

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: P556425

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-81-88-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: P556425  
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-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

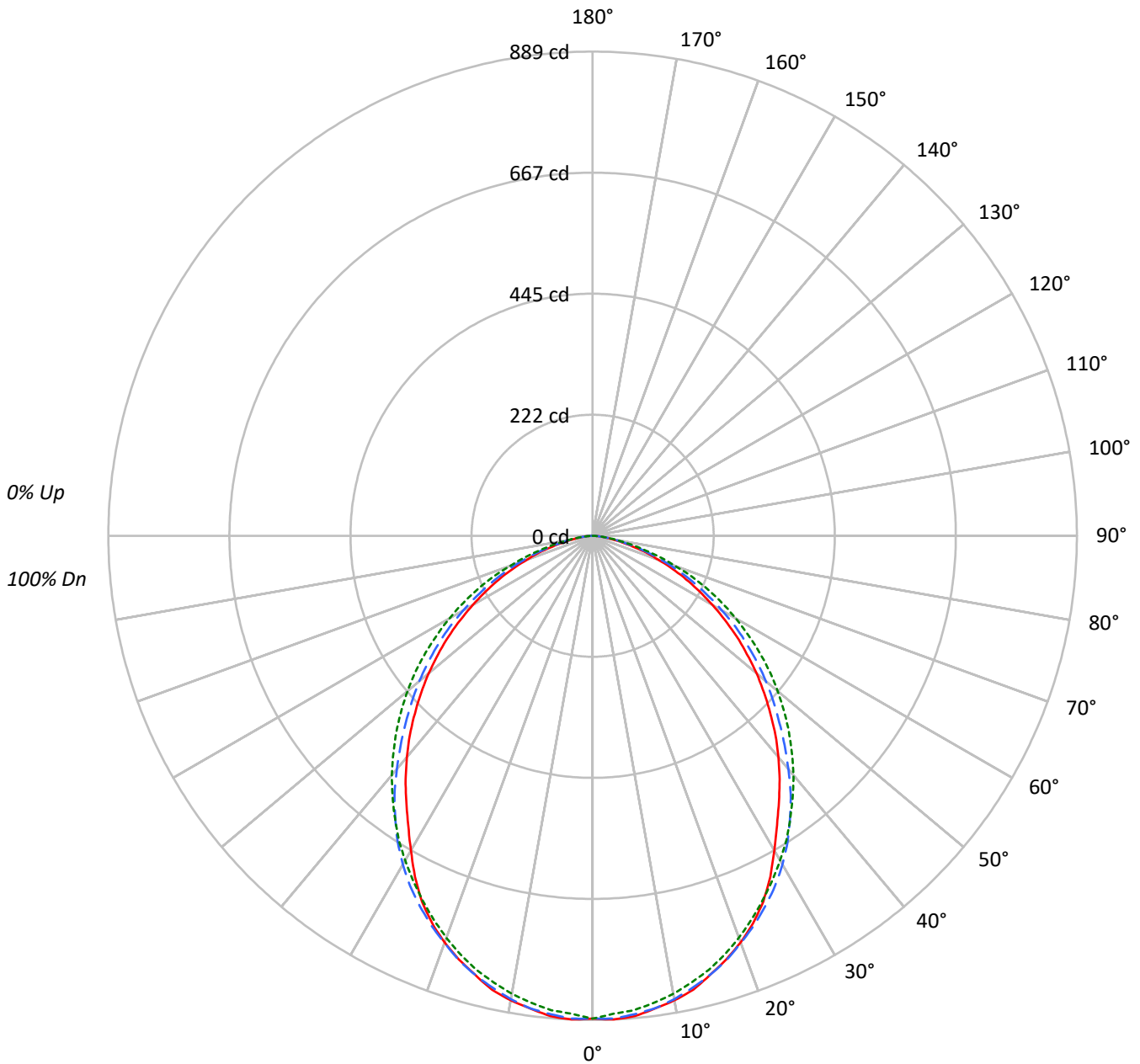
Lumens per Lamp: N/A  
Luminaire Lumens: 2050.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (Ain): 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: P556425

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P556425

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-88-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°	2386	2386	2386
5°	2392	2382	2362
10°	2367	2360	2333
15°	2325	2325	2298
20°	2275	2278	2249
25°	2200	2228	2192
30°	2072	2165	2139
35°	1958	2076	2079
40°	1863	1963	2015
45°	1756	1845	1939
50°	1644	1738	1857
55°	1516	1617	1756
60°	1365	1476	1633
65°	1206	1312	1486
70°	1005	1117	1262
75°	790	892	988
80°	564	628	697
85°	367	367	346



TEST NUMBER: P556425

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.5	4.1
10°-20°	234.5	11.4
20°-30°	342.7	16.7
30°-40°	389.0	19.0
40°-50°	375.5	18.3
50°-60°	309.8	15.1
60°-70°	206.3	10.1
70°-80°	92.3	4.5
80°-90°	16.5	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°	660.7	32.2
0°-40°	1049.6	51.2
0°-60°	1734.9	84.6
0°-90°	2050.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2050.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	886	885	882	877	874	84
15°	834	836	834	831	825	235
25°	741	747	750	745	738	339
35°	596	604	632	635	633	373
45°	462	469	485	507	510	356
55°	323	329	345	364	374	288
65°	189	194	206	221	233	188
75°	76	80	86	90	95	83
85°	12	12	12	11	11	16
90°	0	0	0	0	0	



TEST NUMBER: P556425

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-81-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	886.6	886.6	886.6	886.6	886.6
2.5°	889.0	889.3	887.3	881.8	878.4
5°	885.6	885.2	881.8	877.0	874.3
7.5°	875.7	876.4	875.3	868.5	864.8
10°	866.1	866.5	863.8	858.3	853.9
12.5°	853.9	853.5	849.8	847.1	839.9
15°	834.5	836.5	834.5	830.7	824.9
17.5°	815.7	815.7	817.1	810.6	806.2
20°	794.6	795.6	795.6	790.5	785.4
22.5°	770.1	773.2	774.2	768.7	762.6
25°	741.1	746.9	750.3	744.9	738.4
27.5°	706.1	714.9	725.1	721.0	713.9
30°	666.9	679.8	696.9	693.5	688.3
32.5°	629.8	642.7	666.2	664.8	662.1
35°	596.0	604.2	631.8	635.2	632.8
37.5°	564.0	571.5	597.4	605.2	603.2
40°	530.3	538.5	558.9	572.9	573.6
42.5°	496.9	504.8	521.5	541.5	541.5
45°	461.5	469.3	484.7	506.8	509.5
47.5°	426.8	434.9	449.9	472.1	476.5
50°	392.7	400.2	415.2	436.6	443.5
52.5°	357.3	365.5	380.1	399.9	409.7
55°	323.2	328.7	344.7	363.8	374.3
57.5°	287.8	292.9	311.0	327.3	338.2
60°	253.7	260.2	274.2	290.9	303.5
62.5°	221.0	227.9	239.8	254.4	268.7
65°	189.4	194.5	206.1	220.7	233.3
67.5°	158.7	163.1	174.7	184.9	198.2
70°	127.7	133.5	142.0	151.9	160.4
72.5°	102.9	105.2	112.4	119.5	128.4
75°	76.0	80.0	85.8	89.9	95.0
77.5°	54.5	56.9	60.3	63.7	68.5
80°	36.4	37.5	40.5	41.2	45.0
82.5°	22.1	22.8	23.5	23.8	25.2
85°	11.9	11.9	11.9	11.2	11.2
87.5°	6.8	6.8	5.8	4.8	3.4
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)