

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: P558285

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-81-96-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: P558285  
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-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC 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**

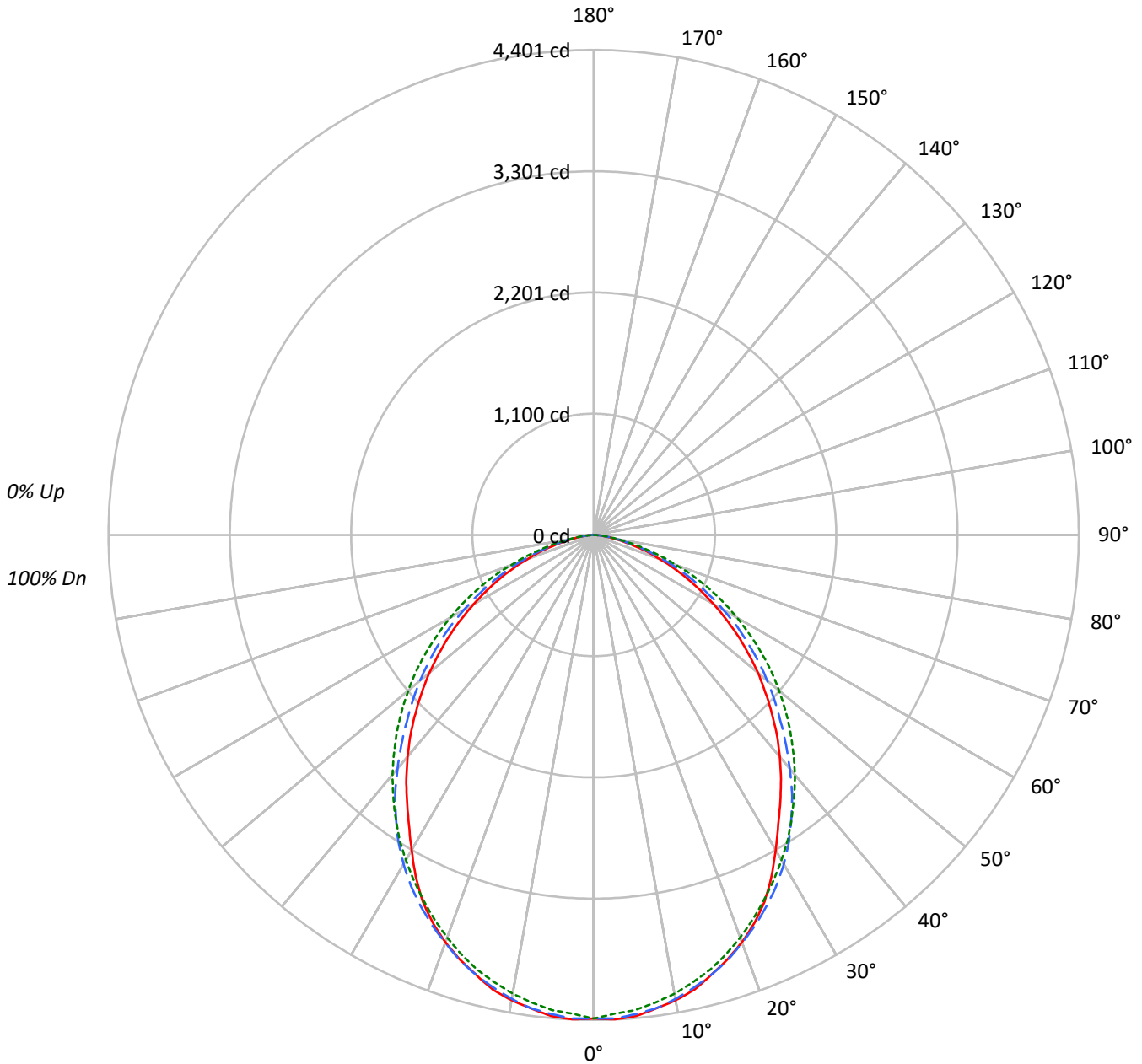
Lumens per Lamp: N/A  
Luminaire Lumens: 10148.0 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	11810	11810	11810
5°	11842	11791	11691
10°	11716	11684	11550
15°	11508	11508	11377
20°	11264	11279	11134
25°	10893	11028	10853
30°	10258	10719	10588
35°	9693	10274	10291
40°	9222	9719	9974
45°	8694	9130	9599
50°	8138	8604	9190
55°	7507	8005	8693
60°	6760	7305	8085
65°	5969	6495	7354
70°	4975	5532	6248
75°	3909	4418	4891
80°	2796	3109	3450
85°	1822	1822	1717



