

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: P557521

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-82-84-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: P557521  
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-35-UNV-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

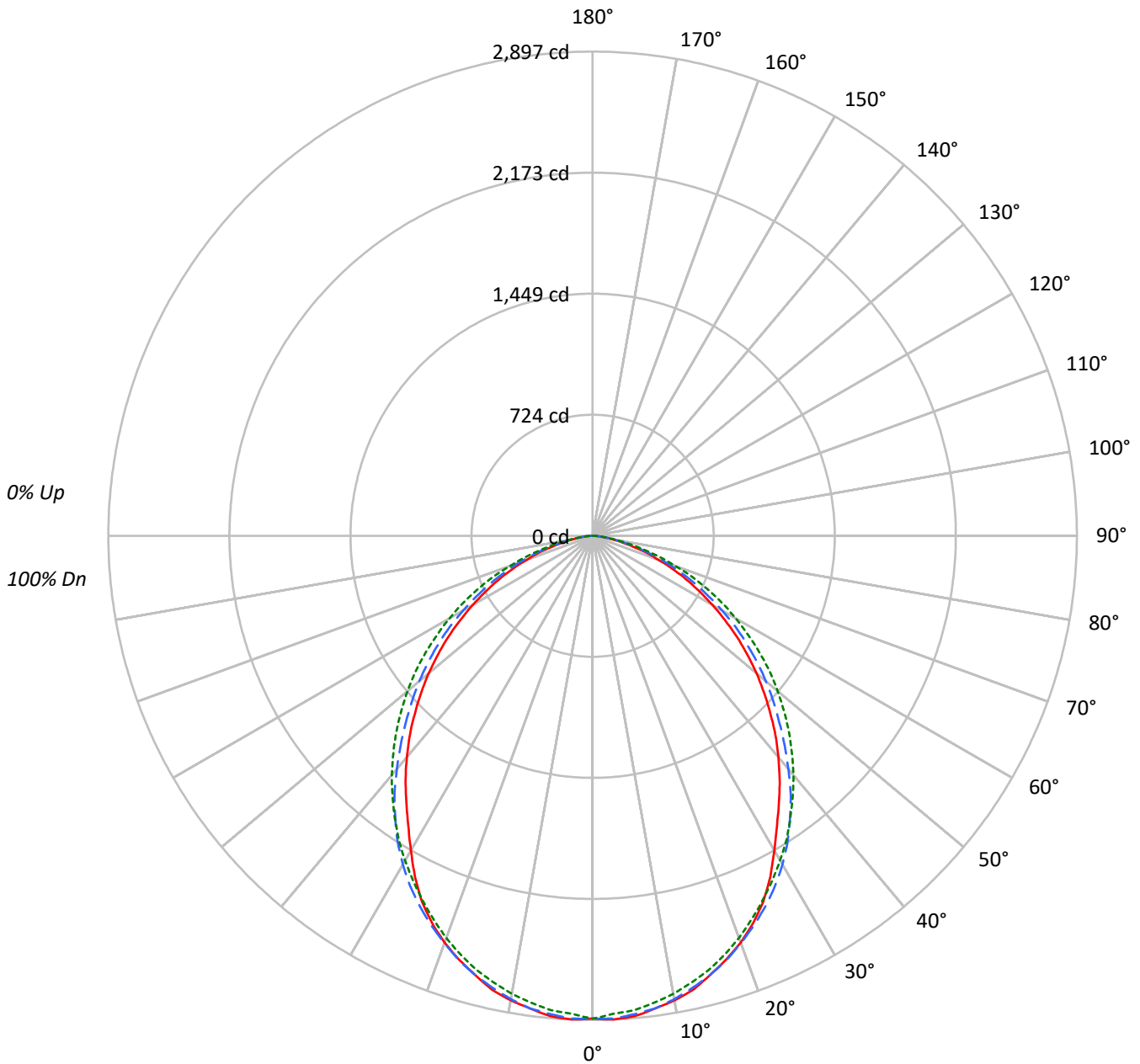
Lumens per Lamp: N/A  
Luminaire Lumens: 6681.0 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	7775	7775	7775
5°	7796	7763	7697
10°	7713	7692	7604
15°	7576	7576	7490
20°	7416	7426	7330
25°	7172	7261	7145
30°	6753	7057	6971
35°	6381	6764	6775
40°	6071	6399	6567
45°	5724	6011	6320
50°	5358	5665	6050
55°	4942	5270	5723
60°	4451	4809	5323
65°	3930	4276	4842
70°	3275	3642	4113
75°	2573	2908	3220
80°	1841	2047	2270
85°	1201	1201	1130



