

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: P556974

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-93-97-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: P556974  
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-30-UNV-93-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

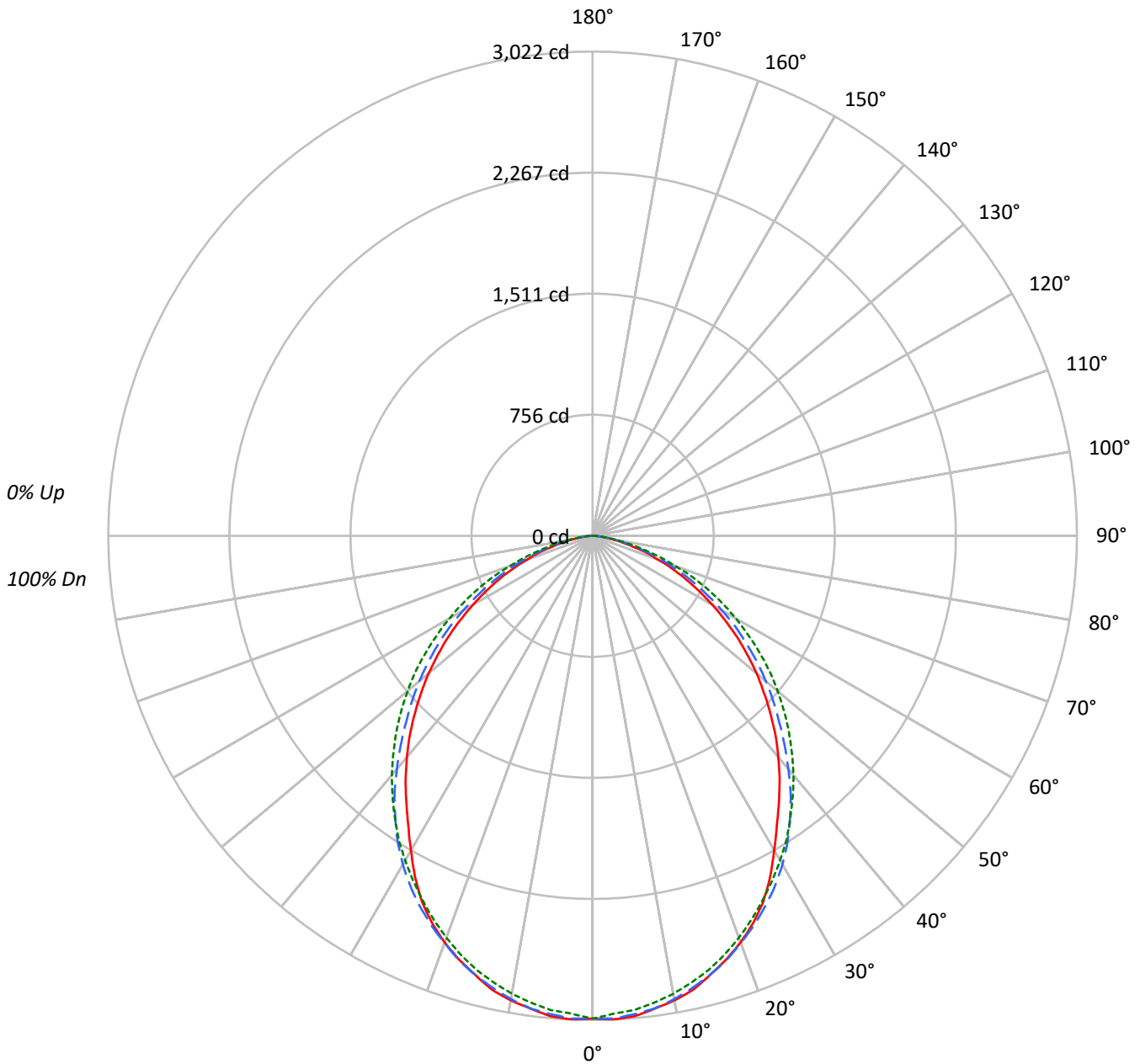
Lumens per Lamp: N/A  
Luminaire Lumens: 6968.0 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8109	8109	8109
5°	8131	8096	8028
10°	8044	8022	7931
15°	7902	7902	7811
20°	7735	7745	7645
25°	7480	7573	7452
30°	7044	7360	7270
35°	6656	7055	7066
40°	6332	6674	6849
45°	5970	6269	6591
50°	5588	5908	6310
55°	5155	5497	5969
60°	4642	5015	5551
65°	4099	4460	5049
70°	3415	3799	4290
75°	2685	3033	3358
80°	1920	2135	2368
85°	1250	1250	1179



