

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: P557801

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-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: P557801  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

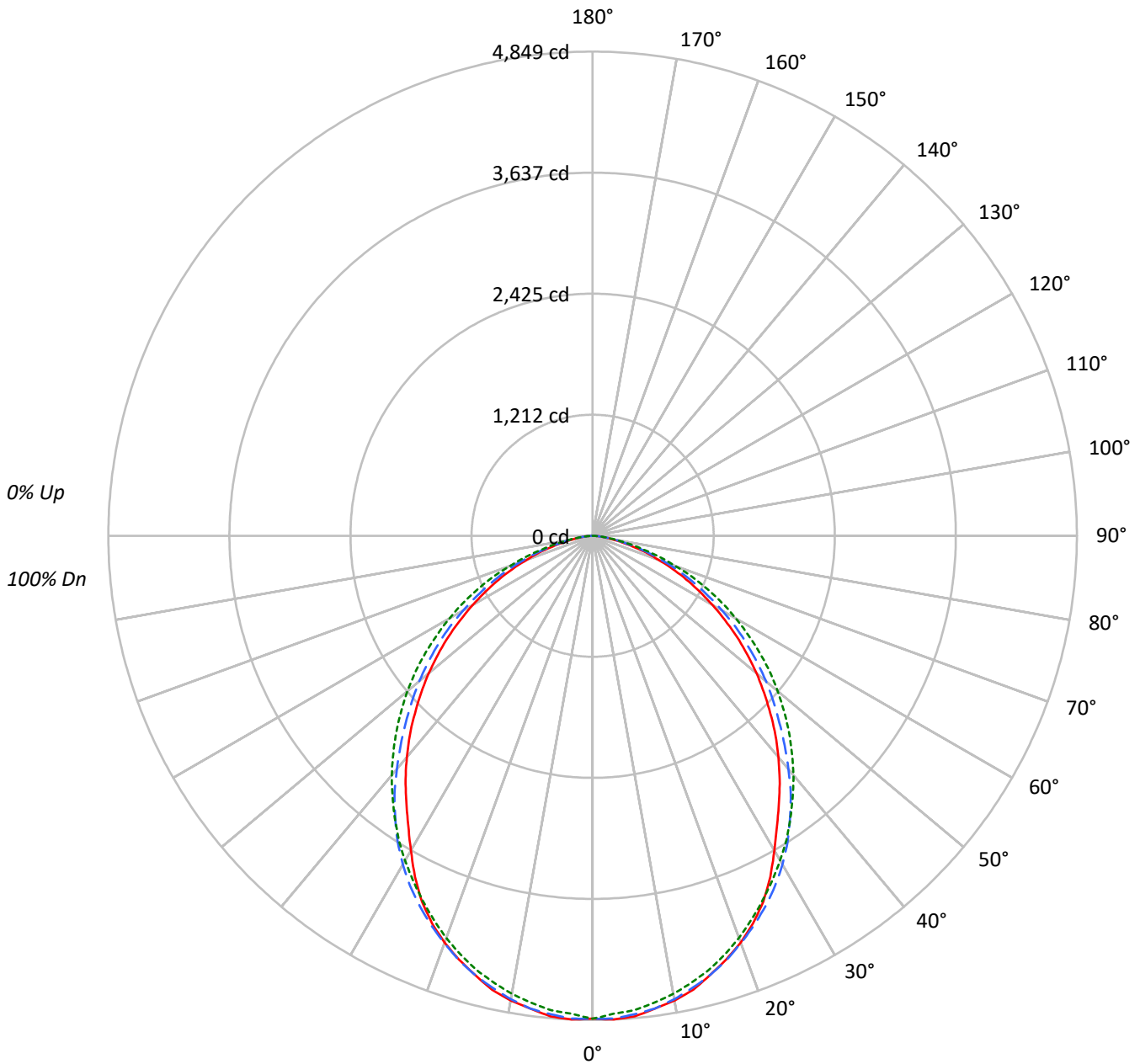
Lumens per Lamp: N/A  
Luminaire Lumens: 11183.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	13015	13015	13015
5°	13049	12994	12884
10°	12911	12875	12728
15°	12682	12682	12537
20°	12413	12429	12269
25°	12004	12153	11960
30°	11304	11812	11668
35°	10681	11322	11341
40°	10162	10711	10991
45°	9581	10062	10578
50°	8969	9482	10127
55°	8272	8822	9580
60°	7450	8050	8910
65°	6578	7158	8104
70°	5482	6096	6885
75°	4308	4868	5390
80°	3081	3426	3801
85°	2007	2007	1893



