

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: P558179

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-93-85-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: P558179  
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-LD4-3LO-50-UNV-93-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

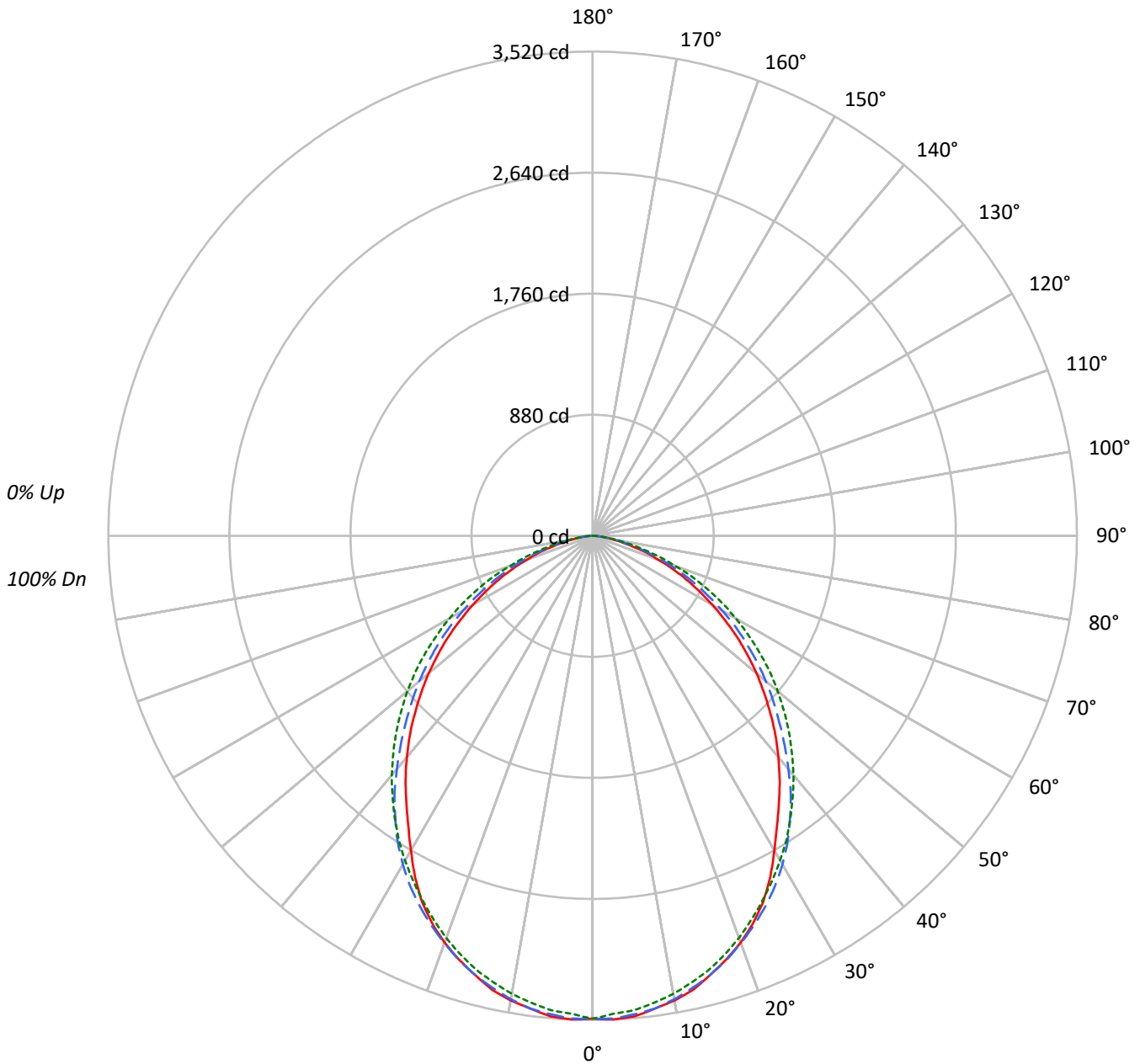
Lumens per Lamp: N/A  
Luminaire Lumens: 8118.0 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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: P558179

CATALOG NUMBER: FUSL-12-4-LD4-3LO-50-UNV-93-85-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558179