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	283.7	4.1
10°-20°	797.1	11.4
20°-30°	1164.8	16.7
30°-40°	1322.2	19.0
40°-50°	1276.3	18.3
50°-60°	1052.9	15.1
60°-70°	701.1	10.1
70°-80°	313.7	4.5
80°-90°	56.1	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°	2245.6	32.2
0°-40°	3567.7	51.2
0°-60°	5897.0	84.6
0°-90°	6968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6968.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3014	3014	3014	3014	3014	
5°	3010	3009	2997	2981	2972	285
15°	2836	2843	2836	2824	2804	800
25°	2519	2539	2550	2532	2510	1154
35°	2026	2054	2148	2159	2151	1269
45°	1569	1595	1647	1723	1732	1210
55°	1099	1117	1172	1236	1272	981
65°	644	661	700	750	793	638
75°	258	272	292	306	323	282
85°	40	40	40	38	38	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3013.5	3013.5	3013.5	3013.5	3013.5
2.5°	3021.6	3022.7	3015.8	2997.3	2985.7
5°	3010.0	3008.8	2997.3	2981.1	2971.8
7.5°	2976.4	2978.7	2975.3	2952.1	2939.4
10°	2944.0	2945.2	2935.9	2917.4	2902.3
12.5°	2902.3	2901.2	2888.4	2879.2	2854.9
15°	2836.4	2843.3	2836.4	2823.6	2803.9
17.5°	2772.7	2772.7	2777.3	2755.3	2740.3
20°	2700.9	2704.4	2704.4	2687.0	2669.6
22.5°	2617.5	2628.0	2631.4	2612.9	2592.1
25°	2519.1	2538.8	2550.4	2531.9	2509.9
27.5°	2399.9	2430.0	2464.7	2450.8	2426.5
30°	2266.8	2310.8	2368.6	2357.1	2339.7
32.5°	2140.6	2184.6	2264.5	2259.8	2250.6
35°	2026.0	2053.8	2147.5	2159.1	2151.0
37.5°	1917.1	1942.6	2030.6	2057.2	2050.3
40°	1802.5	1830.3	1899.8	1947.2	1949.6
42.5°	1689.1	1715.7	1772.4	1840.7	1840.7
45°	1568.7	1595.3	1647.4	1722.7	1731.9
47.5°	1450.6	1478.4	1529.3	1604.6	1619.6
50°	1334.8	1360.3	1411.2	1484.2	1507.3
52.5°	1214.4	1242.2	1292.0	1359.1	1392.7
55°	1098.7	1117.2	1171.6	1236.4	1272.3
57.5°	978.3	995.6	1057.0	1112.5	1149.6
60°	862.5	884.5	931.9	988.7	1031.5
62.5°	751.3	774.5	815.0	864.8	913.4
65°	643.7	661.0	700.4	750.2	793.0
67.5°	539.5	554.5	593.9	628.6	673.8
70°	434.1	453.8	482.8	516.3	545.3
72.5°	349.6	357.7	382.0	406.4	436.5
75°	258.2	272.1	291.7	305.6	323.0
77.5°	185.2	193.3	204.9	216.5	232.7
80°	123.9	127.3	137.8	140.1	152.8
82.5°	75.3	77.6	79.9	81.0	85.7
85°	40.5	40.5	40.5	38.2	38.2
87.5°	23.2	23.2	19.7	16.2	11.6
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)