

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: P557441

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-UNV-81-84-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: P557441  
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-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

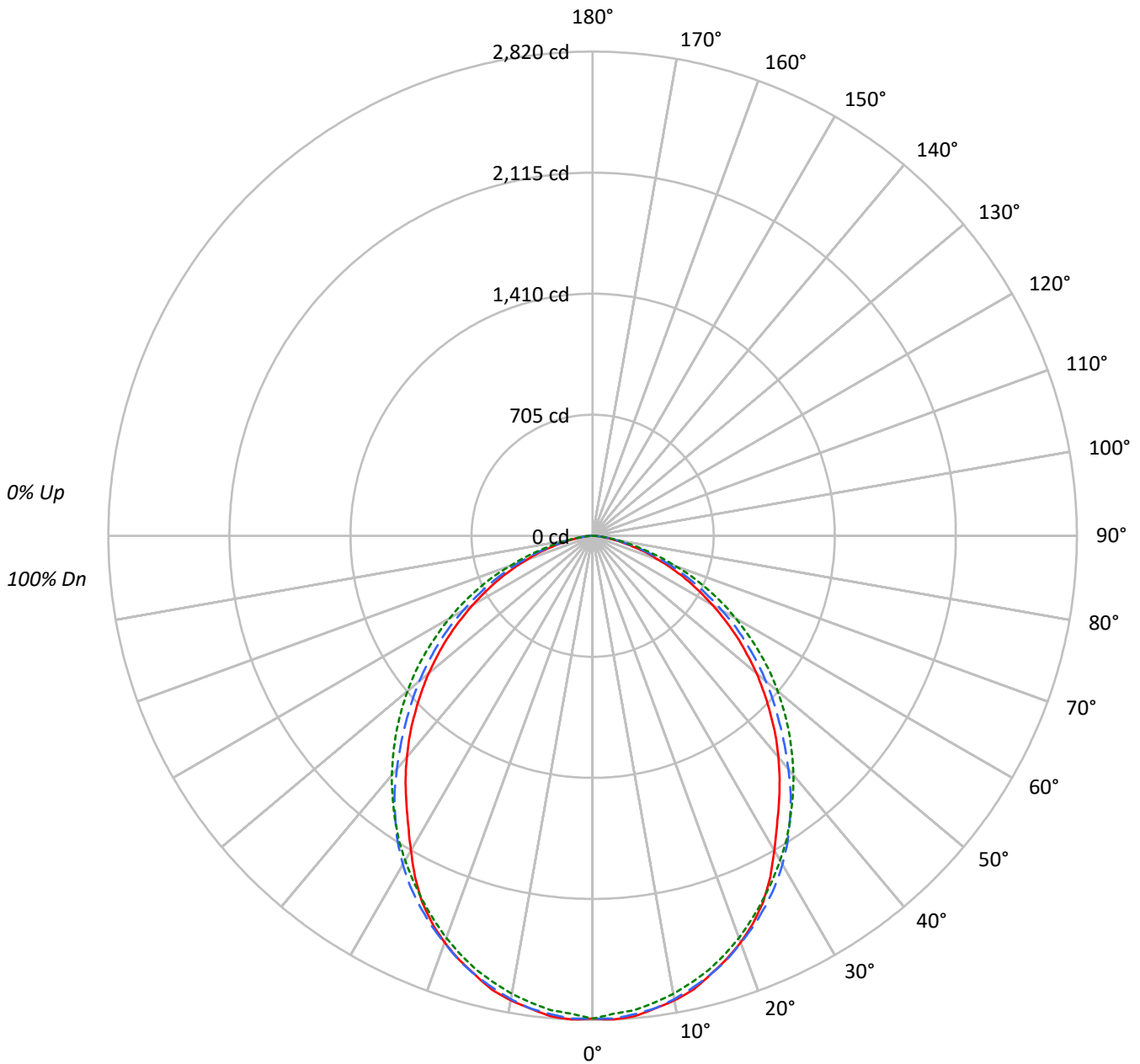
Lumens per Lamp: N/A  
Luminaire Lumens: 6503.0 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P557441

