

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: P556917

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-80-86-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: P556917  
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-LD4-2HI-30-UNV-80-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

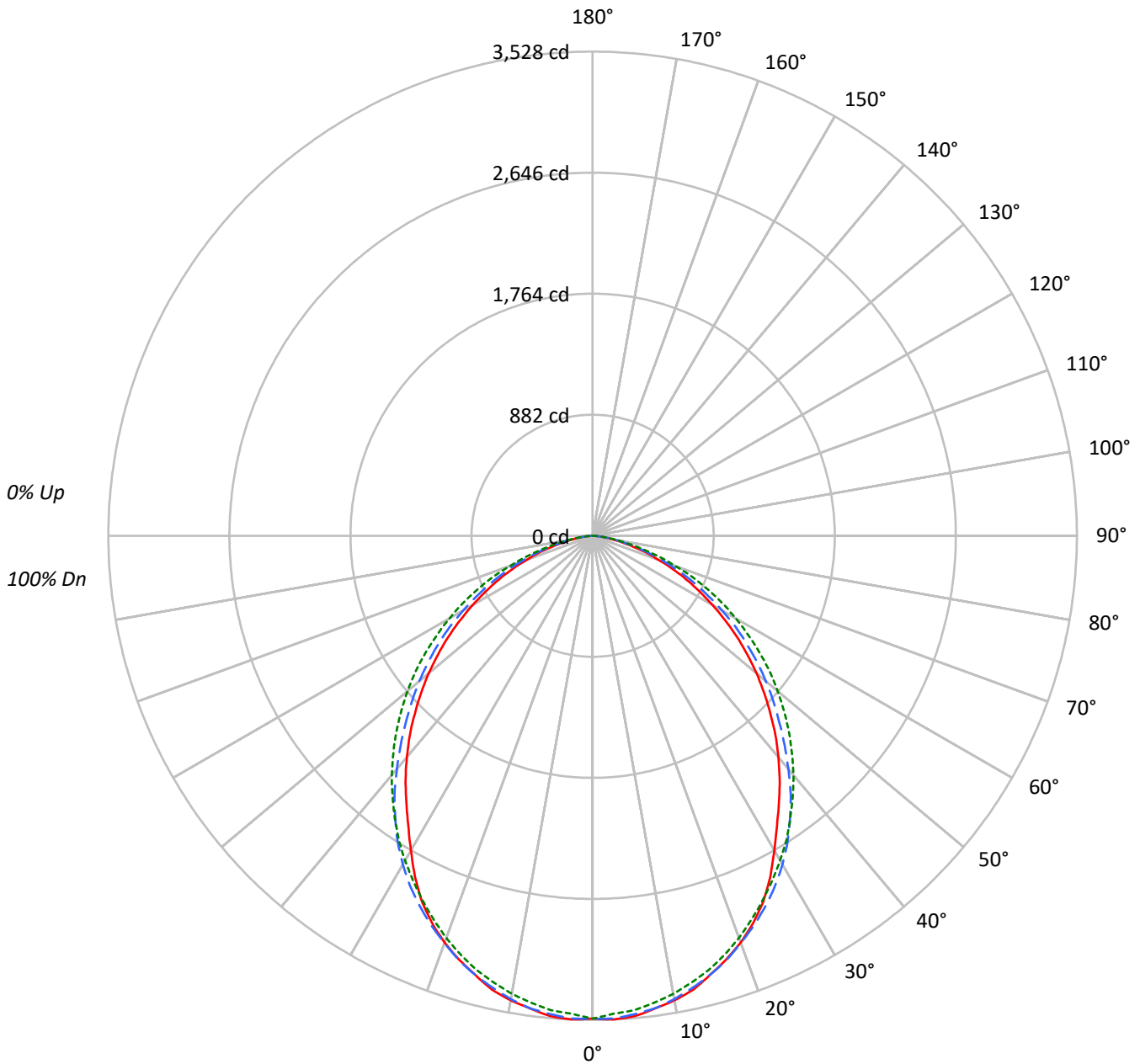
Lumens per Lamp: N/A  
Luminaire Lumens: 8136.0 lumens  
Efficiency: N/A  
Efficacy: 94.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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									
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°	9468	9468	9468
5°	9494	9454	9373
10°	9393	9367	9260
15°	9226	9226	9121
20°	9031	9043	8926
25°	8734	8842	8701
30°	8224	8594	8489
35°	7771	8237	8251
40°	7393	7792	7997
45°	6970	7320	7696
50°	6525	6898	7368
55°	6018	6418	6970
60°	5420	5857	6482
65°	4786	5207	5896
70°	3988	4435	5009
75°	3134	3541	3921
80°	2241	2493	2765
85°	1460	1460	1377



