

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: P557706

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-81-94-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: P557706  
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-LD4-3HI-30-UNV-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

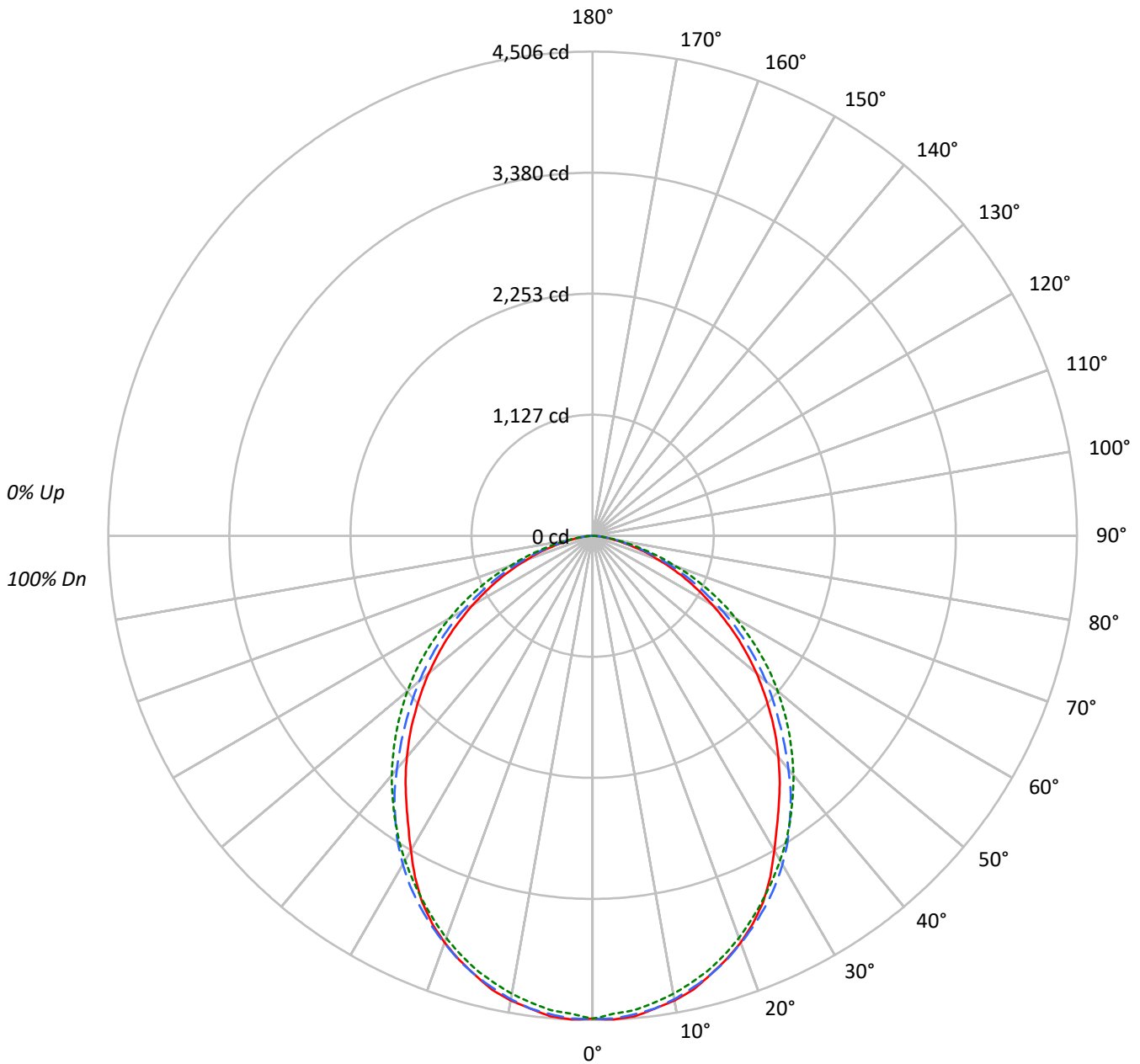
Lumens per Lamp: N/A  
Luminaire Lumens: 10392.0 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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: P557706

CATALOG NUMBER: FUSL-12-4-LD4-3HI-30-UNV-81-94-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557706

