

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: P558178

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-93-85-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: P558178  
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-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

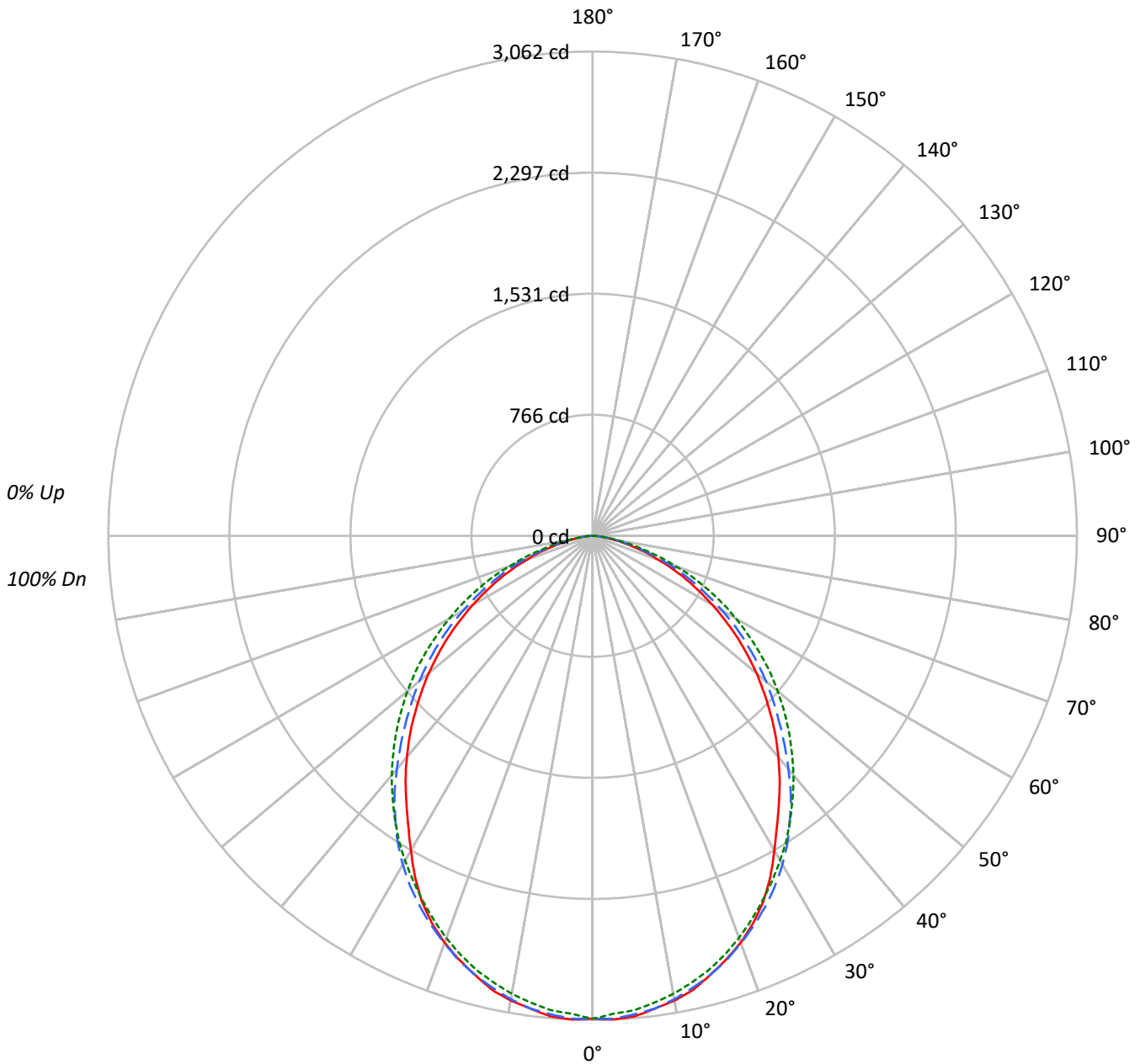
Lumens per Lamp: N/A  
Luminaire Lumens: 7062.0 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8219	8219	8219
5°	8240	8206	8136
10°	8153	8131	8038
15°	8008	8008	7917
20°	7839	7849	7748
25°	7581	7675	7553
30°	7138	7459	7368
35°	6745	7150	7161
40°	6417	6764	6941
45°	6050	6354	6680
50°	5663	5988	6396
55°	5224	5571	6050
60°	4704	5083	5626
65°	4154	4520	5117
70°	3462	3850	4348
75°	2720	3074	3404
80°	1945	2163	2400
85°	1269	1269	1195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	287.6	4.1
10°-20°	807.8	11.4
20°-30°	1180.5	16.7
30°-40°	1340.0	19.0
40°-50°	1293.6	18.3
50°-60°	1067.1	15.1
60°-70°	710.6	10.1
70°-80°	318.0	4.5
80°-90°	56.9	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°	2275.9	32.2
0°-40°	3615.9	51.2
0°-60°	5976.5	84.6
0°-90°	7062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7062.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3054	3054	3054	3054	3054	
5°	3051	3049	3038	3021	3012	289
15°	2875	2882	2875	2862	2842	810
25°	2553	2573	2585	2566	2544	1169
35°	2053	2082	2176	2188	2180	1287
45°	1590	1617	1670	1746	1755	1227
55°	1114	1132	1187	1253	1290	994
65°	652	670	710	760	804	647
75°	262	276	296	310	327	286
