

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: P556576

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-84-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: P556576  
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-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE  
AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

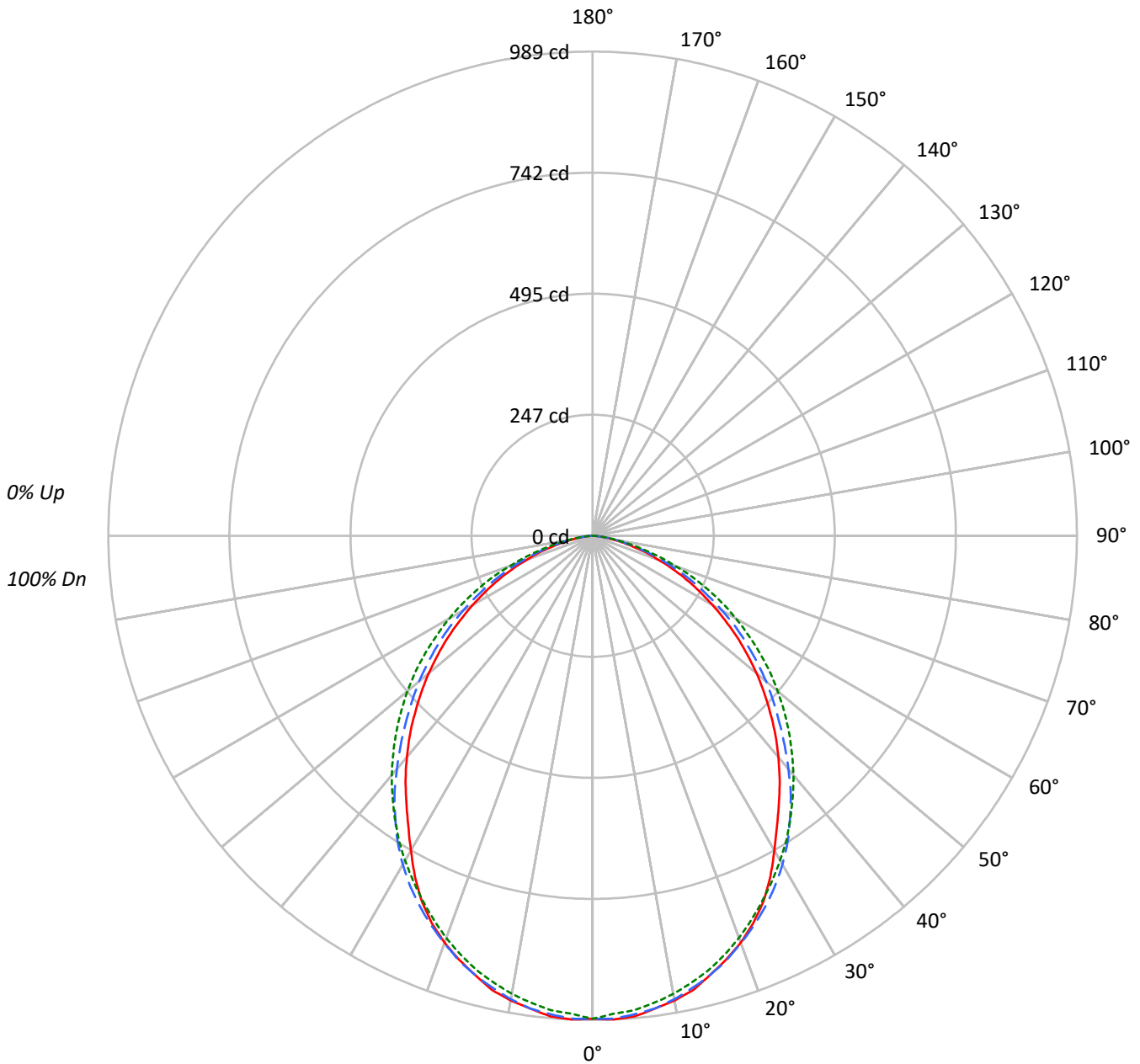
Lumens per Lamp: N/A  
Luminaire Lumens: 2281.0 lumens  
Efficiency: N/A  
Efficacy: 97.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (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: P556576

