

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: P557985

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-93-84-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: P557985  
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-LD4-3LO-30-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

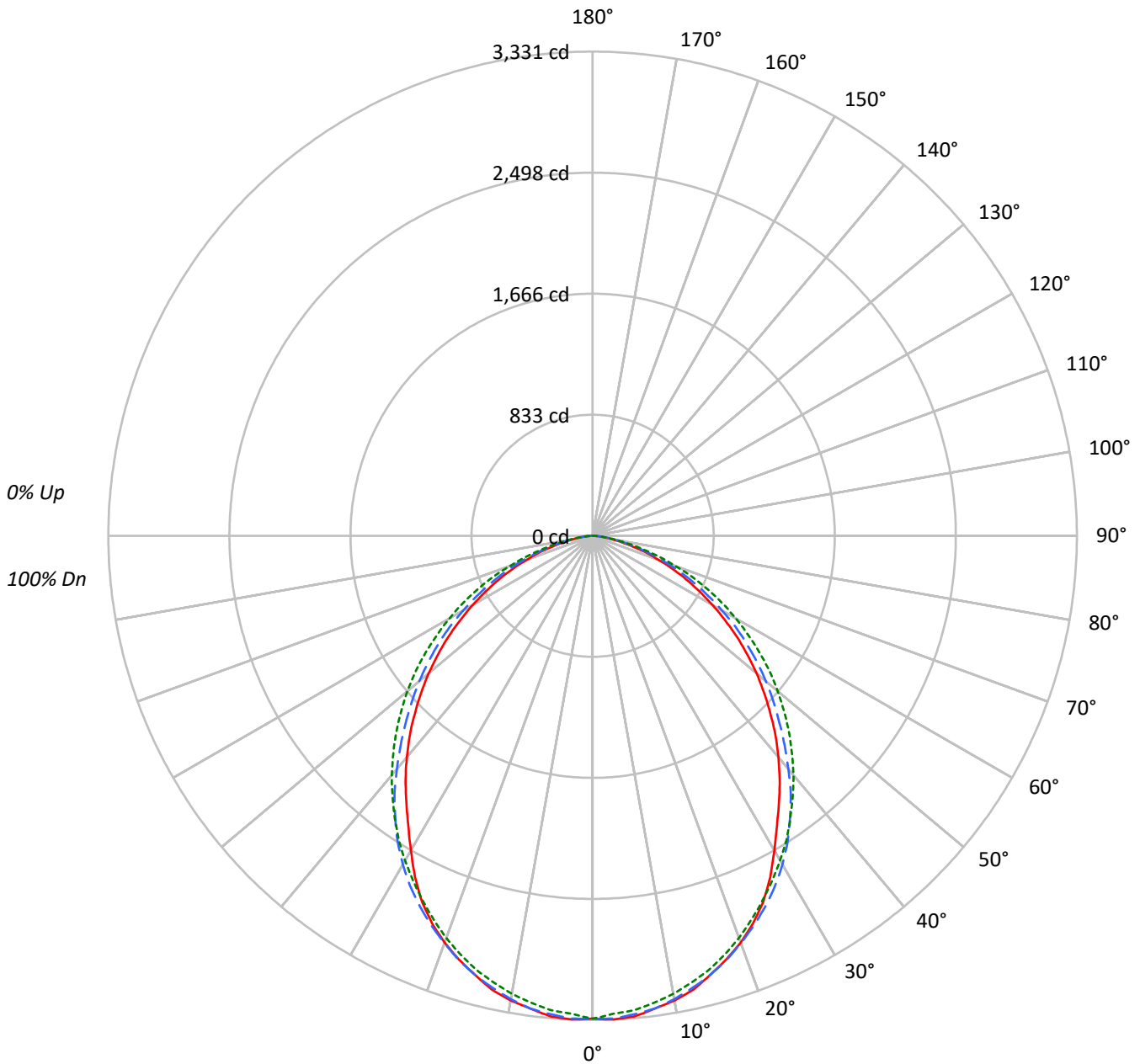
Lumens per Lamp: N/A  
Luminaire Lumens: 7682.0 lumens  
Efficiency: N/A  
Efficacy: 109.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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					
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	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°	8940	8940	8940
5°	8964	8926	8850
10°	8869	8845	8743
15°	8712	8712	8612
20°	8527	8538	8428
25°	8246	8348	8216
30°	7765	8114	8015
35°	7338	7778	7790
40°	6981	7357	7550
45°	6581	6912	7266
50°	6161	6513	6957
55°	5682	6060	6581
60°	5118	5529	6120
65°	4518	4917	5567
70°	3766	4187	4729
75°	2959	3344	3702
80°	2117	2354	2611
85°	1380	1380	1300



