

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: P557076

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-82-86-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: P557076  
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-40-UNV-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 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**

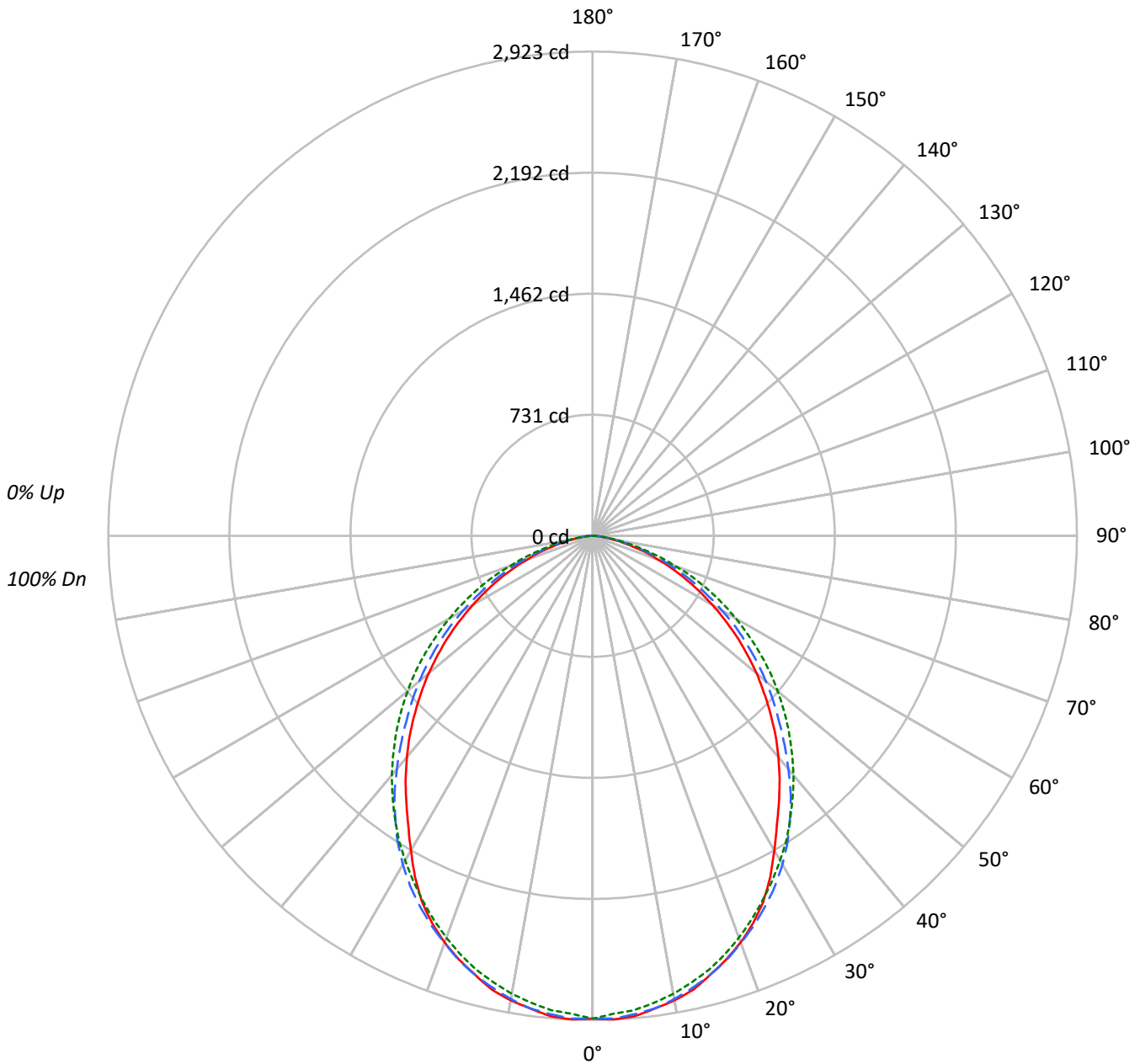
Lumens per Lamp: N/A  
Luminaire Lumens: 6740.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7844	7844	7844
5°	7865	7831	7765
10°	7781	7760	7671
15°	7643	7643	7556
20°	7481	7491	7395
25°	7235	7325	7209
30°	6813	7119	7032
35°	6438	6824	6835
40°	6125	6455	6624
45°	5774	6064	6375
50°	5405	5715	6104
55°	4986	5317	5774
60°	4490	4852	5370
65°	3964	4314	4884
70°	3304	3674	4150
75°	2596	2934	3248
80°	1857	2066	2290
85°	1210	1210	1142



