

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: P558223

Luminaire Tested: **FUSL-12-4-LD4-3STD-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: P558223  
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-LD4-3STD-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**

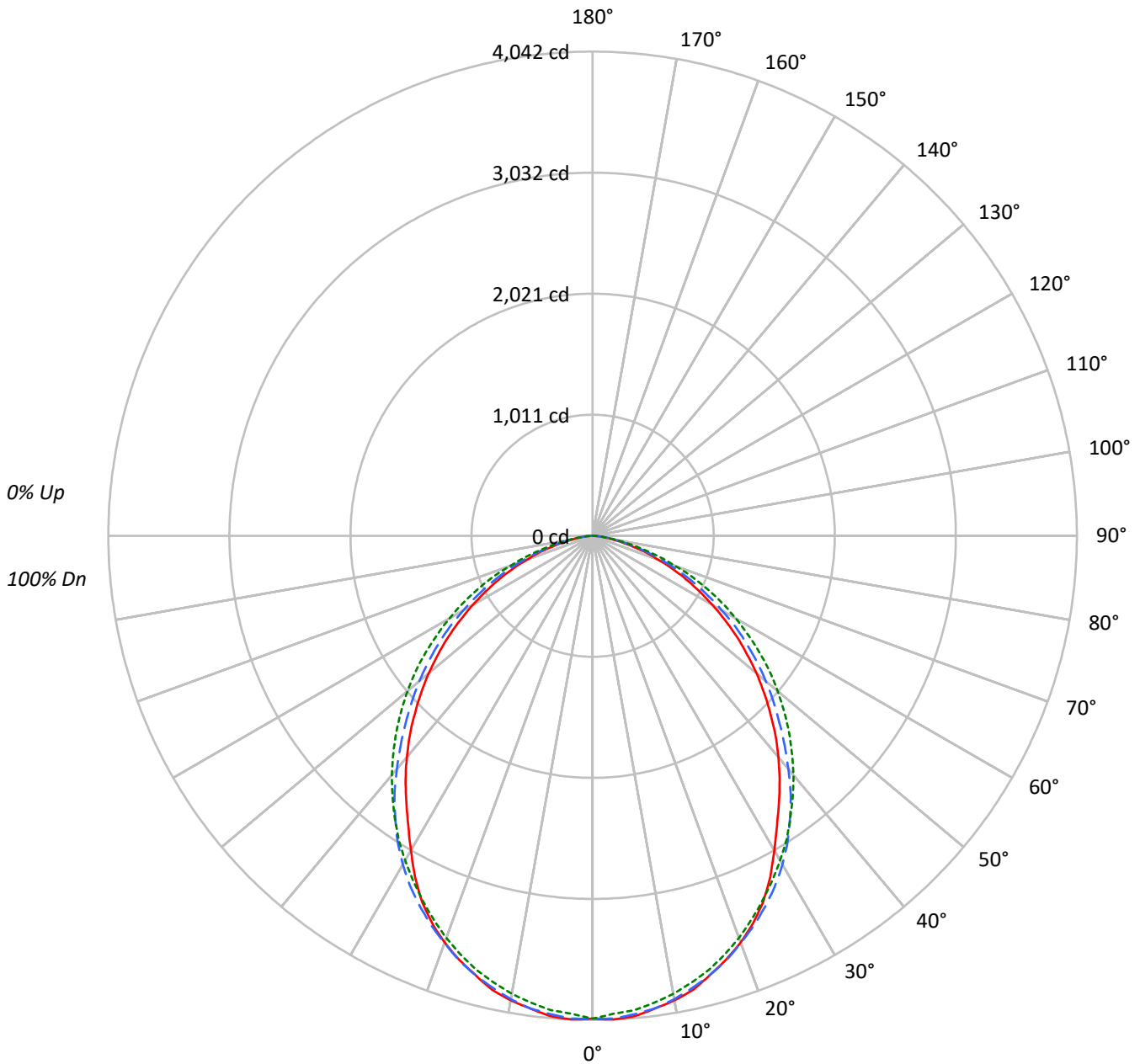
Lumens per Lamp: N/A  
Luminaire Lumens: 9321.0 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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: P558223

CATALOG NUMBER: FUSL-12-4-LD4-3STD-30-UNV-81-97-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558223

