

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: P556627

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-82-85-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: P556627  
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-82-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

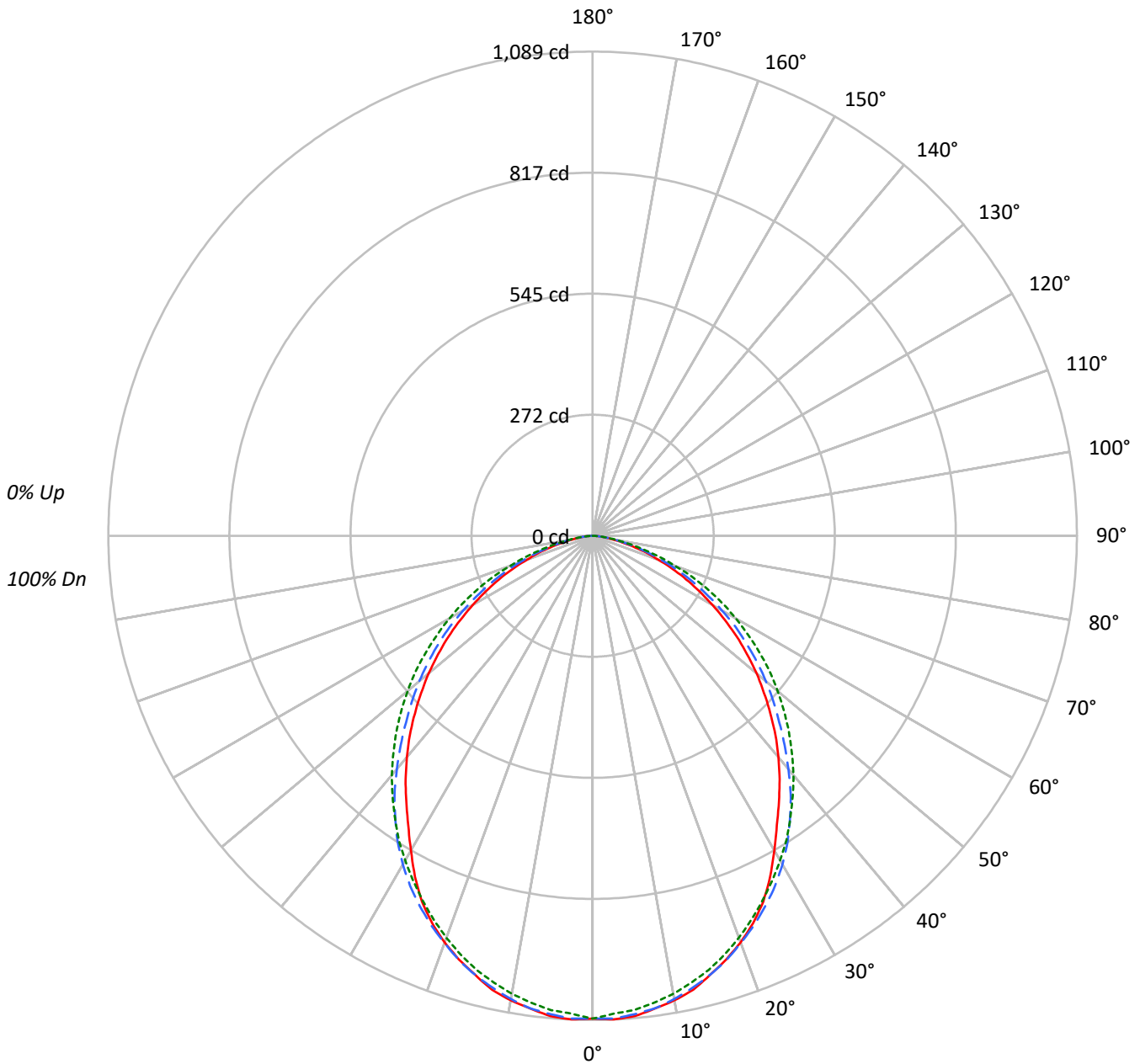
Lumens per Lamp: N/A  
Luminaire Lumens: 2511.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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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°	2922	2922	2922
5°	2930	2918	2893
10°	2899	2891	2858
15°	2847	2847	2815
20°	2787	2791	2755
25°	2695	2729	2686
30°	2538	2652	2620
35°	2398	2542	2546
40°	2282	2405	2468
45°	2151	2259	2375
50°	2014	2129	2274
55°	1857	1981	2151
60°	1673	1807	2000
65°	1477	1607	1820
70°	1231	1369	1546
75°	967	1093	1210
80°	691	769	854
85°	451	451	426



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.2	4.1
10°-20°	287.2	11.4
20°-30°	419.7	16.7
30°-40°	476.5	19.0
40°-50°	459.9	18.3
50°-60°	379.4	15.1
60°-70°	252.7	10.1
70°-80°	113.1	4.5
80°-90°	20.2	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°	809.2	32.2
0°-40°	1285.7	51.2
0°-60°	2125.0	84.6
0°-90°	2511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2511.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1085	1084	1080	1074	1071	103
15°	1022	1025	1022	1018	1010	288
25°	908	915	919	912	904	416
35°	730	740	774	778	775	457
45°	565	575	594	621	624	436
55°	396	403	422	446	458	353
65°	232	238	252	270	286	230
75°	93	98	105	110	116	102
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°	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1088.9	1089.3	1086.8	1080.1	1075.9
5°	1084.7	1084.3	1080.1	1074.3	1070.9
7.5°	1072.6	1073.4	1072.2	1063.8	1059.2
10°	1060.9	1061.3	1058.0	1051.3	1045.9
12.5°	1045.9	1045.5	1040.9	1037.5	1028.8
15°	1022.1	1024.6	1022.1	1017.5	1010.4
17.5°	999.2	999.2	1000.8	992.9	987.5
20°	973.3	974.6	974.6	968.3	962.0
22.5°	943.3	947.0	948.3	941.6	934.1
25°	907.8	914.9	919.1	912.4	904.5
27.5°	864.8	875.7	888.2	883.2	874.4
30°	816.9	832.7	853.6	849.4	843.1
32.5°	771.4	787.2	816.0	814.4	811.0
35°	730.1	740.1	773.9	778.1	775.1
37.5°	690.9	700.0	731.7	741.3	738.8
40°	649.6	659.6	684.6	701.7	702.5
42.5°	608.7	618.3	638.7	663.3	663.3
45°	565.3	574.9	593.7	620.8	624.1
47.5°	522.7	532.8	551.1	578.2	583.6
50°	481.0	490.2	508.6	534.8	543.2
52.5°	437.6	447.6	465.6	489.8	501.9
55°	395.9	402.6	422.2	445.6	458.5
57.5°	352.5	358.8	380.9	400.9	414.3
60°	310.8	318.7	335.8	356.3	371.7
62.5°	270.8	279.1	293.7	311.6	329.2
65°	232.0	238.2	252.4	270.3	285.8
67.5°	194.4	199.8	214.0	226.5	242.8
70°	156.4	163.5	174.0	186.1	196.5
72.5°	126.0	128.9	137.7	146.4	157.3
75°	93.0	98.0	105.1	110.1	116.4
77.5°	66.8	69.7	73.8	78.0	83.9
80°	44.6	45.9	49.6	50.5	55.1
82.5°	27.1	28.0	28.8	29.2	30.9
85°	14.6	14.6	14.6	13.8	13.8
87.5°	8.3	8.3	7.1	5.8	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)