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.4	4.1
10°-20°	771.0	11.4
20°-30°	1126.7	16.7
30°-40°	1278.9	19.0
40°-50°	1234.6	18.3
50°-60°	1018.4	15.1
60°-70°	678.2	10.1
70°-80°	303.5	4.5
80°-90°	54.3	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°	2172.1	32.2
0°-40°	3451.0	51.2
0°-60°	5704.0	84.6
0°-90°	6740.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6740.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2915	2915	2915	2915	2915	
5°	2912	2910	2899	2884	2875	276
15°	2744	2750	2744	2731	2712	773
25°	2437	2456	2467	2449	2428	1116
35°	1960	1987	2077	2088	2081	1228
45°	1517	1543	1594	1666	1675	1171
55°	1063	1081	1133	1196	1231	948
65°	623	639	678	726	767	617
75°	250	263	282	296	312	273
85°	39	39	39	37	37	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2914.9	2914.9	2914.9	2914.9	2914.9
2.5°	2922.7	2923.8	2917.1	2899.2	2888.0
5°	2911.5	2910.4	2899.2	2883.5	2874.6
7.5°	2879.0	2881.3	2877.9	2855.5	2843.2
10°	2847.7	2848.8	2839.8	2821.9	2807.4
12.5°	2807.4	2806.3	2793.9	2785.0	2761.5
15°	2743.5	2750.3	2743.5	2731.2	2712.2
17.5°	2682.0	2682.0	2686.4	2665.2	2650.6
20°	2612.5	2615.9	2615.9	2599.1	2582.3
22.5°	2531.9	2542.0	2545.3	2527.4	2507.3
25°	2436.7	2455.8	2467.0	2449.0	2427.8
27.5°	2321.4	2350.5	2384.1	2370.6	2347.1
30°	2192.6	2235.1	2291.1	2279.9	2263.1
32.5°	2070.5	2113.1	2190.4	2185.9	2176.9
35°	1959.7	1986.6	2077.3	2088.5	2080.6
37.5°	1854.4	1879.0	1964.2	1989.9	1983.2
40°	1743.6	1770.4	1837.6	1883.5	1885.8
42.5°	1633.8	1659.6	1714.4	1780.5	1780.5
45°	1517.3	1543.1	1593.5	1666.3	1675.2
47.5°	1403.1	1430.0	1479.3	1552.1	1566.6
50°	1291.1	1315.8	1365.1	1435.6	1458.0
52.5°	1174.7	1201.6	1249.7	1314.7	1347.1
55°	1062.7	1080.6	1133.3	1196.0	1230.7
57.5°	946.2	963.0	1022.4	1076.1	1112.0
60°	834.3	855.5	901.5	956.3	997.8
62.5°	726.8	749.2	788.3	836.5	883.5
65°	622.6	639.4	677.5	725.6	767.1
67.5°	521.8	536.4	574.5	608.1	651.7
70°	419.9	439.0	467.0	499.4	527.4
72.5°	338.2	346.0	369.5	393.1	422.2
75°	249.7	263.2	282.2	295.6	312.4
77.5°	179.2	187.0	198.2	209.4	225.1
80°	119.8	123.2	133.3	135.5	147.8
82.5°	72.8	75.0	77.3	78.4	82.9
85°	39.2	39.2	39.2	37.0	37.0
87.5°	22.4	22.4	19.0	15.7	11.2
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)