

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: P557075

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-82-85-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: P557075  
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-82-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

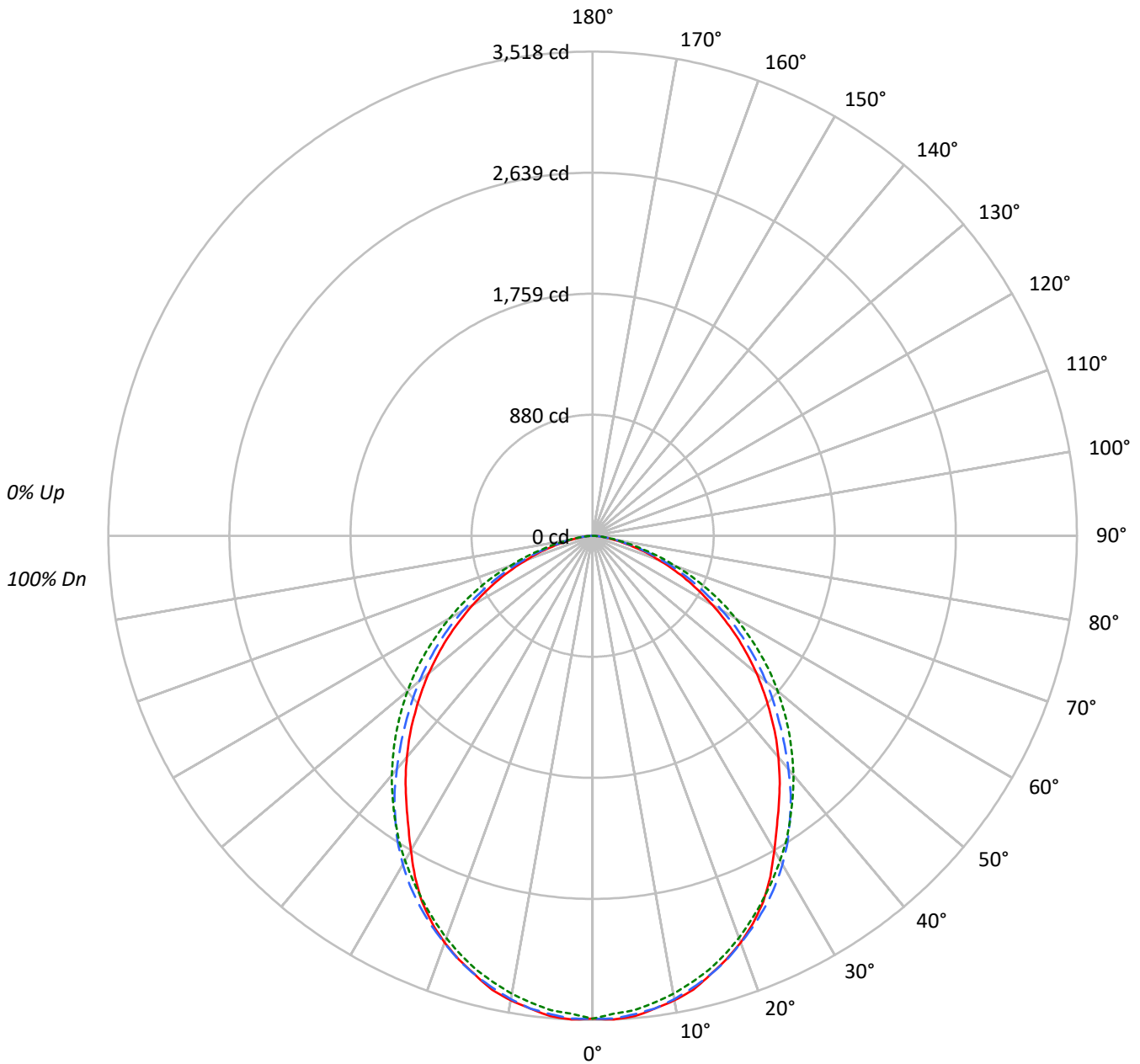
Lumens per Lamp: N/A  
Luminaire Lumens: 8113.0 lumens  
Efficiency: N/A  
Efficacy: 93.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9442	9442	9442
5°	9467	9427	9347
10°	9366	9341	9234
15°	9200	9200	9095
20°	9005	9017	8901
25°	8709	8817	8677
30°	8201	8570	8465
35°	7749	8214	8227
40°	7372	7770	7974
45°	6951	7300	7674
50°	6507	6879	7347
55°	6001	6400	6950
60°	5405	5840	6464
65°	4772	5193	5879
70°	3977	4423	4995
75°	3125	3532	3910
80°	2235	2486	2757
85°	1457	1457	1374



