

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: P557101

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-93-96-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: P557101  
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-93-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

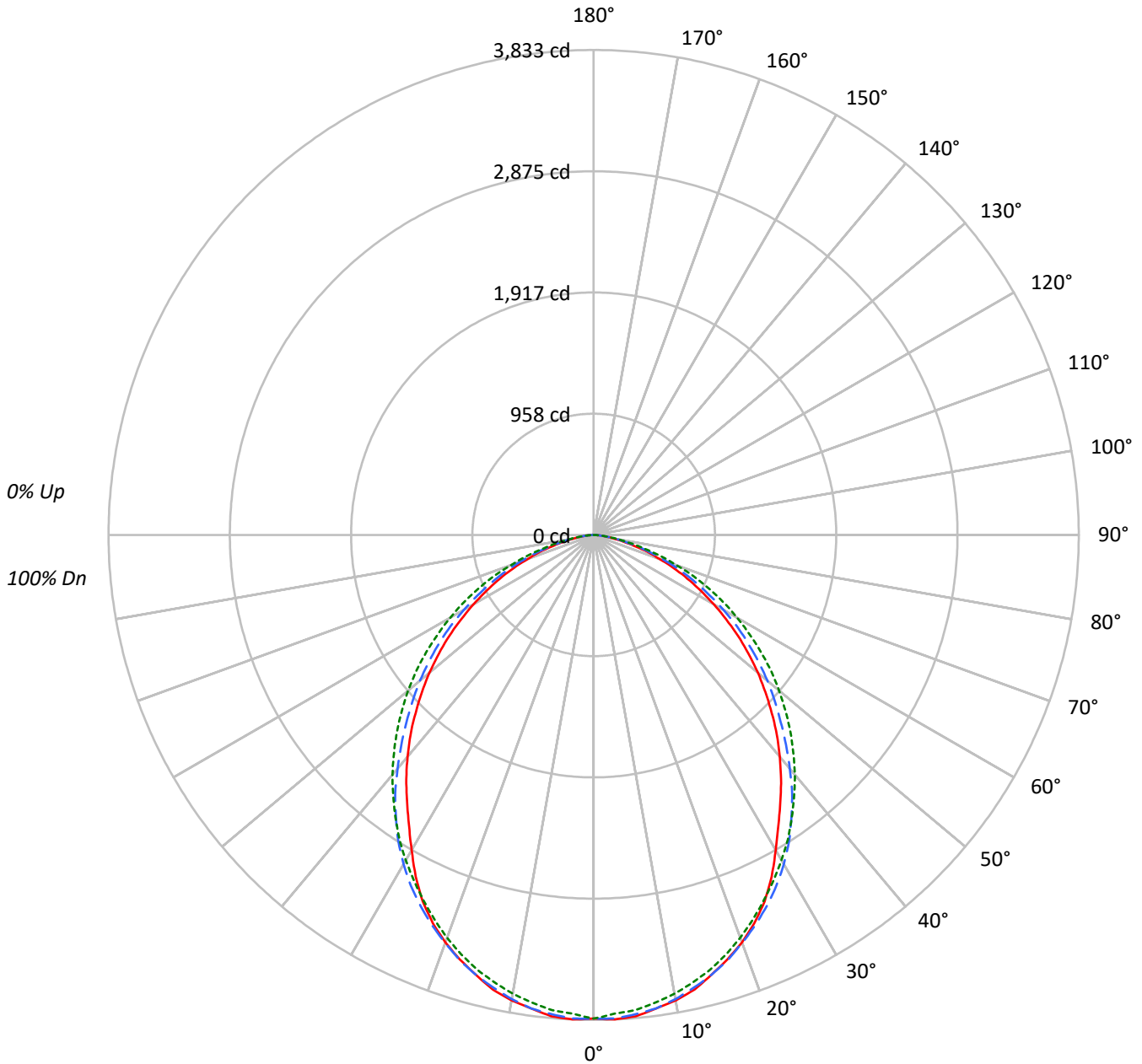
Lumens per Lamp: N/A  
Luminaire Lumens: 8840.0 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P557101

CATALOG NUMBER: FUSL-12-4-LD4-2HI-40-UNV-93-96-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P557101

