

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: P556532

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-80-86-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: P556532  
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-LD4-1LO-40-UNV-80-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

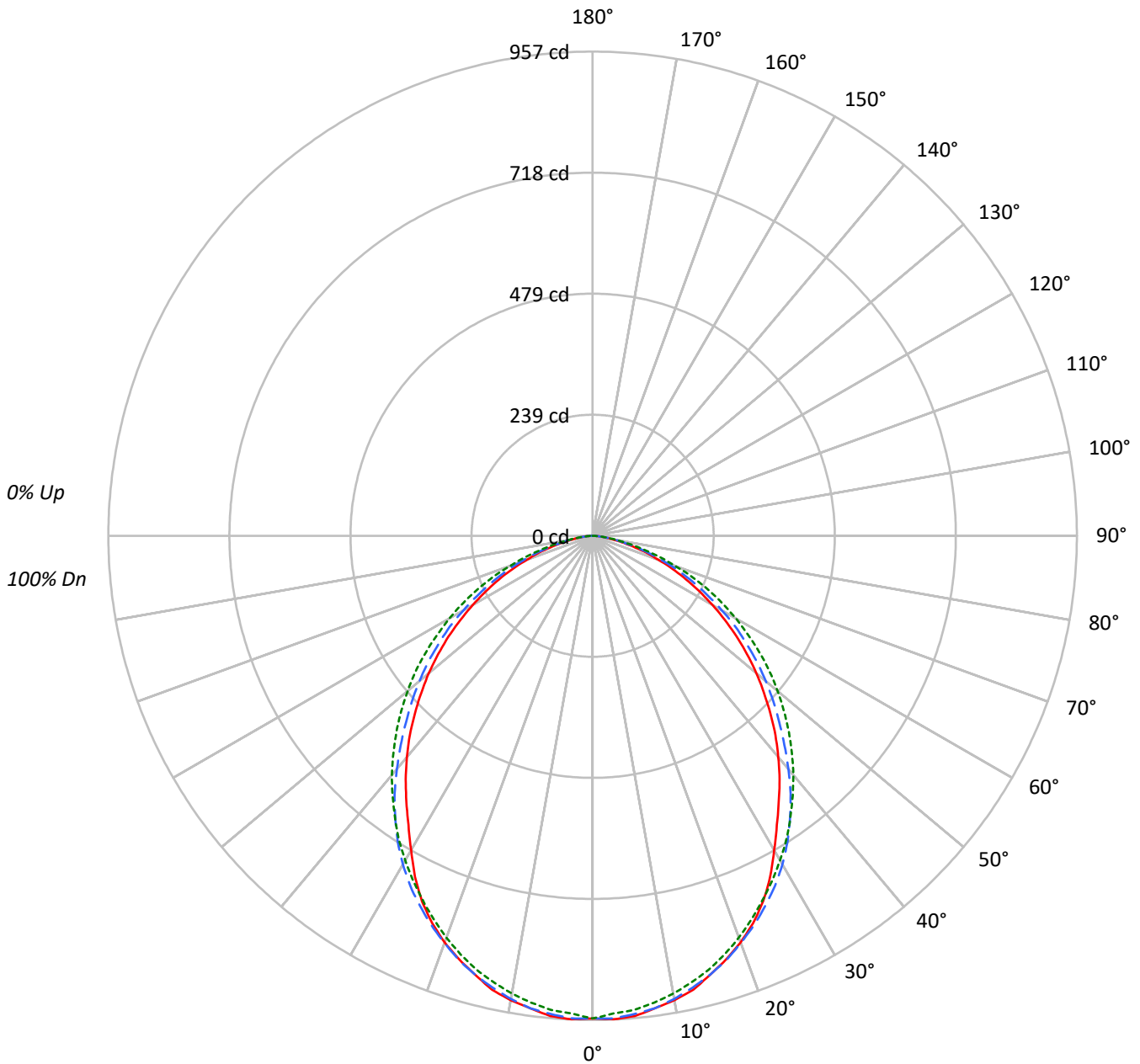
Lumens per Lamp: N/A  
Luminaire Lumens: 2206.0 lumens  
Efficiency: N/A  
Efficacy: 94.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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: P556532

