

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: P558157

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-81-96-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: P558157  
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-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC 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**

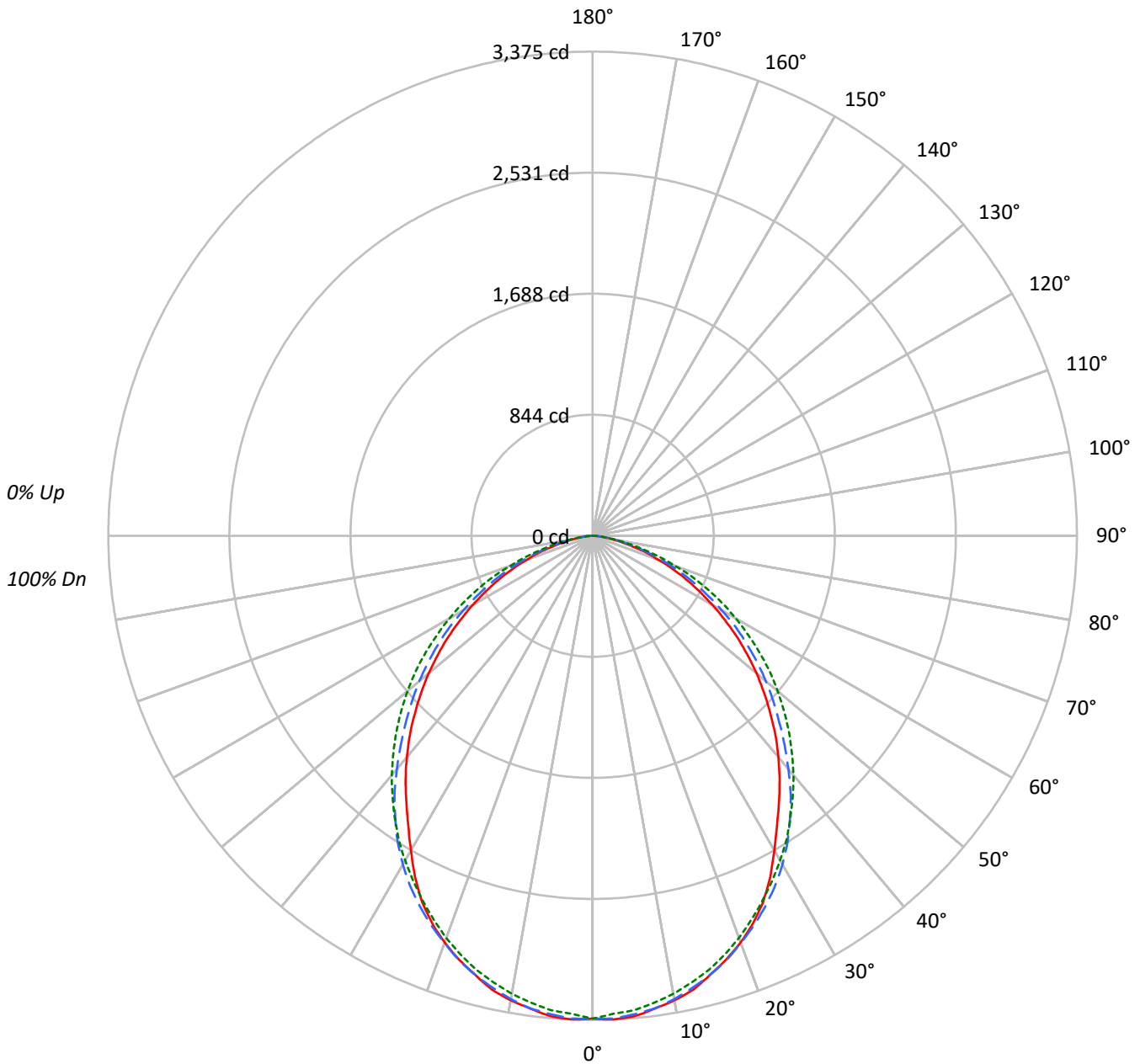
Lumens per Lamp: N/A  
Luminaire Lumens: 7783.0 lumens  
Efficiency: N/A  
Efficacy: 110.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9058	9058	9058
5°	9082	9043	8967
10°	8986	8961	8858
15°	8826	8826	8725
20°	8639	8650	8539
25°	8355	8458	8324
30°	7867	8221	8121
35°	7434	7880	7893
40°	7073	7454	7650
45°	6668	7003	7362
50°	6242	6599	7048
55°	5758	6139	6667
60°	5185	5602	6201
65°	4578	4981	5640
70°	3815	4242	4792
75°	2999	3388	3751
80°	2145	2385	2645
85°	1399	1399	1318



