

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: P557093

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-93-86-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: P557093  
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-93-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

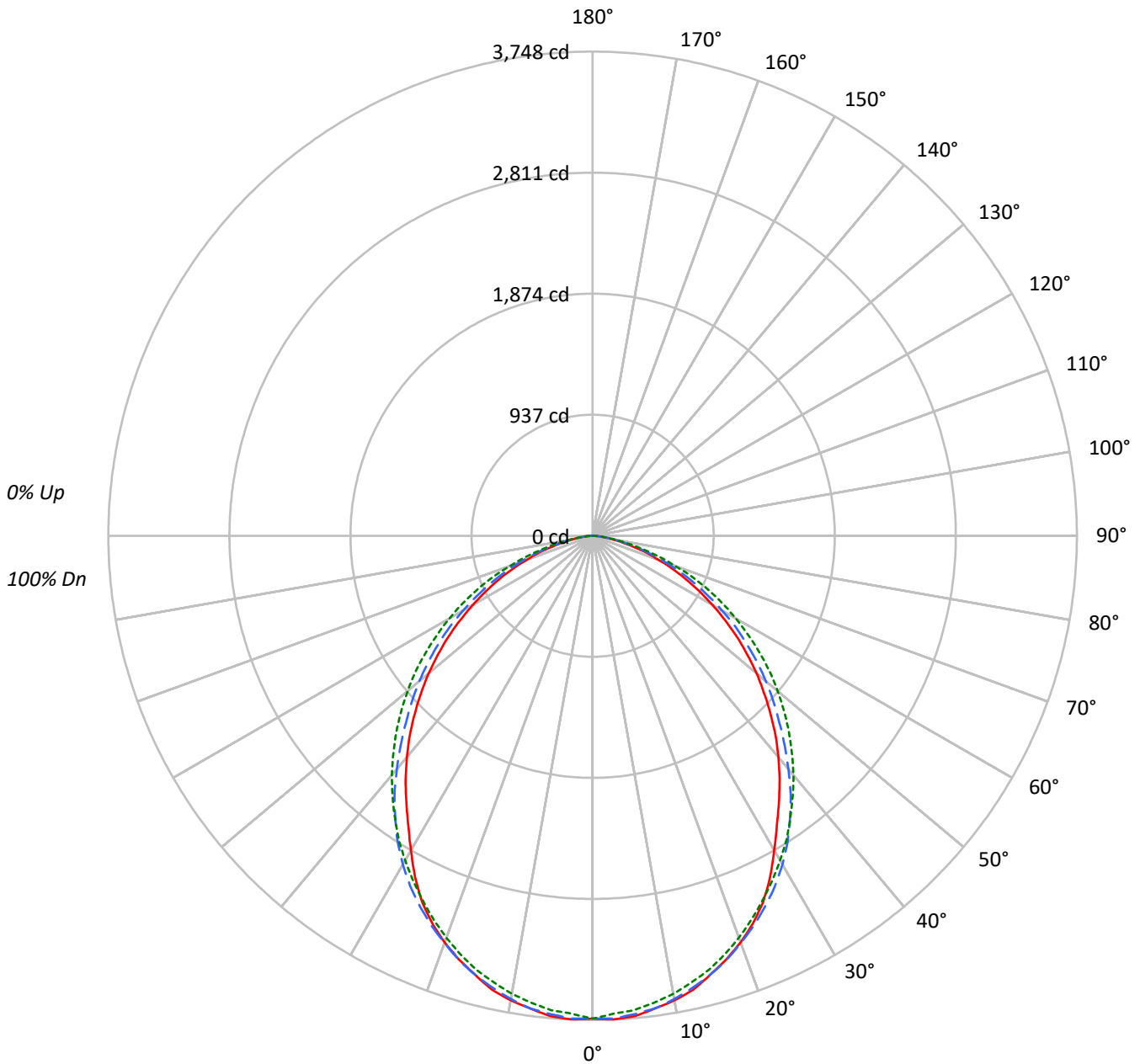
Lumens per Lamp: N/A  
Luminaire Lumens: 8642.0 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	10057	10057	10057
5°	10084	10041	9956
10°	9977	9950	9836
15°	9800	9800	9688
20°	9593	9605	9482
25°	9277	9392	9243
30°	8735	9128	9017
35°	8254	8749	8764
40°	7853	8277	8494
45°	7404	7776	8174
50°	6931	7327	7826
55°	6393	6817	7403
60°	5757	6220	6885
65°	5083	5531	6262
70°	4236	4711	5321
75°	3329	3762	4165
80°	2380	2648	2937
85°	1553	1553	1463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.9	4.1
10°-20°	988.6	11.4
20°-30°	1444.6	16.7
30°-40°	1639.8	19.0
40°-50°	1583.0	18.3
50°-60°	1305.9	15.1
60°-70°	869.6	10.1
70°-80°	389.1	4.5
80°-90°	69.6	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°	2785.1	32.2
0°-40°	4424.9	51.2
0°-60°	7313.7	84.6
0°-90°	8642.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8642.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3737	3737	3737	3737	3737	
5°	3733	3732	3717	3697	3686	353
15°	3518	3526	3518	3502	3478	992
25°	3124	3149	3163	3140	3113	1431
35°	2513	2547	2663	2678	2668	1574
45°	1946	1979	2043	2136	2148	1501
55°	1363	1386	1453	1534	1578	1216
65°	798	820	869	930	984	792
75°	320	337	362	379	401	350