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-84-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556576

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-84-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°	2655	2655	2655
5°	2662	2650	2628
10°	2633	2626	2596
15°	2587	2587	2557
20°	2532	2535	2503
25°	2449	2479	2439
30°	2306	2409	2380
35°	2179	2309	2313
40°	2073	2185	2242
45°	1954	2052	2157
50°	1829	1934	2066
55°	1687	1799	1954
60°	1519	1642	1817
65°	1342	1460	1653
70°	1118	1243	1404
75°	879	993	1099
80°	629	699	775
85°	411	411	386



TEST NUMBER: P556576

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-84-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.9	4.1
10°-20°	260.9	11.4
20°-30°	381.3	16.7
30°-40°	432.8	19.0
40°-50°	417.8	18.3
50°-60°	344.7	15.1
60°-70°	229.5	10.1
70°-80°	102.7	4.5
80°-90°	18.4	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°	735.1	32.2
0°-40°	1167.9	51.2
0°-60°	1930.4	84.6
0°-90°	2281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2281.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	986	986	986	986	986	
5°	985	985	981	976	973	93
15°	928	931	928	924	918	262
25°	825	831	835	829	822	378
35°	663	672	703	707	704	416
45°	514	522	539	564	567	396
55°	360	366	384	405	416	321
65°	211	216	229	246	260	209
75°	84	89	96	100	106	92
85°	13	13	13	12	12	18
90°	0	0	0	0	0	



TEST NUMBER: P556576

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-84-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	986.5	986.5	986.5	986.5	986.5
2.5°	989.1	989.5	987.2	981.2	977.4
5°	985.3	985.0	981.2	975.9	972.8
7.5°	974.3	975.1	974.0	966.4	962.2
10°	963.7	964.1	961.1	955.0	950.1
12.5°	950.1	949.7	945.5	942.5	934.6
15°	928.5	930.8	928.5	924.3	917.9
17.5°	907.6	907.6	909.2	902.0	897.0
20°	884.2	885.3	885.3	879.6	873.9
22.5°	856.9	860.3	861.4	855.3	848.5
25°	824.7	831.1	834.9	828.8	821.6
27.5°	785.6	795.5	806.8	802.3	794.3
30°	742.0	756.4	775.4	771.6	765.9
32.5°	700.7	715.1	741.3	739.8	736.7
35°	663.2	672.3	703.0	706.8	704.1
37.5°	627.6	635.9	664.7	673.4	671.2
40°	590.1	599.2	621.9	637.4	638.2
42.5°	552.9	561.6	580.2	602.6	602.6
45°	513.5	522.2	539.3	563.9	566.9
47.5°	474.9	484.0	500.6	525.3	530.2
50°	437.0	445.3	462.0	485.8	493.4
52.5°	397.5	406.6	422.9	444.9	455.9
55°	359.6	365.7	383.5	404.7	416.5
57.5°	320.2	325.9	346.0	364.2	376.3
60°	282.3	289.5	305.1	323.6	337.7
62.5°	246.0	253.5	266.8	283.1	299.0
65°	210.7	216.4	229.3	245.6	259.6
67.5°	176.6	181.5	194.4	205.8	220.6
70°	142.1	148.6	158.0	169.0	178.5
72.5°	114.5	117.1	125.1	133.0	142.9
75°	84.5	89.1	95.5	100.0	105.7
77.5°	60.6	63.3	67.1	70.9	76.2
80°	40.6	41.7	45.1	45.9	50.0
82.5°	24.6	25.4	26.1	26.5	28.0
85°	13.3	13.3	13.3	12.5	12.5
87.5°	7.6	7.6	6.4	5.3	3.8
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)