

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: P557973

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-82-86-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: P557973  
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-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

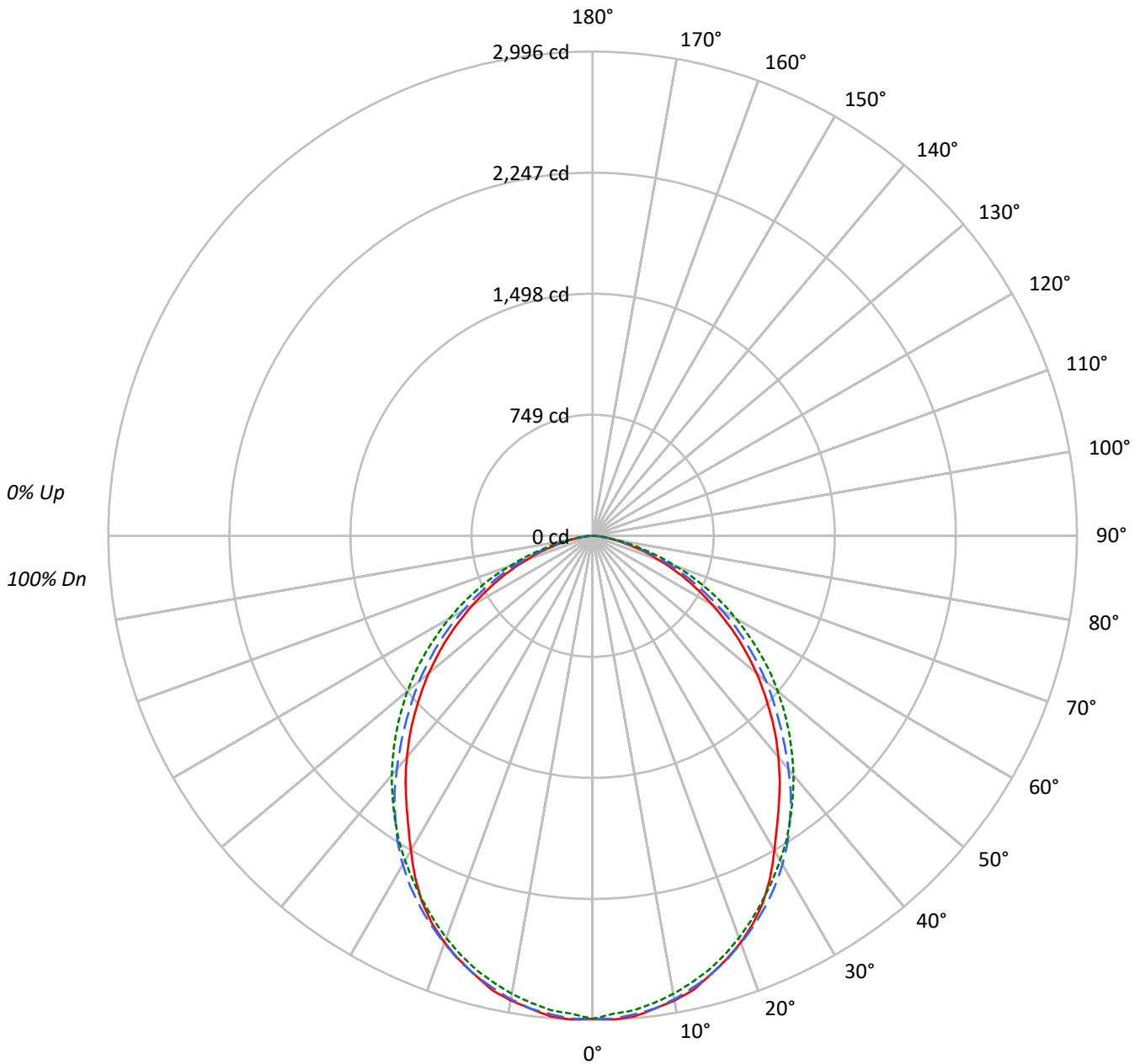
Lumens per Lamp: N/A  
Luminaire Lumens: 6910.0 lumens  
Efficiency: N/A  
Efficacy: 98.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (Ain): 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°	8042	8042	8042
5°	8063	8029	7961
10°	7978	7956	7865
15°	7836	7836	7746
20°	7670	7680	7581
25°	7418	7510	7390
30°	6985	7299	7209
35°	6600	6996	7007
40°	6279	6618	6791
45°	5920	6217	6536
50°	5542	5859	6258
55°	5111	5451	5919
60°	4603	4974	5505
65°	4064	4423	5007
70°	3387	3766	4254
75°	2662	3008	3330
80°	1903	2117	2348
85°	1241	1241	1170



