

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: P557002

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-81-94-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: P557002  
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-35-UNV-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

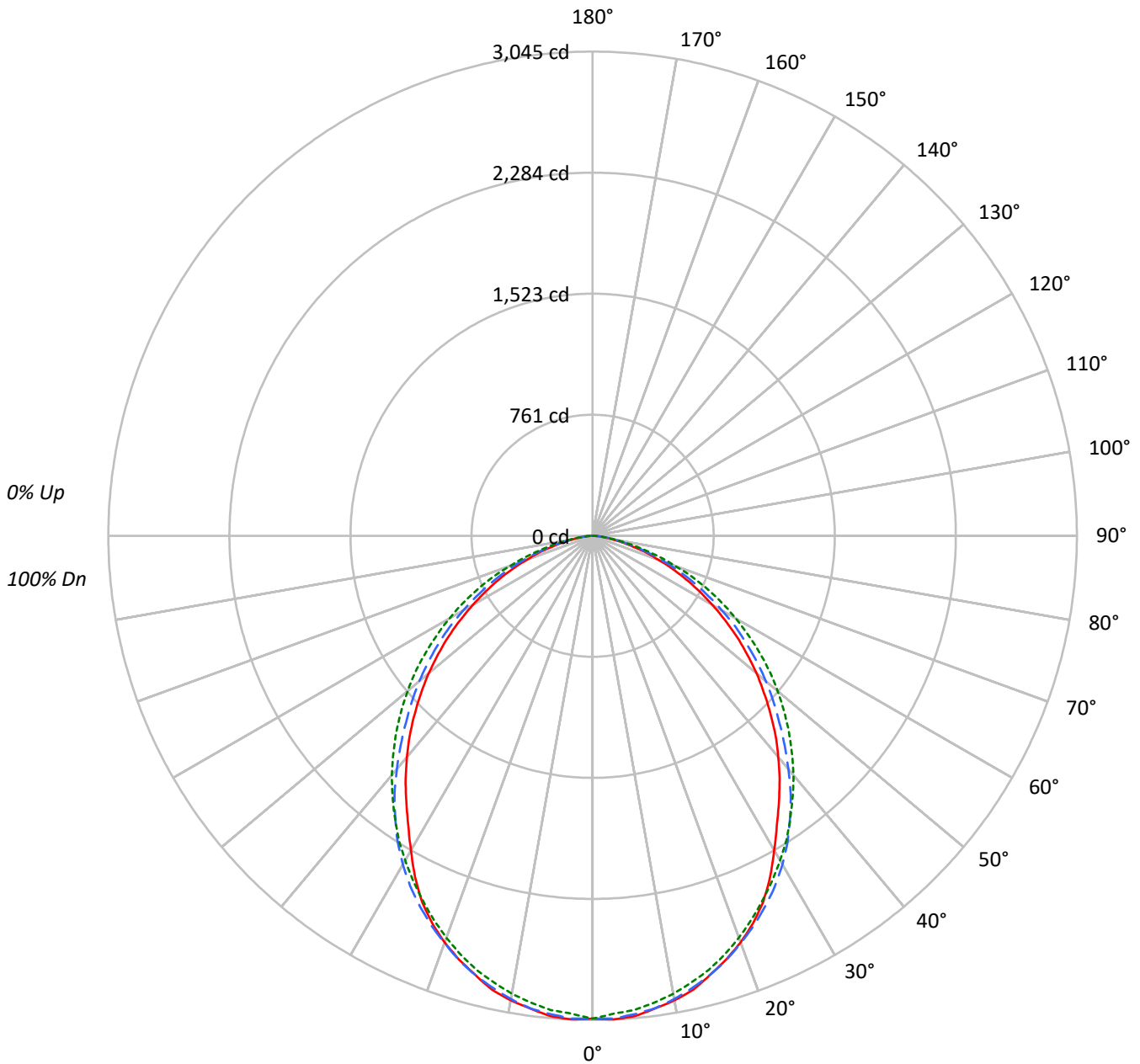
Lumens per Lamp: N/A  
Luminaire Lumens: 7021.0 lumens  
Efficiency: N/A  
Efficacy: 81.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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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°	8171	8171	8171
5°	8193	8158	8089
10°	8106	8083	7991
15°	7962	7962	7871
20°	7793	7803	7703
25°	7537	7630	7509
30°	7097	7416	7325
35°	6706	7109	7120
40°	6380	6724	6901
45°	6015	6317	6641
50°	5631	5953	6358
55°	5194	5538	6015
60°	4677	5054	5594
65°	4130	4493	5088
70°	3441	3827	4323
75°	2704	3057	3384
80°	1934	2151	2386
85°	1260	1260	1189