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	316.9	4.1
10°-20°	890.3	11.4
20°-30°	1301.0	16.7
30°-40°	1476.8	19.0
40°-50°	1425.6	18.3
50°-60°	1176.0	15.1
60°-70°	783.1	10.1
70°-80°	350.5	4.5
80°-90°	62.7	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°	2508.2	32.2
0°-40°	3985.0	51.2
0°-60°	6586.7	84.6
0°-90°	7783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7783.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3366	3366	3366	3366	3366	
5°	3362	3361	3348	3330	3319	318
15°	3168	3176	3168	3154	3132	893
25°	2814	2836	2849	2828	2803	1289
35°	2263	2294	2399	2412	2403	1418
45°	1752	1782	1840	1924	1934	1352
55°	1227	1248	1309	1381	1421	1095
65°	719	738	782	838	886	713
75°	288	304	326	341	361	315
85°	45	45	45	43	43	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3365.9	3365.9	3365.9	3365.9	3365.9
2.5°	3375.0	3376.3	3368.5	3347.8	3334.9
5°	3362.1	3360.8	3347.8	3329.7	3319.4
7.5°	3324.6	3327.2	3323.3	3297.4	3283.2
10°	3288.4	3289.7	3279.3	3258.6	3241.8
12.5°	3241.8	3240.5	3226.3	3215.9	3188.8
15°	3168.1	3175.9	3168.1	3153.9	3131.9
17.5°	3097.0	3097.0	3102.2	3077.6	3060.8
20°	3016.8	3020.7	3020.7	3001.3	2981.9
22.5°	2923.7	2935.3	2939.2	2918.5	2895.3
25°	2813.8	2835.8	2848.7	2828.0	2803.4
27.5°	2680.6	2714.2	2753.0	2737.5	2710.3
30°	2531.9	2581.0	2645.7	2632.8	2613.4
32.5°	2390.9	2440.1	2529.3	2524.1	2513.8
35°	2262.9	2294.0	2398.7	2411.6	2402.6
37.5°	2141.4	2169.8	2268.1	2297.8	2290.1
40°	2013.4	2044.4	2122.0	2175.0	2177.6
42.5°	1886.6	1916.4	1979.7	2056.0	2056.0
45°	1752.2	1781.9	1840.1	1924.1	1934.5
47.5°	1620.3	1651.3	1708.2	1792.2	1809.1
50°	1490.9	1519.4	1576.3	1657.8	1683.6
52.5°	1356.5	1387.5	1443.1	1518.1	1555.6
55°	1227.2	1247.8	1308.6	1381.0	1421.1
57.5°	1092.7	1112.1	1180.6	1242.7	1284.1
60°	963.4	987.9	1040.9	1104.3	1152.2
62.5°	839.2	865.1	910.3	965.9	1020.3
65°	719.0	738.4	782.3	837.9	885.8
67.5°	602.6	619.4	663.4	702.2	752.6
70°	484.9	506.9	539.2	576.7	609.1
72.5°	390.5	399.6	426.7	453.9	487.5
75°	288.4	303.9	325.9	341.4	360.8
77.5°	206.9	215.9	228.9	241.8	259.9
80°	138.4	142.2	153.9	156.5	170.7
82.5°	84.1	86.6	89.2	90.5	95.7
85°	45.3	45.3	45.3	42.7	42.7
87.5°	25.9	25.9	22.0	18.1	12.9
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)