

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: P558164

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-82-86-EDD-90**

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: P558164  
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-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

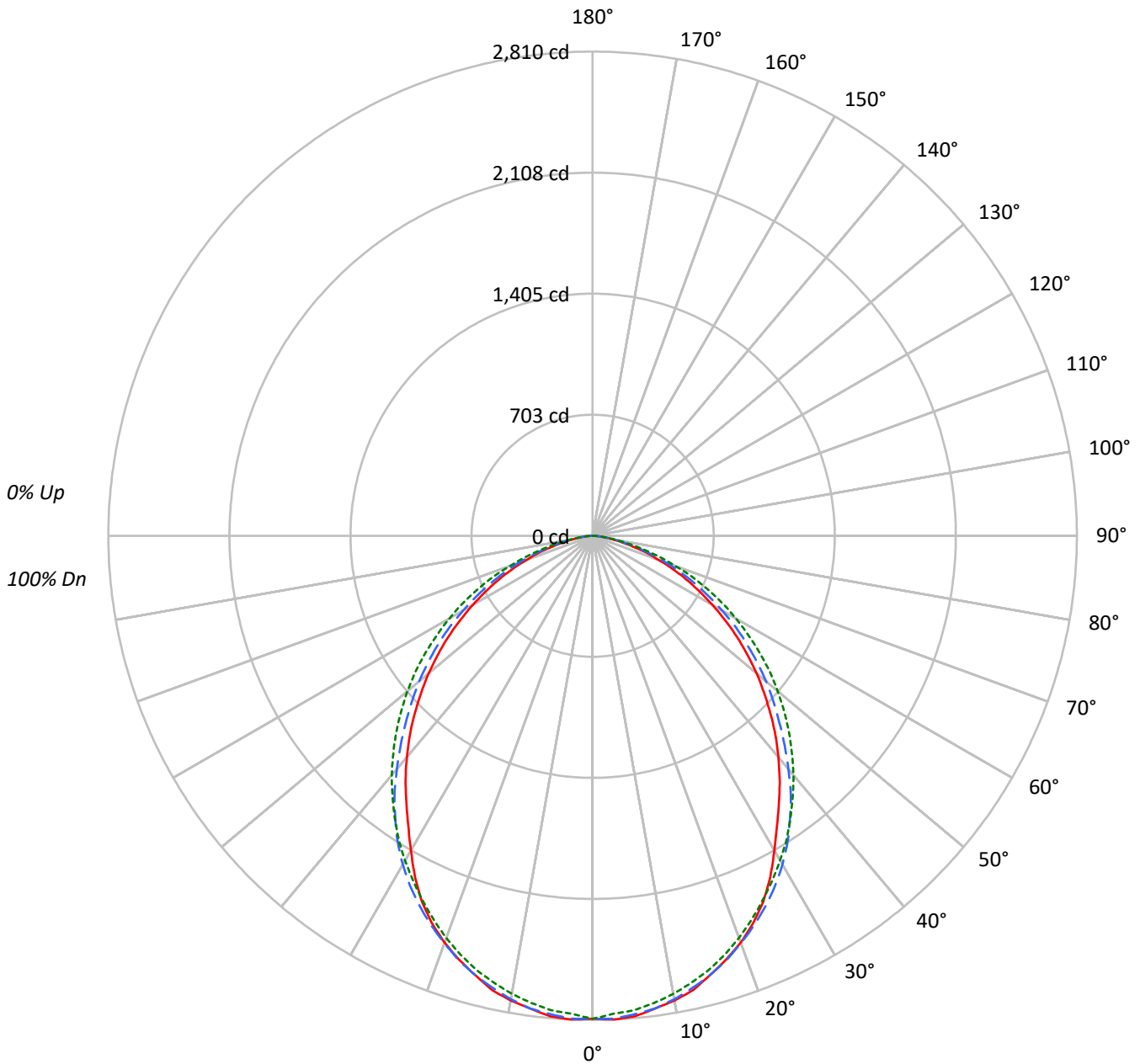
Lumens per Lamp: N/A  
Luminaire Lumens: 6481.0 lumens  
Efficiency: N/A  
Efficacy: 92.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7543	7543	7543
5°	7562	7531	7467
10°	7482	7462	7376
15°	7349	7349	7266
20°	7194	7203	7111
25°	6957	7043	6932
30°	6551	6846	6762
35°	6190	6562	6572
40°	5890	6207	6370
45°	5552	5831	6130
50°	5197	5495	5869
55°	4794	5112	5552
60°	4317	4665	5163
65°	3812	4148	4697
70°	3177	3533	3991
75°	2496	2821	3123
80°	1785	1985	2202
85°	1164	1164	1096



