

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: P557550

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-93-97-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: P557550  
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-35-UNV-93-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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**

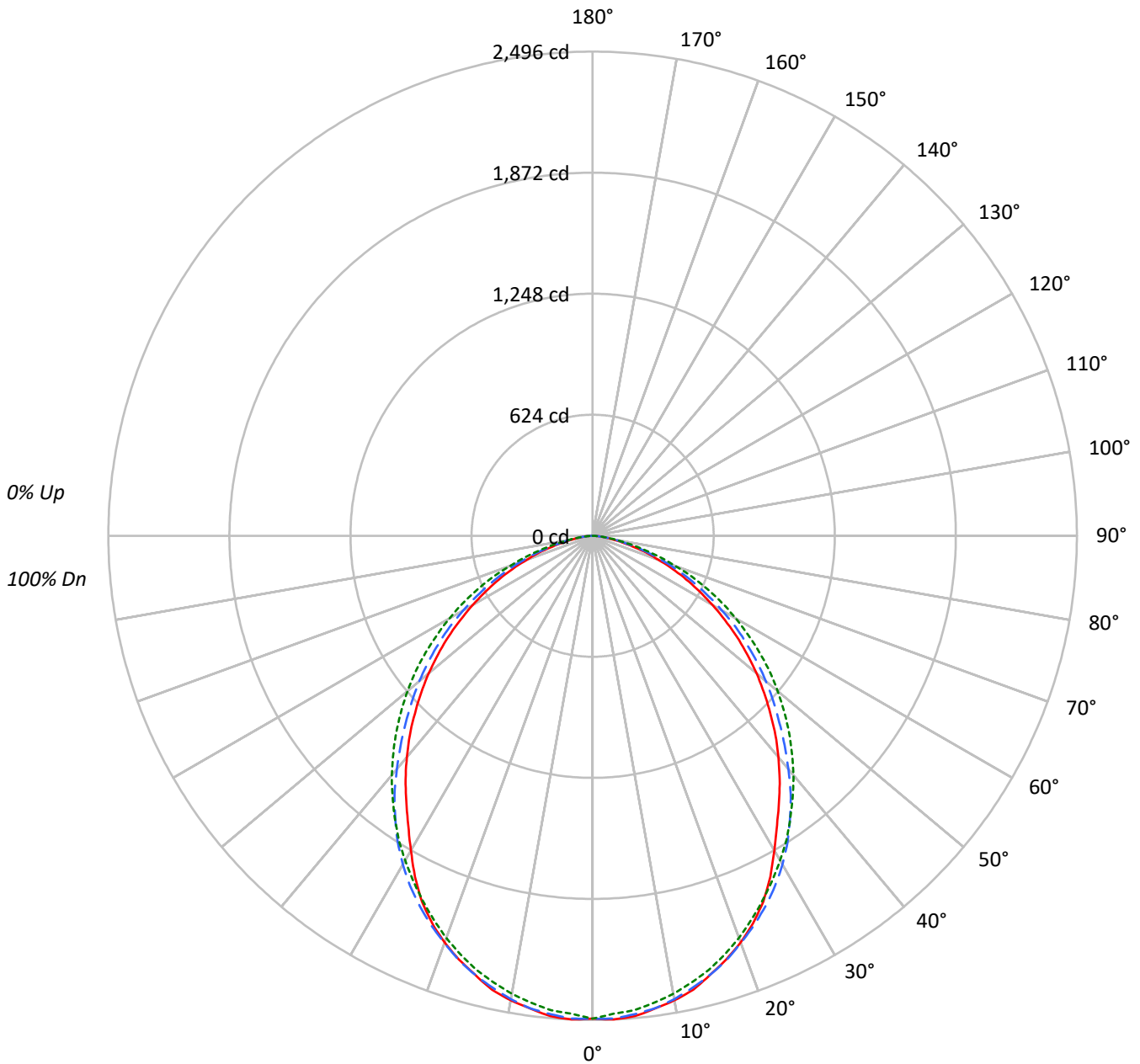
Lumens per Lamp: N/A  
Luminaire Lumens: 5756.0 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	6699	6699	6699
5°	6717	6688	6631
10°	6645	6627	6551
15°	6527	6527	6453
20°	6389	6397	6315
25°	6179	6255	6156
30°	5818	6080	6005
35°	5498	5828	5837
40°	5231	5513	5657
45°	4931	5179	5445
50°	4616	4881	5213
55°	4258	4541	4931
60°	3835	4143	4586
65°	3386	3684	4171
70°	2821	3138	3544
75°	2218	2506	2774
80°	1585	1764	1956
85°	1034	1034	976



