

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: P557476

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-UNV-93-86-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: P557476  
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-LD4-2STD-30-UNV-93-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

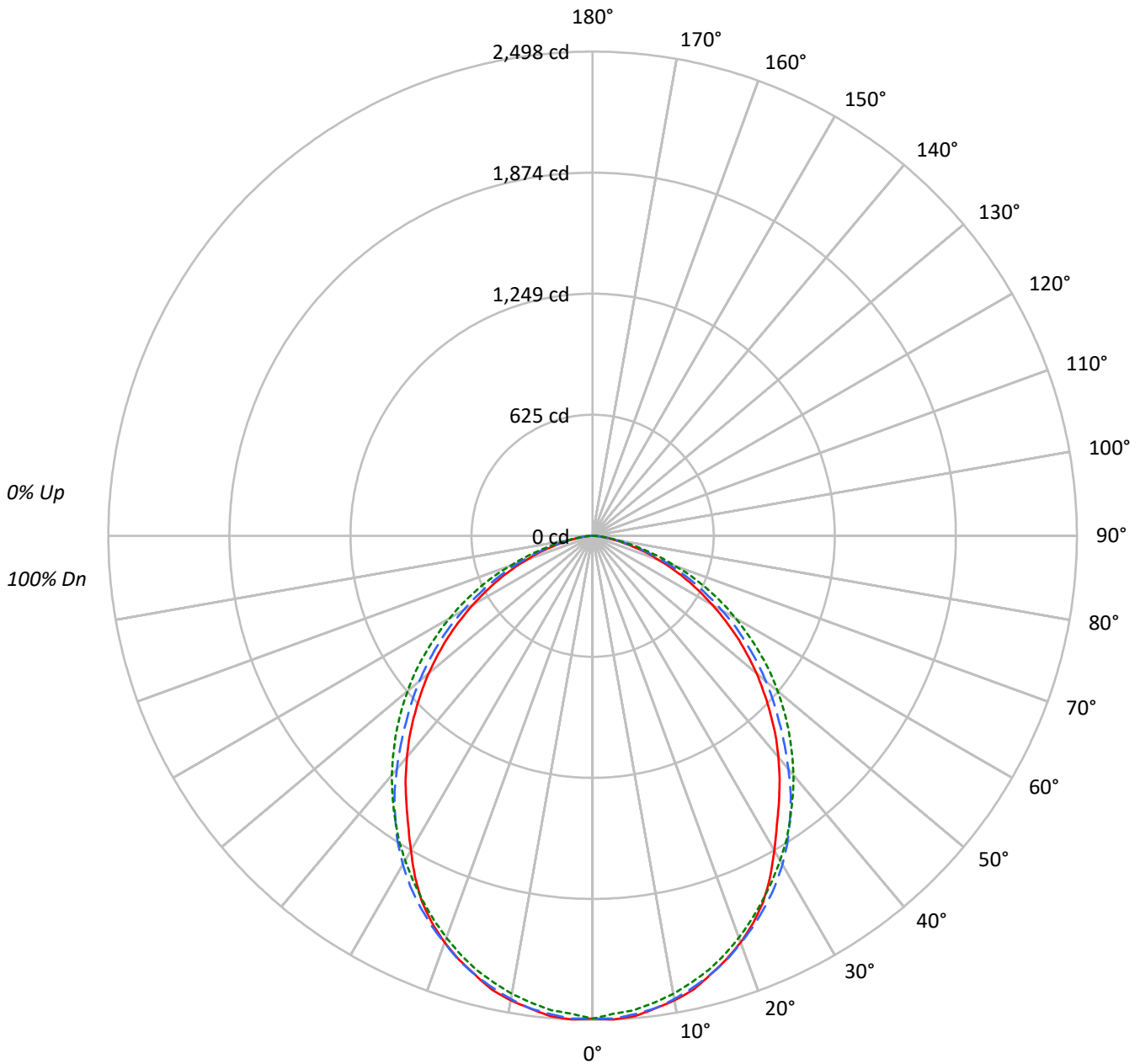
Lumens per Lamp: N/A  
Luminaire Lumens: 5760.0 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	6703	6703	6703
5°	6721	6693	6636
10°	6650	6631	6556
15°	6532	6532	6457
20°	6394	6402	6320
25°	6183	6260	6160
30°	5822	6084	6010
35°	5502	5832	5841
40°	5234	5517	5661
45°	4935	5182	5449
50°	4619	4884	5216
55°	4261	4544	4934
60°	3837	4146	4589
65°	3388	3687	4174
70°	2824	3140	3546
75°	2219	2508	2776
80°	1587	1765	1957
85°	1034	1034	976