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.4	4.1
10°-20°	790.4	11.4
20°-30°	1155.1	16.7
30°-40°	1311.1	19.0
40°-50°	1265.7	18.3
50°-60°	1044.1	15.1
60°-70°	695.3	10.1
70°-80°	311.1	4.5
80°-90°	55.7	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°	2226.9	32.2
0°-40°	3538.0	51.2
0°-60°	5847.9	84.6
0°-90°	6910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6910.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2988	2988	2988	2988	2988	
5°	2985	2984	2972	2956	2947	283
15°	2813	2820	2813	2800	2781	793
25°	2498	2518	2529	2511	2489	1144
35°	2009	2037	2130	2141	2133	1259
45°	1556	1582	1634	1708	1718	1200
55°	1090	1108	1162	1226	1262	972
65°	638	656	695	744	786	633
75°	256	270	289	303	320	280
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2988.4	2988.4	2988.4	2988.4	2988.4
2.5°	2996.4	2997.6	2990.7	2972.3	2960.8
5°	2985.0	2983.8	2972.3	2956.3	2947.1
7.5°	2951.7	2954.0	2950.5	2927.5	2914.9
10°	2919.5	2920.7	2911.5	2893.1	2878.2
12.5°	2878.2	2877.0	2864.4	2855.2	2831.1
15°	2812.7	2819.6	2812.7	2800.1	2780.6
17.5°	2749.6	2749.6	2754.2	2732.4	2717.5
20°	2678.4	2681.9	2681.9	2664.6	2647.4
22.5°	2595.8	2606.1	2609.5	2591.2	2570.5
25°	2498.2	2517.7	2529.2	2510.8	2489.0
27.5°	2379.9	2409.8	2444.2	2430.4	2406.3
30°	2247.9	2291.5	2348.9	2337.4	2320.2
32.5°	2122.8	2166.4	2245.6	2241.0	2231.8
35°	2009.1	2036.7	2129.6	2141.1	2133.1
37.5°	1901.2	1926.4	2013.7	2040.1	2033.2
40°	1787.5	1815.1	1884.0	1931.0	1933.3
42.5°	1675.0	1701.4	1757.7	1825.4	1825.4
45°	1555.6	1582.0	1633.7	1708.3	1717.5
47.5°	1438.5	1466.1	1516.6	1591.2	1606.1
50°	1323.7	1349.0	1399.5	1471.8	1494.8
52.5°	1204.3	1231.9	1281.2	1347.8	1381.1
55°	1089.5	1107.9	1161.8	1226.1	1261.7
57.5°	970.1	987.3	1048.2	1103.3	1140.0
60°	855.3	877.1	924.2	980.4	1022.9
62.5°	745.1	768.1	808.2	857.6	905.8
65°	638.3	655.5	694.6	743.9	786.4
67.5°	535.0	549.9	589.0	623.4	668.2
70°	430.5	450.0	478.7	512.0	540.7
72.5°	346.7	354.8	378.9	403.0	432.8
75°	256.0	269.8	289.3	303.1	320.3
77.5°	183.7	191.7	203.2	214.7	230.8
80°	122.8	126.3	136.6	138.9	151.5
82.5°	74.6	76.9	79.2	80.4	85.0
85°	40.2	40.2	40.2	37.9	37.9
87.5°	23.0	23.0	19.5	16.1	11.5
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)