85°	50	50	50	47	47	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3737.4	3737.4	3737.4	3737.4	3737.4
2.5°	3747.5	3748.9	3740.3	3717.3	3703.0
5°	3733.1	3731.7	3717.3	3697.2	3685.8
7.5°	3691.5	3694.4	3690.1	3661.3	3645.5
10°	3651.3	3652.7	3641.2	3618.3	3599.6
12.5°	3599.6	3598.2	3582.4	3570.9	3540.7
15°	3517.8	3526.4	3517.8	3502.0	3477.6
17.5°	3438.8	3438.8	3444.5	3417.3	3398.6
20°	3349.8	3354.1	3354.1	3332.5	3311.0
22.5°	3246.4	3259.3	3263.6	3240.6	3214.8
25°	3124.3	3148.8	3163.1	3140.1	3112.9
27.5°	2976.5	3013.8	3056.9	3039.6	3009.5
30°	2811.3	2865.9	2937.7	2923.3	2901.8
32.5°	2654.8	2709.4	2808.5	2802.7	2791.2
35°	2512.7	2547.1	2663.4	2677.8	2667.8
37.5°	2377.7	2409.3	2518.4	2551.5	2542.8
40°	2235.6	2270.0	2356.2	2415.1	2417.9
42.5°	2094.9	2127.9	2198.2	2283.0	2283.0
45°	1945.5	1978.6	2043.2	2136.5	2148.0
47.5°	1799.1	1833.5	1896.7	1990.0	2008.7
50°	1655.5	1687.1	1750.3	1840.7	1869.4
52.5°	1506.2	1540.6	1602.4	1685.7	1727.3
55°	1362.6	1385.6	1453.1	1533.5	1578.0
57.5°	1213.3	1234.8	1310.9	1379.8	1425.8
60°	1069.7	1097.0	1155.8	1226.2	1279.3
62.5°	931.8	960.6	1010.8	1072.6	1132.9
65°	798.3	819.9	868.7	930.4	983.5
67.5°	669.1	687.8	736.6	779.7	835.6
70°	538.4	562.8	598.7	640.4	676.3
72.5°	433.6	443.7	473.8	504.0	541.3
75°	320.2	337.4	361.8	379.1	400.6
77.5°	229.7	239.8	254.1	268.5	288.6
80°	153.6	157.9	170.9	173.7	189.5
82.5°	93.3	96.2	99.1	100.5	106.3
85°	50.3	50.3	50.3	47.4	47.4
87.5°	28.7	28.7	24.4	20.1	14.4
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)