

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: P557597

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-82-96-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: P557597  
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-40-UNV-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

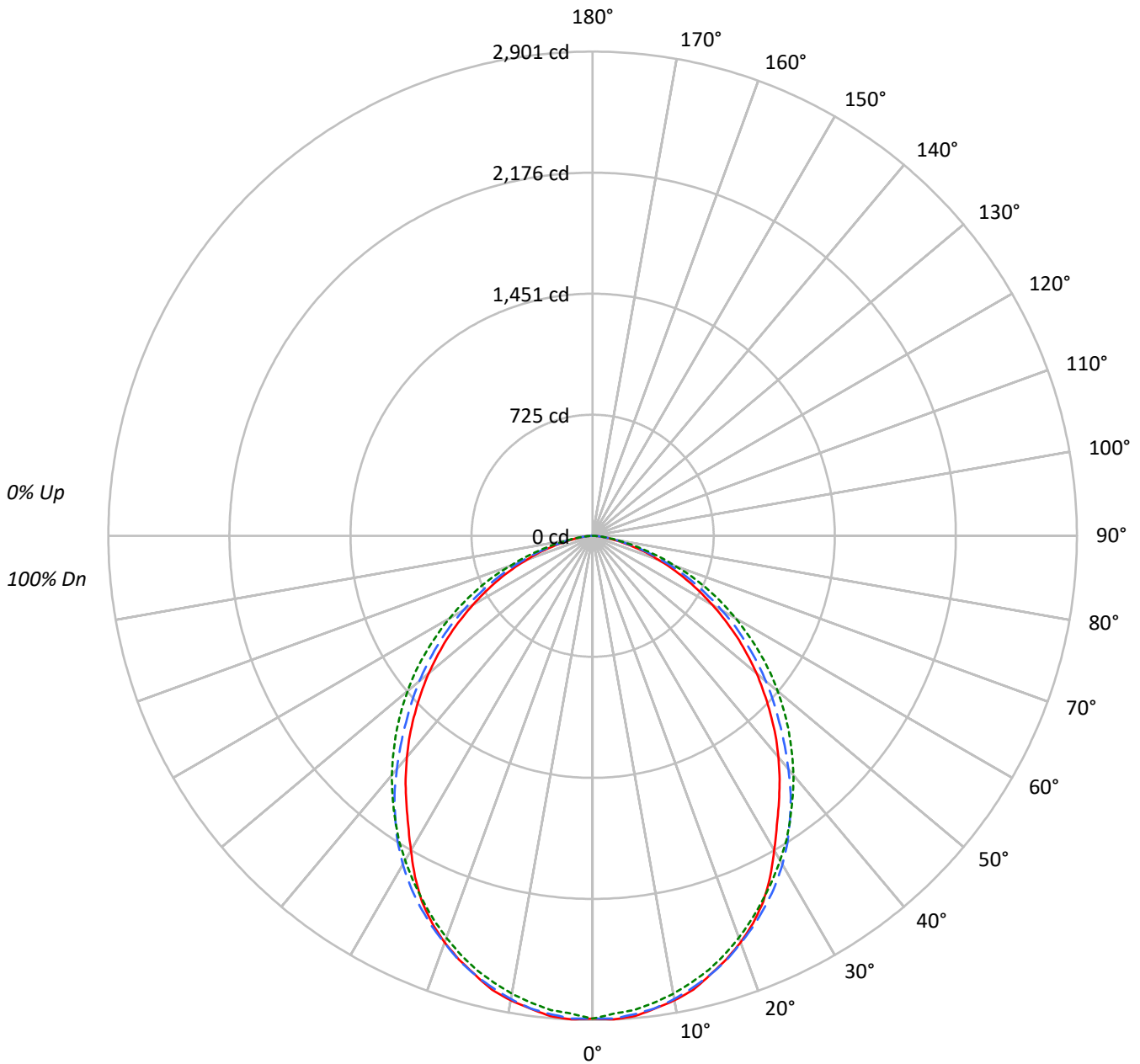
Lumens per Lamp: N/A  
Luminaire Lumens: 6689.0 lumens  
Efficiency: N/A  
Efficacy: 100.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7784	7784	7784
5°	7805	7772	7706
10°	7722	7701	7613
15°	7585	7585	7499
20°	7425	7434	7339
25°	7180	7269	7154
30°	6761	7065	6979
35°	6389	6772	6783
40°	6079	6406	6574
45°	5731	6018	6327
50°	5364	5671	6058
55°	4948	5277	5730
60°	4456	4815	5329
65°	3934	4281	4848
70°	3279	3646	4118
75°	2576	2912	3224
80°	1843	2049	2273
85°	1201	1201	1133



