

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: P558081

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-81-84-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: P558081  
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-40-UNV-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

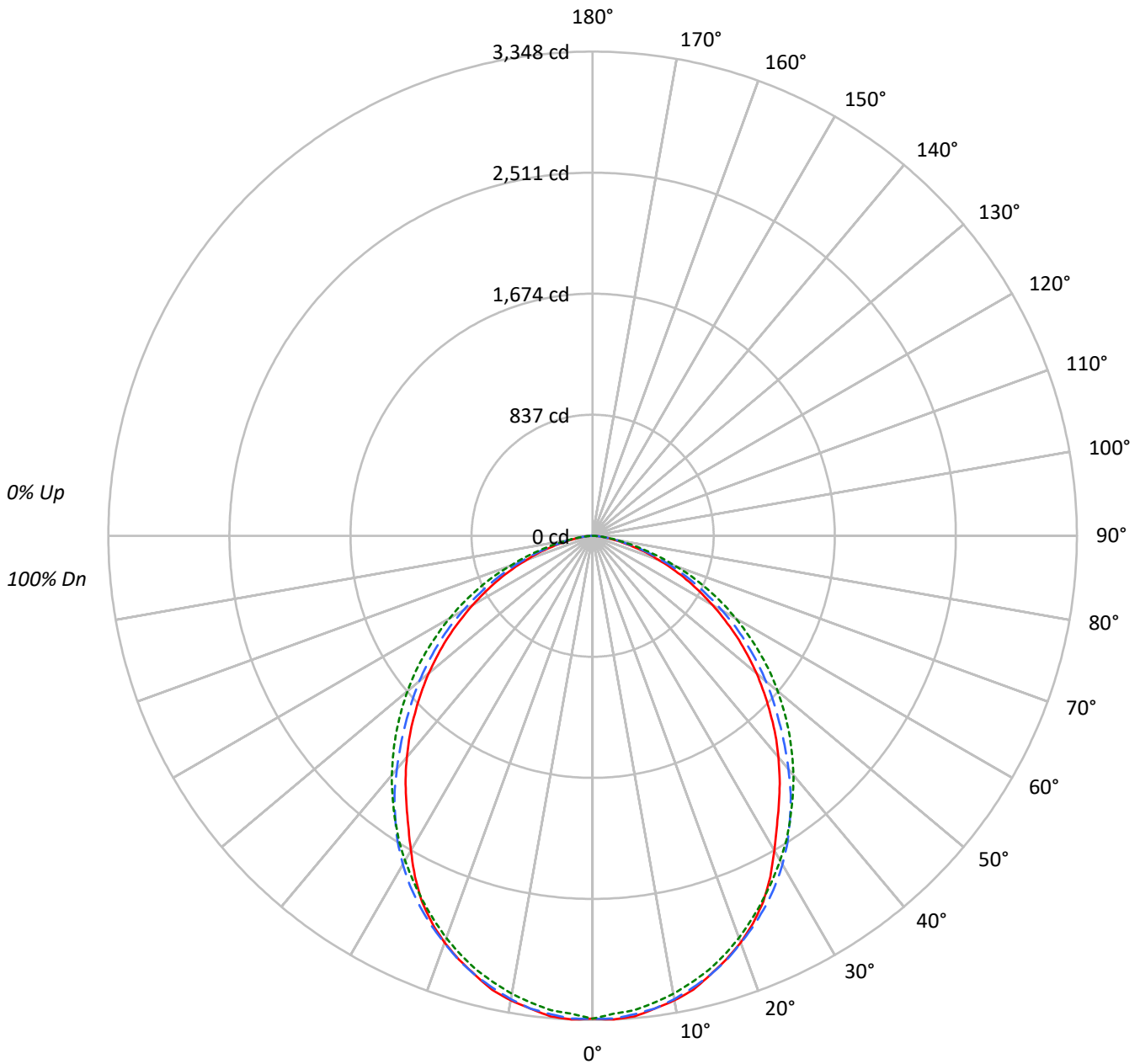
Lumens per Lamp: N/A  
Luminaire Lumens: 7721.0 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	8985	8985	8985
5°	9010	8971	8895
10°	8914	8889	8788
15°	8756	8756	8656
20°	8570	8581	8471
25°	8288	8391	8258
30°	7805	8155	8056
35°	7375	7817	7830
40°	7016	7395	7588
45°	6615	6947	7303
50°	6192	6546	6992
55°	5712	6091	6614
60°	5144	5558	6152
65°	4541	4942	5595
70°	3785	4209	4754
75°	2975	3361	3721
80°	2128	2366	2624
85°	1386	1386	1306



