

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: P557001

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-81-88-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: P557001  
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-35-UNV-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC 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**

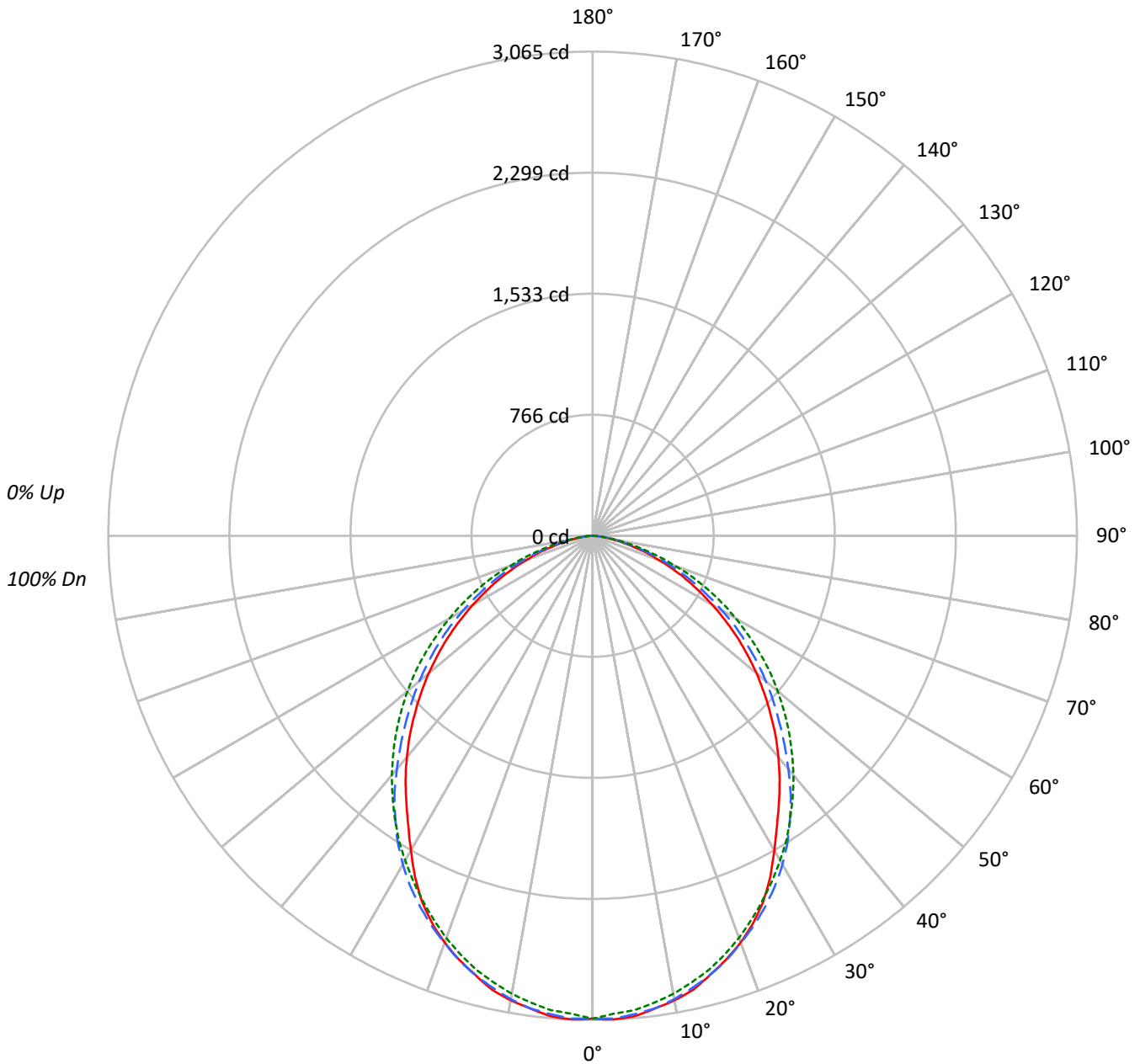
Lumens per Lamp: N/A  
Luminaire Lumens: 7068.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (Ain): 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°	8226	8226	8226
5°	8247	8213	8143
10°	8160	8137	8044
15°	8015	8015	7924
20°	7846	7856	7755
25°	7587	7681	7559
30°	7145	7466	7374
35°	6751	7156	7168
40°	6423	6769	6947
45°	6056	6359	6686
50°	5668	5993	6401
55°	5228	5575	6055
60°	4709	5088	5631
65°	4157	4524	5122
70°	3465	3853	4352
75°	2723	3077	3406
80°	1948	2165	2402
85°	1269	1269	1198