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	312.8	4.1
10°-20°	878.7	11.4
20°-30°	1284.1	16.7
30°-40°	1457.6	19.0
40°-50°	1407.1	18.3
50°-60°	1160.8	15.1
60°-70°	773.0	10.1
70°-80°	345.9	4.5
80°-90°	61.9	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°	2475.7	32.2
0°-40°	3933.3	51.2
0°-60°	6501.2	84.6
0°-90°	7682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7682.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3322	3322	3322	3322	3322	
5°	3318	3317	3304	3286	3276	314
15°	3127	3135	3127	3113	3091	882
25°	2777	2799	2812	2791	2767	1272
35°	2234	2264	2368	2380	2371	1399
45°	1729	1759	1816	1899	1909	1334
55°	1211	1232	1292	1363	1403	1081
65°	710	729	772	827	874	704
75°	285	300	322	337	356	311
85°	45	45	45	42	42	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3322.3	3322.3	3322.3	3322.3	3322.3
2.5°	3331.2	3332.5	3324.8	3304.4	3291.6
5°	3318.4	3317.2	3304.4	3286.5	3276.3
7.5°	3281.4	3284.0	3280.1	3254.6	3240.6
10°	3245.7	3247.0	3236.8	3216.3	3199.7
12.5°	3199.7	3198.5	3184.4	3174.2	3147.4
15°	3127.0	3134.6	3127.0	3112.9	3091.3
17.5°	3056.8	3056.8	3061.9	3037.6	3021.1
20°	2977.7	2981.5	2981.5	2962.3	2943.2
22.5°	2885.8	2897.3	2901.1	2880.7	2857.7
25°	2777.3	2799.0	2811.7	2791.3	2767.1
27.5°	2645.8	2679.0	2717.3	2702.0	2675.2
30°	2499.0	2547.5	2611.4	2598.6	2579.4
32.5°	2359.9	2408.4	2496.5	2491.4	2481.2
35°	2233.6	2264.2	2367.6	2380.3	2371.4
37.5°	2113.6	2141.7	2238.7	2268.0	2260.4
40°	1987.2	2017.9	2094.4	2146.8	2149.3
42.5°	1862.2	1891.5	1954.0	2029.4	2029.4
45°	1729.4	1758.8	1816.2	1899.2	1909.4
47.5°	1599.2	1629.9	1686.0	1769.0	1785.6
50°	1471.6	1499.7	1555.8	1636.2	1661.8
52.5°	1338.9	1369.5	1424.4	1498.4	1535.4
55°	1211.2	1231.7	1291.6	1363.1	1402.7
57.5°	1078.5	1097.6	1165.3	1226.5	1267.4
60°	950.9	975.1	1027.4	1090.0	1137.2
62.5°	828.3	853.9	898.5	953.4	1007.0
65°	709.6	728.8	772.2	827.1	874.3
67.5°	594.8	611.4	654.8	693.0	742.8
70°	478.6	500.3	532.2	569.2	601.1
72.5°	385.4	394.4	421.2	448.0	481.2
75°	284.6	299.9	321.6	336.9	356.1
77.5°	204.2	213.1	225.9	238.7	256.5
80°	136.6	140.4	151.9	154.4	168.5
82.5°	83.0	85.5	88.1	89.3	94.4
85°	44.7	44.7	44.7	42.1	42.1
87.5°	25.5	25.5	21.7	17.9	12.8
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)