

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: P556402

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-80-85-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: P556402  
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-80-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

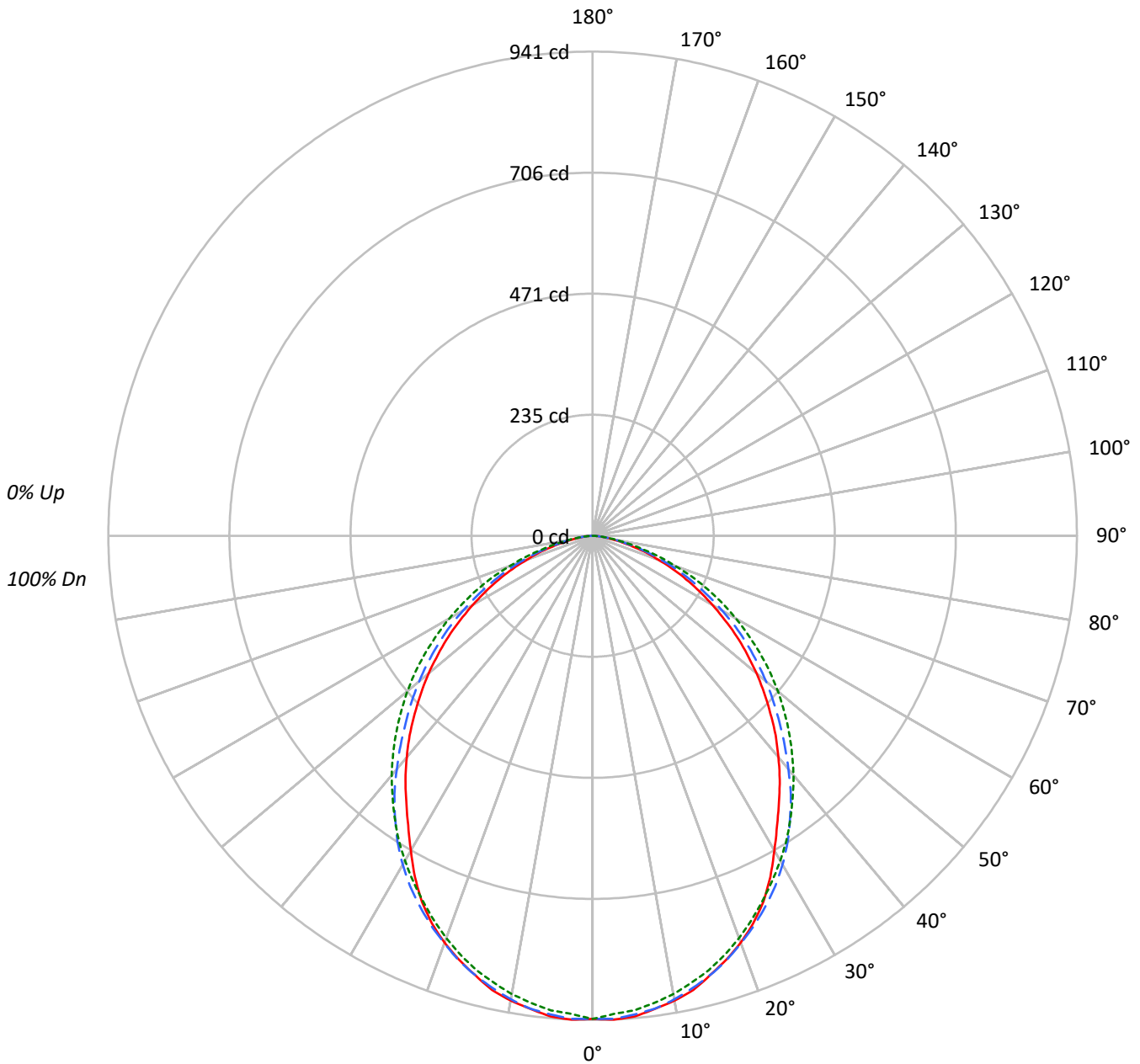
Lumens per Lamp: N/A  
Luminaire Lumens: 2171.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2527	2527	2527
5°	2533	2523	2501
10°	2507	2499	2471
15°	2462	2462	2434
20°	2410	2413	2382
25°	2330	2359	2322
30°	2195	2293	2265
35°	2074	2198	2202
40°	1973	2079	2134
45°	1860	1953	2054
50°	1741	1841	1966
55°	1606	1712	1860
60°	1446	1563	1730
65°	1277	1389	1573
70°	1065	1183	1337
75°	836	945	1046
80°	598	665	738
85°	389	389	367



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.4	4.1
10°-20°	248.3	11.4
20°-30°	362.9	16.7
30°-40°	411.9	19.0
40°-50°	397.7	18.3
50°-60°	328.0	15.1
60°-70°	218.4	10.1
70°-80°	97.8	4.5
80°-90°	17.5	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°	699.7	32.2
0°-40°	1111.6	51.2
0°-60°	1837.3	84.6
0°-90°	2171.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2171.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	939	939	939	939	939	
5°	938	938	934	929	926	89
15°	884	886	884	880	874	249
25°	785	791	795	789	782	359
35°	631	640	669	673	670	395
45°	489	497	513	537	540	377
55°	342	348	365	385	396	306
65°	200	206	218	234	247	199
75°	80	85	91	95	101	88
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	938.9	938.9	938.9	938.9	938.9
2.5°	941.4	941.8	939.6	933.9	930.2
5°	937.8	937.5	933.9	928.8	925.9
7.5°	927.4	928.1	927.0	919.8	915.8
10°	917.3	917.6	914.7	909.0	904.3
12.5°	904.3	903.9	899.9	897.1	889.5
15°	883.7	885.9	883.7	879.7	873.6
17.5°	863.9	863.9	865.3	858.5	853.8
20°	841.5	842.6	842.6	837.2	831.8
22.5°	815.5	818.8	819.9	814.1	807.6
25°	784.9	791.0	794.6	788.9	782.0
27.5°	747.7	757.1	767.9	763.6	756.0
30°	706.3	720.0	738.0	734.4	729.0
32.5°	666.9	680.6	705.5	704.1	701.2
35°	631.2	639.9	669.1	672.7	670.2
37.5°	597.3	605.3	632.7	641.0	638.8
40°	561.6	570.3	591.9	606.7	607.4
42.5°	526.3	534.6	552.2	573.5	573.5
45°	488.7	497.0	513.3	536.7	539.6
47.5°	452.0	460.6	476.5	499.9	504.6
50°	415.9	423.8	439.7	462.4	469.6
52.5°	378.4	387.0	402.5	423.5	433.9
55°	342.3	348.1	365.0	385.2	396.4
57.5°	304.8	310.2	329.3	346.6	358.2
60°	268.7	275.6	290.4	308.0	321.4
62.5°	234.1	241.3	253.9	269.4	284.6
65°	200.5	206.0	218.2	233.7	247.1
67.5°	168.1	172.8	185.0	195.9	209.9
70°	135.3	141.4	150.4	160.9	169.9
72.5°	108.9	111.5	119.0	126.6	136.0
75°	80.4	84.8	90.9	95.2	100.6
77.5°	57.7	60.2	63.8	67.5	72.5
80°	38.6	39.7	42.9	43.6	47.6
82.5°	23.4	24.2	24.9	25.2	26.7
85°	12.6	12.6	12.6	11.9	11.9
87.5°	7.2	7.2	6.1	5.0	3.6
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)