CATALOG NUMBER: FUSL-12-4-LD4-3HI-30-UNV-81-94-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°	12094	12094	12094
5°	12126	12075	11972
10°	11998	11964	11828
15°	11785	11785	11650
20°	11535	11550	11402
25°	11155	11294	11114
30°	10504	10977	10843
35°	9926	10521	10539
40°	9444	9953	10214
45°	8903	9350	9830
50°	8334	8811	9411
55°	7687	8198	8902
60°	6923	7480	8280
65°	6113	6651	7531
70°	5094	5665	6398
75°	4003	4524	5008
80°	2862	3185	3532
85°	1865	1865	1760



TEST NUMBER: P557706

CATALOG NUMBER: FUSL-12-4-LD4-3HI-30-UNV-81-94-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	423.1	4.1
10°-20°	1188.7	11.4
20°-30°	1737.2	16.7
30°-40°	1971.9	19.0
40°-50°	1903.5	18.3
50°-60°	1570.3	15.1
60°-70°	1045.7	10.1
70°-80°	467.9	4.5
80°-90°	83.7	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°	3349.0	32.2
0°-40°	5320.9	51.2
0°-60°	8794.7	84.6
0°-90°	10392.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10392.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4494	4494	4494	4494	4494	
5°	4489	4487	4470	4446	4432	425
15°	4230	4240	4230	4211	4182	1192
25°	3757	3786	3804	3776	3743	1721
35°	3022	3063	3203	3220	3208	1893
45°	2340	2379	2457	2569	2583	1805
55°	1638	1666	1747	1844	1898	1462
65°	960	986	1045	1119	1183	952
75°	385	406	435	456	482	421
85°	60	60	60	57	57	81
90°	0	0	0	0	0	



TEST NUMBER: P557706

CATALOG NUMBER: FUSL-12-4-LD4-3HI-30-UNV-81-94-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4494.3	4494.3	4494.3	4494.3	4494.3
2.5°	4506.4	4508.1	4497.7	4470.1	4452.8
5°	4489.1	4487.4	4470.1	4445.9	4432.1
7.5°	4439.0	4442.5	4437.3	4402.8	4383.8
10°	4390.7	4392.4	4378.6	4351.0	4328.5
12.5°	4328.5	4326.8	4307.8	4294.0	4257.7
15°	4230.1	4240.5	4230.1	4211.1	4181.8
17.5°	4135.1	4135.1	4142.1	4109.2	4086.8
20°	4028.1	4033.3	4033.3	4007.4	3981.5
22.5°	3903.8	3919.3	3924.5	3896.9	3865.8
25°	3757.0	3786.4	3803.6	3776.0	3743.2
27.5°	3579.2	3624.1	3675.9	3655.2	3618.9
30°	3380.6	3446.2	3532.6	3515.3	3489.4
32.5°	3192.4	3258.0	3377.2	3370.3	3356.5
35°	3021.5	3062.9	3202.8	3220.1	3208.0
37.5°	2859.2	2897.2	3028.4	3068.1	3057.8
40°	2688.3	2729.7	2833.3	2904.1	2907.6
42.5°	2519.1	2558.8	2643.4	2745.3	2745.3
45°	2339.5	2379.2	2456.9	2569.1	2583.0
47.5°	2163.4	2204.8	2280.8	2393.0	2415.5
50°	1990.7	2028.7	2104.7	2213.5	2248.0
52.5°	1811.2	1852.6	1926.9	2027.0	2077.1
55°	1638.5	1666.1	1747.3	1844.0	1897.5
57.5°	1459.0	1484.9	1576.4	1659.2	1714.5
60°	1286.3	1319.1	1389.9	1474.5	1538.4
62.5°	1120.5	1155.1	1215.5	1289.8	1362.3
65°	960.0	985.9	1044.6	1118.8	1182.7
67.5°	804.6	827.0	885.7	937.5	1004.9
70°	647.5	676.8	720.0	770.1	813.2
72.5°	521.4	533.5	569.8	606.0	650.9
75°	385.0	405.7	435.1	455.8	481.7
77.5°	276.3	288.3	305.6	322.9	347.0
80°	184.7	189.9	205.5	208.9	227.9
82.5°	112.2	115.7	119.1	120.9	127.8
85°	60.4	60.4	60.4	57.0	57.0
87.5°	34.5	34.5	29.4	24.2	17.3
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)