

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: P557867

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-93-94-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: P557867  
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-LD4-3HI-40-UNV-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

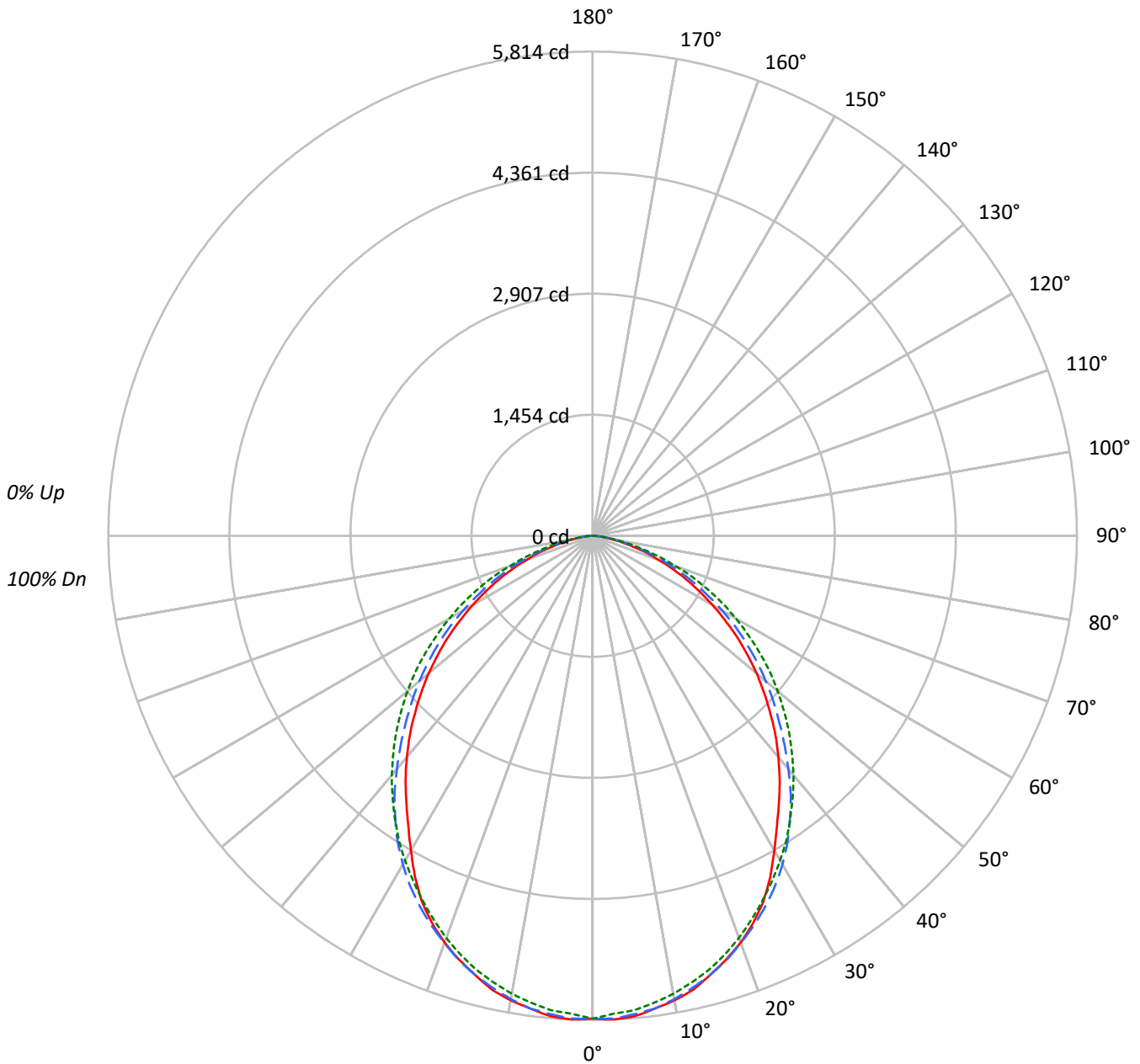
Lumens per Lamp: N/A  
Luminaire Lumens: 13408.0 lumens  
Efficiency: N/A  
Efficacy: 103.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	15604	15604	15604
5°	15645	15579	15447
10°	15480	15437	15260
15°	15205	15205	15031
20°	14883	14902	14711
25°	14393	14571	14340
30°	13553	14162	13989
35°	12807	13575	13597
40°	12184	12841	13178
45°	11487	12064	12683
50°	10753	11368	12142
55°	9918	10577	11486
60°	8932	9651	10683
65°	7887	8581	9717
70°	6573	7308	8255
75°	5165	5837	6462
80°	3694	4108	4558
85°	2408	2408	2269



