

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: P556943

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-81-97-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: P556943  
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-LD4-2HI-30-UNV-81-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

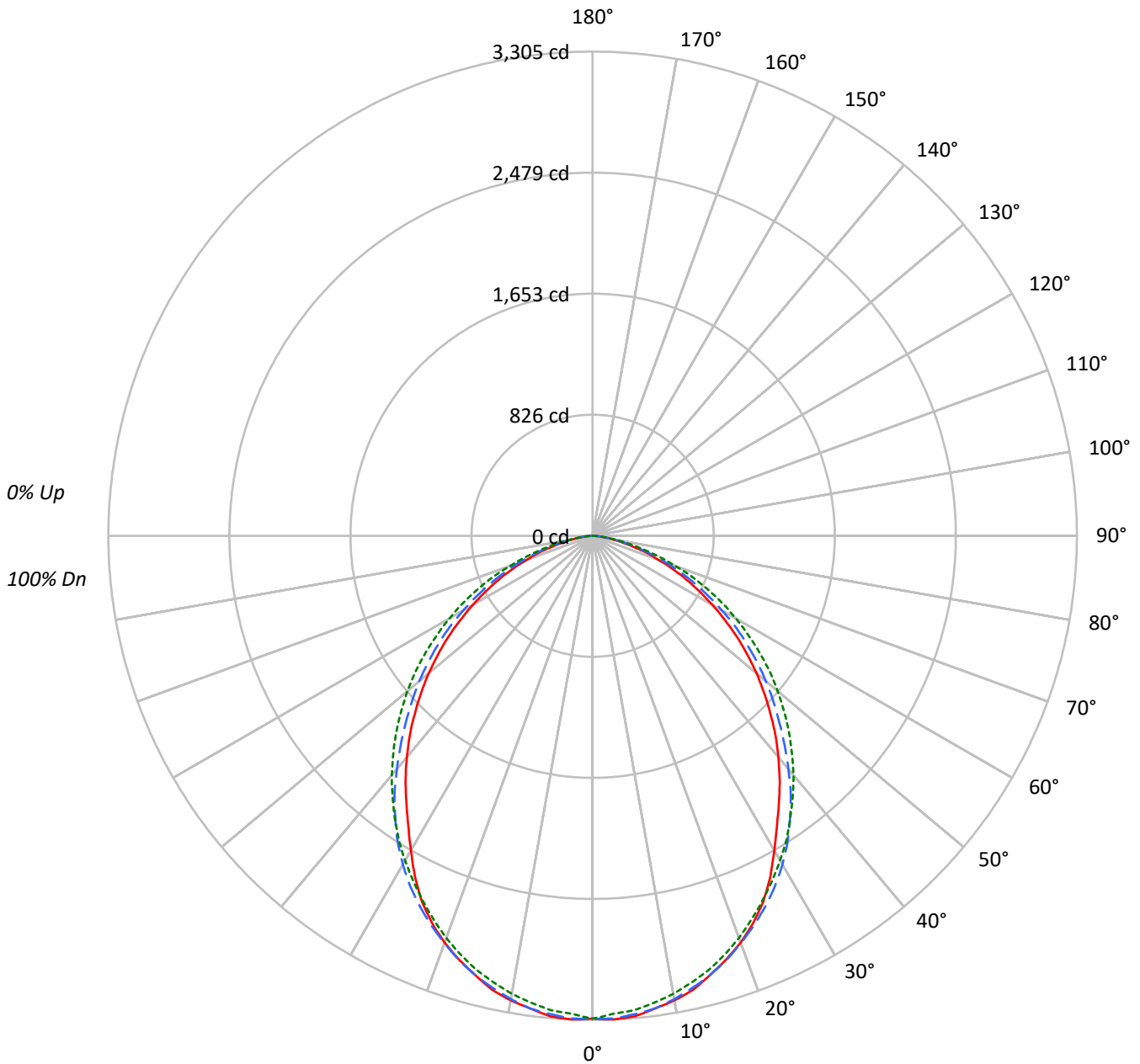
Lumens per Lamp: N/A  
Luminaire Lumens: 7622.0 lumens  
Efficiency: N/A  
Efficacy: 88.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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: P556943

CATALOG NUMBER: FUSL-12-4-LD4-2HI-30-UNV-81-97-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P556943

