

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: P556625

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-82-84-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: P556625  
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-50-UNV-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

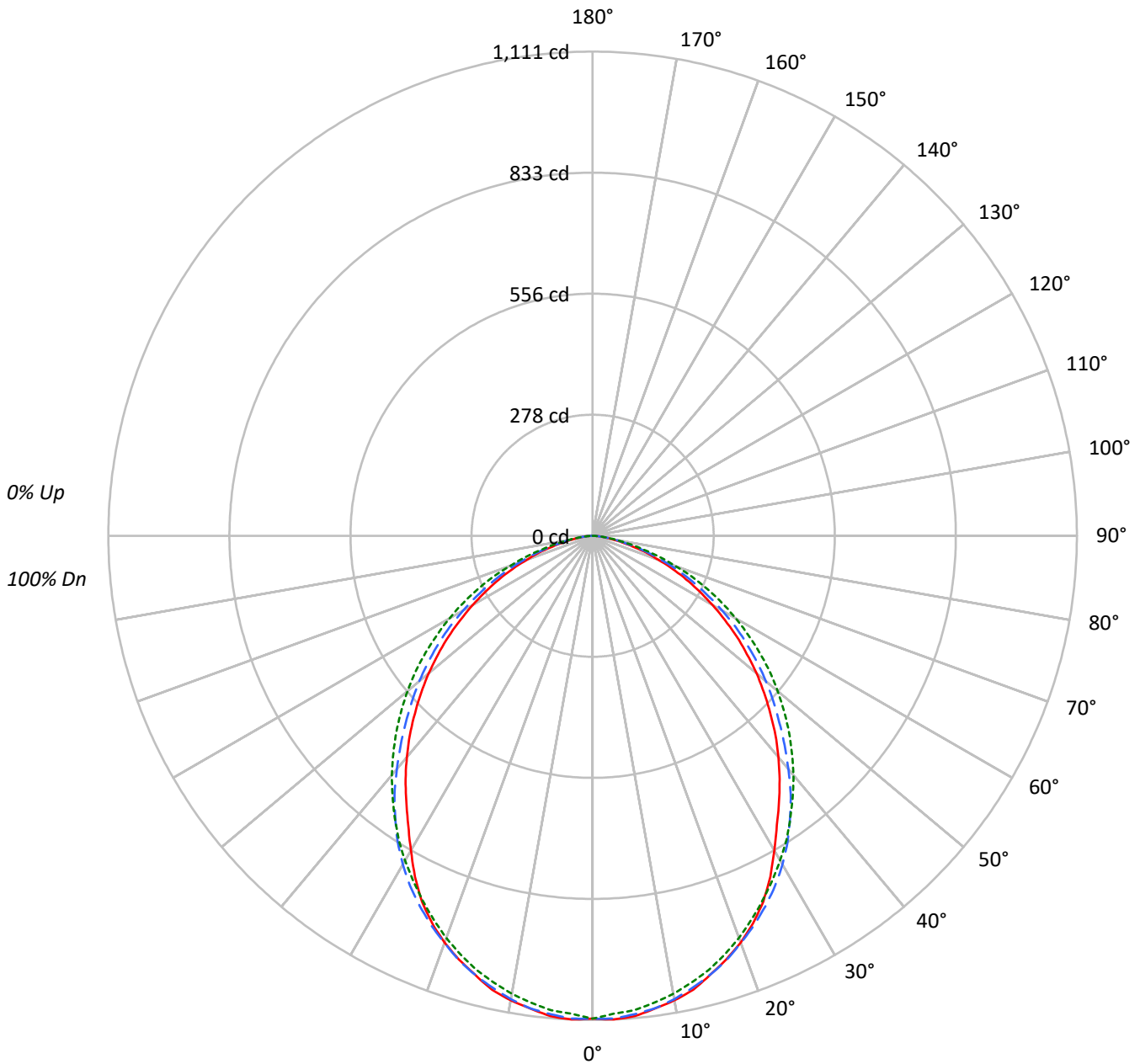
Lumens per Lamp: N/A  
Luminaire Lumens: 2562.0 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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									
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°	2982	2982	2982
5°	2989	2977	2952
10°	2958	2950	2916
15°	2905	2905	2872
20°	2844	2847	2811
25°	2750	2784	2740
30°	2590	2706	2673
35°	2447	2594	2598
40°	2328	2454	2518
45°	2195	2305	2423
50°	2055	2172	2320
55°	1895	2021	2195
60°	1707	1844	2041
65°	1507	1640	1857
70°	1256	1397	1578
75°	987	1116	1235
80°	705	786	871
85°	460	460	432



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.3	4.1
10°-20°	293.1	11.4
20°-30°	428.3	16.7
30°-40°	486.1	19.0
40°-50°	469.3	18.3
50°-60°	387.1	15.1
60°-70°	257.8	10.1
70°-80°	115.4	4.5
80°-90°	20.6	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°	825.7	32.2
0°-40°	1311.8	51.2
0°-60°	2168.2	84.6
0°-90°	2562.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2562.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1107	1106	1102	1096	1093	105
15°	1043	1045	1043	1038	1031	294
25°	926	934	938	931	923	424
35°	745	755	790	794	791	467
45°	577	587	606	633	637	445
55°	404	411	431	455	468	361
65°	237	243	258	276	292	235
75°	95	100	107	112	119	104
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°	1108.0	1108.0	1108.0	1108.0	1108.0
2.5°	1111.0	1111.4	1108.9	1102.0	1097.8
5°	1106.7	1106.3	1102.0	1096.1	1092.7
7.5°	1094.4	1095.2	1094.0	1085.4	1080.8
10°	1082.5	1082.9	1079.5	1072.7	1067.1
12.5°	1067.1	1066.7	1062.0	1058.6	1049.7
15°	1042.9	1045.4	1042.9	1038.2	1031.0
17.5°	1019.5	1019.5	1021.2	1013.1	1007.5
20°	993.1	994.3	994.3	988.0	981.6
22.5°	962.4	966.3	967.5	960.7	953.1
25°	926.2	933.5	937.7	930.9	922.8
27.5°	882.4	893.5	906.2	901.1	892.2
30°	833.4	849.6	870.9	866.6	860.3
32.5°	787.0	803.2	832.6	830.9	827.5
35°	744.9	755.1	789.6	793.9	790.9
37.5°	704.9	714.3	746.6	756.4	753.8
40°	662.8	673.0	698.5	716.0	716.8
42.5°	621.0	630.8	651.7	676.8	676.8
45°	576.8	586.6	605.7	633.4	636.8
47.5°	533.4	543.6	562.3	590.0	595.5
50°	490.8	500.2	518.9	545.7	554.2
52.5°	446.5	456.7	475.0	499.7	512.1
55°	404.0	410.8	430.8	454.6	467.8
57.5°	359.7	366.1	388.6	409.1	422.7
60°	317.1	325.2	342.7	363.5	379.3
62.5°	276.3	284.8	299.7	318.0	335.8
65°	236.7	243.1	257.5	275.8	291.6
67.5°	198.4	203.9	218.4	231.1	247.7
70°	159.6	166.9	177.5	189.8	200.5
72.5°	128.5	131.5	140.5	149.4	160.5
75°	94.9	100.0	107.3	112.4	118.8
77.5°	68.1	71.1	75.3	79.6	85.6
80°	45.5	46.8	50.7	51.5	56.2
82.5°	27.7	28.5	29.4	29.8	31.5
85°	14.9	14.9	14.9	14.0	14.0
87.5°	8.5	8.5	7.2	6.0	4.3
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)