

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: P558158

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-81-97-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: P558158  
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-81-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

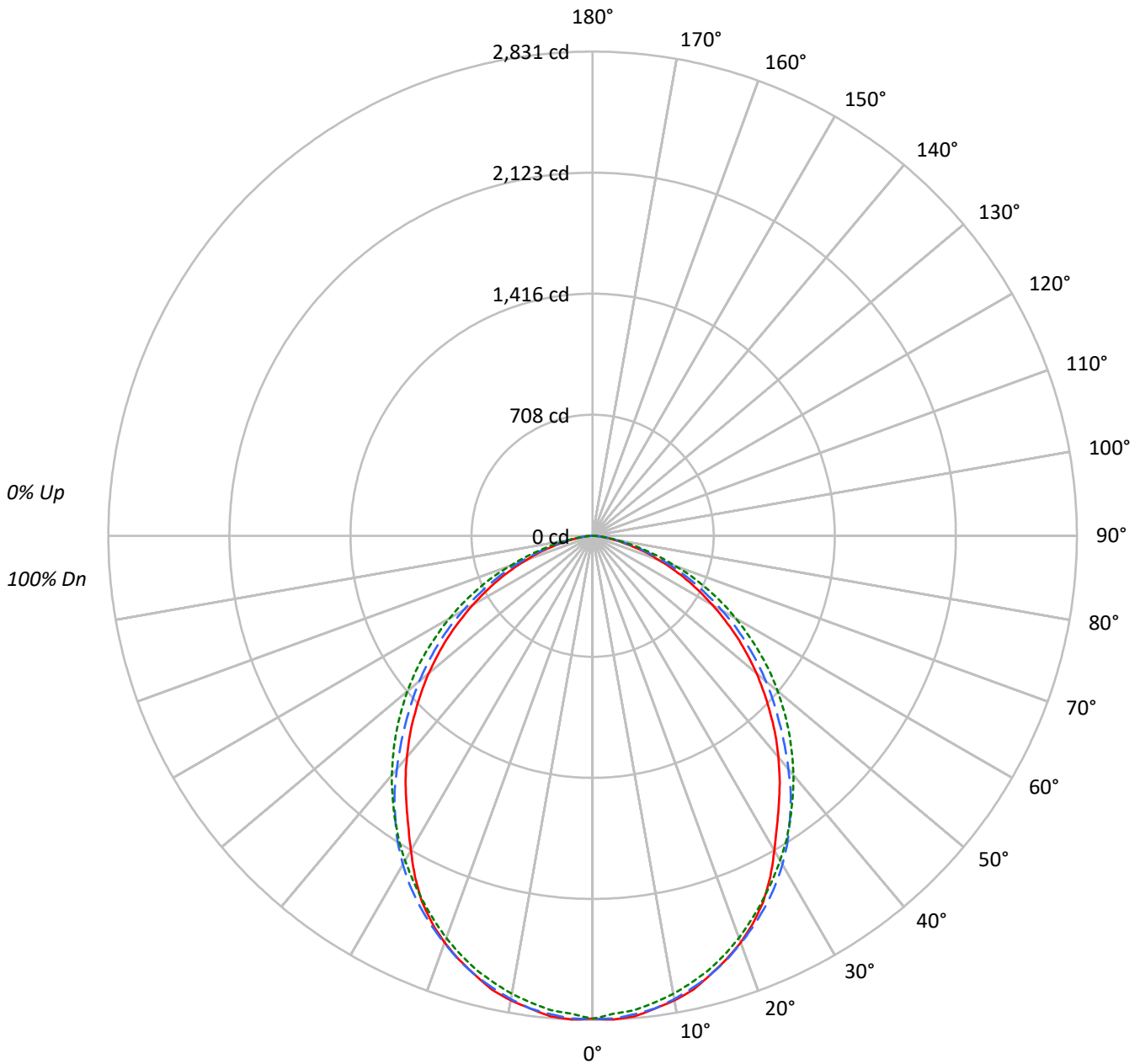
Lumens per Lamp: N/A  
Luminaire Lumens: 6529.0 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (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°	7598	7598	7598
5°	7619	7586	7522
10°	7538	7517	7431
15°	7404	7404	7319
20°	7247	7257	7163
25°	7008	7095	6983
30°	6600	6896	6812
35°	6236	6610	6621
40°	5933	6253	6417
45°	5593	5874	6176
50°	5236	5536	5913
55°	4830	5150	5593
60°	4349	4700	5202
65°	3840	4179	4732
70°	3201	3559	4020
75°	2515	2843	3146
80°	1799	2001	2219
85°	1173	1173	1105