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	287.8	4.1
10°-20°	808.5	11.4
20°-30°	1181.5	16.7
30°-40°	1341.1	19.0
40°-50°	1294.7	18.3
50°-60°	1068.0	15.1
60°-70°	711.2	10.1
70°-80°	318.3	4.5
80°-90°	56.9	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°	2277.8	32.2
0°-40°	3618.9	51.2
0°-60°	5981.6	84.6
0°-90°	7068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7068.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3057	3057	3057	3057	3057	
5°	3053	3052	3040	3024	3014	289
15°	2877	2884	2877	2864	2844	811
25°	2555	2575	2587	2568	2546	1170
35°	2055	2083	2178	2190	2182	1288
45°	1591	1618	1671	1747	1757	1228
55°	1114	1133	1188	1254	1291	995
65°	653	670	710	761	804	647
75°	262	276	296	310	328	286
85°	41	41	41	39	39	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3056.7	3056.7	3056.7	3056.7	3056.7
2.5°	3064.9	3066.1	3059.1	3040.3	3028.5
5°	3053.2	3052.0	3040.3	3023.8	3014.5
7.5°	3019.1	3021.5	3018.0	2994.5	2981.6
10°	2986.3	2987.4	2978.0	2959.3	2944.0
12.5°	2944.0	2942.8	2929.9	2920.5	2895.8
15°	2877.1	2884.1	2877.1	2864.1	2844.2
17.5°	2812.5	2812.5	2817.2	2794.9	2779.6
20°	2739.7	2743.2	2743.2	2725.6	2708.0
22.5°	2655.1	2665.7	2669.2	2650.4	2629.3
25°	2555.3	2575.3	2587.0	2568.2	2545.9
27.5°	2434.3	2464.9	2500.1	2486.0	2461.4
30°	2299.3	2343.9	2402.6	2390.9	2373.3
32.5°	2171.3	2215.9	2296.9	2292.3	2282.9
35°	2055.0	2083.2	2178.3	2190.1	2181.9
37.5°	1944.7	1970.5	2059.7	2086.7	2079.7
40°	1828.4	1856.6	1927.0	1975.2	1977.5
42.5°	1713.3	1740.3	1797.9	1867.2	1867.2
45°	1591.2	1618.2	1671.0	1747.4	1756.8
47.5°	1471.4	1499.6	1551.3	1627.6	1642.9
50°	1354.0	1379.8	1431.5	1505.5	1529.0
52.5°	1231.9	1260.0	1310.5	1378.6	1412.7
55°	1114.4	1133.2	1188.4	1254.2	1290.6
57.5°	992.3	1009.9	1072.1	1128.5	1166.1
60°	874.9	897.2	945.3	1002.9	1046.3
62.5°	762.1	785.6	826.7	877.2	926.5
65°	652.9	670.5	710.5	761.0	804.4
67.5°	547.2	562.5	602.4	637.7	683.4
70°	440.4	460.3	489.7	523.7	553.1
72.5°	354.6	362.9	387.5	412.2	442.7
75°	261.9	276.0	295.9	310.0	327.6
77.5°	187.9	196.1	207.9	219.6	236.0
80°	125.7	129.2	139.7	142.1	155.0
82.5°	76.3	78.7	81.0	82.2	86.9
85°	41.1	41.1	41.1	38.8	38.8
87.5°	23.5	23.5	20.0	16.4	11.7
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)