

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: P558441

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-88-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: P558441  
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-50-UNV-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

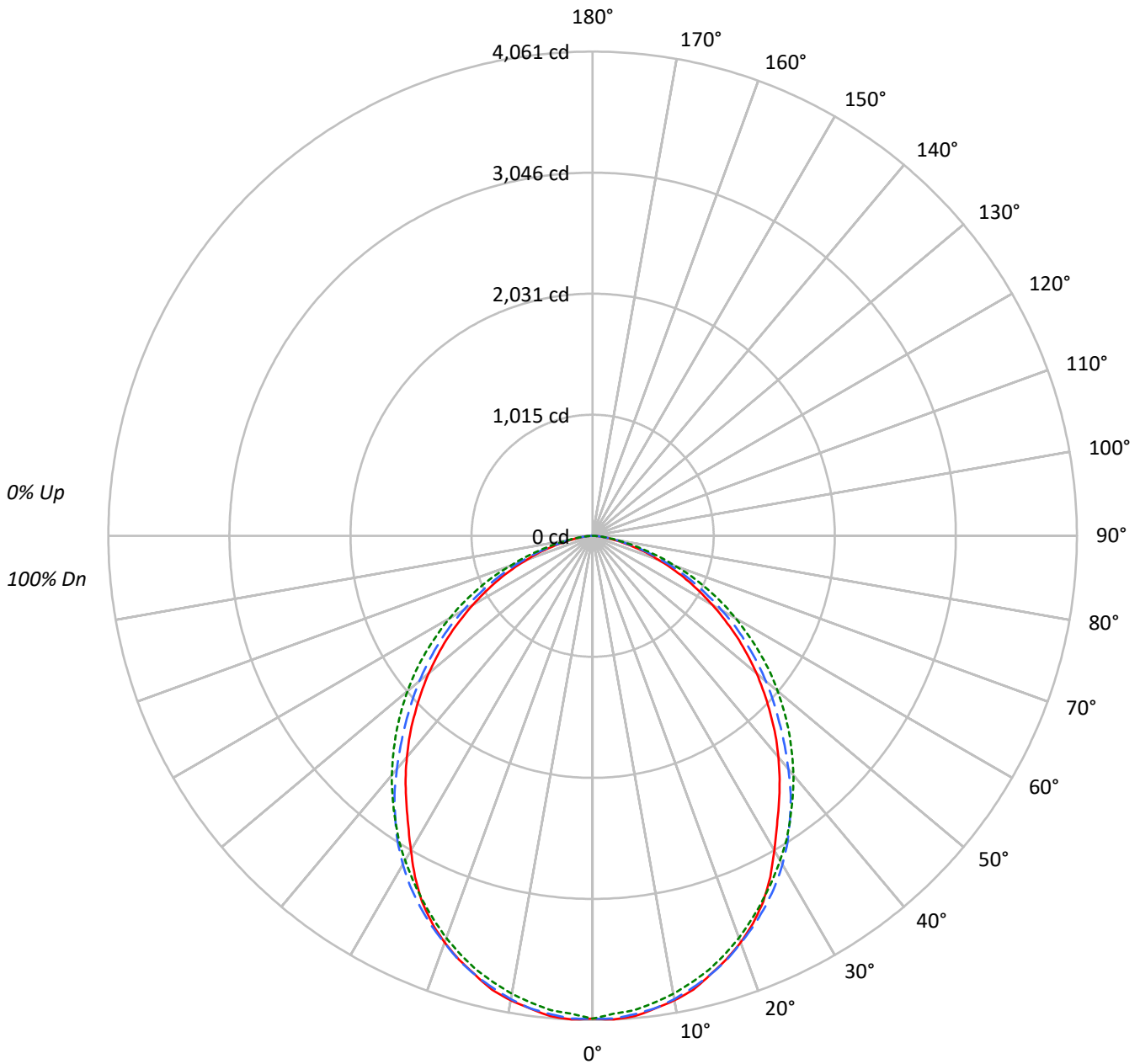
Lumens per Lamp: N/A  
Luminaire Lumens: 9365.0 lumens  
Efficiency: N/A  
Efficacy: 93.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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### Luminous Intensity Polar Plot





