

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: P557671

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-93-87-EDD**

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: P557671  
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-50-UNV-93-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

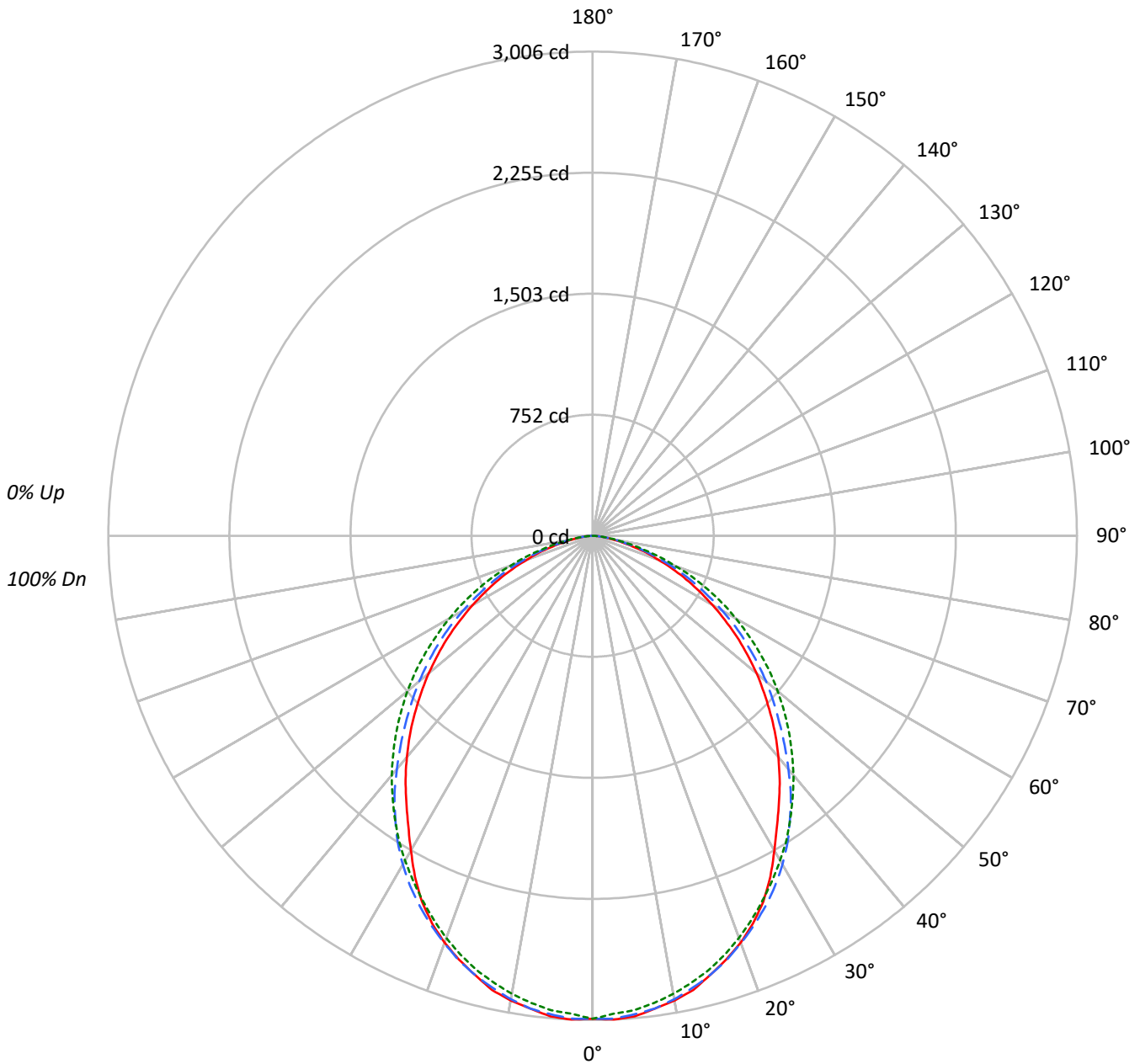
Lumens per Lamp: N/A  
Luminaire Lumens: 6933.0 lumens  
Efficiency: N/A  
Efficacy: 104.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P557671

CATALOG NUMBER: FUSL-12-4-LD4-2STD-50-UNV-93-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P557671

