

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: P558308

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-86-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: P558308  
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-93-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

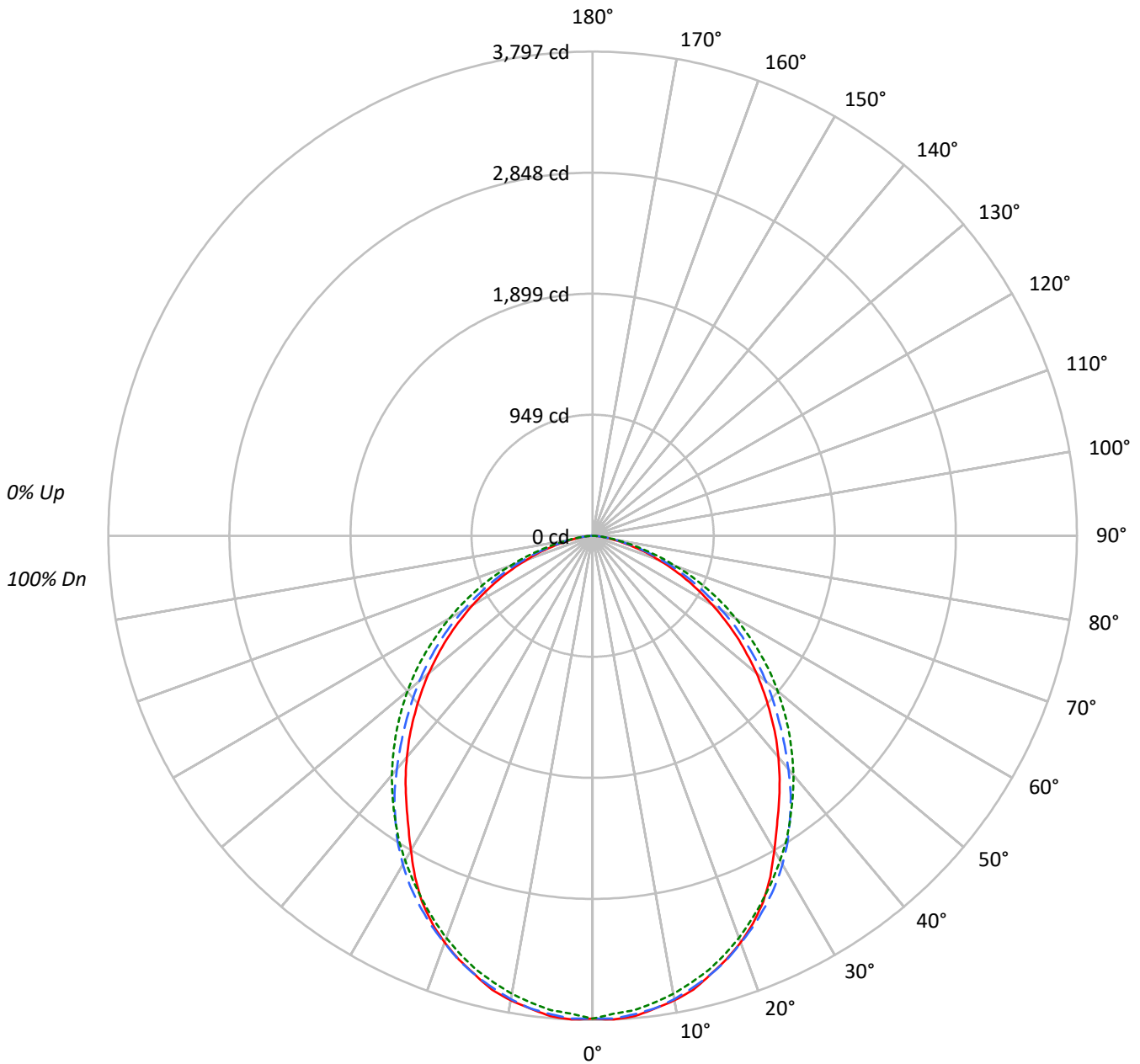
Lumens per Lamp: N/A  
Luminaire Lumens: 8756.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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					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	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°	10190	10190	10190
5°	10217	10174	10088
10°	10109	10081	9966
15°	9930	9930	9816
20°	9719	9732	9607
25°	9399	9516	9364
30°	8851	9248	9136
35°	8363	8865	8879
40°	7957	8386	8606
45°	7502	7878	8282
50°	7022	7424	7929
55°	6477	6907	7501
60°	5833	6303	6976
65°	5150	5604	6345
70°	4292	4773	5391
75°	3373	3812	4220
80°	2413	2682	2975
85°	1572	1572	1482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	356.5	4.1
10°-20°	1001.6	11.4
20°-30°	1463.7	16.7
30°-40°	1661.4	19.0
40°-50°	1603.8	18.3
50°-60°	1323.1	15.1
60°-70°	881.0	10.1
70°-80°	394.3	4.5
80°-90°	70.5	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°	2821.8	32.2
0°-40°	4483.2	51.2
0°-60°	7410.1	84.6
0°-90°	8756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8756.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3787	3787	3787	3787	3787	
5°	3782	3781	3766	3746	3734	358
15°	3564	3573	3564	3548	3523	1005
25°	3166	3190	3205	3182	3154	1450
35°	2546	2581	2699	2713	2703	1595
45°	1971	2005	2070	2165	2176	1521