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-80-86-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556532

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-80-86-EDD-90

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2567	2567	2567
5°	2574	2563	2541
10°	2547	2540	2511
15°	2502	2502	2473
20°	2449	2452	2420
25°	2368	2397	2359
30°	2230	2330	2302
35°	2107	2234	2237
40°	2005	2113	2168
45°	1890	1985	2087
50°	1769	1870	1998
55°	1632	1740	1890
60°	1470	1588	1758
65°	1298	1412	1599
70°	1081	1202	1358
75°	849	961	1064
80°	607	676	750
85°	395	395	374



TEST NUMBER: P556532

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-80-86-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.8	4.1
10°-20°	252.3	11.4
20°-30°	368.8	16.7
30°-40°	418.6	19.0
40°-50°	404.1	18.3
50°-60°	333.3	15.1
60°-70°	222.0	10.1
70°-80°	99.3	4.5
80°-90°	17.8	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°	710.9	32.2
0°-40°	1129.5	51.2
0°-60°	1866.9	84.6
0°-90°	2206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2206.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	953	953	949	944	941	90
15°	898	900	898	894	888	253
25°	798	804	807	802	795	365
35°	641	650	680	684	681	402
45°	497	505	522	545	548	383
55°	348	354	371	391	403	310
65°	204	209	222	238	251	202
75°	82	86	92	97	102	89
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



TEST NUMBER: P556532

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-80-86-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	954.0	954.0	954.0	954.0	954.0
2.5°	956.6	957.0	954.8	948.9	945.2
5°	952.9	952.6	948.9	943.8	940.8
7.5°	942.3	943.0	941.9	934.6	930.6
10°	932.0	932.4	929.5	923.6	918.9
12.5°	918.9	918.5	914.5	911.5	903.8
15°	898.0	900.2	898.0	893.9	887.7
17.5°	877.8	877.8	879.3	872.3	867.5
20°	855.1	856.2	856.2	850.7	845.2
22.5°	828.7	832.0	833.1	827.2	820.6
25°	797.5	803.8	807.4	801.6	794.6
27.5°	759.8	769.3	780.3	775.9	768.2
30°	717.6	731.6	749.9	746.2	740.7
32.5°	677.7	691.6	716.9	715.4	712.5
35°	641.4	650.2	679.9	683.6	681.0
37.5°	606.9	615.0	642.9	651.3	649.1
40°	570.7	579.5	601.5	616.5	617.2
42.5°	534.7	543.2	561.1	582.8	582.8
45°	496.6	505.1	521.6	545.4	548.3
47.5°	459.2	468.0	484.2	508.0	512.8
50°	422.6	430.7	446.8	469.9	477.2
52.5°	384.5	393.3	409.0	430.3	440.9
55°	347.8	353.7	370.9	391.4	402.8
57.5°	309.7	315.2	334.6	352.2	363.9
60°	273.1	280.0	295.0	313.0	326.6
62.5°	237.9	245.2	258.0	273.8	289.2
65°	203.8	209.3	221.7	237.5	251.1
67.5°	170.8	175.6	188.0	199.0	213.3
70°	137.4	143.7	152.8	163.5	172.6
72.5°	110.7	113.3	120.9	128.6	138.2
75°	81.7	86.1	92.4	96.8	102.3
77.5°	58.6	61.2	64.9	68.5	73.7
80°	39.2	40.3	43.6	44.3	48.4
82.5°	23.8	24.6	25.3	25.7	27.1
85°	12.8	12.8	12.8	12.1	12.1
87.5°	7.3	7.3	6.2	5.1	3.7
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)