

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: P557573

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-81-86-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: P557573  
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-81-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

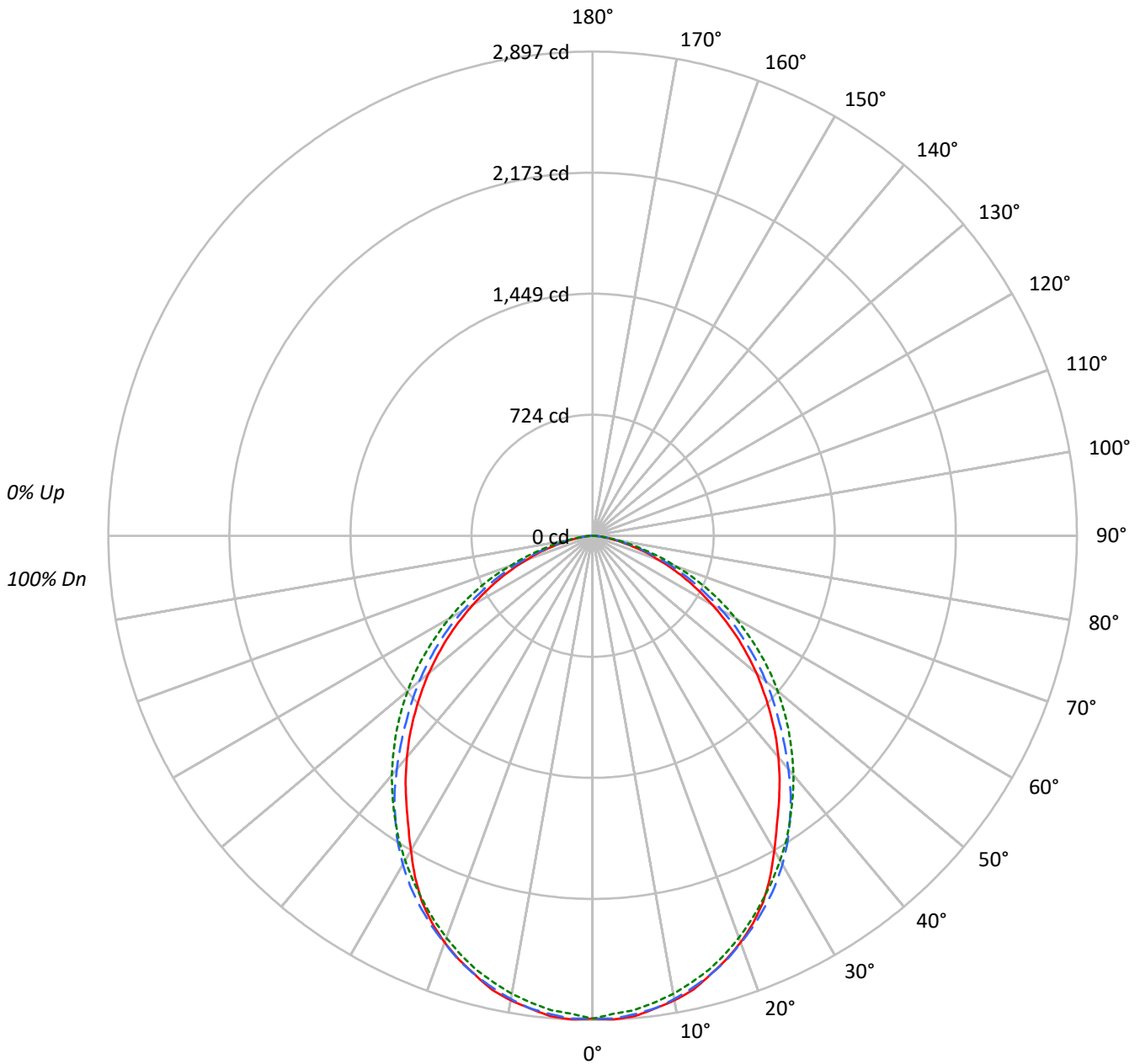
Lumens per Lamp: N/A  
Luminaire Lumens: 6680.0 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (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°	7774	7774	7774
5°	7795	7762	7696
10°	7712	7691	7603
15°	7575	7575	7489
20°	7415	7424	7329
25°	7171	7260	7144
30°	6752	7056	6970
35°	6380	6763	6774
40°	6070	6398	6565
45°	5723	6010	6318
50°	5357	5664	6049
55°	4941	5270	5722
60°	4450	4808	5322
65°	3929	4276	4840
70°	3275	3641	4113
75°	2573	2908	3219
80°	1841	2047	2270
85°	1198	1198	1130



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.0	4.1
10°-20°	764.1	11.4
20°-30°	1116.6	16.7
30°-40°	1267.5	19.0
40°-50°	1223.6	18.3
50°-60°	1009.4	15.1
60°-70°	672.2	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°	2152.8	32.2
0°-40°	3420.3	51.2
0°-60°	5653.3	84.6
0°-90°	6680.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6680.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2889	2889	2889	2889	2889	
5°	2886	2884	2873	2858	2849	273
15°	2719	2726	2719	2707	2688	767
25°	2415	2434	2445	2427	2406	1106
35°	1942	1969	2059	2070	2062	1217
45°	1504	1529	1579	1651	1660	1160
55°	1053	1071	1123	1185	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°	2888.9	2888.9	2888.9	2888.9	2888.9
2.5°	2896.7	2897.8	2891.1	2873.4	2862.3
5°	2885.6	2884.5	2873.4	2857.9	2849.0
7.5°	2853.4	2855.6	2852.3	2830.1	2817.9
10°	2822.3	2823.4	2814.6	2796.8	2782.4
12.5°	2782.4	2781.3	2769.1	2760.2	2736.9
15°	2719.1	2725.8	2719.1	2706.9	2688.0
17.5°	2658.1	2658.1	2662.5	2641.4	2627.0
20°	2589.3	2592.6	2592.6	2576.0	2559.3
22.5°	2509.4	2519.3	2522.7	2504.9	2484.9
25°	2415.0	2433.9	2445.0	2427.2	2406.1
27.5°	2300.7	2329.6	2362.9	2349.5	2326.2
30°	2173.1	2215.3	2270.7	2259.6	2243.0
32.5°	2052.1	2094.3	2170.9	2166.4	2157.5
35°	1942.2	1968.9	2058.8	2069.9	2062.1
37.5°	1837.9	1862.3	1946.7	1972.2	1965.5
40°	1728.0	1754.7	1821.3	1866.8	1869.0
42.5°	1619.3	1644.8	1699.2	1764.7	1764.7
45°	1503.8	1529.4	1579.3	1651.4	1660.3
47.5°	1390.6	1417.3	1466.1	1538.2	1552.7
50°	1279.7	1304.1	1352.9	1422.8	1445.0
52.5°	1164.2	1190.9	1238.6	1303.0	1335.1
55°	1053.2	1071.0	1123.2	1185.3	1219.7
57.5°	937.8	954.5	1013.3	1066.6	1102.1
60°	826.8	847.9	893.4	947.8	988.9
62.5°	720.3	742.5	781.3	829.1	875.7
65°	617.1	633.7	671.5	719.2	760.2
67.5°	517.2	531.6	569.4	602.6	645.9
70°	416.2	435.1	462.8	495.0	522.7
72.5°	335.2	342.9	366.2	389.6	418.4
75°	247.5	260.8	279.7	293.0	309.6
77.5°	177.6	185.3	196.4	207.5	223.1
80°	118.8	122.1	132.1	134.3	146.5
82.5°	72.1	74.4	76.6	77.7	82.1
85°	38.8	38.8	38.8	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)