

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: P557677

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-93-96-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: P557677  
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-93-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

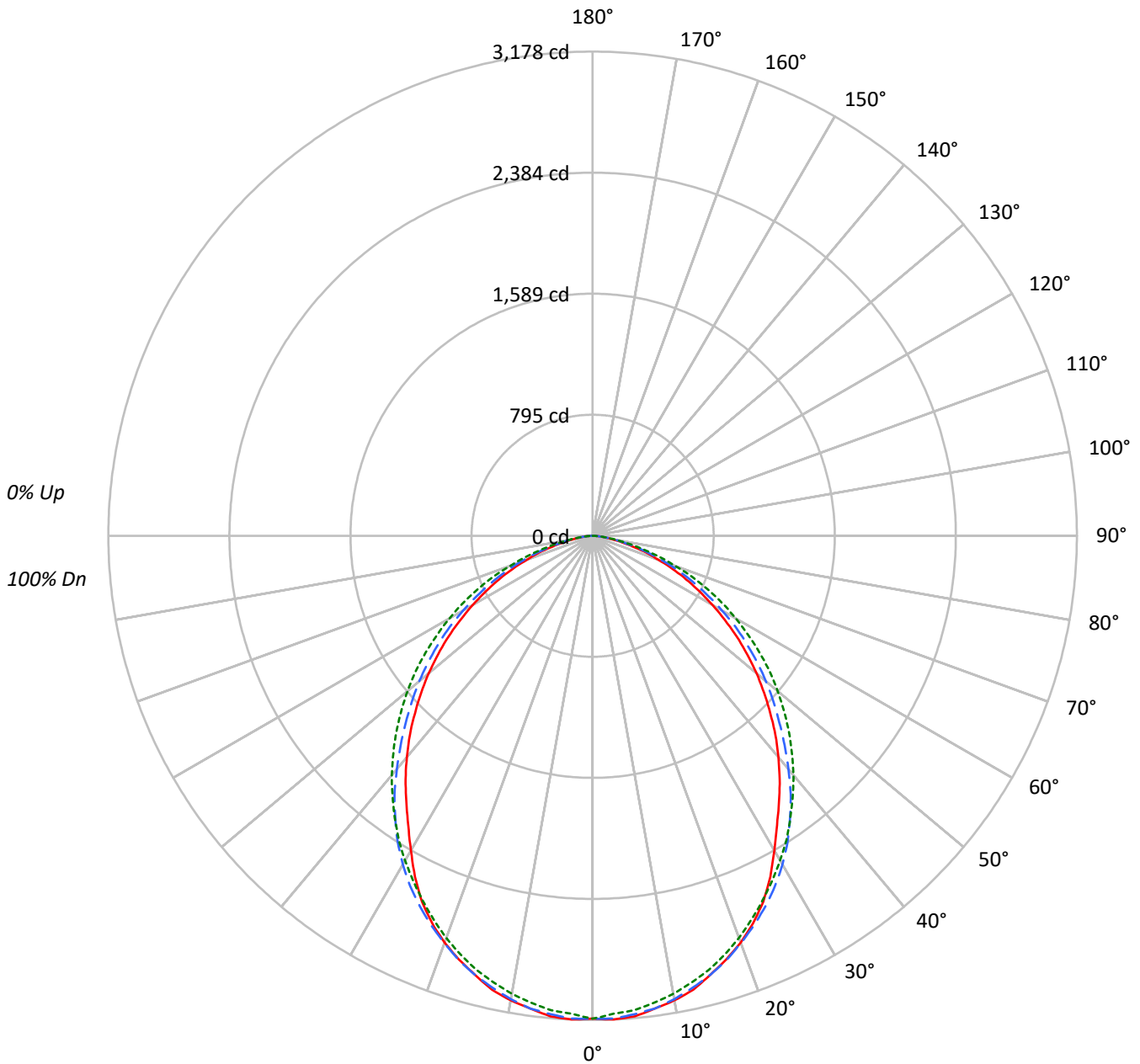
Lumens per Lamp: N/A  
Luminaire Lumens: 7329.0 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	8529	8529	8529
5°	8552	8516	8444
10°	8461	8438	8341
15°	8311	8311	8216
20°	8135	8146	8041
25°	7867	7965	7838
30°	7408	7741	7647
35°	7000	7420	7432
40°	6660	7019	7203
45°	6279	6594	6932
50°	5878	6214	6637
55°	5422	5781	6278
60°	4883	5275	5839
65°	4311	4691	5311
70°	3592	3995	4512
75°	2823	3191	3532
80°	2019	2245	2490
85°	1315	1315	1241



