

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: P558317

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-96-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: P558317  
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-35-UNV-93-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

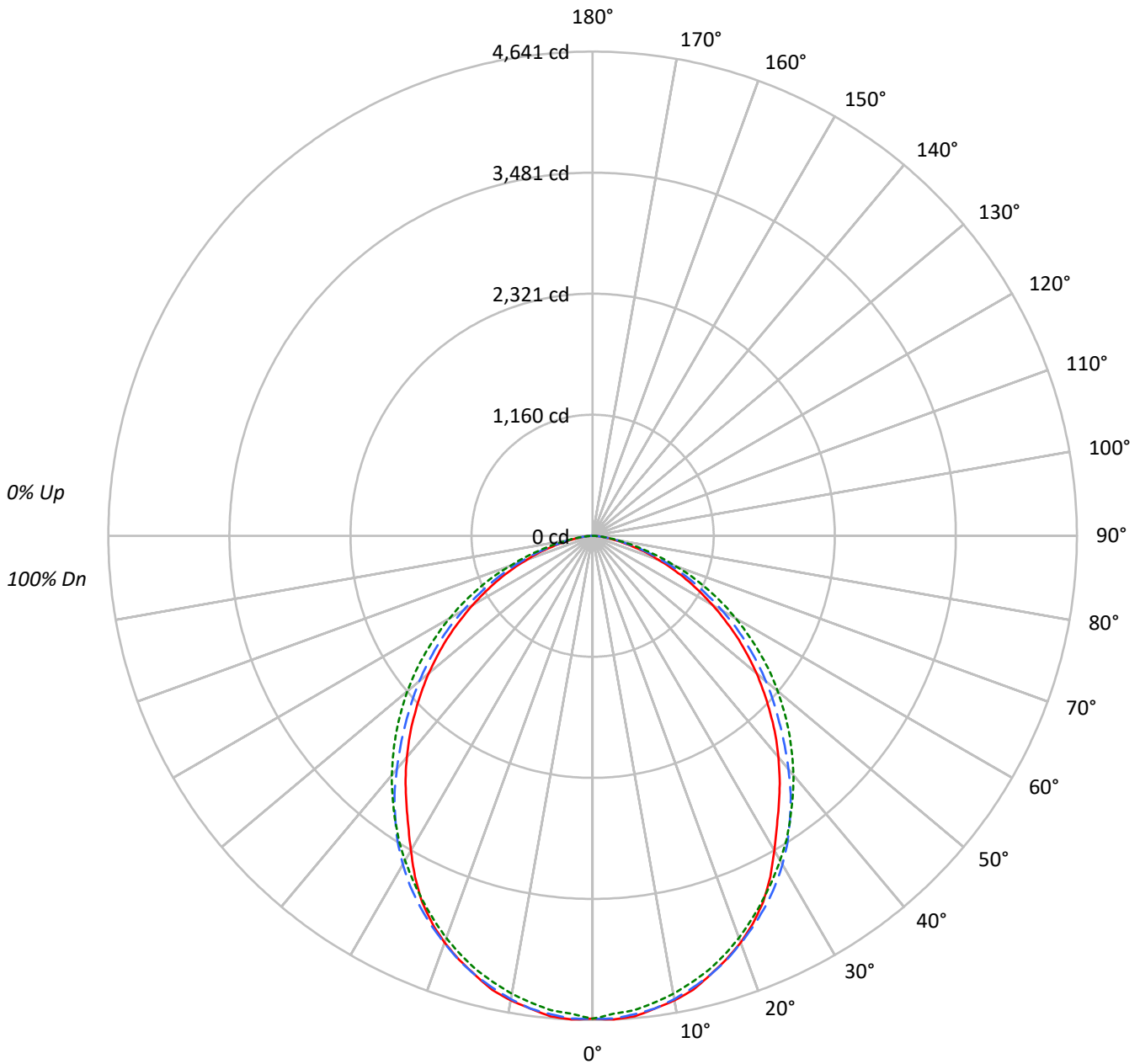
Lumens per Lamp: N/A  
Luminaire Lumens: 10703.0 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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									
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°	12456	12456	12456
5°	12489	12436	12331
10°	12357	12322	12182
15°	12137	12137	11999
20°	11880	11896	11743
25°	11489	11632	11447
30°	10819	11305	11167
35°	10223	10836	10854
40°	9726	10251	10520
45°	9170	9630	10124
50°	8583	9075	9693
55°	7918	8443	9169
60°	7130	7704	8527
65°	6295	6850	7756
70°	5246	5834	6590
75°	4122	4659	5158
80°	2949	3279	3637
85°	1920	1920	1812



