

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: P557048

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-80-88-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: P557048  
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-40-UNV-80-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

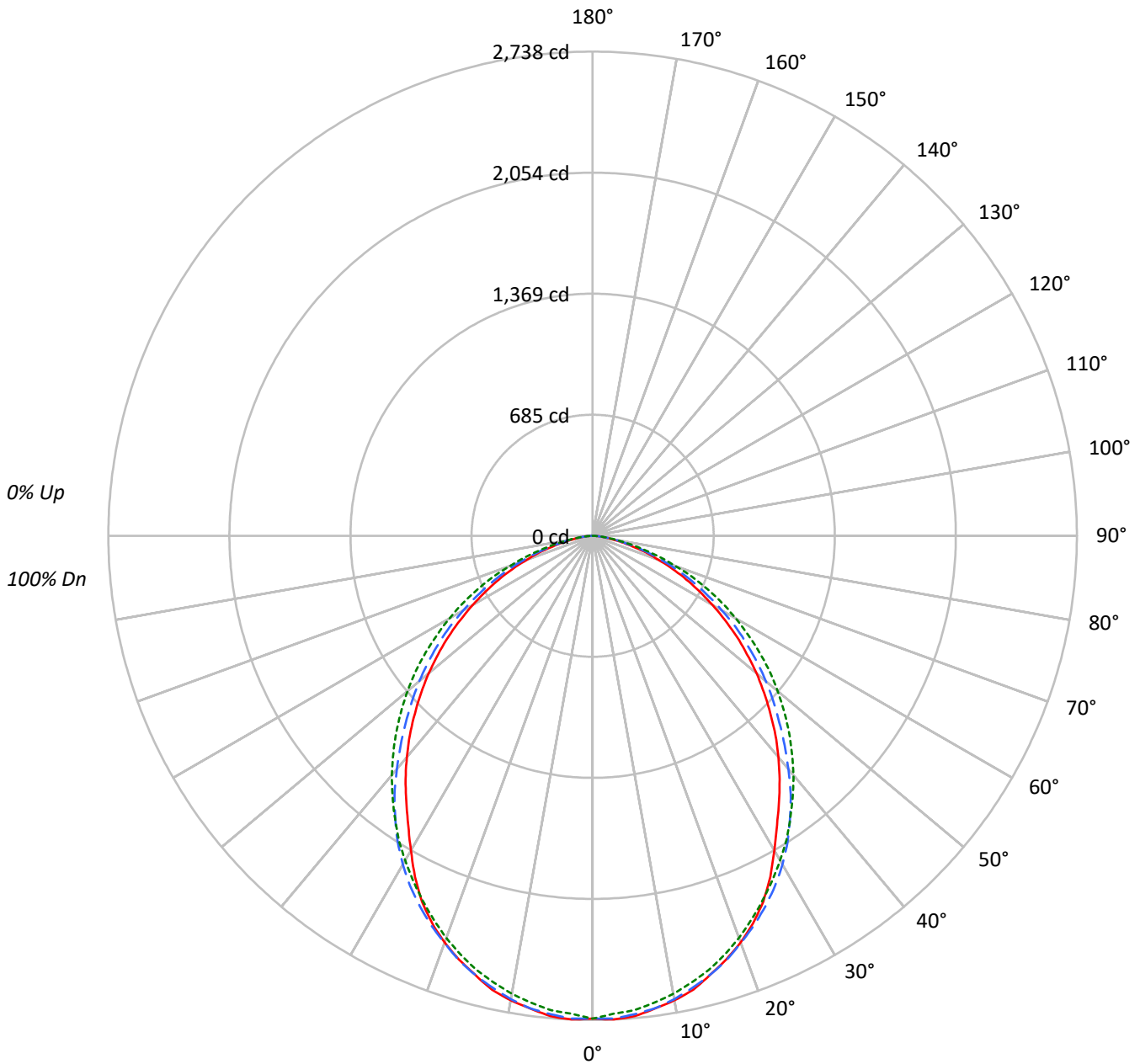
Lumens per Lamp: N/A  
Luminaire Lumens: 6314.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7348	7348	7348
5°	7368	7337	7274
10°	7289	7270	7186
15°	7160	7160	7078
20°	7009	7017	6928
25°	6778	6862	6753
30°	6382	6669	6588
35°	6031	6393	6403
40°	5737	6047	6206
45°	5409	5681	5973
50°	5063	5354	5718
55°	4670	4981	5409
60°	4206	4545	5031
65°	3714	4041	4576
70°	3095	3441	3888
75°	2432	2749	3043
80°	1739	1934	2146
85°	1133	1133	1068