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	314.4	4.1
10°-20°	883.2	11.4
20°-30°	1290.7	16.7
30°-40°	1465.0	19.0
40°-50°	1414.3	18.3
50°-60°	1166.7	15.1
60°-70°	776.9	10.1
70°-80°	347.7	4.5
80°-90°	62.2	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°	2488.3	32.2
0°-40°	3953.3	51.2
0°-60°	6534.2	84.6
0°-90°	7721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7721.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3339	3339	3339	3339	3339	
5°	3335	3334	3321	3303	3293	316
15°	3143	3151	3143	3129	3107	886
25°	2791	2813	2826	2806	2781	1278
35°	2245	2276	2380	2392	2383	1407
45°	1738	1768	1825	1909	1919	1341
55°	1217	1238	1298	1370	1410	1087
65°	713	732	776	831	879	707
75°	286	302	323	339	358	313
85°	45	45	45	42	42	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3339.1	3339.1	3339.1	3339.1	3339.1
2.5°	3348.1	3349.4	3341.7	3321.2	3308.3
5°	3335.3	3334.0	3321.2	3303.2	3293.0
7.5°	3298.1	3300.6	3296.8	3271.1	3257.0
10°	3262.2	3263.4	3253.2	3232.7	3216.0
12.5°	3216.0	3214.7	3200.6	3190.3	3163.4
15°	3142.9	3150.6	3142.9	3128.8	3106.9
17.5°	3072.3	3072.3	3077.4	3053.1	3036.4
20°	2992.8	2996.6	2996.6	2977.4	2958.1
22.5°	2900.4	2912.0	2915.8	2895.3	2872.2
25°	2791.4	2813.2	2826.0	2805.5	2781.1
27.5°	2659.2	2692.6	2731.1	2715.7	2688.8
30°	2511.7	2560.5	2624.6	2611.8	2592.5
32.5°	2371.9	2420.6	2509.2	2504.0	2493.8
35°	2244.9	2275.7	2379.6	2392.4	2383.4
37.5°	2124.3	2152.5	2250.0	2279.5	2271.8
40°	1997.3	2028.1	2105.1	2157.7	2160.2
42.5°	1871.6	1901.1	1964.0	2039.7	2039.7
45°	1738.2	1767.7	1825.4	1908.8	1919.1
47.5°	1607.4	1638.1	1694.6	1778.0	1794.6
50°	1479.1	1507.3	1563.7	1644.6	1670.2
52.5°	1345.7	1376.4	1431.6	1506.0	1543.2
55°	1217.4	1237.9	1298.2	1370.0	1409.8
57.5°	1084.0	1103.2	1171.2	1232.8	1273.8
60°	955.7	980.1	1032.7	1095.5	1143.0
62.5°	832.5	858.2	903.1	958.3	1012.1
65°	713.2	732.5	776.1	831.3	878.7
67.5°	597.8	614.5	658.1	696.6	746.6
70°	481.1	502.9	534.9	572.1	604.2
72.5°	387.4	396.4	423.3	450.3	483.6
75°	286.1	301.5	323.3	338.7	357.9
77.5°	205.2	214.2	227.1	239.9	257.8
80°	137.3	141.1	152.7	155.2	169.3
82.5°	83.4	85.9	88.5	89.8	94.9
85°	44.9	44.9	44.9	42.3	42.3
87.5°	25.7	25.7	21.8	18.0	12.8
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)