CATALOG NUMBER: FUSL-12-4-LD4-2STD-50-UNV-93-87-EDD

**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°	8068	8068	8068
5°	8090	8056	7987
10°	8004	7982	7891
15°	7862	7862	7772
20°	7696	7706	7607
25°	7442	7535	7415
30°	7008	7323	7233
35°	6622	7019	7031
40°	6300	6640	6814
45°	5940	6238	6558
50°	5560	5878	6278
55°	5128	5469	5939
60°	4619	4991	5524
65°	4078	4437	5024
70°	3399	3779	4268
75°	2671	3018	3342
80°	1911	2125	2356
85°	1244	1244	1173



TEST NUMBER: P557671

CATALOG NUMBER: FUSL-12-4-LD4-2STD-50-UNV-93-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.3	4.1
10°-20°	793.1	11.4
20°-30°	1158.9	16.7
30°-40°	1315.5	19.0
40°-50°	1269.9	18.3
50°-60°	1047.6	15.1
60°-70°	697.6	10.1
70°-80°	312.2	4.5
80°-90°	55.8	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°	2234.3	32.2
0°-40°	3549.8	51.2
0°-60°	5867.4	84.6
0°-90°	6933.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6933.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2998	2998	2998	2998	2998	
5°	2995	2994	2982	2966	2957	283
15°	2822	2829	2822	2809	2790	796
25°	2506	2526	2538	2519	2497	1148
35°	2016	2043	2137	2148	2140	1263
45°	1561	1587	1639	1714	1723	1204
55°	1093	1112	1166	1230	1266	976
65°	640	658	697	746	789	635
75°	257	271	290	304	321	281
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



TEST NUMBER: P557671

CATALOG NUMBER: FUSL-12-4-LD4-2STD-50-UNV-93-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2998.3	2998.3	2998.3	2998.3	2998.3
2.5°	3006.4	3007.6	3000.6	2982.2	2970.7
5°	2994.9	2993.7	2982.2	2966.1	2956.9
7.5°	2961.5	2963.8	2960.3	2937.3	2924.6
10°	2929.2	2930.4	2921.2	2902.7	2887.8
12.5°	2887.8	2886.6	2873.9	2864.7	2840.5
15°	2822.1	2829.0	2822.1	2809.4	2789.9
17.5°	2758.8	2758.8	2763.4	2741.5	2726.5
20°	2687.3	2690.8	2690.8	2673.5	2656.2
22.5°	2604.4	2614.8	2618.2	2599.8	2579.1
25°	2506.5	2526.1	2537.6	2519.2	2497.3
27.5°	2387.8	2417.8	2452.4	2438.5	2414.3
30°	2255.4	2299.2	2356.7	2345.2	2327.9
32.5°	2129.8	2173.6	2253.1	2248.5	2239.3
35°	2015.8	2043.4	2136.7	2148.3	2140.2
37.5°	1907.5	1932.9	2020.4	2046.9	2040.0
40°	1793.5	1821.1	1890.2	1937.5	1939.8
42.5°	1680.6	1707.1	1763.5	1831.5	1831.5
45°	1560.8	1587.3	1639.1	1714.0	1723.2
47.5°	1443.3	1471.0	1521.6	1596.5	1611.5
50°	1328.1	1353.5	1404.1	1476.7	1499.7
52.5°	1208.3	1236.0	1285.5	1352.3	1385.7
55°	1093.1	1111.6	1165.7	1230.2	1265.9
57.5°	973.3	990.6	1051.7	1107.0	1143.8
60°	858.2	880.0	927.3	983.7	1026.3
62.5°	747.6	770.6	810.9	860.5	908.8
65°	640.4	657.7	696.9	746.4	789.0
67.5°	536.8	551.8	590.9	625.5	670.4
70°	432.0	451.5	480.3	513.7	542.5
72.5°	347.9	355.9	380.1	404.3	434.3
75°	256.9	270.7	290.3	304.1	321.4
77.5°	184.3	192.4	203.9	215.4	231.5
80°	123.3	126.7	137.1	139.4	152.0
82.5°	74.9	77.2	79.5	80.6	85.2
85°	40.3	40.3	40.3	38.0	38.0
87.5°	23.0	23.0	19.6	16.1	11.5
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)