85°	41	41	41	39	39	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3054.1	3054.1	3054.1	3054.1	3054.1
2.5°	3062.3	3063.5	3056.5	3037.7	3026.0
5°	3050.6	3049.4	3037.7	3021.3	3011.9
7.5°	3016.6	3018.9	3015.4	2991.9	2979.0
10°	2983.7	2984.9	2975.5	2956.7	2941.5
12.5°	2941.5	2940.3	2927.4	2918.0	2893.4
15°	2874.6	2881.7	2874.6	2861.7	2841.8
17.5°	2810.1	2810.1	2814.8	2792.5	2777.2
20°	2737.3	2740.9	2740.9	2723.3	2705.7
22.5°	2652.9	2663.4	2666.9	2648.2	2627.0
25°	2553.1	2573.1	2584.8	2566.0	2543.7
27.5°	2432.3	2462.8	2498.0	2483.9	2459.3
30°	2297.3	2341.9	2400.6	2388.9	2371.3
32.5°	2169.5	2214.0	2295.0	2290.3	2280.9
35°	2053.3	2081.5	2176.5	2188.2	2180.0
37.5°	1943.0	1968.8	2058.0	2085.0	2077.9
40°	1826.8	1855.0	1925.4	1973.5	1975.9
42.5°	1711.9	1738.8	1796.3	1865.6	1865.6
45°	1589.8	1616.8	1669.6	1745.9	1755.3
47.5°	1470.2	1498.3	1549.9	1626.2	1641.5
50°	1352.8	1378.6	1430.3	1504.2	1527.7
52.5°	1230.8	1259.0	1309.4	1377.5	1411.5
55°	1113.5	1132.2	1187.4	1253.1	1289.5
57.5°	991.4	1009.0	1071.2	1127.6	1165.1
60°	874.1	896.4	944.5	1002.0	1045.4
62.5°	761.5	784.9	826.0	876.5	925.7
65°	652.4	670.0	709.9	760.3	803.7
67.5°	546.8	562.0	601.9	637.1	682.9
70°	440.0	459.9	489.3	523.3	552.6
72.5°	354.3	362.6	387.2	411.8	442.3
75°	261.6	275.7	295.7	309.8	327.4
77.5°	187.7	195.9	207.7	219.4	235.8
80°	125.5	129.1	139.6	142.0	154.9
82.5°	76.3	78.6	81.0	82.1	86.8
85°	41.1	41.1	41.1	38.7	38.7
87.5°	23.5	23.5	19.9	16.4	11.7
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)