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	265.9	4.1
10°-20°	746.9	11.4
20°-30°	1091.4	16.7
30°-40°	1238.9	19.0
40°-50°	1195.9	18.3
50°-60°	986.6	15.1
60°-70°	657.0	10.1
70°-80°	294.0	4.5
80°-90°	52.6	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°	2104.1	32.2
0°-40°	3343.0	51.2
0°-60°	5525.5	84.6
0°-90°	6529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6529.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2824	2824	2824	2824	2824	
5°	2820	2819	2808	2793	2785	267
15°	2658	2664	2658	2646	2627	749
25°	2360	2379	2390	2372	2352	1081
35°	1898	1924	2012	2023	2016	1189
45°	1470	1495	1544	1614	1623	1134
55°	1029	1047	1098	1158	1192	919
65°	603	619	656	703	743	598
75°	242	255	273	286	303	265
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°	2823.6	2823.6	2823.6	2823.6	2823.6
2.5°	2831.2	2832.3	2825.8	2808.4	2797.6
5°	2820.4	2819.3	2808.4	2793.3	2784.6
7.5°	2788.9	2791.1	2787.8	2766.1	2754.2
10°	2758.5	2759.6	2750.9	2733.6	2719.5
12.5°	2719.5	2718.4	2706.5	2697.8	2675.0
15°	2657.7	2664.2	2657.7	2645.7	2627.3
17.5°	2598.0	2598.0	2602.3	2581.7	2567.6
20°	2530.7	2534.0	2534.0	2517.7	2501.5
22.5°	2452.6	2462.4	2465.7	2448.3	2428.8
25°	2360.4	2378.9	2389.7	2372.4	2351.8
27.5°	2248.7	2276.9	2309.4	2296.4	2273.7
30°	2124.0	2165.2	2219.4	2208.6	2192.3
32.5°	2005.7	2046.9	2121.8	2117.4	2108.8
35°	1898.3	1924.4	2012.2	2023.1	2015.5
37.5°	1796.4	1820.2	1902.7	1927.6	1921.1
40°	1689.0	1715.0	1780.1	1824.6	1826.7
42.5°	1582.7	1607.6	1660.8	1724.8	1724.8
45°	1469.8	1494.8	1543.6	1614.1	1622.8
47.5°	1359.2	1385.2	1433.0	1503.5	1517.6
50°	1250.7	1274.6	1322.3	1390.7	1412.4
52.5°	1137.9	1163.9	1210.6	1273.5	1305.0
55°	1029.4	1046.8	1097.8	1158.5	1192.1
57.5°	916.6	932.9	990.4	1042.5	1077.2
60°	808.1	828.8	873.2	926.4	966.5
62.5°	704.0	725.7	763.7	810.3	855.9
65°	603.1	619.4	656.3	702.9	743.1
67.5°	505.5	519.6	556.5	589.0	631.3
70°	406.8	425.2	452.3	483.8	510.9
72.5°	327.6	335.2	358.0	380.7	409.0
75°	241.9	254.9	273.4	286.4	302.6
77.5°	173.6	181.2	192.0	202.8	218.0
80°	116.1	119.3	129.1	131.3	143.2
82.5°	70.5	72.7	74.8	75.9	80.3
85°	38.0	38.0	38.0	35.8	35.8
87.5°	21.7	21.7	18.4	15.2	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)