

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: P558084

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-81-86-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: P558084  
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-40-UNV-81-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

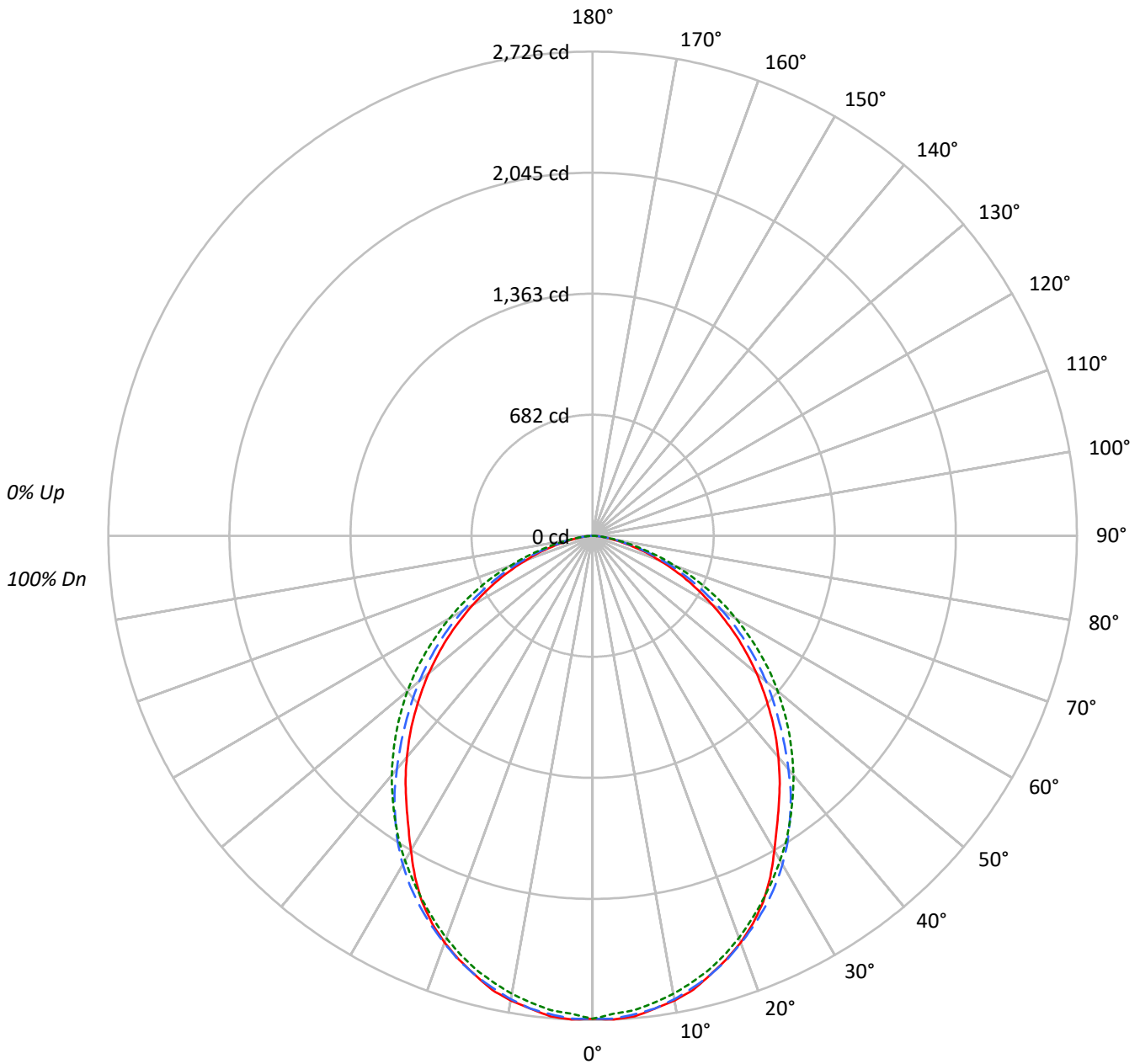
Lumens per Lamp: N/A  
Luminaire Lumens: 6287.0 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	7317	7317	7317
5°	7336	7305	7243
10°	7258	7238	7156
15°	7129	7129	7048
20°	6979	6988	6898
25°	6749	6832	6724
30°	6355	6641	6559
35°	6005	6365	6376
40°	5713	6021	6179
45°	5386	5657	5947
50°	5042	5331	5694
55°	4651	4959	5386
60°	4188	4526	5009
65°	3698	4024	4556
70°	3082	3427	3871
75°	2421	2737	3030
80°	1733	1926	2137
85°	1130	1130	1065



