

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: P557582

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-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: P557582  
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-LD4-2STD-40-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 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

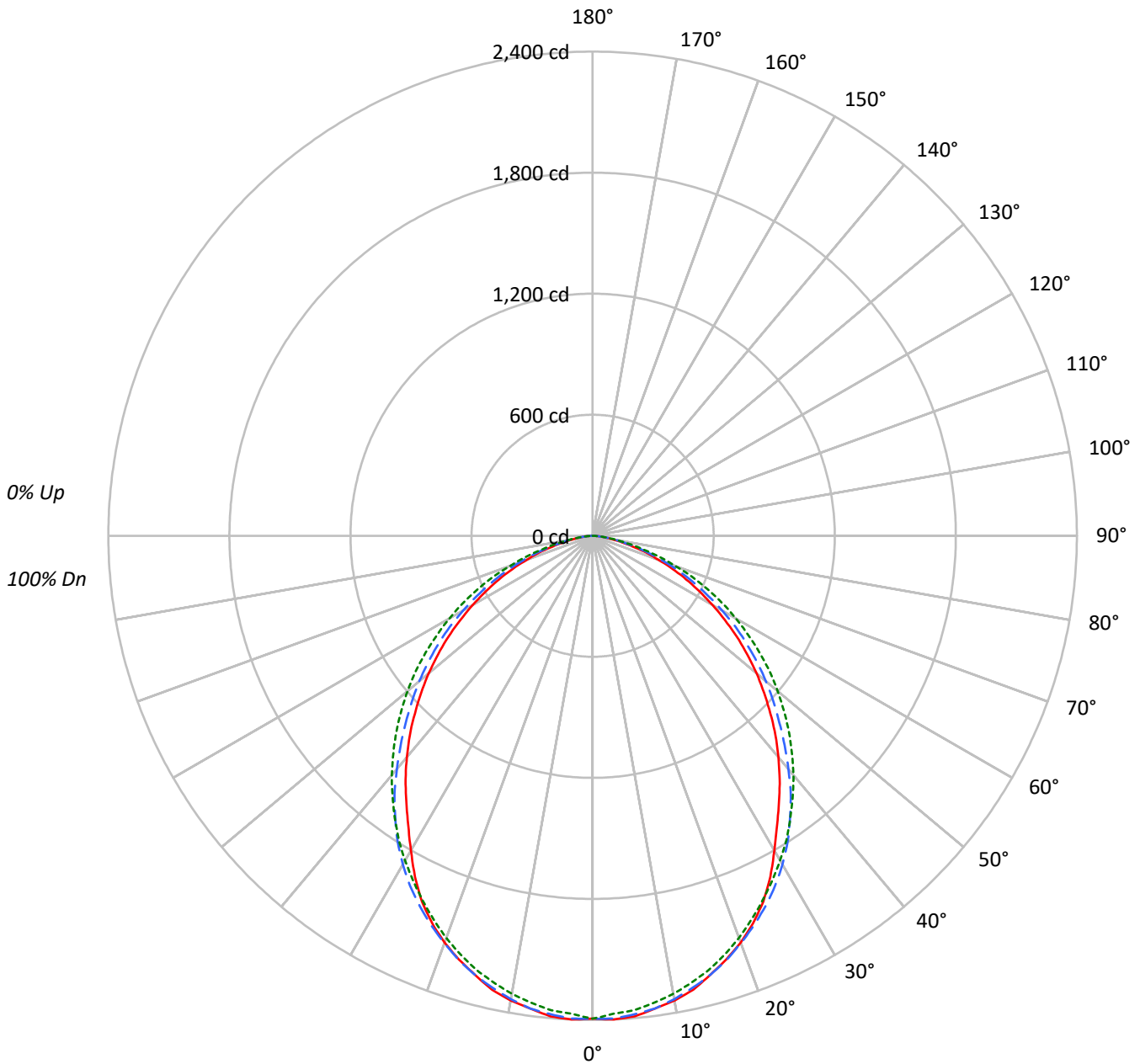
Lumens per Lamp: N/A  
Luminaire Lumens: 5535.0 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	6441	6441	6441
5°	6459	6431	6377
10°	6390	6372	6300
15°	6277	6277	6205
20°	6144	6152	6073
25°	5942	6015	5920
30°	5595	5846	5775
35°	5287	5604	5613
40°	5030	5301	5440
45°	4742	4980	5235
50°	4439	4693	5012
55°	4094	4366	4742
60°	3687	3984	4410
65°	3256	3543	4011
70°	2714	3017	3408
75°	2132	2409	2668
80°	1525	1695	1881
85°	994	994	936