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	435.8	4.1
10°-20°	1224.3	11.4
20°-30°	1789.1	16.7
30°-40°	2030.9	19.0
40°-50°	1960.5	18.3
50°-60°	1617.3	15.1
60°-70°	1077.0	10.1
70°-80°	481.9	4.5
80°-90°	86.2	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°	3449.3	32.2
0°-40°	5480.1	51.2
0°-60°	9057.9	84.6
0°-90°	10703.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10703.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4629	4629	4629	4629	4629	
5°	4623	4622	4604	4579	4565	438
15°	4357	4367	4357	4337	4307	1228
25°	3870	3900	3918	3889	3855	1772
35°	3112	3155	3299	3316	3304	1950
45°	2410	2450	2530	2646	2660	1859
55°	1688	1716	1800	1899	1954	1506
65°	989	1015	1076	1152	1218	980
75°	396	418	448	470	496	434
85°	62	62	62	59	59	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4628.8	4628.8	4628.8	4628.8	4628.8
2.5°	4641.2	4643.0	4632.3	4603.9	4586.1
5°	4623.4	4621.7	4603.9	4579.0	4564.8
7.5°	4571.9	4575.4	4570.1	4534.5	4515.0
10°	4522.1	4523.9	4509.6	4481.2	4458.1
12.5°	4458.1	4456.3	4436.7	4422.5	4385.2
15°	4356.7	4367.4	4356.7	4337.1	4306.9
17.5°	4258.9	4258.9	4266.0	4232.2	4209.1
20°	4148.6	4154.0	4154.0	4127.3	4100.6
22.5°	4020.6	4036.6	4042.0	4013.5	3981.5
25°	3869.5	3899.7	3917.5	3889.0	3855.2
27.5°	3686.3	3732.5	3785.9	3764.5	3727.2
30°	3481.8	3549.4	3638.3	3620.5	3593.8
32.5°	3288.0	3355.5	3478.2	3471.1	3456.9
35°	3111.9	3154.6	3298.6	3316.4	3304.0
37.5°	2944.8	2983.9	3119.0	3159.9	3149.3
40°	2768.7	2811.4	2918.1	2991.0	2994.6
42.5°	2594.5	2635.4	2722.5	2827.4	2827.4
45°	2409.5	2450.4	2530.4	2646.0	2660.3
47.5°	2228.1	2270.8	2349.1	2464.6	2487.8
50°	2050.3	2089.4	2167.7	2279.7	2315.3
52.5°	1865.4	1908.1	1984.5	2087.7	2139.2
55°	1687.6	1716.0	1799.6	1899.2	1954.3
57.5°	1502.6	1529.3	1623.5	1708.9	1765.8
60°	1324.8	1358.6	1431.5	1518.6	1584.4
62.5°	1154.1	1189.6	1251.9	1328.3	1403.0
65°	988.7	1015.4	1075.8	1152.3	1218.1
67.5°	828.7	851.8	912.2	965.6	1034.9
70°	666.8	697.1	741.5	793.1	837.6
72.5°	537.0	549.5	586.8	624.2	670.4
75°	396.5	417.9	448.1	469.5	496.1
77.5°	284.5	297.0	314.7	332.5	357.4
80°	190.3	195.6	211.6	215.2	234.7
82.5°	115.6	119.1	122.7	124.5	131.6
85°	62.2	62.2	62.2	58.7	58.7
87.5°	35.6	35.6	30.2	24.9	17.8
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)