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	256.0	4.1
10°-20°	719.2	11.4
20°-30°	1050.9	16.7
30°-40°	1192.9	19.0
40°-50°	1151.6	18.3
50°-60°	950.0	15.1
60°-70°	632.6	10.1
70°-80°	283.1	4.5
80°-90°	50.7	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°	2026.1	32.2
0°-40°	3219.1	51.2
0°-60°	5320.6	84.6
0°-90°	6287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6287.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2719	2719	2719	2719	2719	
5°	2716	2715	2704	2690	2681	257
15°	2559	2565	2559	2548	2530	721
25°	2273	2291	2301	2284	2265	1041
35°	1828	1853	1938	1948	1941	1145
45°	1415	1439	1486	1554	1563	1092
55°	991	1008	1057	1116	1148	885
65°	581	596	632	677	716	576
75°	233	246	263	276	291	255
85°	37	37	37	34	34	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2719.0	2719.0	2719.0	2719.0	2719.0
2.5°	2726.3	2727.3	2721.1	2704.3	2693.9
5°	2715.8	2714.8	2704.3	2689.7	2681.4
7.5°	2685.5	2687.6	2684.5	2663.6	2652.1
10°	2656.3	2657.3	2649.0	2632.3	2618.7
12.5°	2618.7	2617.6	2606.2	2597.8	2575.9
15°	2559.1	2565.4	2559.1	2547.7	2529.9
17.5°	2501.7	2501.7	2505.9	2486.0	2472.5
20°	2436.9	2440.1	2440.1	2424.4	2408.7
22.5°	2361.7	2371.1	2374.3	2357.6	2338.7
25°	2272.9	2290.7	2301.1	2284.4	2264.6
27.5°	2165.4	2192.5	2223.8	2211.3	2189.4
30°	2045.2	2084.9	2137.2	2126.7	2111.0
32.5°	1931.4	1971.1	2043.1	2039.0	2030.6
35°	1828.0	1853.0	1937.6	1948.1	1940.8
37.5°	1729.8	1752.8	1832.1	1856.2	1849.9
40°	1626.4	1651.4	1714.1	1756.9	1759.0
42.5°	1524.0	1548.0	1599.2	1660.8	1660.8
45°	1415.4	1439.4	1486.4	1554.3	1562.6
47.5°	1308.8	1333.9	1379.9	1447.7	1461.3
50°	1204.4	1227.3	1273.3	1339.1	1360.0
52.5°	1095.7	1120.8	1165.7	1226.3	1256.6
55°	991.3	1008.0	1057.1	1115.6	1148.0
57.5°	882.6	898.3	953.7	1003.8	1037.2
60°	778.2	798.0	840.9	892.0	930.7
62.5°	677.9	698.8	735.4	780.3	824.2
65°	580.8	596.4	632.0	676.9	715.5
67.5°	486.8	500.3	535.9	567.2	607.9
70°	391.7	409.5	435.6	465.9	492.0
72.5°	315.5	322.8	344.7	366.6	393.8
75°	232.9	245.5	263.2	275.8	291.4
77.5°	167.1	174.4	184.9	195.3	210.0
80°	111.8	114.9	124.3	126.4	137.9
82.5°	67.9	70.0	72.1	73.1	77.3
85°	36.6	36.6	36.6	34.5	34.5
87.5°	20.9	20.9	17.8	14.6	10.4
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)