

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: P557150

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-82-97-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: P557150  
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-LD4-2HI-50-UNV-82-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

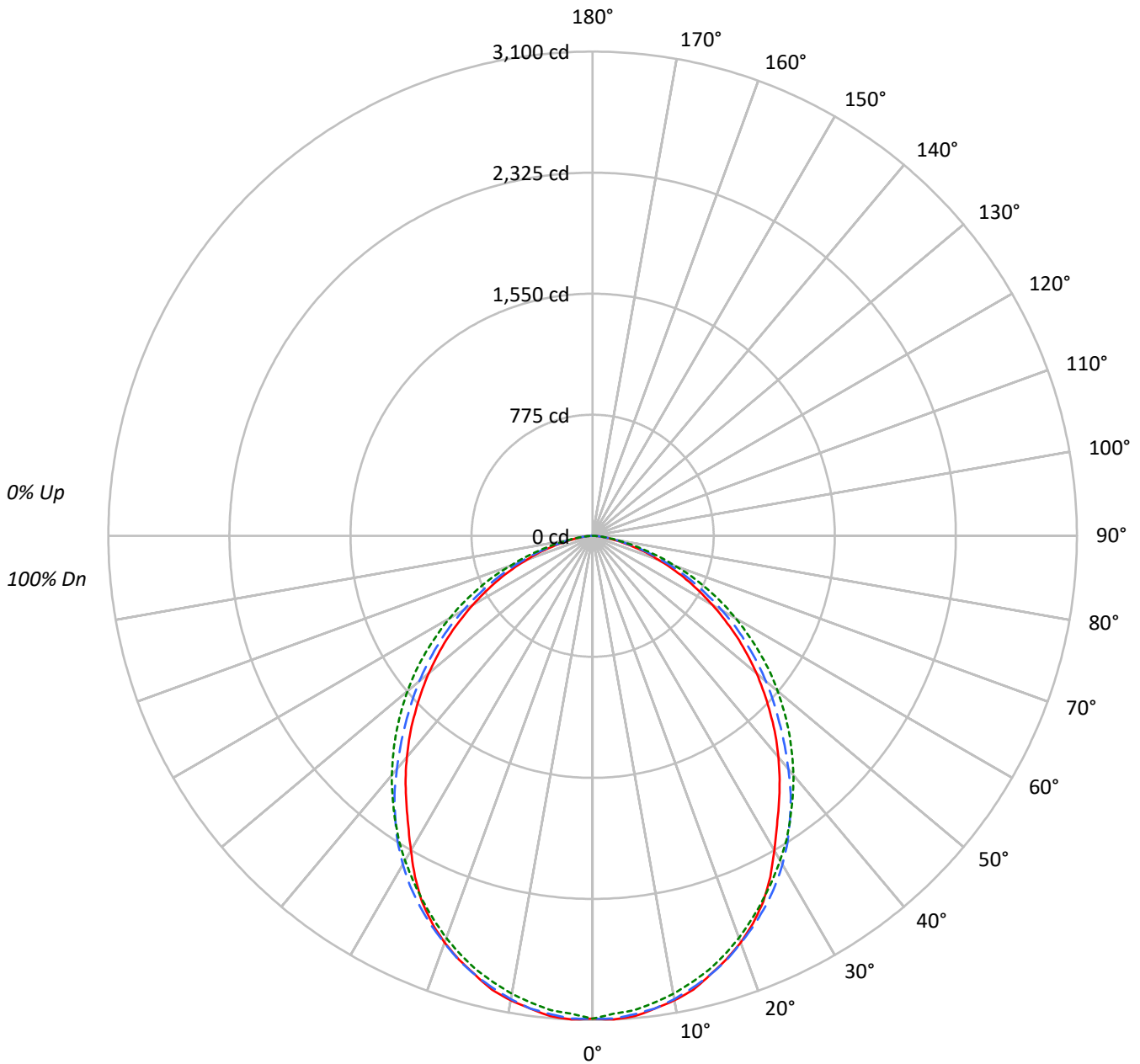
Lumens per Lamp: N/A  
Luminaire Lumens: 7149.0 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	8320	8320	8320
5°	8342	8307	8236
10°	8253	8231	8137
15°	8107	8107	8014
20°	7936	7946	7844
25°	7674	7769	7646
30°	7226	7551	7459
35°	6828	7238	7250
40°	6497	6847	7026
45°	6125	6432	6762
50°	5733	6062	6474
55°	5288	5639	6124
60°	4762	5146	5696
65°	4205	4576	5181
70°	3504	3897	4401
75°	2754	3112	3446
80°	1970	2190	2430
85°	1284	1284	1210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	291.1	4.1
10°-20°	817.8	11.4
20°-30°	1195.0	16.7
30°-40°	1356.5	19.0
40°-50°	1309.5	18.3
50°-60°	1080.2	15.1
60°-70°	719.4	10.1
70°-80°	321.9	4.5
80°-90°	57.6	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°	2303.9	32.2
0°-40°	3660.4	51.2
0°-60°	6050.2	84.6
0°-90°	7149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7149.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3092	3092	3092	3092	3092	
5°	3088	3087	3075	3058	3049	292
15°	2910	2917	2910	2897	2877	820
25°	2585	2605	2617	2598	2575	1184
35°	2079	2107	2203	2215	2207	1302
45°	1609	1637	1690	1767	1777	1242
55°	1127	1146	1202	1268	1305	1006
65°	660	678	719	770	814	655
