

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: P556413

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-80-96-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: P556413  
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-80-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND  
3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

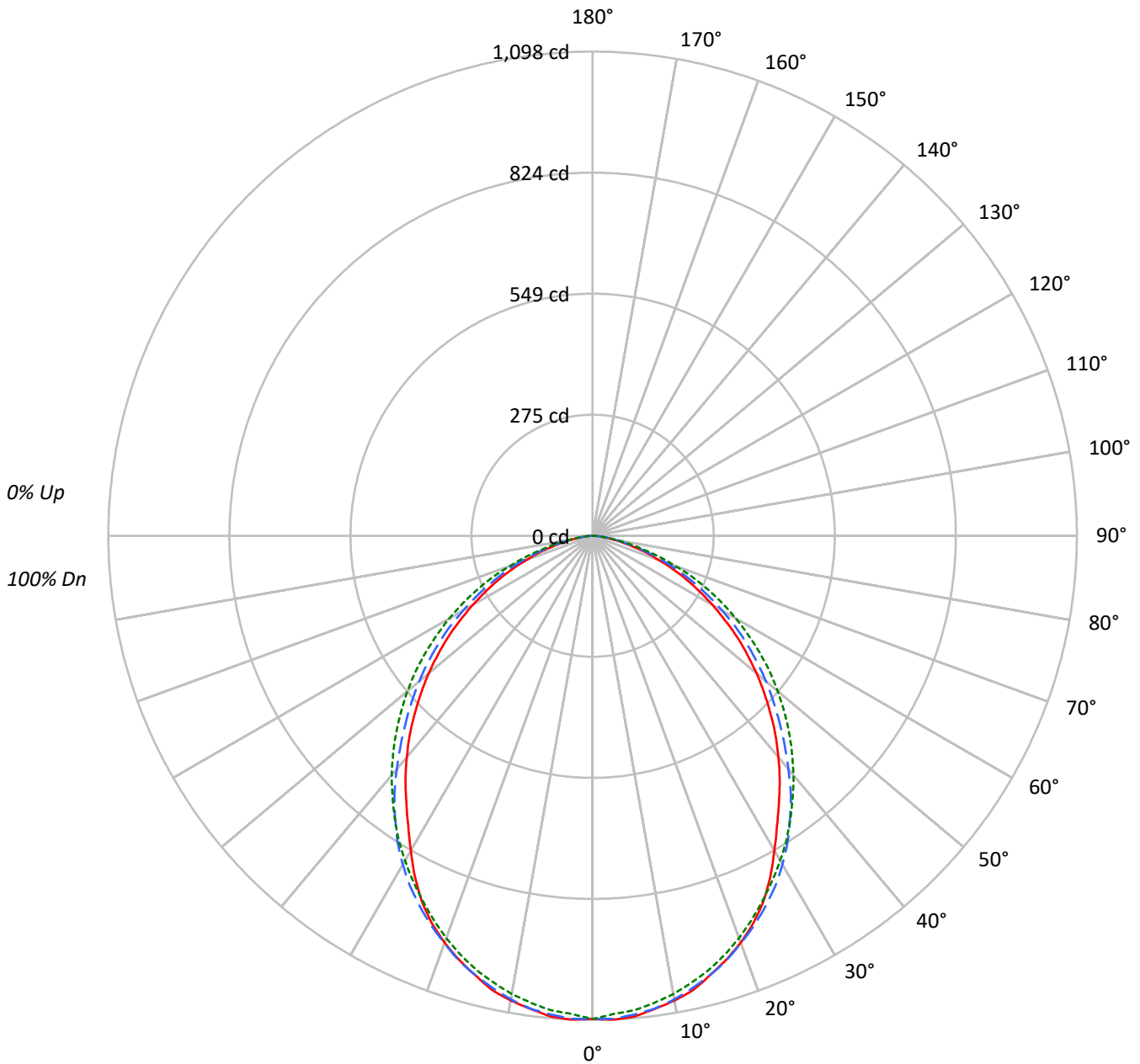
Lumens per Lamp: N/A  
Luminaire Lumens: 2533.0 lumens  
Efficiency: N/A  
Efficacy: 108.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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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°	2948	2948	2948
5°	2956	2943	2918
10°	2924	2916	2883
15°	2873	2873	2840
20°	2812	2815	2779
25°	2719	2753	2709
30°	2560	2675	2643
35°	2419	2565	2569
40°	2302	2426	2490
45°	2170	2279	2396
50°	2031	2148	2294
55°	1874	1998	2170
60°	1687	1823	2018
65°	1490	1621	1836
70°	1242	1381	1559
75°	975	1103	1221
80°	697	776	862
85°	454	454	429



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.1	4.1
10°-20°	289.7	11.4
20°-30°	423.4	16.7
30°-40°	480.6	19.0
40°-50°	464.0	18.3
50°-60°	382.7	15.1
60°-70°	254.9	10.1
70°-80°	114.1	4.5
80°-90°	20.4	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°	816.3	32.2
0°-40°	1296.9	51.2
0°-60°	2143.7	84.6
0°-90°	2533.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2533.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1094	1094	1090	1084	1080	104
15°	1031	1034	1031	1026	1019	291
25°	916	923	927	920	912	419
35°	736	747	781	785	782	461
45°	570	580	599	626	630	440
55°	399	406	426	450	462	356
65°	234	240	255	273	288	232
75°	94	99	106	111	117	103
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1095.5	1095.5	1095.5	1095.5	1095.5
2.5°	1098.4	1098.8	1096.3	1089.6	1085.4
5°	1094.2	1093.8	1089.6	1083.7	1080.3
7.5°	1082.0	1082.8	1081.6	1073.2	1068.5
10°	1070.2	1070.6	1067.3	1060.5	1055.1
12.5°	1055.1	1054.6	1050.0	1046.6	1037.8
15°	1031.1	1033.6	1031.1	1026.4	1019.3
17.5°	1007.9	1007.9	1009.6	1001.6	996.1
20°	981.8	983.1	983.1	976.8	970.5
22.5°	951.5	955.3	956.6	949.8	942.3
25°	915.8	922.9	927.1	920.4	912.4
27.5°	872.4	883.4	896.0	890.9	882.1
30°	824.0	840.0	861.0	856.8	850.5
32.5°	778.1	794.1	823.2	821.5	818.1
35°	736.5	746.6	780.7	784.9	781.9
37.5°	696.9	706.2	738.2	747.8	745.3
40°	655.3	665.4	690.6	707.9	708.7
42.5°	614.0	623.7	644.3	669.1	669.1
45°	570.2	579.9	598.9	626.2	629.6
47.5°	527.3	537.4	555.9	583.3	588.8
50°	485.2	494.5	513.0	539.5	547.9
52.5°	441.5	451.6	469.7	494.1	506.3
55°	399.4	406.1	425.9	449.5	462.5
57.5°	355.6	361.9	384.2	404.4	417.9
60°	313.5	321.5	338.8	359.4	375.0
62.5°	273.1	281.5	296.3	314.4	332.0
65°	234.0	240.3	254.6	272.7	288.3
67.5°	196.1	201.6	215.9	228.5	244.9
70°	157.8	165.0	175.5	187.7	198.2
72.5°	127.1	130.0	138.9	147.7	158.7
75°	93.8	98.9	106.1	111.1	117.4
77.5°	67.3	70.3	74.5	78.7	84.6
80°	45.0	46.3	50.1	50.9	55.6
82.5°	27.4	28.2	29.0	29.5	31.1
85°	14.7	14.7	14.7	13.9	13.9
87.5°	8.4	8.4	7.2	5.9	4.2
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)