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	413.2	4.1
10°-20°	1160.8	11.4
20°-30°	1696.4	16.7
30°-40°	1925.6	19.0
40°-50°	1858.8	18.3
50°-60°	1533.4	15.1
60°-70°	1021.1	10.1
70°-80°	456.9	4.5
80°-90°	81.7	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°	3270.4	32.2
0°-40°	5196.0	51.2
0°-60°	8588.2	84.6
0°-90°	10148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10148.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4389	4389	4389	4389	4389	
5°	4384	4382	4365	4342	4328	415
15°	4131	4141	4131	4112	4084	1165
25°	3669	3698	3714	3687	3655	1680
35°	2951	2991	3128	3144	3133	1849
45°	2285	2323	2399	2509	2522	1763
55°	1600	1627	1706	1801	1853	1428
65°	937	963	1020	1093	1155	930
75°	376	396	425	445	470	411
85°	59	59	59	56	56	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4388.7	4388.7	4388.7	4388.7	4388.7
2.5°	4400.6	4402.2	4392.1	4365.1	4348.3
5°	4383.7	4382.0	4365.1	4341.5	4328.1
7.5°	4334.8	4338.2	4333.1	4299.4	4280.8
10°	4287.6	4289.3	4275.8	4248.8	4226.9
12.5°	4226.9	4225.2	4206.7	4193.2	4157.8
15°	4130.8	4140.9	4130.8	4112.2	4083.6
17.5°	4038.1	4038.1	4044.8	4012.8	3990.8
20°	3933.5	3938.6	3938.6	3913.3	3888.0
22.5°	3812.1	3827.3	3832.4	3805.4	3775.0
25°	3668.8	3697.5	3714.3	3687.4	3655.3
27.5°	3495.1	3539.0	3589.6	3569.3	3533.9
30°	3301.3	3365.3	3449.6	3432.8	3407.5
32.5°	3117.5	3181.5	3297.9	3291.1	3277.7
35°	2950.6	2991.0	3127.6	3144.5	3132.7
37.5°	2792.1	2829.2	2957.3	2996.1	2986.0
40°	2625.2	2665.6	2766.8	2835.9	2839.3
42.5°	2459.9	2498.7	2581.3	2680.8	2680.8
45°	2284.6	2323.4	2399.2	2508.8	2522.3
47.5°	2112.6	2153.1	2227.3	2336.8	2358.8
50°	1944.0	1981.1	2055.3	2161.5	2195.2
52.5°	1768.7	1809.1	1881.6	1979.4	2028.3
55°	1600.0	1627.0	1706.3	1800.7	1853.0
57.5°	1424.7	1450.0	1539.3	1620.3	1674.2
60°	1256.1	1288.1	1357.3	1439.9	1502.3
62.5°	1094.2	1128.0	1187.0	1259.5	1330.3
65°	937.4	962.7	1020.1	1092.6	1154.9
67.5°	785.7	807.6	864.9	915.5	981.3
70°	632.3	660.9	703.1	752.0	794.1
72.5°	509.2	521.0	556.4	591.8	635.6
75°	376.0	396.2	424.9	445.1	470.4
77.5°	269.8	281.6	298.4	315.3	338.9
80°	180.4	185.5	200.6	204.0	222.6
82.5°	109.6	113.0	116.3	118.0	124.8
85°	59.0	59.0	59.0	55.6	55.6
87.5°	33.7	33.7	28.7	23.6	16.9
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)