

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: P557443

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-UNV-81-85-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: P557443  
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-81-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

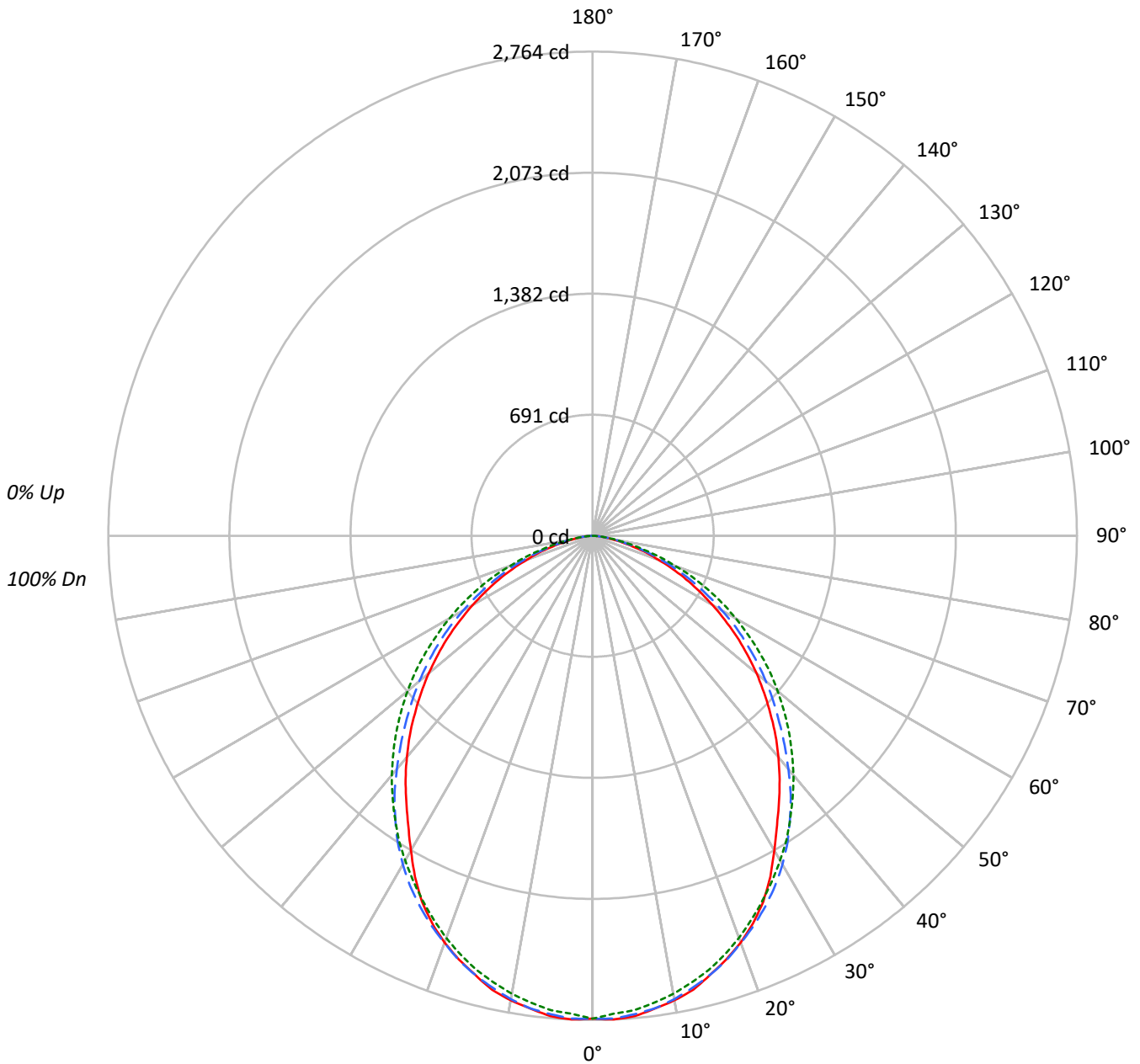
Lumens per Lamp: N/A  
Luminaire Lumens: 6374.0 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (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°	7418	7418	7418
5°	7438	7406	7343
10°	7359	7338	7254
15°	7228	7228	7146
20°	7075	7084	6993
25°	6842	6927	6817
30°	6443	6733	6650
35°	6088	6454	6464
40°	5792	6105	6265
45°	5461	5735	6029
50°	5112	5404	5772
55°	4715	5028	5460
60°	4246	4588	5078
65°	3749	4080	4619
70°	3124	3474	3925
75°	2456	2775	3072
80°	1756	1953	2166
85°	1145	1145	1078