CATALOG NUMBER: FUSL-12-4-LD4-2HI-30-UNV-81-97-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°	8870	8870	8870
5°	8894	8856	8781
10°	8799	8775	8675
15°	8644	8644	8545
20°	8460	8471	8363
25°	8182	8283	8152
30°	7704	8051	7952
35°	7280	7717	7729
40°	6926	7300	7491
45°	6530	6858	7210
50°	6113	6463	6903
55°	5638	6012	6529
60°	5077	5486	6072
65°	4483	4878	5524
70°	3736	4155	4693
75°	2936	3318	3673
80°	2100	2335	2591
85°	1368	1368	1291



TEST NUMBER: P556943

CATALOG NUMBER: FUSL-12-4-LD4-2HI-30-UNV-81-97-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	310.4	4.1
10°-20°	871.9	11.4
20°-30°	1274.1	16.7
30°-40°	1446.2	19.0
40°-50°	1396.1	18.3
50°-60°	1151.7	15.1
60°-70°	767.0	10.1
70°-80°	343.2	4.5
80°-90°	61.4	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°	2456.4	32.2
0°-40°	3902.6	51.2
0°-60°	6450.5	84.6
0°-90°	7622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7622.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3296	3296	3296	3296	3296	
5°	3292	3291	3279	3261	3251	312
15°	3103	3110	3103	3089	3067	875
25°	2756	2777	2790	2770	2746	1262
35°	2216	2246	2349	2362	2353	1389
45°	1716	1745	1802	1884	1894	1324
55°	1202	1222	1282	1352	1392	1073
65°	704	723	766	821	868	698
75°	282	298	319	334	353	309
85°	44	44	44	42	42	60
90°	0	0	0	0	0	



TEST NUMBER: P556943

CATALOG NUMBER: FUSL-12-4-LD4-2HI-30-UNV-81-97-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3296.3	3296.3	3296.3	3296.3	3296.3
2.5°	3305.2	3306.4	3298.9	3278.6	3265.9
5°	3292.5	3291.3	3278.6	3260.9	3250.7
7.5°	3255.8	3258.3	3254.5	3229.2	3215.3
10°	3220.3	3221.6	3211.5	3191.2	3174.7
12.5°	3174.7	3173.5	3159.6	3149.4	3122.8
15°	3102.6	3110.2	3102.6	3088.6	3067.1
17.5°	3032.9	3032.9	3038.0	3013.9	2997.5
20°	2954.4	2958.2	2958.2	2939.2	2920.2
22.5°	2863.2	2874.6	2878.4	2858.2	2835.4
25°	2755.6	2777.1	2789.8	2769.5	2745.5
27.5°	2625.2	2658.1	2696.1	2680.9	2654.3
30°	2479.5	2527.6	2591.0	2578.3	2559.3
32.5°	2341.5	2389.6	2477.0	2471.9	2461.8
35°	2216.1	2246.5	2349.1	2361.7	2352.9
37.5°	2097.1	2124.9	2221.2	2250.3	2242.7
40°	1971.7	2002.1	2078.1	2130.0	2132.5
42.5°	1847.6	1876.7	1938.8	2013.5	2013.5
45°	1715.9	1745.0	1802.0	1884.3	1894.5
47.5°	1586.7	1617.1	1672.9	1755.2	1771.6
50°	1460.1	1488.0	1543.7	1623.5	1648.8
52.5°	1328.4	1358.8	1413.3	1486.7	1523.4
55°	1201.8	1222.0	1281.5	1352.5	1391.7
57.5°	1070.1	1089.1	1156.2	1217.0	1257.5
60°	943.4	967.5	1019.4	1081.5	1128.3
62.5°	821.9	847.2	891.5	946.0	999.2
65°	704.1	723.1	766.1	820.6	867.5
67.5°	590.1	606.6	649.6	687.6	737.0
70°	474.9	496.4	528.1	564.8	596.5
72.5°	382.4	391.3	417.9	444.5	477.4
75°	282.4	297.6	319.1	334.3	353.3
77.5°	202.6	211.5	224.1	236.8	254.5
80°	135.5	139.3	150.7	153.2	167.2
82.5°	82.3	84.8	87.4	88.6	93.7
85°	44.3	44.3	44.3	41.8	41.8
87.5°	25.3	25.3	21.5	17.7	12.7
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)