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	331.3	4.1
10°-20°	930.7	11.4
20°-30°	1360.0	16.7
30°-40°	1543.8	19.0
40°-50°	1490.3	18.3
50°-60°	1229.4	15.1
60°-70°	818.7	10.1
70°-80°	366.4	4.5
80°-90°	65.5	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°	2622.0	32.2
0°-40°	4165.8	51.2
0°-60°	6885.4	84.6
0°-90°	8136.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8136.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3519	3519	3519	3519	3519	
5°	3515	3513	3500	3481	3470	333
15°	3312	3320	3312	3297	3274	934
25°	2941	2964	2978	2956	2931	1347
35°	2366	2398	2508	2521	2512	1482
45°	1832	1863	1924	2011	2022	1413
55°	1283	1304	1368	1444	1486	1145
65°	752	772	818	876	926	745
75°	301	318	341	357	377	330
85°	47	47	47	45	45	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3518.6	3518.6	3518.6	3518.6	3518.6
2.5°	3528.1	3529.4	3521.3	3499.7	3486.2
5°	3514.6	3513.2	3499.7	3480.8	3469.9
7.5°	3475.4	3478.1	3474.0	3447.0	3432.1
10°	3437.5	3438.9	3428.0	3406.4	3388.8
12.5°	3388.8	3387.5	3372.6	3361.8	3333.4
15°	3311.8	3319.9	3311.8	3296.9	3273.9
17.5°	3237.4	3237.4	3242.9	3217.2	3199.6
20°	3153.6	3157.7	3157.7	3137.4	3117.1
22.5°	3056.3	3068.5	3072.5	3050.9	3026.6
25°	2941.4	2964.4	2977.9	2956.3	2930.6
27.5°	2802.2	2837.3	2877.9	2861.7	2833.3
30°	2646.7	2698.1	2765.7	2752.2	2731.9
32.5°	2499.4	2550.8	2644.0	2638.6	2627.8
35°	2365.6	2398.0	2507.5	2521.0	2511.6
37.5°	2238.5	2268.2	2371.0	2402.1	2394.0
40°	2104.7	2137.1	2218.2	2273.6	2276.4
42.5°	1972.2	2003.3	2069.5	2149.3	2149.3
45°	1831.6	1862.7	1923.5	2011.4	2022.2
47.5°	1693.7	1726.2	1785.7	1873.5	1891.1
50°	1558.6	1588.3	1647.8	1732.9	1760.0
52.5°	1418.0	1450.4	1508.6	1587.0	1626.2
55°	1282.8	1304.4	1368.0	1443.7	1485.6
57.5°	1142.2	1162.5	1234.1	1299.0	1342.3
60°	1007.1	1032.7	1088.2	1154.4	1204.4
62.5°	877.3	904.3	951.6	1009.8	1066.5
65°	751.6	771.9	817.8	875.9	925.9
67.5°	629.9	647.5	693.4	734.0	786.7
70°	506.9	529.9	563.7	602.9	636.7
72.5°	408.2	417.7	446.1	474.5	509.6
75°	301.4	317.7	340.6	356.9	377.1
77.5°	216.3	225.7	239.3	252.8	271.7
80°	144.6	148.7	160.9	163.6	178.4
82.5°	87.9	90.6	93.3	94.6	100.0
85°	47.3	47.3	47.3	44.6	44.6
87.5°	27.0	27.0	23.0	18.9	13.5
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)