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	257.1	4.1
10°-20°	722.3	11.4
20°-30°	1055.5	16.7
30°-40°	1198.1	19.0
40°-50°	1156.6	18.3
50°-60°	954.1	15.1
60°-70°	635.3	10.1
70°-80°	284.3	4.5
80°-90°	50.9	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°	2034.8	32.2
0°-40°	3232.9	51.2
0°-60°	5343.5	84.6
0°-90°	6314.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6314.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2731	2731	2731	2731	2731	
5°	2728	2726	2716	2701	2693	258
15°	2570	2576	2570	2559	2541	725
25°	2283	2300	2311	2294	2274	1045
35°	1836	1861	1946	1956	1949	1150
45°	1421	1446	1493	1561	1569	1097
55°	996	1012	1062	1120	1153	889
65°	583	599	635	680	719	578
75°	234	246	264	277	293	256
85°	37	37	37	35	35	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2730.6	2730.6	2730.6	2730.6	2730.6
2.5°	2738.0	2739.0	2732.7	2716.0	2705.5
5°	2727.5	2726.4	2716.0	2701.3	2692.9
7.5°	2697.1	2699.2	2696.0	2675.0	2663.5
10°	2667.7	2668.7	2660.4	2643.6	2629.9
12.5°	2629.9	2628.9	2617.3	2609.0	2586.9
15°	2570.1	2576.4	2570.1	2558.6	2540.8
17.5°	2512.4	2512.4	2516.6	2496.7	2483.1
20°	2447.4	2450.5	2450.5	2434.8	2419.1
22.5°	2371.9	2381.3	2384.5	2367.7	2348.8
25°	2282.7	2300.5	2311.0	2294.2	2274.3
27.5°	2174.7	2201.9	2233.4	2220.8	2198.8
30°	2054.0	2093.9	2146.3	2135.8	2120.1
32.5°	1939.7	1979.5	2051.9	2047.7	2039.3
35°	1835.8	1861.0	1946.0	1956.5	1949.1
37.5°	1737.2	1760.3	1840.0	1864.1	1857.8
40°	1633.3	1658.5	1721.5	1764.5	1766.6
42.5°	1530.5	1554.7	1606.1	1668.0	1668.0
45°	1421.4	1445.6	1492.8	1561.0	1569.4
47.5°	1314.4	1339.6	1385.8	1454.0	1467.6
50°	1209.5	1232.6	1278.8	1344.9	1365.8
52.5°	1100.4	1125.6	1170.7	1231.6	1262.0
55°	995.5	1012.3	1061.6	1120.4	1152.9
57.5°	886.4	902.2	957.8	1008.1	1041.7
60°	781.5	801.5	844.5	895.9	934.7
62.5°	680.8	701.8	738.5	783.6	827.7
65°	583.3	599.0	634.7	679.8	718.6
67.5°	488.9	502.5	538.2	569.6	610.5
70°	393.4	411.2	437.4	467.9	494.1
72.5°	316.8	324.2	346.2	368.2	395.5
75°	233.9	246.5	264.4	276.9	292.7
77.5°	167.8	175.2	185.7	196.2	210.9
80°	112.2	115.4	124.8	126.9	138.5
82.5°	68.2	70.3	72.4	73.4	77.6
85°	36.7	36.7	36.7	34.6	34.6
87.5°	21.0	21.0	17.8	14.7	10.5
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)