

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: P557100

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-93-96-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: P557100  
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-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

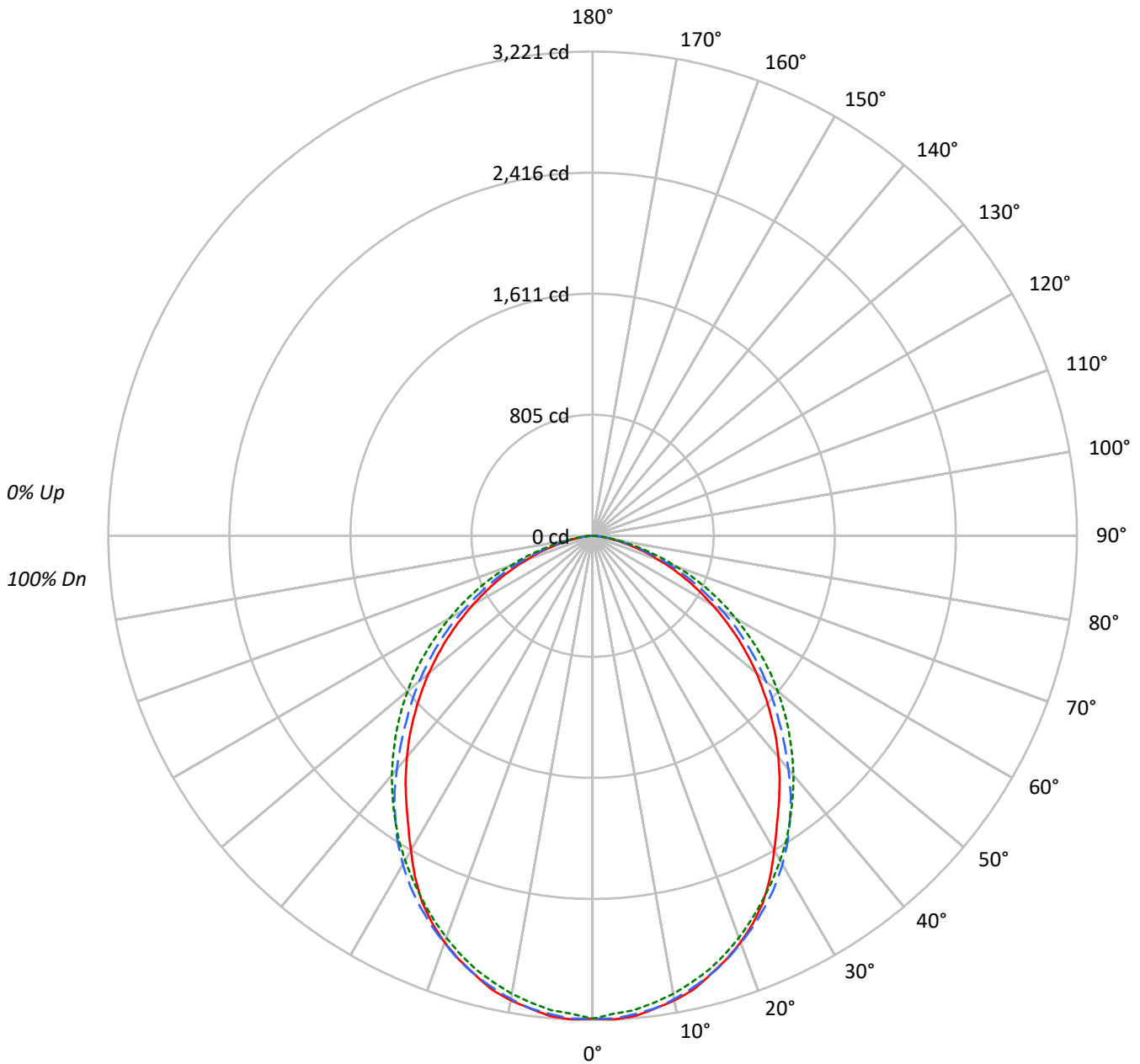
Lumens per Lamp: N/A  
Luminaire Lumens: 7427.0 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8643	8643	8643
5°	8666	8630	8557
10°	8574	8551	8453
15°	8422	8422	8326
20°	8244	8255	8149
25°	7973	8071	7943
30°	7507	7845	7749
35°	7094	7520	7532
40°	6749	7113	7300
45°	6363	6682	7025
50°	5956	6297	6726
55°	5494	5859	6362
60°	4948	5346	5917
65°	4369	4753	5382
70°	3640	4049	4573
75°	2861	3234	3580
80°	2046	2275	2524
85°	1334	1334	1257