75°	265	279	299	314	331	290
85°	42	42	42	39	39	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3091.8	3091.8	3091.8	3091.8	3091.8
2.5°	3100.1	3101.3	3094.1	3075.1	3063.3
5°	3088.2	3087.0	3075.1	3058.5	3049.0
7.5°	3053.7	3056.1	3052.6	3028.8	3015.7
10°	3020.5	3021.7	3012.2	2993.2	2977.7
12.5°	2977.7	2976.5	2963.5	2954.0	2929.0
15°	2910.0	2917.2	2910.0	2897.0	2876.8
17.5°	2844.7	2844.7	2849.5	2826.9	2811.4
20°	2771.1	2774.6	2774.6	2756.8	2739.0
22.5°	2685.5	2696.2	2699.8	2680.8	2659.4
25°	2584.6	2604.8	2616.7	2597.6	2575.1
27.5°	2462.2	2493.1	2528.8	2514.5	2489.6
30°	2325.6	2370.8	2430.2	2418.3	2400.5
32.5°	2196.2	2241.3	2323.3	2318.5	2309.0
35°	2078.6	2107.1	2203.3	2215.2	2206.9
37.5°	1966.9	1993.1	2083.3	2110.7	2103.5
40°	1849.4	1877.9	1949.1	1997.8	2000.2
42.5°	1733.0	1760.3	1818.5	1888.5	1888.5
45°	1609.4	1636.7	1690.2	1767.4	1776.9
47.5°	1488.3	1516.8	1569.0	1646.2	1661.7
50°	1369.5	1395.6	1447.9	1522.7	1546.5
52.5°	1246.0	1274.5	1325.5	1394.4	1428.9
55°	1127.2	1146.2	1202.0	1268.5	1305.4
57.5°	1003.7	1021.5	1084.4	1141.4	1179.5
60°	884.9	907.5	956.2	1014.4	1058.3
62.5°	770.9	794.6	836.2	887.3	937.1
65°	660.4	678.2	718.6	769.7	813.6
67.5°	553.5	568.9	609.3	645.0	691.3
70°	445.4	465.6	495.3	529.7	559.4
72.5°	358.7	367.0	392.0	416.9	447.8
75°	264.9	279.1	299.3	313.6	331.4
77.5°	190.0	198.4	210.2	222.1	238.7
80°	127.1	130.7	141.3	143.7	156.8
82.5°	77.2	79.6	82.0	83.1	87.9
85°	41.6	41.6	41.6	39.2	39.2
87.5°	23.8	23.8	20.2	16.6	11.9
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)