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

RF	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								
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°	10899	10899	10899
5°	10928	10881	10789
10°	10812	10782	10659
15°	10620	10620	10499
20°	10395	10409	10275
25°	10053	10177	10016
30°	9466	9892	9771
35°	8945	9482	9497
40°	8510	8969	9204
45°	8023	8426	8858
50°	7510	7940	8481
55°	6928	7387	8023
60°	6239	6741	7461
65°	5508	5994	6786
70°	4591	5105	5766
75°	3608	4077	4513
80°	2580	2870	3183
85°	1683	1683	1584



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	381.3	4.1
10°-20°	1071.3	11.4
20°-30°	1565.5	16.7
30°-40°	1777.0	19.0
40°-50°	1715.4	18.3
50°-60°	1415.1	15.1
60°-70°	942.3	10.1
70°-80°	421.7	4.5
80°-90°	75.4	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°	3018.1	32.2
0°-40°	4795.1	51.2
0°-60°	7925.5	84.6
0°-90°	9365.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9365.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4050	4050	4050	4050	4050	
5°	4046	4044	4028	4007	3994	383
15°	3812	3821	3812	3795	3768	1075
25°	3386	3412	3428	3403	3373	1550
35°	2723	2760	2886	2902	2891	1706
45°	2108	2144	2214	2315	2328	1627
55°	1477	1502	1575	1662	1710	1318
65°	865	888	941	1008	1066	858
75°	347	366	392	411	434	379
85°	54	54	54	51	51	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4050.1	4050.1	4050.1	4050.1	4050.1
2.5°	4061.0	4062.6	4053.2	4028.3	4012.8
5°	4045.5	4043.9	4028.3	4006.6	3994.1
7.5°	4000.3	4003.4	3998.8	3967.7	3950.5
10°	3956.8	3958.3	3945.9	3921.0	3900.8
12.5°	3900.8	3899.2	3882.1	3869.6	3837.0
15°	3812.1	3821.4	3812.1	3794.9	3768.5
17.5°	3726.5	3726.5	3732.7	3703.1	3682.9
20°	3630.0	3634.7	3634.7	3611.3	3588.0
22.5°	3518.0	3532.0	3536.7	3511.8	3483.8
25°	3385.7	3412.2	3427.7	3402.8	3373.3
27.5°	3225.5	3265.9	3312.6	3293.9	3261.3
30°	3046.5	3105.7	3183.5	3167.9	3144.6
32.5°	2876.9	2936.1	3043.4	3037.2	3024.8
35°	2722.9	2760.2	2886.3	2901.8	2890.9
37.5°	2576.6	2610.9	2729.1	2764.9	2755.6
40°	2422.6	2459.9	2553.3	2617.1	2620.2
42.5°	2270.1	2305.9	2382.1	2473.9	2473.9
45°	2108.3	2144.1	2214.1	2315.2	2327.7
47.5°	1949.6	1986.9	2055.4	2156.5	2176.8
50°	1794.0	1828.2	1896.7	1994.7	2025.8
52.5°	1632.2	1669.5	1736.4	1826.7	1871.8
55°	1476.6	1501.5	1574.6	1661.7	1710.0
57.5°	1314.8	1338.1	1420.6	1495.3	1545.1
60°	1159.2	1188.7	1252.5	1328.8	1386.3
62.5°	1009.8	1040.9	1095.4	1162.3	1227.6
65°	865.1	888.4	941.3	1008.3	1065.8
67.5°	725.1	745.3	798.2	844.9	905.6
70°	583.5	609.9	648.8	694.0	732.8
72.5°	469.9	480.8	513.5	546.1	586.6
75°	347.0	365.6	392.1	410.8	434.1
77.5°	249.0	259.8	275.4	291.0	312.7
80°	166.5	171.2	185.2	188.3	205.4
82.5°	101.1	104.2	107.4	108.9	115.1
85°	54.5	54.5	54.5	51.3	51.3
87.5°	31.1	31.1	26.5	21.8	15.6
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)