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	298.4	4.1
10°-20°	838.4	11.4
20°-30°	1225.1	16.7
30°-40°	1390.7	19.0
40°-50°	1342.5	18.3
50°-60°	1107.4	15.1
60°-70°	737.5	10.1
70°-80°	330.0	4.5
80°-90°	59.0	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°	2361.9	32.2
0°-40°	3752.6	51.2
0°-60°	6202.5	84.6
0°-90°	7329.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7329.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3170	3170	3170	3170	3170	
5°	3166	3165	3153	3136	3126	300
15°	2983	2991	2983	2970	2949	841
25°	2650	2670	2682	2663	2640	1213
35°	2131	2160	2259	2271	2262	1335
45°	1650	1678	1733	1812	1822	1273
55°	1156	1175	1232	1300	1338	1031
65°	677	695	737	789	834	671
75°	272	286	307	322	340	297
85°	43	43	43	40	40	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3169.6	3169.6	3169.6	3169.6	3169.6
2.5°	3178.1	3179.3	3172.0	3152.6	3140.4
5°	3166.0	3164.7	3152.6	3135.5	3125.8
7.5°	3130.6	3133.1	3129.4	3105.1	3091.7
10°	3096.5	3097.8	3088.0	3068.5	3052.7
12.5°	3052.7	3051.5	3038.1	3028.4	3002.8
15°	2983.3	2990.6	2983.3	2969.9	2949.2
17.5°	2916.3	2916.3	2921.2	2898.1	2882.2
20°	2840.8	2844.5	2844.5	2826.2	2808.0
22.5°	2753.2	2764.1	2767.8	2748.3	2726.4
25°	2649.7	2670.4	2682.5	2663.1	2639.9
27.5°	2524.2	2555.9	2592.4	2577.8	2552.2
30°	2384.2	2430.5	2491.4	2479.2	2460.9
32.5°	2251.5	2297.7	2381.8	2376.9	2367.2
35°	2130.9	2160.2	2258.8	2271.0	2262.4
37.5°	2016.5	2043.3	2135.8	2163.8	2156.5
40°	1895.9	1925.1	1998.2	2048.1	2050.6
42.5°	1776.6	1804.6	1864.3	1936.1	1936.1
45°	1649.9	1678.0	1732.7	1811.9	1821.6
47.5°	1525.7	1555.0	1608.5	1687.7	1703.5
50°	1404.0	1430.8	1484.3	1561.1	1585.4
52.5°	1277.3	1306.6	1358.9	1429.5	1464.9
55°	1155.6	1175.1	1232.3	1300.5	1338.2
57.5°	1028.9	1047.2	1111.7	1170.2	1209.1
60°	907.2	930.3	980.2	1039.9	1084.9
62.5°	790.3	814.6	857.2	909.6	960.7
65°	677.0	695.3	736.7	789.1	834.1
67.5°	567.4	583.3	624.7	661.2	708.7
70°	456.6	477.3	507.8	543.1	573.5
72.5°	367.7	376.3	401.8	427.4	459.1
75°	271.5	286.2	306.9	321.5	339.7
77.5°	194.8	203.4	215.5	227.7	244.8
80°	130.3	133.9	144.9	147.3	160.7
82.5°	79.1	81.6	84.0	85.2	90.1
85°	42.6	42.6	42.6	40.2	40.2
87.5°	24.4	24.4	20.7	17.0	12.2
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)