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	234.5	4.1
10°-20°	658.9	11.4
20°-30°	962.9	16.7
30°-40°	1092.9	19.0
40°-50°	1055.1	18.3
50°-60°	870.4	15.1
60°-70°	579.6	10.1
70°-80°	259.4	4.5
80°-90°	46.4	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°	1856.3	32.2
0°-40°	2949.2	51.2
0°-60°	4874.7	84.6
0°-90°	5760.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5760.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2491	2491	2491	2491	2491	
5°	2488	2487	2478	2464	2457	236
15°	2345	2350	2345	2334	2318	661
25°	2082	2099	2108	2093	2075	954
35°	1675	1698	1775	1785	1778	1049
45°	1297	1319	1362	1424	1432	1000
55°	908	924	968	1022	1052	811
65°	532	546	579	620	656	528
75°	213	225	241	253	267	233
85°	34	34	34	32	32	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2491.1	2491.1	2491.1	2491.1	2491.1
2.5°	2497.8	2498.7	2493.0	2477.7	2468.1
5°	2488.2	2487.2	2477.7	2464.3	2456.6
7.5°	2460.4	2462.3	2459.5	2440.3	2429.8
10°	2433.6	2434.6	2426.9	2411.6	2399.2
12.5°	2399.2	2398.2	2387.7	2380.0	2359.9
15°	2344.6	2350.4	2344.6	2334.1	2317.8
17.5°	2292.0	2292.0	2295.8	2277.6	2265.2
20°	2232.7	2235.5	2235.5	2221.2	2206.8
22.5°	2163.8	2172.4	2175.2	2159.9	2142.7
25°	2082.4	2098.7	2108.3	2092.9	2074.8
27.5°	1983.8	2008.7	2037.4	2026.0	2005.9
30°	1873.8	1910.2	1958.0	1948.4	1934.1
32.5°	1769.5	1805.8	1871.9	1868.0	1860.4
35°	1674.7	1697.7	1775.2	1784.8	1778.1
37.5°	1584.8	1605.8	1678.6	1700.6	1694.8
40°	1490.0	1513.0	1570.4	1609.7	1611.6
42.5°	1396.3	1418.3	1465.2	1521.6	1521.6
45°	1296.7	1318.7	1361.8	1424.0	1431.7
47.5°	1199.1	1222.1	1264.2	1326.4	1338.8
50°	1103.4	1124.5	1166.6	1226.9	1246.0
52.5°	1003.9	1026.9	1068.0	1123.5	1151.3
55°	908.2	923.5	968.5	1022.1	1051.7
57.5°	808.7	823.0	873.7	919.7	950.3
60°	713.0	731.1	770.4	817.3	852.7
62.5°	621.1	640.2	673.7	714.9	755.1
65°	532.1	546.4	579.0	620.1	655.5
67.5°	446.0	458.4	490.9	519.6	557.0
70°	358.9	375.1	399.1	426.8	450.7
72.5°	289.0	295.7	315.8	335.9	360.8
75°	213.4	224.9	241.2	252.6	267.0
77.5°	153.1	159.8	169.4	179.0	192.4
80°	102.4	105.3	113.9	115.8	126.3
82.5°	62.2	64.1	66.0	67.0	70.8
85°	33.5	33.5	33.5	31.6	31.6
87.5°	19.1	19.1	16.3	13.4	9.6
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)