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	455.4	4.1
10°-20°	1279.2	11.4
20°-30°	1869.4	16.7
30°-40°	2121.9	19.0
40°-50°	2048.4	18.3
50°-60°	1689.8	15.1
60°-70°	1125.3	10.1
70°-80°	503.5	4.5
80°-90°	90.1	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°	3604.0	32.2
0°-40°	5725.9	51.2
0°-60°	9464.1	84.6
0°-90°	11183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11183.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4836	4836	4836	4836	4836	
5°	4831	4829	4810	4784	4770	457
15°	4552	4563	4552	4532	4500	1283
25°	4043	4075	4093	4063	4028	1851
35°	3252	3296	3447	3465	3452	2037
45°	2518	2560	2644	2765	2780	1942
55°	1763	1793	1880	1984	2042	1574
65°	1033	1061	1124	1204	1273	1024
75°	414	437	468	490	518	453
85°	65	65	65	61	61	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4836.4	4836.4	4836.4	4836.4	4836.4
2.5°	4849.4	4851.2	4840.1	4810.3	4791.8
5°	4830.8	4828.9	4810.3	4784.3	4769.5
7.5°	4776.9	4780.6	4775.0	4737.9	4717.4
10°	4724.9	4726.7	4711.9	4682.1	4658.0
12.5°	4658.0	4656.1	4635.7	4620.8	4581.8
15°	4552.1	4563.2	4552.1	4531.6	4500.1
17.5°	4449.9	4449.9	4457.3	4422.0	4397.9
20°	4334.7	4340.3	4340.3	4312.4	4284.5
22.5°	4200.9	4217.6	4223.2	4193.5	4160.0
25°	4043.0	4074.6	4093.2	4063.4	4028.1
27.5°	3851.6	3899.9	3955.7	3933.4	3894.4
30°	3638.0	3708.6	3801.5	3782.9	3755.0
32.5°	3435.4	3506.0	3634.2	3626.8	3611.9
35°	3251.5	3296.1	3446.6	3465.2	3452.2
37.5°	3076.8	3117.7	3258.9	3301.7	3290.5
40°	2892.9	2937.5	3049.0	3125.1	3128.9
42.5°	2710.8	2753.5	2844.6	2954.2	2954.2
45°	2517.6	2560.3	2643.9	2764.7	2779.6
47.5°	2328.1	2372.7	2454.4	2575.2	2599.3
50°	2142.3	2183.1	2264.9	2381.9	2419.1
52.5°	1949.0	1993.6	2073.5	2181.3	2235.2
55°	1763.2	1793.0	1880.3	1984.3	2041.9
57.5°	1570.0	1597.9	1696.3	1785.5	1845.0
60°	1384.2	1419.5	1495.7	1586.7	1655.5
62.5°	1205.8	1243.0	1308.0	1387.9	1466.0
65°	1033.0	1060.9	1124.1	1204.0	1272.7
67.5°	865.8	890.0	953.2	1008.9	1081.4
70°	696.7	728.3	774.8	828.7	875.1
72.5°	561.1	574.1	613.1	652.2	700.5
75°	414.3	436.6	468.2	490.5	518.4
77.5°	297.3	310.3	328.9	347.4	373.5
80°	198.8	204.4	221.1	224.8	245.3
82.5°	120.8	124.5	128.2	130.1	137.5
85°	65.0	65.0	65.0	61.3	61.3
87.5°	37.2	37.2	31.6	26.0	18.6
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)