CATALOG NUMBER: FUSL-12-4-LD4-3STD-30-UNV-81-97-EDD

**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°	10848	10848	10848
5°	10876	10830	10738
10°	10761	10731	10609
15°	10570	10570	10449
20°	10346	10360	10226
25°	10005	10130	9969
30°	9422	9845	9725
35°	8903	9437	9452
40°	8470	8927	9161
45°	7986	8386	8817
50°	7475	7903	8441
55°	6895	7353	7985
60°	6209	6709	7426
65°	5482	5966	6755
70°	4569	5081	5739
75°	3590	4058	4493
80°	2568	2856	3168
85°	1673	1673	1578



TEST NUMBER: P558223

CATALOG NUMBER: FUSL-12-4-LD4-3STD-30-UNV-81-97-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	379.5	4.1
10°-20°	1066.2	11.4
20°-30°	1558.1	16.7
30°-40°	1768.6	19.0
40°-50°	1707.3	18.3
50°-60°	1408.4	15.1
60°-70°	937.9	10.1
70°-80°	419.7	4.5
80°-90°	75.1	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°	3003.9	32.2
0°-40°	4772.5	51.2
0°-60°	7888.3	84.6
0°-90°	9321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9321.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4031	4031	4031	4031	4031	
5°	4026	4025	4009	3988	3975	381
15°	3794	3803	3794	3777	3751	1070
25°	3370	3396	3412	3387	3357	1543
35°	2710	2747	2873	2888	2877	1698
45°	2098	2134	2204	2304	2317	1619
55°	1470	1494	1567	1654	1702	1312
65°	861	884	937	1004	1061	854
75°	345	364	390	409	432	378
85°	54	54	54	51	51	73
90°	0	0	0	0	0	



TEST NUMBER: P558223

CATALOG NUMBER: FUSL-12-4-LD4-3STD-30-UNV-81-97-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4031.1	4031.1	4031.1	4031.1	4031.1
2.5°	4041.9	4043.5	4034.2	4009.4	3993.9
5°	4026.4	4024.9	4009.4	3987.7	3975.3
7.5°	3981.5	3984.6	3980.0	3949.0	3932.0
10°	3938.2	3939.7	3927.3	3902.6	3882.4
12.5°	3882.4	3880.9	3863.8	3851.5	3818.9
15°	3794.2	3803.4	3794.2	3777.1	3750.8
17.5°	3709.0	3709.0	3715.2	3685.7	3665.6
20°	3613.0	3617.6	3617.6	3594.4	3571.1
22.5°	3501.5	3515.4	3520.0	3495.3	3467.4
25°	3369.8	3396.2	3411.6	3386.9	3357.4
27.5°	3210.3	3250.6	3297.0	3278.5	3245.9
30°	3032.2	3091.1	3168.5	3153.0	3129.8
32.5°	2863.4	2922.3	3029.1	3022.9	3010.5
35°	2710.1	2747.3	2872.7	2888.2	2877.4
37.5°	2564.5	2598.6	2716.3	2751.9	2742.6
40°	2411.2	2448.4	2541.3	2604.8	2607.9
42.5°	2259.5	2295.1	2371.0	2462.3	2462.3
45°	2098.4	2134.0	2203.7	2304.4	2316.8
47.5°	1940.4	1977.6	2045.7	2146.4	2166.5
50°	1785.6	1819.6	1887.8	1985.3	2016.3
52.5°	1624.5	1661.7	1728.3	1818.1	1863.0
55°	1469.7	1494.4	1567.2	1653.9	1701.9
57.5°	1308.6	1331.8	1413.9	1488.2	1537.8
60°	1153.7	1183.2	1246.6	1322.5	1379.8
62.5°	1005.1	1036.0	1090.2	1156.8	1221.9
65°	861.0	884.3	936.9	1003.5	1060.8
67.5°	721.7	741.8	794.4	840.9	901.3
70°	580.7	607.1	645.8	690.7	729.4
72.5°	467.7	478.5	511.0	543.6	583.8
75°	345.3	363.9	390.3	408.8	432.1
77.5°	247.8	258.6	274.1	289.6	311.3
80°	165.7	170.3	184.3	187.4	204.4
82.5°	100.7	103.8	106.9	108.4	114.6
85°	54.2	54.2	54.2	51.1	51.1
87.5°	31.0	31.0	26.3	21.7	15.5
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)