CATALOG NUMBER: FUSL-12-4-LD4-2HI-40-UNV-93-96-EDD

**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°	10288	10288	10288
5°	10315	10272	10184
10°	10206	10178	10061
15°	10025	10025	9910
20°	9812	9825	9699
25°	9489	9607	9454
30°	8936	9337	9223
35°	8444	8950	8965
40°	8033	8467	8688
45°	7574	7954	8362
50°	7089	7495	8006
55°	6539	6973	7573
60°	5889	6363	7043
65°	5200	5658	6406
70°	4334	4819	5443
75°	3405	3848	4261
80°	2436	2709	3005
85°	1587	1587	1497



TEST NUMBER: P557101

CATALOG NUMBER: FUSL-12-4-LD4-2HI-40-UNV-93-96-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	360.0	4.1
10°-20°	1011.2	11.4
20°-30°	1477.7	16.7
30°-40°	1677.4	19.0
40°-50°	1619.2	18.3
50°-60°	1335.8	15.1
60°-70°	889.5	10.1
70°-80°	398.0	4.5
80°-90°	71.2	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°	2848.9	32.2
0°-40°	4526.3	51.2
0°-60°	7481.2	84.6
0°-90°	8840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8840.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3823	3823	3823	3823	3823	
5°	3819	3817	3802	3782	3770	361
15°	3598	3607	3598	3582	3557	1014
25°	3196	3221	3236	3212	3184	1464
35°	2570	2606	2724	2739	2729	1610
45°	1990	2024	2090	2186	2197	1535
55°	1394	1417	1486	1569	1614	1244
65°	817	839	889	952	1006	810
75°	328	345	370	388	410	358
85°	51	51	51	48	48	69
90°	0	0	0	0	0	



TEST NUMBER: P557101

CATALOG NUMBER: FUSL-12-4-LD4-2HI-40-UNV-93-96-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3823.1	3823.1	3823.1	3823.1	3823.1
2.5°	3833.4	3834.8	3826.0	3802.5	3787.8
5°	3818.7	3817.2	3802.5	3781.9	3770.2
7.5°	3776.1	3779.0	3774.6	3745.2	3729.1
10°	3734.9	3736.4	3724.7	3701.2	3682.1
12.5°	3682.1	3680.6	3664.5	3652.7	3621.9
15°	3598.4	3607.2	3598.4	3582.2	3557.2
17.5°	3517.6	3517.6	3523.5	3495.5	3476.5
20°	3426.5	3430.9	3430.9	3408.9	3386.9
22.5°	3320.8	3334.0	3338.4	3314.9	3288.5
25°	3195.9	3220.9	3235.6	3212.1	3184.2
27.5°	3044.7	3082.8	3126.9	3109.3	3078.4
30°	2875.7	2931.6	3005.0	2990.3	2968.3
32.5°	2715.7	2771.5	2872.8	2866.9	2855.2
35°	2570.3	2605.5	2724.5	2739.2	2728.9
37.5°	2432.2	2464.5	2576.1	2609.9	2601.1
40°	2286.8	2322.0	2410.2	2470.4	2473.3
42.5°	2142.9	2176.6	2248.6	2335.3	2335.3
45°	1990.1	2023.9	2090.0	2185.5	2197.2
47.5°	1840.3	1875.6	1940.2	2035.6	2054.7
50°	1693.4	1725.7	1790.4	1882.9	1912.3
52.5°	1540.7	1575.9	1639.1	1724.3	1766.9
55°	1393.8	1417.3	1486.3	1568.6	1614.1
57.5°	1241.1	1263.1	1340.9	1411.4	1458.4
60°	1094.2	1122.1	1182.3	1254.3	1308.6
62.5°	953.2	982.6	1034.0	1097.1	1158.8
65°	816.6	838.6	888.6	951.7	1006.1
67.5°	684.4	703.5	753.5	797.5	854.8
70°	550.8	575.7	612.5	655.0	691.8
72.5°	443.6	453.8	484.7	515.5	553.7
75°	327.5	345.1	370.1	387.7	409.8
77.5°	235.0	245.3	260.0	274.7	295.2
80°	157.2	161.6	174.8	177.7	193.9
82.5°	95.5	98.4	101.3	102.8	108.7
85°	51.4	51.4	51.4	48.5	48.5
87.5°	29.4	29.4	25.0	20.6	14.7
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)