55°	1381	1404	1472	1554	1599	1232
65°	809	831	880	943	996	802
75°	324	342	367	384	406	355
85°	51	51	51	48	48	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3786.7	3786.7	3786.7	3786.7	3786.7
2.5°	3796.9	3798.4	3789.7	3766.4	3751.8
5°	3782.4	3780.9	3766.4	3746.0	3734.4
7.5°	3740.2	3743.1	3738.7	3709.6	3693.6
10°	3699.5	3700.9	3689.3	3666.0	3647.1
12.5°	3647.1	3645.6	3629.6	3618.0	3587.4
15°	3564.2	3572.9	3564.2	3548.2	3523.4
17.5°	3484.2	3484.2	3490.0	3462.3	3443.4
20°	3394.0	3398.3	3398.3	3376.5	3354.7
22.5°	3289.2	3302.3	3306.7	3283.4	3257.2
25°	3165.6	3190.3	3204.8	3181.6	3153.9
27.5°	3015.7	3053.5	3097.2	3079.7	3049.2
30°	2848.4	2903.7	2976.4	2961.9	2940.1
32.5°	2689.9	2745.1	2845.5	2839.7	2828.1
35°	2545.8	2580.7	2698.6	2713.1	2702.9
37.5°	2409.1	2441.1	2551.7	2585.1	2576.4
40°	2265.1	2300.0	2387.3	2446.9	2449.8
42.5°	2122.5	2156.0	2227.2	2313.1	2313.1
45°	1971.2	2004.7	2070.1	2164.7	2176.3
47.5°	1822.8	1857.7	1921.7	2016.3	2035.2
50°	1677.3	1709.3	1773.4	1865.0	1894.1
52.5°	1526.0	1561.0	1623.5	1707.9	1750.1
55°	1380.6	1403.8	1472.2	1553.7	1598.8
57.5°	1229.3	1251.1	1328.2	1398.0	1444.6
60°	1083.8	1111.4	1171.1	1242.4	1296.2
62.5°	944.1	973.2	1024.2	1086.7	1147.8
65°	808.8	830.7	880.1	942.7	996.5
67.5°	677.9	696.8	746.3	789.9	846.7
70°	545.5	570.3	606.6	648.8	685.2
72.5°	439.3	449.5	480.1	510.6	548.4
75°	324.4	341.9	366.6	384.1	405.9
77.5°	232.8	242.9	257.5	272.0	292.4
80°	155.7	160.0	173.1	176.0	192.0
82.5°	94.6	97.5	100.4	101.8	107.7
85°	50.9	50.9	50.9	48.0	48.0
87.5°	29.1	29.1	24.7	20.4	14.5
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)