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	302.4	4.1
10°-20°	849.6	11.4
20°-30°	1241.5	16.7
30°-40°	1409.3	19.0
40°-50°	1360.4	18.3
50°-60°	1122.2	15.1
60°-70°	747.3	10.1
70°-80°	334.4	4.5
80°-90°	59.8	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°	2393.5	32.2
0°-40°	3802.8	51.2
0°-60°	6285.4	84.6
0°-90°	7427.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7427.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3212	3212	3212	3212	3212	
5°	3208	3207	3195	3177	3168	304
15°	3023	3031	3023	3010	2989	852
25°	2685	2706	2718	2699	2675	1230
35°	2159	2189	2289	2301	2293	1353
45°	1672	1700	1756	1836	1846	1290
55°	1171	1191	1249	1318	1356	1045
65°	686	705	746	800	845	680
75°	275	290	311	326	344	301
85°	43	43	43	41	41	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3212.0	3212.0	3212.0	3212.0	3212.0
2.5°	3220.6	3221.9	3214.5	3194.7	3182.4
5°	3208.3	3207.0	3194.7	3177.4	3167.6
7.5°	3172.5	3175.0	3171.3	3146.6	3133.0
10°	3137.9	3139.2	3129.3	3109.6	3093.5
12.5°	3093.5	3092.3	3078.7	3068.8	3042.9
15°	3023.2	3030.6	3023.2	3009.6	2988.6
17.5°	2955.3	2955.3	2960.3	2936.8	2920.8
20°	2878.8	2882.5	2882.5	2864.0	2845.5
22.5°	2790.0	2801.1	2804.8	2785.0	2762.8
25°	2685.1	2706.1	2718.4	2698.7	2675.2
27.5°	2558.0	2590.1	2627.1	2612.3	2586.4
30°	2416.1	2463.0	2524.7	2512.3	2493.8
32.5°	2281.6	2328.5	2413.6	2408.7	2398.8
35°	2159.4	2189.0	2289.0	2301.3	2292.7
37.5°	2043.4	2070.6	2164.4	2192.7	2185.3
40°	1921.3	1950.9	2024.9	2075.5	2078.0
42.5°	1800.3	1828.7	1889.2	1962.0	1962.0
45°	1672.0	1700.4	1755.9	1836.1	1846.0
47.5°	1546.1	1575.8	1630.1	1710.3	1726.3
50°	1422.8	1449.9	1504.2	1581.9	1606.6
52.5°	1294.4	1324.0	1377.1	1448.7	1484.4
55°	1171.0	1190.8	1248.8	1317.9	1356.1
57.5°	1042.7	1061.2	1126.6	1185.8	1225.3
60°	919.3	942.7	993.3	1053.8	1099.5
62.5°	800.8	825.5	868.7	921.8	973.6
65°	686.1	704.6	746.5	799.6	845.3
67.5°	575.0	591.1	633.0	670.0	718.2
70°	462.7	483.7	514.6	550.3	581.2
72.5°	372.7	381.3	407.2	433.1	465.2
75°	275.2	290.0	311.0	325.8	344.3
77.5°	197.4	206.1	218.4	230.7	248.0
80°	132.0	135.7	146.8	149.3	162.9
82.5°	80.2	82.7	85.1	86.4	91.3
85°	43.2	43.2	43.2	40.7	40.7
87.5°	24.7	24.7	21.0	17.3	12.3
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)