

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: P558374

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-93-87-EDD-90**

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: P558374  
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-LD4-3STD-40-UNV-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

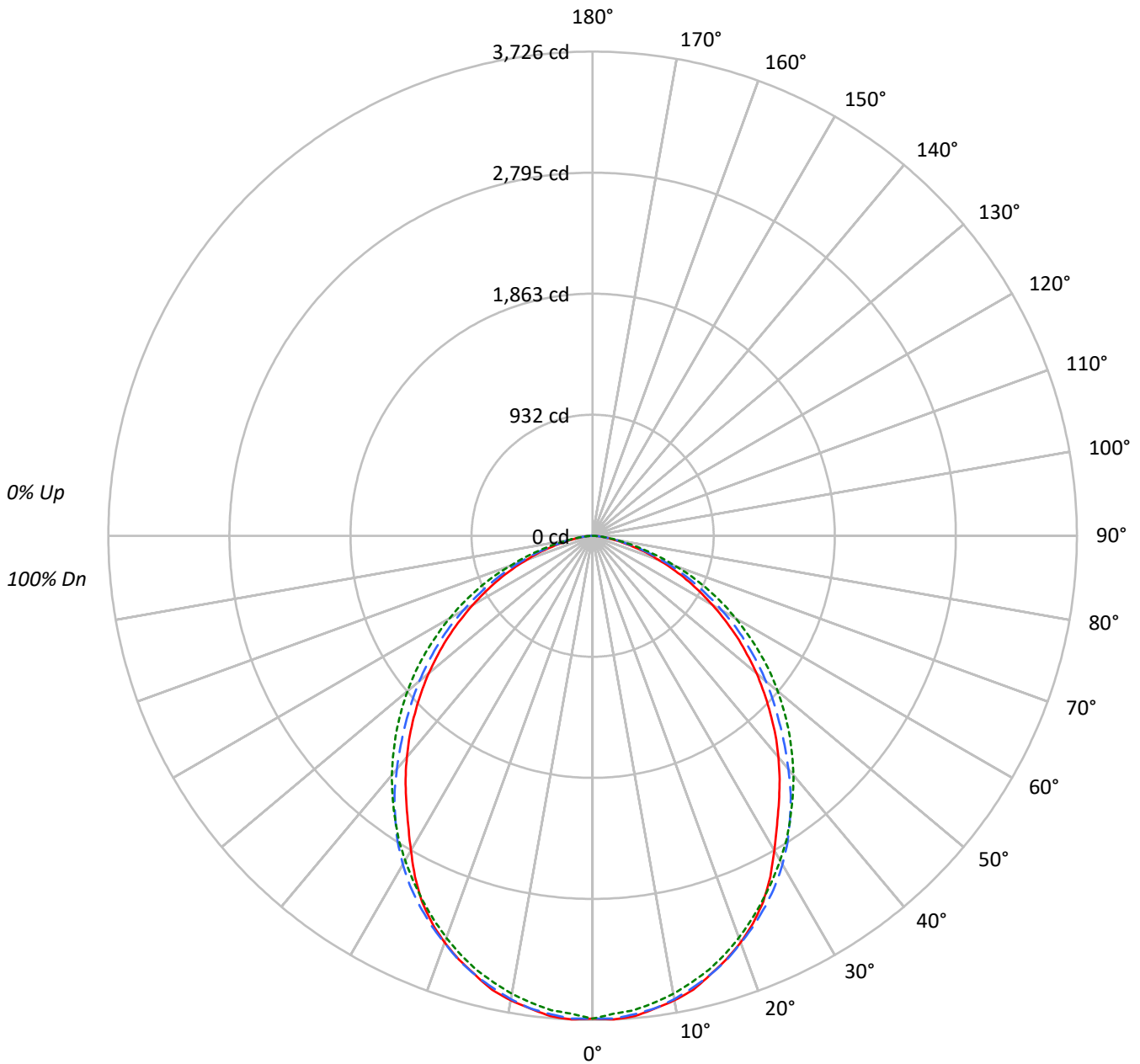
Lumens per Lamp: N/A  
Luminaire Lumens: 8592.0 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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

TEST NUMBER: P558374

CATALOG NUMBER: FUSL-12-4-LD4-3STD-40-UNV-93-87-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558374