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P557441

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-84-EDD

**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°	7568	7568	7568
5°	7588	7556	7492
10°	7508	7487	7401
15°	7375	7375	7290
20°	7218	7228	7135
25°	6981	7067	6955
30°	6573	6869	6785
35°	6211	6584	6595
40°	5909	6228	6392
45°	5571	5851	6151
50°	5215	5514	5889
55°	4810	5130	5571
60°	4332	4681	5181
65°	3825	4162	4713
70°	3188	3544	4004
75°	2505	2831	3134
80°	1791	1993	2210
85°	1167	1167	1102



TEST NUMBER: P557441

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	264.8	4.1
10°-20°	743.9	11.4
20°-30°	1087.1	16.7
30°-40°	1233.9	19.0
40°-50°	1191.2	18.3
50°-60°	982.6	15.1
60°-70°	654.4	10.1
70°-80°	292.8	4.5
80°-90°	52.4	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°	2095.7	32.2
0°-40°	3329.7	51.2
0°-60°	5503.5	84.6
0°-90°	6503.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6503.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2812	2812	2812	2812	2812	
5°	2809	2808	2797	2782	2774	266
15°	2647	2654	2647	2635	2617	746
25°	2351	2369	2380	2363	2342	1077
35°	1891	1917	2004	2015	2008	1185
45°	1464	1489	1538	1608	1616	1130
55°	1025	1043	1093	1154	1187	915
65°	601	617	654	700	740	596
75°	241	254	272	285	301	263
85°	38	38	38	36	36	51
90°	0	0	0	0	0	



TEST NUMBER: P557441

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2812.4	2812.4	2812.4	2812.4	2812.4
2.5°	2819.9	2821.0	2814.5	2797.3	2786.4
5°	2809.1	2808.1	2797.3	2782.1	2773.5
7.5°	2777.8	2780.0	2776.7	2755.1	2743.2
10°	2747.6	2748.6	2740.0	2722.7	2708.7
12.5°	2708.7	2707.6	2695.7	2687.0	2664.4
15°	2647.1	2653.6	2647.1	2635.2	2616.8
17.5°	2587.6	2587.6	2592.0	2571.4	2557.4
20°	2520.7	2523.9	2523.9	2507.7	2491.5
22.5°	2442.9	2452.6	2455.8	2438.5	2419.1
25°	2351.0	2369.4	2380.2	2362.9	2342.4
27.5°	2239.7	2267.8	2300.3	2287.3	2264.6
30°	2115.5	2156.6	2210.6	2199.8	2183.6
32.5°	1997.7	2038.8	2113.3	2109.0	2100.4
35°	1890.8	1916.7	2004.2	2015.0	2007.5
37.5°	1789.2	1813.0	1895.1	1919.9	1913.5
40°	1682.2	1708.2	1773.0	1817.3	1819.5
42.5°	1576.4	1601.2	1654.2	1717.9	1717.9
45°	1464.0	1488.8	1537.5	1607.7	1616.3
47.5°	1353.8	1379.7	1427.3	1497.5	1511.5
50°	1245.7	1269.5	1317.1	1385.1	1406.7
52.5°	1133.4	1159.3	1205.8	1268.4	1299.8
55°	1025.3	1042.6	1093.4	1153.9	1187.4
57.5°	913.0	929.2	986.4	1038.3	1072.9
60°	804.9	825.5	869.8	922.7	962.7
62.5°	701.2	722.8	760.6	807.1	852.5
65°	600.7	616.9	653.7	700.1	740.1
67.5°	503.5	517.5	554.3	586.7	628.8
70°	405.2	423.5	450.5	481.9	508.9
72.5°	326.3	333.9	356.5	379.2	407.3
75°	240.9	253.9	272.3	285.2	301.4
77.5°	172.9	180.4	191.2	202.0	217.2
80°	115.6	118.8	128.6	130.7	142.6
82.5°	70.2	72.4	74.6	75.6	80.0
85°	37.8	37.8	37.8	35.7	35.7
87.5°	21.6	21.6	18.4	15.1	10.8
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)