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.9	4.1
10°-20°	803.1	11.4
20°-30°	1173.6	16.7
30°-40°	1332.2	19.0
40°-50°	1286.0	18.3
50°-60°	1060.9	15.1
60°-70°	706.5	10.1
70°-80°	316.1	4.5
80°-90°	56.6	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°	2262.7	32.2
0°-40°	3594.9	51.2
0°-60°	5941.8	84.6
0°-90°	7021.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7021.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3036	3036	3036	3036	3036	
5°	3033	3032	3020	3004	2994	287
15°	2858	2865	2858	2845	2825	806
25°	2538	2558	2570	2551	2529	1162
35°	2041	2069	2164	2176	2167	1279
45°	1581	1607	1660	1736	1745	1220
55°	1107	1126	1180	1246	1282	988
65°	649	666	706	756	799	643
75°	260	274	294	308	326	284
85°	41	41	41	38	38	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3036.4	3036.4	3036.4	3036.4	3036.4
2.5°	3044.6	3045.7	3038.7	3020.1	3008.4
5°	3032.9	3031.7	3020.1	3003.7	2994.4
7.5°	2999.1	3001.4	2997.9	2974.6	2961.7
10°	2966.4	2967.6	2958.2	2939.6	2924.4
12.5°	2924.4	2923.3	2910.4	2901.1	2876.6
15°	2857.9	2864.9	2857.9	2845.1	2825.3
17.5°	2793.8	2793.8	2798.4	2776.3	2761.1
20°	2721.4	2724.9	2724.9	2707.4	2690.0
22.5°	2637.5	2648.0	2651.5	2632.8	2611.8
25°	2538.3	2558.1	2569.8	2551.1	2529.0
27.5°	2418.2	2448.5	2483.5	2469.5	2445.0
30°	2284.0	2328.3	2386.7	2375.0	2357.5
32.5°	2156.9	2201.2	2281.7	2277.0	2267.7
35°	2041.4	2069.4	2163.9	2175.5	2167.4
37.5°	1931.7	1957.4	2046.0	2072.9	2065.9
40°	1816.2	1844.2	1914.2	1962.1	1964.4
42.5°	1701.9	1728.8	1785.9	1854.7	1854.7
45°	1580.6	1607.4	1659.9	1735.8	1745.1
47.5°	1461.6	1489.6	1540.9	1616.8	1631.9
50°	1345.0	1370.6	1422.0	1495.5	1518.8
52.5°	1223.7	1251.7	1301.8	1369.5	1403.3
55°	1107.0	1125.7	1180.5	1245.8	1282.0
57.5°	985.7	1003.2	1065.0	1121.0	1158.3
60°	869.0	891.2	939.0	996.2	1039.4
62.5°	757.1	780.4	821.2	871.4	920.4
65°	648.6	666.1	705.7	755.9	799.1
67.5°	543.6	558.8	598.4	633.4	678.9
70°	437.4	457.3	486.4	520.3	549.4
72.5°	352.3	360.4	384.9	409.4	439.8
75°	260.1	274.1	294.0	308.0	325.5
77.5°	186.6	194.8	206.5	218.1	234.5
80°	124.8	128.3	138.8	141.1	154.0
82.5°	75.8	78.2	80.5	81.7	86.3
85°	40.8	40.8	40.8	38.5	38.5
87.5°	23.3	23.3	19.8	16.3	11.7
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)