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.4	4.1
10°-20°	633.1	11.4
20°-30°	925.2	16.7
30°-40°	1050.3	19.0
40°-50°	1013.9	18.3
50°-60°	836.4	15.1
60°-70°	556.9	10.1
70°-80°	249.2	4.5
80°-90°	44.6	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°	1783.8	32.2
0°-40°	2834.0	51.2
0°-60°	4684.2	84.6
0°-90°	5535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5535.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2394	2394	2394	2394	2394	
5°	2391	2390	2381	2368	2361	226
15°	2253	2259	2253	2243	2227	635
25°	2001	2017	2026	2011	1994	916
35°	1609	1631	1706	1715	1709	1008
45°	1246	1267	1309	1368	1376	961
55°	873	887	931	982	1011	779
65°	511	525	556	596	630	507
75°	205	216	232	243	257	224
85°	32	32	32	30	30	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2393.7	2393.7	2393.7	2393.7	2393.7
2.5°	2400.2	2401.1	2395.6	2380.9	2371.7
5°	2391.0	2390.1	2380.9	2368.0	2360.6
7.5°	2364.3	2366.2	2363.4	2345.0	2334.9
10°	2338.6	2339.5	2332.1	2317.4	2305.5
12.5°	2305.5	2304.5	2294.4	2287.1	2267.8
15°	2253.0	2258.6	2253.0	2242.9	2227.3
17.5°	2202.5	2202.5	2206.1	2188.7	2176.7
20°	2145.4	2148.2	2148.2	2134.4	2120.6
22.5°	2079.2	2087.5	2090.3	2075.6	2059.0
25°	2001.1	2016.7	2025.9	2011.2	1993.7
27.5°	1906.4	1930.3	1957.8	1946.8	1927.5
30°	1800.6	1835.5	1881.5	1872.3	1858.5
32.5°	1700.4	1735.3	1798.8	1795.1	1787.7
35°	1609.3	1631.4	1705.9	1715.1	1708.6
37.5°	1522.9	1543.1	1613.0	1634.1	1628.6
40°	1431.8	1453.9	1509.1	1546.8	1548.6
42.5°	1341.7	1362.9	1407.9	1462.2	1462.2
45°	1246.1	1267.2	1308.6	1368.4	1375.7
47.5°	1152.3	1174.3	1214.8	1274.6	1286.5
50°	1060.3	1080.5	1121.0	1178.9	1197.3
52.5°	964.7	986.7	1026.3	1079.6	1106.3
55°	872.7	887.4	930.6	982.1	1010.7
57.5°	777.1	790.9	839.6	883.7	913.2
60°	685.1	702.6	740.3	785.3	819.4
62.5°	596.8	615.2	647.4	686.9	725.6
65°	511.3	525.1	556.4	595.9	629.9
67.5°	428.5	440.5	471.8	499.3	535.2
70°	344.9	360.5	383.5	410.1	433.1
72.5°	277.7	284.2	303.5	322.8	346.7
75°	205.1	216.1	231.7	242.8	256.6
77.5°	147.1	153.6	162.8	172.0	184.8
80°	98.4	101.2	109.4	111.3	121.4
82.5°	59.8	61.6	63.5	64.4	68.1
85°	32.2	32.2	32.2	30.3	30.3
87.5°	18.4	18.4	15.6	12.9	9.2
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)