

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: P557418

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-94-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: P557418  
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-LD4-2LO-50-UNV-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

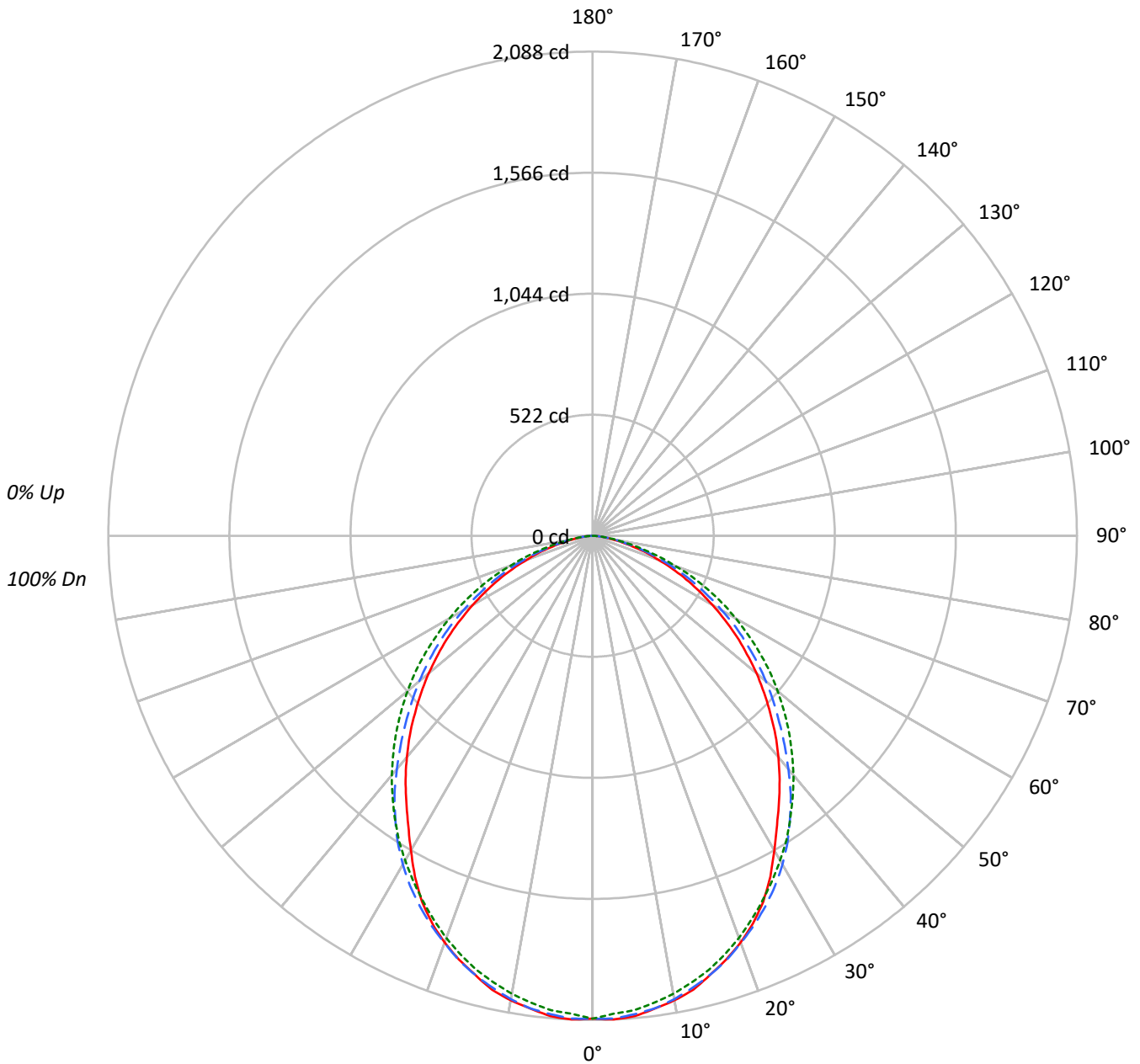
Lumens per Lamp: N/A  
Luminaire Lumens: 4815.1 lumens  
Efficiency: N/A  
Efficacy: 102.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	5604	5604	5604
5°	5619	5595	5547
10°	5559	5544	5480
15°	5460	5460	5398
20°	5345	5352	5283
25°	5169	5233	5150
30°	4867	5086	5024
35°	4599	4875	4883
40°	4376	4612	4732
45°	4125	4332	4555
50°	3862	4083	4361
55°	3562	3798	4125
60°	3208	3466	3836
65°	2832	3082	3489
70°	2360	2625	2965
75°	1855	2096	2321
80°	1327	1475	1636
85°	865	865	815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	196.1	4.1
10°-20°	550.8	11.4
20°-30°	804.9	16.7
30°-40°	913.6	19.0
40°-50°	882.0	18.3
50°-60°	727.6	15.1
60°-70°	484.5	10.1
70°-80°	216.8	4.5
80°-90°	38.8	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°	1551.8	32.2
0°-40°	2465.4	51.2
0°-60°	4075.0	84.6
0°-90°	4815.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4815.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2082	2082	2082	2082	2082	
5°	2080	2079	2071	2060	2054	197
15°	1960	1965	1960	1951	1938	553
25°	1741	1754	1762	1750	1734	797
35°	1400	1419	1484	1492	1486	877
45°	1084	1102	1138	1190	1197	836
55°	759	772	810	854	879	678
65°	445	457	484	518	548	441
