

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: P556430

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-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: P556430  
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-LD4-1LO-30-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 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

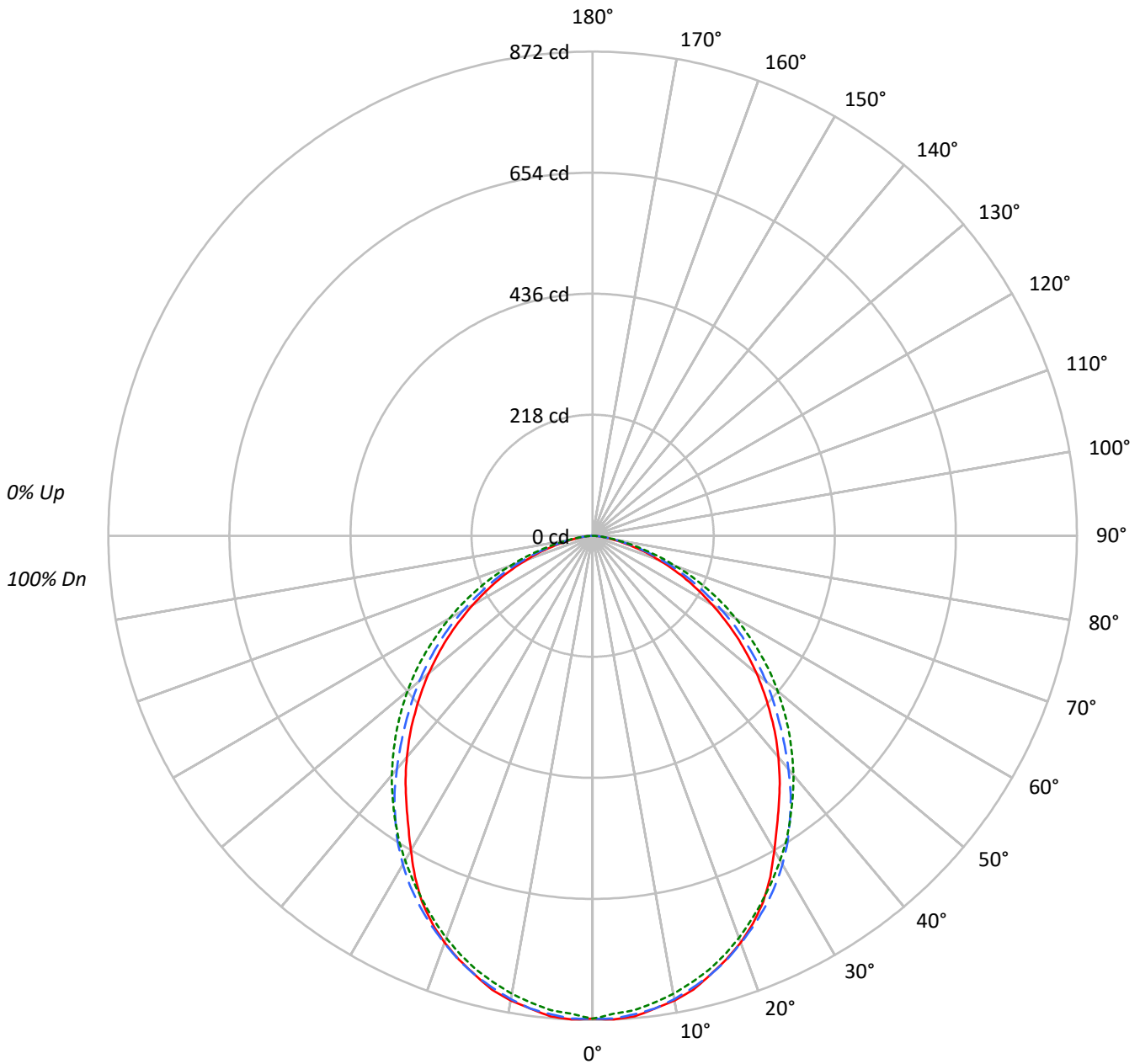
Lumens per Lamp: N/A  
Luminaire Lumens: 2011.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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