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	259.5	4.1
10°-20°	729.1	11.4
20°-30°	1065.5	16.7
30°-40°	1209.4	19.0
40°-50°	1167.5	18.3
50°-60°	963.1	15.1
60°-70°	641.4	10.1
70°-80°	287.0	4.5
80°-90°	51.3	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°	2054.2	32.2
0°-40°	3263.6	51.2
0°-60°	5394.3	84.6
0°-90°	6374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6374.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2757	2757	2757	2757	2757	
5°	2753	2752	2742	2727	2718	261
15°	2595	2601	2595	2583	2565	731
25°	2304	2322	2333	2316	2296	1055
35°	1853	1879	1964	1975	1968	1161
45°	1435	1459	1507	1576	1584	1107
55°	1005	1022	1072	1131	1164	897
65°	589	605	641	686	725	584
75°	236	249	267	280	296	258
85°	37	37	37	35	35	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2756.6	2756.6	2756.6	2756.6	2756.6
2.5°	2764.0	2765.1	2758.7	2741.8	2731.2
5°	2753.4	2752.4	2741.8	2726.9	2718.5
7.5°	2722.7	2724.8	2721.6	2700.5	2688.8
10°	2693.1	2694.1	2685.6	2668.7	2654.9
12.5°	2654.9	2653.9	2642.2	2633.7	2611.5
15°	2594.6	2600.9	2594.6	2582.9	2564.9
17.5°	2536.3	2536.3	2540.6	2520.4	2506.7
20°	2470.7	2473.8	2473.8	2458.0	2442.1
22.5°	2394.4	2403.9	2407.1	2390.2	2371.1
25°	2304.4	2322.4	2333.0	2316.0	2295.9
27.5°	2195.3	2222.9	2254.6	2241.9	2219.7
30°	2073.5	2113.8	2166.7	2156.1	2140.2
32.5°	1958.1	1998.3	2071.4	2067.2	2058.7
35°	1853.3	1878.7	1964.5	1975.0	1967.6
37.5°	1753.7	1777.0	1857.5	1881.9	1875.5
40°	1648.9	1674.3	1737.8	1781.2	1783.4
42.5°	1545.1	1569.4	1621.3	1683.8	1683.8
45°	1435.0	1459.3	1507.0	1575.8	1584.3
47.5°	1326.9	1352.3	1398.9	1467.8	1481.5
50°	1221.0	1244.3	1290.9	1357.6	1378.8
52.5°	1110.9	1136.3	1181.8	1243.3	1274.0
55°	1005.0	1021.9	1071.7	1131.0	1163.8
57.5°	894.9	910.7	966.9	1017.7	1051.6
60°	789.0	809.1	852.5	904.4	943.6
62.5°	687.3	708.5	745.5	791.1	835.6
65°	588.8	604.7	640.7	686.2	725.4
67.5°	493.5	507.3	543.3	575.0	616.3
70°	397.1	415.1	441.6	472.3	498.8
72.5°	319.8	327.2	349.5	371.7	399.2
75°	236.2	248.9	266.9	279.6	295.5
77.5°	169.4	176.9	187.4	198.0	212.9
80°	113.3	116.5	126.0	128.1	139.8
82.5°	68.8	71.0	73.1	74.1	78.4
85°	37.1	37.1	37.1	34.9	34.9
87.5°	21.2	21.2	18.0	14.8	10.6
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)