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.4	4.1
10°-20°	765.2	11.4
20°-30°	1118.1	16.7
30°-40°	1269.2	19.0
40°-50°	1225.2	18.3
50°-60°	1010.7	15.1
60°-70°	673.1	10.1
70°-80°	301.2	4.5
80°-90°	53.9	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°	2155.7	32.2
0°-40°	3424.9	51.2
0°-60°	5660.9	84.6
0°-90°	6689.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6689.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2893	2893	2893	2893	2893	
5°	2890	2888	2877	2862	2853	273
15°	2723	2730	2723	2711	2692	768
25°	2418	2437	2448	2430	2409	1107
35°	1945	1972	2062	2073	2065	1219
45°	1506	1531	1581	1654	1663	1162
55°	1055	1072	1125	1187	1221	941
65°	618	635	672	720	761	613
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°	2892.8	2892.8	2892.8	2892.8	2892.8
2.5°	2900.6	2901.7	2895.0	2877.3	2866.1
5°	2889.5	2888.4	2877.3	2861.7	2852.8
7.5°	2857.3	2859.5	2856.1	2833.9	2821.7
10°	2826.1	2827.3	2818.4	2800.6	2786.1
12.5°	2786.1	2785.0	2772.8	2763.9	2740.6
15°	2722.8	2729.5	2722.8	2710.6	2691.7
17.5°	2661.7	2661.7	2666.1	2645.0	2630.5
20°	2592.8	2596.1	2596.1	2579.4	2562.8
22.5°	2512.7	2522.7	2526.1	2508.3	2488.3
25°	2418.3	2437.2	2448.3	2430.5	2409.4
27.5°	2303.8	2332.7	2366.0	2352.7	2329.4
30°	2176.0	2218.2	2273.8	2262.7	2246.0
32.5°	2054.9	2097.1	2173.8	2169.3	2160.4
35°	1944.8	1971.5	2061.5	2072.7	2064.9
37.5°	1840.4	1864.8	1949.3	1974.9	1968.2
40°	1730.4	1757.0	1823.7	1869.3	1871.5
42.5°	1621.4	1647.0	1701.5	1767.0	1767.0
45°	1505.9	1531.4	1581.4	1653.7	1662.6
47.5°	1392.5	1419.2	1468.1	1540.3	1554.8
50°	1281.4	1305.8	1354.7	1424.7	1447.0
52.5°	1165.8	1192.5	1240.3	1304.7	1336.9
55°	1054.7	1072.4	1124.7	1186.9	1221.4
57.5°	939.1	955.8	1014.7	1068.0	1103.6
60°	827.9	849.1	894.6	949.1	990.2
62.5°	721.3	743.5	782.4	830.2	876.8
65°	617.9	634.6	672.4	720.1	761.3
67.5°	517.9	532.3	570.1	603.5	646.8
70°	416.8	435.6	463.4	495.7	523.4
72.5°	335.6	343.4	366.7	390.1	419.0
75°	247.8	261.2	280.1	293.4	310.1
77.5°	177.8	185.6	196.7	207.8	223.4
80°	118.9	122.2	132.2	134.5	146.7
82.5°	72.2	74.5	76.7	77.8	82.2
85°	38.9	38.9	38.9	36.7	36.7
87.5°	22.2	22.2	18.9	15.6	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)