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	546.0	4.1
10°-20°	1533.7	11.4
20°-30°	2241.3	16.7
30°-40°	2544.1	19.0
40°-50°	2456.0	18.3
50°-60°	2026.0	15.1
60°-70°	1349.2	10.1
70°-80°	603.7	4.5
80°-90°	108.0	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°	4321.0	32.2
0°-40°	6865.1	51.2
0°-60°	11347.1	84.6
0°-90°	13408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13408.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5799	5799	5799	5799	5799	
5°	5792	5790	5767	5736	5718	548
15°	5458	5471	5458	5433	5395	1539
25°	4847	4885	4908	4872	4830	2220
35°	3898	3952	4132	4155	4139	2443
45°	3018	3070	3170	3315	3333	2329
55°	2114	2150	2254	2379	2448	1887
65°	1239	1272	1348	1444	1526	1228
75°	497	524	561	588	622	543
85°	78	78	78	74	74	105
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5798.6	5798.6	5798.6	5798.6	5798.6
2.5°	5814.2	5816.4	5803.1	5767.4	5745.1
5°	5791.9	5789.7	5767.4	5736.2	5718.4
7.5°	5727.3	5731.8	5725.1	5680.5	5656.0
10°	5665.0	5667.2	5649.4	5613.7	5584.8
12.5°	5584.8	5582.5	5558.0	5540.2	5493.4
15°	5457.8	5471.1	5457.8	5433.3	5395.4
17.5°	5335.3	5335.3	5344.2	5301.8	5272.9
20°	5197.1	5203.8	5203.8	5170.4	5137.0
22.5°	5036.8	5056.8	5063.5	5027.8	4987.7
25°	4847.4	4885.3	4907.5	4871.9	4829.6
27.5°	4618.0	4675.9	4742.7	4716.0	4669.2
30°	4361.8	4446.4	4557.8	4535.5	4502.1
32.5°	4119.0	4203.6	4357.3	4348.4	4330.6
35°	3898.4	3951.9	4132.3	4154.6	4139.0
37.5°	3689.0	3738.0	3907.3	3958.6	3945.2
40°	3468.5	3521.9	3655.6	3746.9	3751.4
42.5°	3250.2	3301.4	3410.6	3542.0	3542.0
45°	3018.5	3069.7	3170.0	3314.8	3332.6
47.5°	2791.3	2844.7	2942.7	3087.5	3116.5
50°	2568.5	2617.5	2715.5	2855.9	2900.4
52.5°	2336.8	2390.3	2486.1	2615.3	2679.9
55°	2114.1	2149.7	2254.4	2379.1	2448.2
57.5°	1882.4	1915.8	2033.9	2140.8	2212.1
60°	1659.6	1701.9	1793.3	1902.4	1984.9
62.5°	1445.8	1490.3	1568.3	1664.1	1757.6
65°	1238.6	1272.0	1347.7	1443.5	1526.0
67.5°	1038.1	1067.1	1142.8	1209.6	1296.5
70°	835.4	873.2	928.9	993.5	1049.2
72.5°	672.8	688.3	735.1	781.9	839.8
75°	496.8	523.5	561.4	588.1	621.5
77.5°	356.4	372.0	394.3	416.6	447.8
80°	238.4	245.0	265.1	269.5	294.1
82.5°	144.8	149.3	153.7	155.9	164.8
85°	78.0	78.0	78.0	73.5	73.5
87.5°	44.6	44.6	37.9	31.2	22.3
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)