

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: P557006

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-81-97-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: P557006  
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-81-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

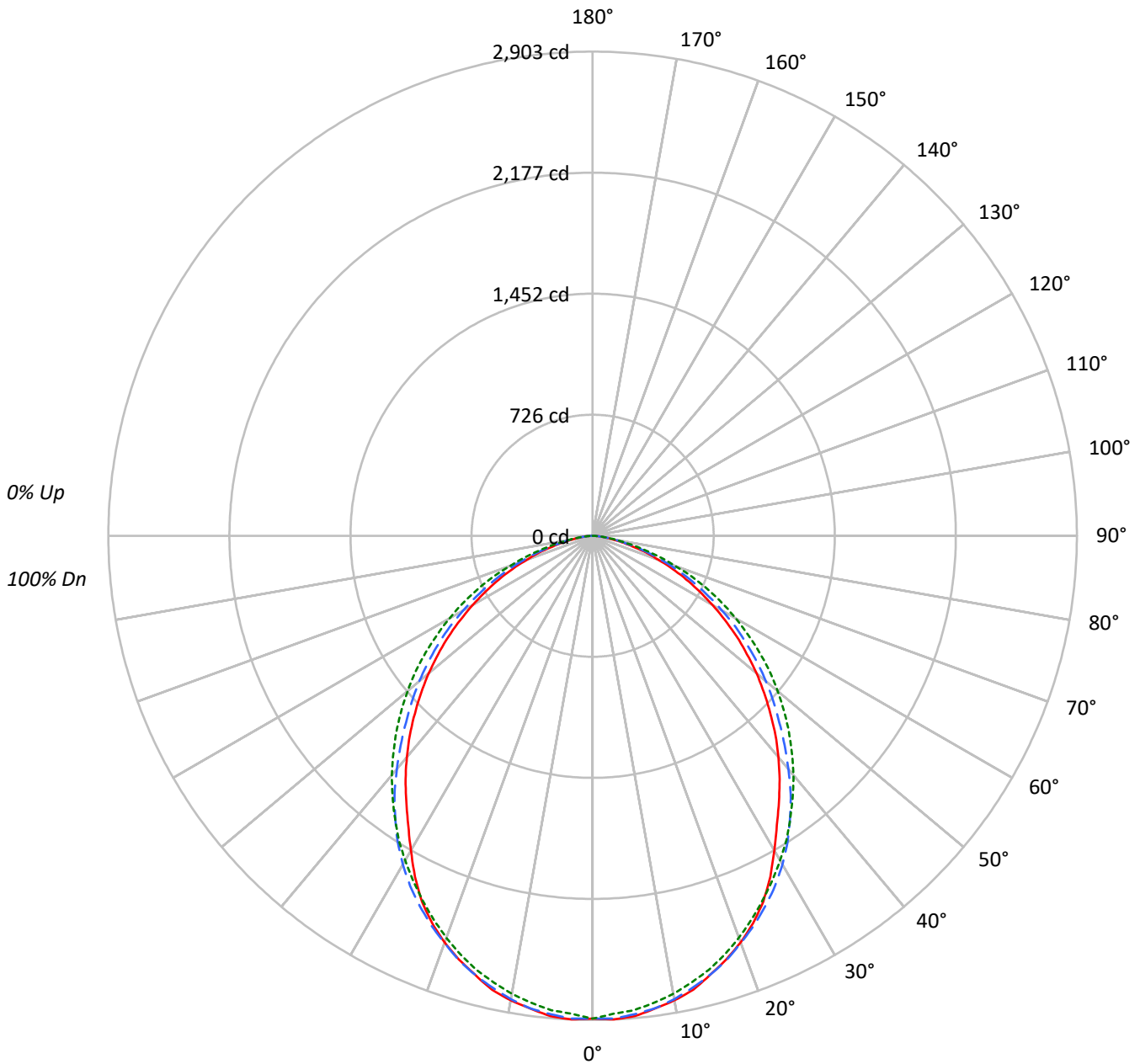
Lumens per Lamp: N/A  
Luminaire Lumens: 6694.0 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7790	7790	7790
5°	7811	7778	7712
10°	7728	7707	7619
15°	7591	7591	7504
20°	7430	7440	7344
25°	7186	7275	7159
30°	6766	7071	6984
35°	6394	6777	6788
40°	6083	6411	6579
45°	5735	6023	6332
50°	5368	5676	6062
55°	4952	5280	5735
60°	4459	4818	5333
65°	3938	4285	4851
70°	3282	3649	4121
75°	2578	2914	3226
80°	1844	2050	2275
85°	1201	1201	1133



