°	3402.9	51.2
0°-60°	5624.5	84.6
0°-90°	6646.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6646.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2874	2874	2874	2874	2874	
5°	2871	2870	2859	2843	2834	272
15°	2705	2712	2705	2693	2674	763
25°	2403	2422	2432	2415	2394	1100
35°	1932	1959	2048	2059	2052	1211
45°	1496	1522	1571	1643	1652	1154
55°	1048	1066	1117	1179	1214	935
65°	614	630	668	716	756	609
75°	246	260	278	292	308	269
85°	39	39	39	36	36	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2874.2	2874.2	2874.2	2874.2	2874.2
2.5°	2882.0	2883.1	2876.4	2858.8	2847.7
5°	2870.9	2869.8	2858.8	2843.3	2834.5
7.5°	2838.9	2841.1	2837.8	2815.7	2803.6
10°	2808.0	2809.1	2800.2	2782.6	2768.2
12.5°	2768.2	2767.1	2755.0	2746.1	2722.9
15°	2705.3	2711.9	2705.3	2693.1	2674.4
17.5°	2644.6	2644.6	2649.0	2628.0	2613.6
20°	2576.1	2579.4	2579.4	2562.8	2546.3
22.5°	2496.6	2506.5	2509.8	2492.2	2472.3
25°	2402.7	2421.5	2432.5	2414.9	2393.9
27.5°	2289.0	2317.7	2350.8	2337.6	2314.4
30°	2162.0	2204.0	2259.2	2248.1	2231.6
32.5°	2041.7	2083.6	2159.8	2155.4	2146.6
35°	1932.3	1958.8	2048.3	2059.3	2051.6
37.5°	1828.5	1852.8	1936.8	1962.2	1955.5
40°	1719.2	1745.7	1812.0	1857.3	1859.5
42.5°	1611.0	1636.4	1690.5	1755.7	1755.7
45°	1496.2	1521.6	1571.3	1643.0	1651.9
47.5°	1383.6	1410.1	1458.6	1530.4	1544.8
50°	1273.1	1297.4	1346.0	1415.6	1437.7
52.5°	1158.3	1184.8	1232.3	1296.3	1328.3
55°	1047.9	1065.5	1117.4	1179.3	1213.5
57.5°	933.0	949.6	1008.1	1061.1	1096.5
60°	822.6	843.6	888.9	943.0	983.8
62.5°	716.6	738.7	777.4	824.8	871.2
65°	613.9	630.5	668.0	715.5	756.4
67.5°	514.6	528.9	566.5	599.6	642.6
70°	414.1	432.8	460.4	492.5	520.1
72.5°	333.5	341.2	364.4	387.6	416.3
75°	246.2	259.5	278.3	291.5	308.1
77.5°	176.7	184.4	195.4	206.5	221.9
80°	118.1	121.5	131.4	133.6	145.8
82.5°	71.8	74.0	76.2	77.3	81.7
85°	38.6	38.6	38.6	36.4	36.4
87.5°	22.1	22.1	18.8	15.5	11.0
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)