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	263.9	4.1
10°-20°	741.4	11.4
20°-30°	1083.4	16.7
30°-40°	1229.8	19.0
40°-50°	1187.1	18.3
50°-60°	979.3	15.1
60°-70°	652.2	10.1
70°-80°	291.8	4.5
80°-90°	52.2	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°	2088.6	32.2
0°-40°	3318.4	51.2
0°-60°	5484.8	84.6
0°-90°	6481.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6481.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2803	2803	2803	2803	2803	
5°	2800	2799	2788	2773	2764	265
15°	2638	2645	2638	2626	2608	744
25°	2343	2361	2372	2355	2334	1073
35°	1884	1910	1997	2008	2001	1181
45°	1459	1484	1532	1602	1611	1126
55°	1022	1039	1090	1150	1183	912
65°	599	615	652	698	738	594
75°	240	253	271	284	300	263
85°	38	38	38	36	36	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2802.9	2802.9	2802.9	2802.9	2802.9
2.5°	2810.4	2811.5	2805.0	2787.8	2777.0
5°	2799.6	2798.6	2787.8	2772.7	2764.1
7.5°	2768.4	2770.6	2767.3	2745.8	2734.0
10°	2738.3	2739.3	2730.7	2713.5	2699.5
12.5°	2699.5	2698.4	2686.6	2678.0	2655.3
15°	2638.1	2644.6	2638.1	2626.3	2608.0
17.5°	2578.9	2578.9	2583.2	2562.7	2548.7
20°	2512.1	2515.4	2515.4	2499.2	2483.1
22.5°	2434.6	2444.3	2447.5	2430.3	2410.9
25°	2343.1	2361.4	2372.2	2354.9	2334.5
27.5°	2232.2	2260.2	2292.5	2279.5	2256.9
30°	2108.3	2149.3	2203.1	2192.3	2176.2
32.5°	1991.0	2031.9	2106.2	2101.9	2093.3
35°	1884.4	1910.2	1997.4	2008.2	2000.7
37.5°	1783.2	1806.8	1888.7	1913.4	1907.0
40°	1676.6	1702.4	1767.0	1811.1	1813.3
42.5°	1571.0	1595.8	1648.6	1712.1	1712.1
45°	1459.0	1483.8	1532.3	1602.3	1610.9
47.5°	1349.2	1375.1	1422.4	1492.4	1506.4
50°	1241.5	1265.2	1312.6	1380.4	1402.0
52.5°	1129.5	1155.4	1201.7	1264.1	1295.4
55°	1021.9	1039.1	1089.7	1150.0	1183.4
57.5°	909.9	926.0	983.1	1034.8	1069.2
60°	802.2	822.7	866.8	919.6	959.4
62.5°	698.8	720.4	758.1	804.4	849.6
65°	598.7	614.8	651.5	697.8	737.6
67.5°	501.8	515.8	552.4	584.7	626.7
70°	403.8	422.1	449.0	480.2	507.2
72.5°	325.2	332.7	355.3	378.0	405.9
75°	240.1	253.0	271.3	284.3	300.4
77.5°	172.3	179.8	190.6	201.4	216.4
80°	115.2	118.4	128.1	130.3	142.1
82.5°	70.0	72.1	74.3	75.4	79.7
85°	37.7	37.7	37.7	35.5	35.5
87.5°	21.5	21.5	18.3	15.1	10.8
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)