75°	178	188	202	211	223	195
85°	28	28	28	26	26	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2082.4	2082.4	2082.4	2082.4	2082.4
2.5°	2088.0	2088.8	2084.0	2071.2	2063.2
5°	2080.0	2079.2	2071.2	2060.0	2053.6
7.5°	2056.8	2058.4	2056.0	2040.0	2031.2
10°	2034.4	2035.2	2028.8	2016.0	2005.6
12.5°	2005.6	2004.8	1996.0	1989.6	1972.8
15°	1960.0	1964.8	1960.0	1951.2	1937.6
17.5°	1916.0	1916.0	1919.2	1904.0	1893.6
20°	1866.4	1868.8	1868.8	1856.8	1844.8
22.5°	1808.8	1816.0	1818.4	1805.6	1791.2
25°	1740.8	1754.4	1762.4	1749.6	1734.4
27.5°	1658.4	1679.2	1703.2	1693.6	1676.8
30°	1566.4	1596.8	1636.8	1628.8	1616.8
32.5°	1479.2	1509.6	1564.8	1561.6	1555.2
35°	1400.0	1419.2	1484.0	1492.0	1486.4
37.5°	1324.8	1342.4	1403.2	1421.6	1416.8
40°	1245.6	1264.8	1312.8	1345.6	1347.2
42.5°	1167.2	1185.6	1224.8	1272.0	1272.0
45°	1084.0	1102.4	1138.4	1190.4	1196.8
47.5°	1002.4	1021.6	1056.8	1108.8	1119.2
50°	922.4	940.0	975.2	1025.6	1041.6
52.5°	839.2	858.4	892.8	939.2	962.4
55°	759.2	772.0	809.6	854.4	879.2
57.5°	676.0	688.0	730.4	768.8	794.4
60°	596.0	611.2	644.0	683.2	712.8
62.5°	519.2	535.2	563.2	597.6	631.2
65°	444.8	456.8	484.0	518.4	548.0
67.5°	372.8	383.2	410.4	434.4	465.6
70°	300.0	313.6	333.6	356.8	376.8
72.5°	241.6	247.2	264.0	280.8	301.6
75°	178.4	188.0	201.6	211.2	223.2
77.5°	128.0	133.6	141.6	149.6	160.8
80°	85.6	88.0	95.2	96.8	105.6
82.5°	52.0	53.6	55.2	56.0	59.2
85°	28.0	28.0	28.0	26.4	26.4
87.5°	16.0	16.0	13.6	11.2	8.0
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)