CATALOG NUMBER: FUSL-12-4-LD4-3STD-40-UNV-93-87-EDD-90

**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°	9999	9999	9999
5°	10026	9983	9898
10°	9919	9892	9779
15°	9743	9743	9632
20°	9537	9550	9427
25°	9223	9337	9189
30°	8685	9075	8964
35°	8206	8699	8713
40°	7808	8229	8444
45°	7361	7731	8127
50°	6890	7285	7781
55°	6356	6777	7360
60°	5724	6184	6845
65°	5054	5499	6226
70°	4212	4684	5290
75°	3309	3740	4141
80°	2366	2633	2920
85°	1544	1544	1454



TEST NUMBER: P558374

CATALOG NUMBER: FUSL-12-4-LD4-3STD-40-UNV-93-87-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.9	4.1
10°-20°	982.8	11.4
20°-30°	1436.3	16.7
30°-40°	1630.3	19.0
40°-50°	1573.8	18.3
50°-60°	1298.3	15.1
60°-70°	864.5	10.1
70°-80°	386.9	4.5
80°-90°	69.2	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°	2769.0	32.2
0°-40°	4399.3	51.2
0°-60°	7271.3	84.6
0°-90°	8592.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8592.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3716	3716	3716	3716	3716	
5°	3712	3710	3696	3676	3664	351
15°	3497	3506	3497	3482	3457	986
25°	3106	3130	3145	3122	3095	1423
35°	2498	2532	2648	2662	2652	1565
45°	1934	1967	2031	2124	2136	1492
55°	1355	1378	1445	1525	1569	1209
65°	794	815	864	925	978	787
75°	318	336	360	377	398	348
85°	50	50	50	47	47	67
90°	0	0	0	0	0	



TEST NUMBER: P558374

CATALOG NUMBER: FUSL-12-4-LD4-3STD-40-UNV-93-87-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3715.8	3715.8	3715.8	3715.8	3715.8
2.5°	3725.8	3727.2	3718.7	3695.8	3681.6
5°	3711.5	3710.1	3695.8	3675.8	3664.4
7.5°	3670.1	3673.0	3668.7	3640.2	3624.5
10°	3630.2	3631.6	3620.2	3597.3	3578.8
12.5°	3578.8	3577.3	3561.6	3550.2	3520.2
15°	3497.4	3506.0	3497.4	3481.7	3457.4
17.5°	3418.9	3418.9	3424.6	3397.5	3378.9
20°	3330.4	3334.7	3334.7	3313.3	3291.8
22.5°	3227.6	3240.5	3244.7	3221.9	3196.2
25°	3106.3	3130.5	3144.8	3122.0	3094.8
27.5°	2959.2	2996.4	3039.2	3022.0	2992.1
30°	2795.1	2849.3	2920.7	2906.4	2885.0
32.5°	2639.5	2693.7	2792.2	2786.5	2775.1
35°	2498.1	2532.4	2648.0	2662.3	2652.3
37.5°	2364.0	2395.4	2503.9	2536.7	2528.1
40°	2222.6	2256.9	2342.5	2401.1	2403.9
42.5°	2082.7	2115.6	2185.5	2269.7	2269.7
45°	1934.3	1967.1	2031.4	2124.1	2135.6
47.5°	1788.7	1822.9	1885.7	1978.5	1997.1
50°	1645.9	1677.3	1740.1	1830.1	1858.6
52.5°	1497.5	1531.7	1593.1	1675.9	1717.3
55°	1354.7	1377.6	1444.6	1524.6	1568.8
57.5°	1206.2	1227.7	1303.3	1371.8	1417.5
60°	1063.5	1090.6	1149.1	1219.1	1271.9
62.5°	926.5	955.0	1005.0	1066.4	1126.3
65°	793.7	815.1	863.6	925.0	977.8
67.5°	665.2	683.8	732.3	775.1	830.8
70°	535.3	559.6	595.3	636.7	672.4
72.5°	431.1	441.1	471.1	501.1	538.2
75°	318.3	335.5	359.7	376.9	398.3
77.5°	228.4	238.4	252.7	266.9	286.9
80°	152.7	157.0	169.9	172.7	188.4
82.5°	92.8	95.6	98.5	99.9	105.6
85°	50.0	50.0	50.0	47.1	47.1
87.5°	28.6	28.6	24.3	20.0	14.3
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)