TEST NUMBER: P556430

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-97-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556430

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-97-EDD-90

**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°	2340	2340	2340
5°	2347	2337	2317
10°	2322	2315	2289
15°	2281	2281	2254
20°	2232	2235	2206
25°	2159	2186	2151
30°	2033	2124	2098
35°	1921	2036	2039
40°	1827	1926	1977
45°	1723	1809	1902
50°	1613	1705	1821
55°	1488	1586	1723
60°	1340	1448	1602
65°	1183	1287	1457
70°	986	1096	1238
75°	775	875	969
80°	555	617	683
85°	361	361	340



TEST NUMBER: P556430

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-97-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.9	4.1
10°-20°	230.0	11.4
20°-30°	336.2	16.7
30°-40°	381.6	19.0
40°-50°	368.4	18.3
50°-60°	303.9	15.1
60°-70°	202.3	10.1
70°-80°	90.6	4.5
80°-90°	16.2	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°	648.1	32.2
0°-40°	1029.7	51.2
0°-60°	1701.9	84.6
0°-90°	2011.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2011.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	870	870	870	870	870	
5°	869	868	865	860	858	82
15°	819	821	819	815	809	231
25°	727	733	736	731	724	333
35°	585	593	620	623	621	366
45°	453	460	475	497	500	349
55°	317	322	338	357	367	283
65°	186	191	202	216	229	184
75°	74	78	84	88	93	81
85°	12	12	12	11	11	16
90°	0	0	0	0	0	



TEST NUMBER: P556430

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-97-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	869.7	869.7	869.7	869.7	869.7
2.5°	872.0	872.4	870.4	865.0	861.7
5°	868.7	868.4	865.0	860.4	857.7
7.5°	859.0	859.7	858.7	852.0	848.3
10°	849.7	850.0	847.3	842.0	837.6
12.5°	837.6	837.3	833.6	830.9	823.9
15°	818.6	820.6	818.6	814.9	809.2
17.5°	800.2	800.2	801.5	795.2	790.9
20°	779.5	780.5	780.5	775.5	770.5
22.5°	755.4	758.4	759.4	754.1	748.1
25°	727.0	732.7	736.1	730.7	724.4
27.5°	692.6	701.3	711.3	707.3	700.3
30°	654.2	666.9	683.6	680.3	675.2
32.5°	617.8	630.5	653.5	652.2	649.5
35°	584.7	592.7	619.8	623.1	620.8
37.5°	553.3	560.6	586.0	593.7	591.7
40°	520.2	528.2	548.3	562.0	562.7
42.5°	487.5	495.2	511.5	531.2	531.2
45°	452.7	460.4	475.4	497.2	499.8
47.5°	418.6	426.7	441.4	463.1	467.4
50°	385.2	392.6	407.3	428.3	435.0
52.5°	350.5	358.5	372.9	392.3	401.9
55°	317.1	322.4	338.1	356.8	367.2
57.5°	282.3	287.3	305.0	321.1	331.8
60°	248.9	255.3	269.0	285.3	297.7
62.5°	216.8	223.5	235.2	249.6	263.6
65°	185.8	190.8	202.1	216.5	228.9
67.5°	155.7	160.0	171.4	181.4	194.5
70°	125.3	131.0	139.3	149.0	157.4
72.5°	100.9	103.2	110.3	117.3	126.0
75°	74.5	78.5	84.2	88.2	93.2
77.5°	53.5	55.8	59.1	62.5	67.2
80°	35.8	36.8	39.8	40.4	44.1
82.5°	21.7	22.4	23.1	23.4	24.7
85°	11.7	11.7	11.7	11.0	11.0
87.5°	6.7	6.7	5.7	4.7	3.3
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)