CATALOG NUMBER: FUSL-12-4-LD4-3LO-50-UNV-93-85-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°	9447	9447	9447
5°	9473	9433	9353
10°	9372	9346	9239
15°	9206	9206	9101
20°	9011	9023	8907
25°	8714	8822	8682
30°	8206	8575	8470
35°	7754	8219	8232
40°	7377	7775	7979
45°	6955	7304	7679
50°	6510	6883	7352
55°	6005	6404	6954
60°	5408	5844	6467
65°	4775	5196	5883
70°	3980	4425	4998
75°	3127	3534	3912
80°	2236	2487	2758
85°	1457	1457	1374



TEST NUMBER: P558179

CATALOG NUMBER: FUSL-12-4-LD4-3LO-50-UNV-93-85-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	330.6	4.1
10°-20°	928.6	11.4
20°-30°	1357.0	16.7
30°-40°	1540.4	19.0
40°-50°	1487.0	18.3
50°-60°	1226.7	15.1
60°-70°	816.9	10.1
70°-80°	365.5	4.5
80°-90°	65.4	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°	2616.2	32.2
0°-40°	4156.6	51.2
0°-60°	6870.2	84.6
0°-90°	8118.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8118.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3511	3511	3511	3511	3511	
5°	3507	3505	3492	3473	3462	332
15°	3304	3313	3304	3290	3267	932
25°	2935	2958	2971	2950	2924	1344
35°	2360	2393	2502	2515	2506	1479
45°	1828	1859	1919	2007	2018	1410
55°	1280	1302	1365	1440	1482	1142
65°	750	770	816	874	924	744
75°	301	317	340	356	376	329
85°	47	47	47	44	44	64
90°	0	0	0	0	0	



TEST NUMBER: P558179

CATALOG NUMBER: FUSL-12-4-LD4-3LO-50-UNV-93-85-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3510.8	3510.8	3510.8	3510.8	3510.8
2.5°	3520.3	3521.6	3513.5	3491.9	3478.5
5°	3506.8	3505.4	3491.9	3473.1	3462.3
7.5°	3467.7	3470.4	3466.3	3439.3	3424.5
10°	3429.9	3431.2	3420.5	3398.9	3381.3
12.5°	3381.3	3380.0	3365.2	3354.4	3326.0
15°	3304.5	3312.6	3304.5	3289.6	3266.7
17.5°	3230.3	3230.3	3235.7	3210.1	3192.5
20°	3146.7	3150.7	3150.7	3130.5	3110.2
22.5°	3049.5	3061.7	3065.7	3044.2	3019.9
25°	2934.9	2957.8	2971.3	2949.7	2924.1
27.5°	2796.0	2831.0	2871.5	2855.3	2827.0
30°	2640.9	2692.1	2759.6	2746.1	2725.8
32.5°	2493.9	2545.1	2638.2	2632.8	2622.0
35°	2360.3	2392.7	2502.0	2515.4	2506.0
37.5°	2233.5	2263.2	2365.7	2396.7	2388.7
40°	2100.0	2132.4	2213.3	2268.6	2271.3
42.5°	1967.8	1998.9	2065.0	2144.5	2144.5
45°	1827.6	1858.6	1919.3	2007.0	2017.7
47.5°	1690.0	1722.4	1781.7	1869.4	1886.9
50°	1555.1	1584.8	1644.1	1729.1	1756.1
52.5°	1414.9	1447.2	1505.2	1583.4	1622.6
55°	1280.0	1301.6	1364.9	1440.5	1482.3
57.5°	1139.7	1159.9	1231.4	1296.2	1339.3
60°	1004.8	1030.5	1085.8	1151.8	1201.7
62.5°	875.3	902.3	949.5	1007.5	1064.2
65°	749.9	770.1	816.0	874.0	923.9
67.5°	628.5	646.1	691.9	732.4	785.0
70°	505.8	528.7	562.4	601.5	635.3
72.5°	407.3	416.8	445.1	473.4	508.5
75°	300.8	317.0	339.9	356.1	376.3
77.5°	215.8	225.2	238.7	252.2	271.1
80°	144.3	148.4	160.5	163.2	178.0
82.5°	87.7	90.4	93.1	94.4	99.8
85°	47.2	47.2	47.2	44.5	44.5
87.5°	27.0	27.0	22.9	18.9	13.5
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)