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	330.4	4.1
10°-20°	928.1	11.4
20°-30°	1356.2	16.7
30°-40°	1539.4	19.0
40°-50°	1486.1	18.3
50°-60°	1225.9	15.1
60°-70°	816.4	10.1
70°-80°	365.3	4.5
80°-90°	65.4	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°	2614.6	32.2
0°-40°	4154.0	51.2
0°-60°	6866.0	84.6
0°-90°	8113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8113.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3509	3509	3509	3509	3509	
5°	3505	3503	3490	3471	3460	332
15°	3302	3310	3302	3288	3265	931
25°	2933	2956	2970	2948	2922	1343
35°	2359	2391	2500	2514	2504	1478
45°	1826	1857	1918	2006	2016	1409
55°	1279	1301	1364	1440	1481	1142
65°	749	770	816	874	923	743
75°	301	317	340	356	376	329
85°	47	47	47	44	44	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3508.7	3508.7	3508.7	3508.7	3508.7
2.5°	3518.1	3519.4	3511.4	3489.8	3476.3
5°	3504.6	3503.3	3489.8	3470.9	3460.1
7.5°	3465.5	3468.2	3464.2	3437.2	3422.4
10°	3427.8	3429.1	3418.4	3396.8	3379.3
12.5°	3379.3	3377.9	3363.1	3352.3	3324.0
15°	3302.4	3310.5	3302.4	3287.6	3264.7
17.5°	3228.3	3228.3	3233.7	3208.1	3190.6
20°	3144.7	3148.8	3148.8	3128.5	3108.3
22.5°	3047.7	3059.8	3063.8	3042.3	3018.0
25°	2933.1	2956.0	2969.5	2947.9	2922.3
27.5°	2794.3	2829.3	2869.7	2853.6	2825.3
30°	2639.2	2690.5	2757.9	2744.4	2724.2
32.5°	2492.3	2543.5	2636.6	2631.2	2620.4
35°	2358.9	2391.2	2500.4	2513.9	2504.5
37.5°	2232.2	2261.8	2364.3	2395.3	2387.2
40°	2098.7	2131.1	2212.0	2267.2	2269.9
42.5°	1966.6	1997.6	2063.7	2143.2	2143.2
45°	1826.4	1857.4	1918.1	2005.7	2016.5
47.5°	1689.0	1721.3	1780.6	1868.2	1885.8
50°	1554.2	1583.8	1643.1	1728.0	1755.0
52.5°	1414.0	1446.3	1504.3	1582.5	1621.6
55°	1279.2	1300.8	1364.1	1439.6	1481.4
57.5°	1139.0	1159.2	1230.7	1295.4	1338.5
60°	1004.2	1029.8	1085.1	1151.1	1201.0
62.5°	874.8	901.8	948.9	1006.9	1063.5
65°	749.4	769.7	815.5	873.5	923.3
67.5°	628.1	645.7	691.5	731.9	784.5
70°	505.5	528.4	562.1	601.2	634.9
72.5°	407.1	416.5	444.8	473.1	508.2
75°	300.6	316.8	339.7	355.9	376.1
77.5°	215.7	225.1	238.6	252.1	270.9
80°	144.2	148.3	160.4	163.1	177.9
82.5°	87.6	90.3	93.0	94.4	99.7
85°	47.2	47.2	47.2	44.5	44.5
87.5°	27.0	27.0	22.9	18.9	13.5
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)