

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: P556439

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-82-87-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: P556439  
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-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

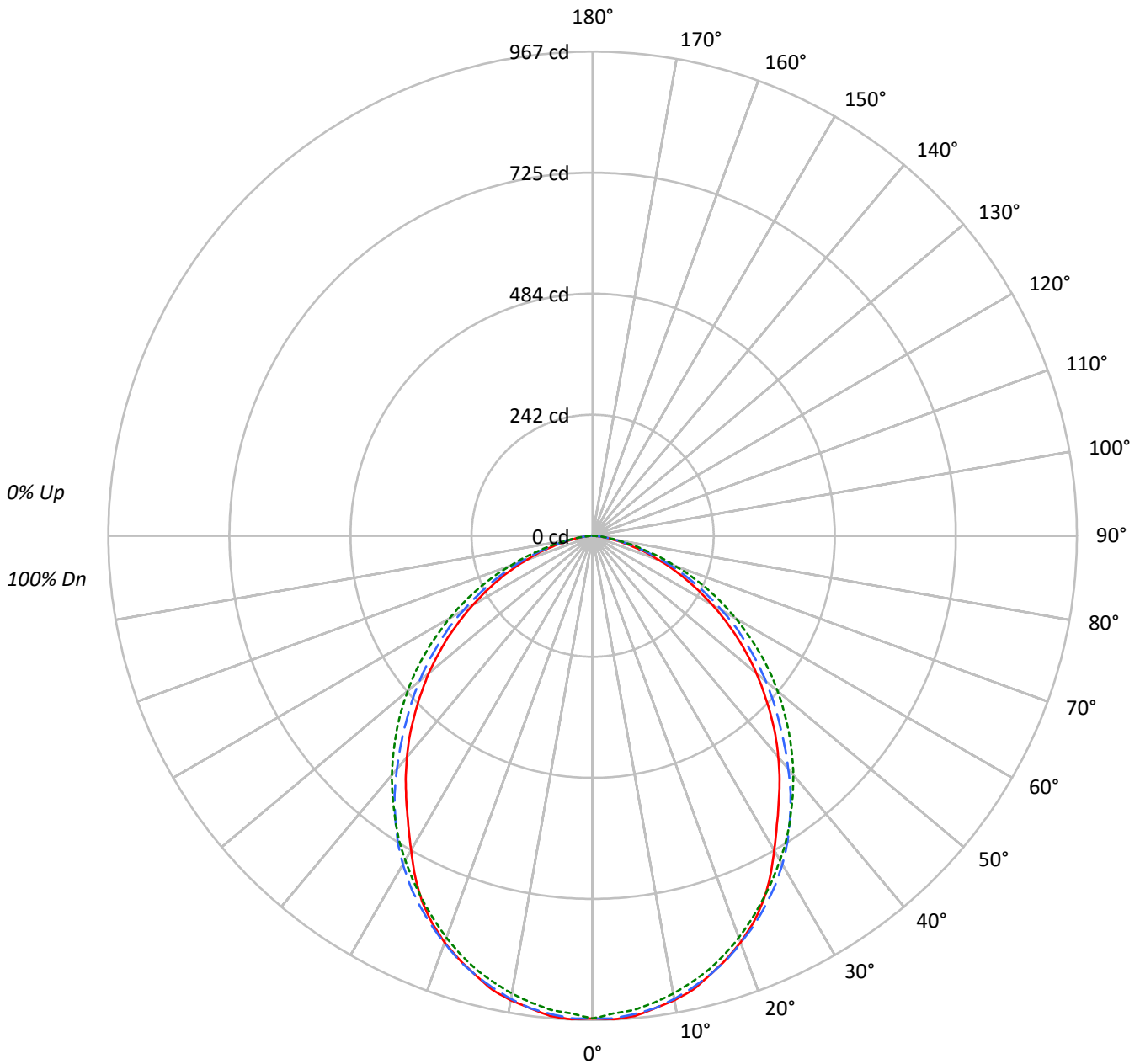
Lumens per Lamp: N/A  
Luminaire Lumens: 2229.0 lumens  
Efficiency: N/A  
Efficacy: 95.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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: P556439