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.0	4.1
10°-20°	764.2	11.4
20°-30°	1116.8	16.7
30°-40°	1267.7	19.0
40°-50°	1223.8	18.3
50°-60°	1009.5	15.1
60°-70°	672.3	10.1
70°-80°	300.8	4.5
80°-90°	53.8	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°	2153.1	32.2
0°-40°	3420.8	51.2
0°-60°	5654.1	84.6
0°-90°	6681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6681.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2889	2889	2889	2889	2889	
5°	2886	2885	2874	2858	2849	273
15°	2720	2726	2720	2707	2688	767
25°	2415	2434	2445	2428	2406	1106
35°	1942	1969	2059	2070	2062	1217
45°	1504	1530	1580	1652	1661	1160
55°	1053	1071	1123	1186	1220	940
65°	617	634	672	719	760	612
75°	248	261	280	293	310	271
85°	39	39	39	37	37	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2889.4	2889.4	2889.4	2889.4	2889.4
2.5°	2897.1	2898.2	2891.6	2873.8	2862.7
5°	2886.0	2884.9	2873.8	2858.3	2849.4
7.5°	2853.8	2856.1	2852.7	2830.5	2818.3
10°	2822.8	2823.9	2815.0	2797.2	2782.8
12.5°	2782.8	2781.7	2769.5	2760.6	2737.3
15°	2719.5	2726.2	2719.5	2707.3	2688.4
17.5°	2658.5	2658.5	2662.9	2641.8	2627.4
20°	2589.7	2593.0	2593.0	2576.3	2559.7
22.5°	2509.7	2519.7	2523.1	2505.3	2485.3
25°	2415.4	2434.3	2445.4	2427.6	2406.5
27.5°	2301.1	2329.9	2363.2	2349.9	2326.6
30°	2173.4	2215.6	2271.1	2260.0	2243.3
32.5°	2052.4	2094.6	2171.2	2166.7	2157.9
35°	1942.5	1969.2	2059.1	2070.2	2062.4
37.5°	1838.2	1862.6	1947.0	1972.5	1965.8
40°	1728.3	1754.9	1821.5	1867.0	1869.3
42.5°	1619.5	1645.0	1699.4	1764.9	1764.9
45°	1504.1	1529.6	1579.5	1651.7	1660.6
47.5°	1390.8	1417.5	1466.3	1538.5	1552.9
50°	1279.8	1304.3	1353.1	1423.0	1445.2
52.5°	1164.4	1191.0	1238.8	1303.2	1335.3
55°	1053.4	1071.2	1123.3	1185.5	1219.9
57.5°	938.0	954.6	1013.4	1066.7	1102.2
60°	827.0	848.0	893.6	947.9	989.0
62.5°	720.4	742.6	781.4	829.2	875.8
65°	617.2	633.8	671.6	719.3	760.4
67.5°	517.3	531.7	569.4	602.7	646.0
70°	416.3	435.1	462.9	495.1	522.8
72.5°	335.2	343.0	366.3	389.6	418.5
75°	247.5	260.9	279.7	293.0	309.7
77.5°	177.6	185.4	196.5	207.6	223.1
80°	118.8	122.1	132.1	134.3	146.5
82.5°	72.2	74.4	76.6	77.7	82.1
85°	38.9	38.9	38.9	36.6	36.6
87.5°	22.2	22.2	18.9	15.5	11.1
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)