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.6	4.1
10°-20°	765.7	11.4
20°-30°	1119.0	16.7
30°-40°	1270.2	19.0
40°-50°	1226.2	18.3
50°-60°	1011.5	15.1
60°-70°	673.6	10.1
70°-80°	301.4	4.5
80°-90°	53.9	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°	2157.3	32.2
0°-40°	3427.5	51.2
0°-60°	5665.1	84.6
0°-90°	6694.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6694.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2895	2895	2895	2895	2895	
5°	2892	2890	2879	2864	2855	274
15°	2725	2732	2725	2713	2694	768
25°	2420	2439	2450	2432	2411	1108
35°	1946	1973	2063	2074	2066	1219
45°	1507	1533	1583	1655	1664	1163
55°	1056	1073	1126	1188	1222	942
65°	618	635	673	721	762	613
75°	248	261	280	294	310	271
85°	39	39	39	37	37	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2895.0	2895.0	2895.0	2895.0	2895.0
2.5°	2902.8	2903.9	2897.2	2879.4	2868.3
5°	2891.6	2890.5	2879.4	2863.8	2854.9
7.5°	2859.4	2861.6	2858.3	2836.0	2823.8
10°	2828.3	2829.4	2820.5	2802.7	2788.2
12.5°	2788.2	2787.1	2774.9	2766.0	2742.6
15°	2724.8	2731.5	2724.8	2712.6	2693.7
17.5°	2663.7	2663.7	2668.1	2647.0	2632.5
20°	2594.7	2598.0	2598.0	2581.3	2564.7
22.5°	2514.6	2524.6	2528.0	2510.2	2490.2
25°	2420.1	2439.0	2450.1	2432.3	2411.2
27.5°	2305.5	2334.4	2367.8	2354.5	2331.1
30°	2177.6	2219.9	2275.5	2264.4	2247.7
32.5°	2056.4	2098.7	2175.4	2171.0	2162.1
35°	1946.3	1973.0	2063.1	2074.2	2066.4
37.5°	1841.8	1866.2	1950.7	1976.3	1969.7
40°	1731.7	1758.3	1825.1	1870.7	1872.9
42.5°	1622.7	1648.2	1702.7	1768.4	1768.4
45°	1507.0	1532.6	1582.6	1654.9	1663.8
47.5°	1393.6	1420.2	1469.2	1541.5	1555.9
50°	1282.3	1306.8	1355.7	1425.8	1448.0
52.5°	1166.7	1193.4	1241.2	1305.7	1337.9
55°	1055.5	1073.2	1125.5	1187.8	1222.3
57.5°	939.8	956.5	1015.4	1068.8	1104.4
60°	828.6	849.7	895.3	949.8	990.9
62.5°	721.8	744.0	783.0	830.8	877.5
65°	618.4	635.0	672.9	720.7	761.8
67.5°	518.3	532.7	570.5	603.9	647.3
70°	417.1	436.0	463.8	496.0	523.8
72.5°	335.9	343.7	367.0	390.4	419.3
75°	248.0	261.4	280.3	293.6	310.3
77.5°	177.9	185.7	196.9	208.0	223.5
80°	119.0	122.3	132.3	134.6	146.8
82.5°	72.3	74.5	76.7	77.9	82.3
85°	38.9	38.9	38.9	36.7	36.7
87.5°	22.2	22.2	18.9	15.6	11.1
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)