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-82-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P556439

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-82-87-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°	2594	2594	2594
5°	2601	2590	2568
10°	2573	2566	2537
15°	2528	2528	2499
20°	2474	2477	2446
25°	2393	2423	2384
30°	2253	2354	2325
35°	2129	2257	2260
40°	2025	2135	2191
45°	1910	2006	2108
50°	1788	1890	2019
55°	1649	1758	1909
60°	1485	1604	1776
65°	1311	1427	1615
70°	1093	1215	1372
75°	859	970	1074
80°	614	683	758
85°	401	401	377



TEST NUMBER: P556439

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-82-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	4.1
10°-20°	255.0	11.4
20°-30°	372.6	16.7
30°-40°	423.0	19.0
40°-50°	408.3	18.3
50°-60°	336.8	15.1
60°-70°	224.3	10.1
70°-80°	100.4	4.5
80°-90°	18.0	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°	718.3	32.2
0°-40°	1141.3	51.2
0°-60°	1886.4	84.6
0°-90°	2229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2229.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	964	964	964	964	964	
5°	963	962	959	954	951	91
15°	907	910	907	903	897	256
25°	806	812	816	810	803	369
35°	648	657	687	691	688	406
45°	502	510	527	551	554	387
55°	351	357	375	396	407	314
65°	206	212	224	240	254	204
75°	83	87	93	98	103	90
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



TEST NUMBER: P556439

CATALOG NUMBER: FUSL-12-4-LD4-1LO-30-UNV-82-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	964.0	964.0	964.0	964.0	964.0
2.5°	966.6	966.9	964.7	958.8	955.1
5°	962.9	962.5	958.8	953.6	950.7
7.5°	952.1	952.9	951.8	944.4	940.3
10°	941.8	942.1	939.2	933.2	928.4
12.5°	928.4	928.1	924.0	921.0	913.2
15°	907.3	909.5	907.3	903.2	897.0
17.5°	887.0	887.0	888.4	881.4	876.6
20°	864.0	865.1	865.1	859.6	854.0
22.5°	837.3	840.7	841.8	835.8	829.2
25°	805.9	812.1	815.9	809.9	802.9
27.5°	767.7	777.3	788.4	784.0	776.2
30°	725.1	739.2	757.7	754.0	748.4
32.5°	684.8	698.8	724.4	722.9	719.9
35°	648.1	657.0	687.0	690.7	688.1
37.5°	613.3	621.4	649.6	658.1	655.9
40°	576.6	585.5	607.7	622.9	623.6
42.5°	540.3	548.8	567.0	588.8	588.8
45°	501.8	510.3	527.0	551.1	554.0
47.5°	464.0	472.9	489.2	513.3	518.1
50°	427.0	435.1	451.4	474.8	482.2
52.5°	388.5	397.4	413.3	434.8	445.5
55°	351.4	357.4	374.8	395.5	407.0
57.5°	312.9	318.5	338.1	355.9	367.7
60°	275.9	282.9	298.1	316.3	330.0
62.5°	240.3	247.8	260.7	276.6	292.2
65°	205.9	211.5	224.1	240.0	253.7
67.5°	172.6	177.4	190.0	201.1	215.5
70°	138.9	145.2	154.4	165.2	174.4
72.5°	111.8	114.4	122.2	130.0	139.6
75°	82.6	87.0	93.3	97.8	103.3
77.5°	59.3	61.8	65.5	69.3	74.4
80°	39.6	40.7	44.1	44.8	48.9
82.5°	24.1	24.8	25.6	25.9	27.4
85°	13.0	13.0	13.0	12.2	12.2
87.5°	7.4	7.4	6.3	5.2	3.7
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)