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	234.4	4.1
10°-20°	658.4	11.4
20°-30°	962.2	16.7
30°-40°	1092.2	19.0
40°-50°	1054.3	18.3
50°-60°	869.8	15.1
60°-70°	579.2	10.1
70°-80°	259.2	4.5
80°-90°	46.4	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°	1855.0	32.2
0°-40°	2947.2	51.2
0°-60°	4871.3	84.6
0°-90°	5756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5756.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2489	2489	2489	2489	2489	
5°	2486	2486	2476	2462	2455	235
15°	2343	2349	2343	2332	2316	661
25°	2081	2097	2107	2092	2073	953
35°	1674	1696	1774	1784	1777	1049
45°	1296	1318	1361	1423	1431	1000
55°	908	923	968	1021	1051	810
65°	532	546	579	620	655	527
75°	213	225	241	252	267	233
85°	34	34	34	32	32	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2489.3	2489.3	2489.3	2489.3	2489.3
2.5°	2496.0	2497.0	2491.2	2475.9	2466.4
5°	2486.5	2485.5	2475.9	2462.5	2454.9
7.5°	2458.7	2460.6	2457.8	2438.6	2428.1
10°	2431.9	2432.9	2425.2	2409.9	2397.5
12.5°	2397.5	2396.6	2386.0	2378.4	2358.3
15°	2343.0	2348.7	2343.0	2332.5	2316.2
17.5°	2290.4	2290.4	2294.2	2276.1	2263.6
20°	2231.1	2234.0	2234.0	2219.6	2205.3
22.5°	2162.3	2170.9	2173.7	2158.4	2141.2
25°	2081.0	2097.2	2106.8	2091.5	2073.3
27.5°	1982.5	2007.3	2036.0	2024.5	2004.5
30°	1872.5	1908.8	1956.6	1947.1	1932.7
32.5°	1768.3	1804.6	1870.6	1866.8	1859.1
35°	1673.6	1696.5	1774.0	1783.6	1776.9
37.5°	1583.7	1604.7	1677.4	1699.4	1693.7
40°	1489.0	1512.0	1569.3	1608.5	1610.5
42.5°	1395.3	1417.3	1464.1	1520.6	1520.6
45°	1295.8	1317.8	1360.9	1423.0	1430.7
47.5°	1198.3	1221.2	1263.3	1325.5	1337.9
50°	1102.6	1123.7	1165.8	1226.0	1245.1
52.5°	1003.2	1026.1	1067.3	1122.7	1150.5
55°	907.6	922.9	967.8	1021.4	1051.0
57.5°	808.1	822.4	873.1	919.0	949.6
60°	712.5	730.6	769.8	816.7	852.1
62.5°	620.7	639.8	673.3	714.4	754.5
65°	531.7	546.1	578.6	619.7	655.1
67.5°	445.6	458.1	490.6	519.3	556.6
70°	358.6	374.9	398.8	426.5	450.4
72.5°	288.8	295.5	315.6	335.7	360.5
75°	213.3	224.7	241.0	252.5	266.8
77.5°	153.0	159.7	169.3	178.8	192.2
80°	102.3	105.2	113.8	115.7	126.2
82.5°	62.2	64.1	66.0	66.9	70.8
85°	33.5	33.5	33.5	31.6	31.6
87.5°	19.1	19.1	16.3	13.4	9.6
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)