

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: P556460

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-96-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: P556460  
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-93-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

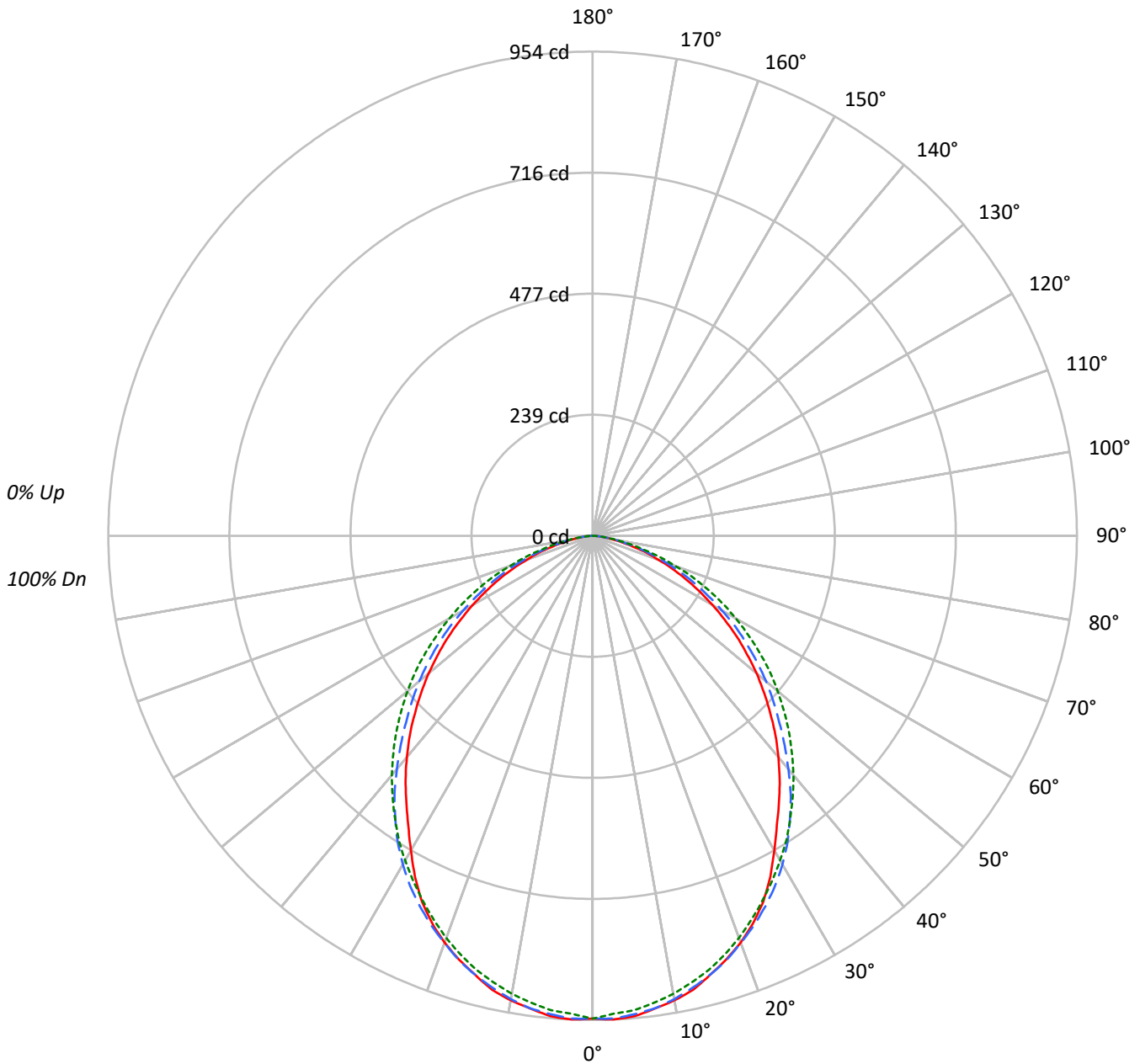
Lumens per Lamp: N/A  
Luminaire Lumens: 2200.0 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2560	2560	2560
5°	2567	2556	2535
10°	2540	2533	2504
15°	2495	2495	2466
20°	2442	2445	2414
25°	2362	2391	2353
30°	2224	2324	2295
35°	2101	2227	2231
40°	1999	2107	2162
45°	1885	1979	2081
50°	1764	1865	1992
55°	1628	1735	1885
60°	1466	1583	1753
65°	1294	1408	1594
70°	1079	1199	1355
75°	847	958	1061
80°	606	674	747
85°	395	395	374



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.6	4.1
10°-20°	251.7	11.4
20°-30°	367.8	16.7
30°-40°	417.4	19.0
40°-50°	403.0	18.3
50°-60°	332.4	15.1
60°-70°	221.4	10.1
70°-80°	99.1	4.5
80°-90°	17.7	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°	709.0	32.2
0°-40°	1126.4	51.2
0°-60°	1861.8	84.6
0°-90°	2200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2200.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	950	950	946	941	938	90
15°	896	898	896	892	885	252
25°	795	802	805	799	792	364
35°	640	648	678	682	679	401
45°	495	504	520	544	547	382
55°	347	353	370	390	402	310
65°	203	209	221	237	250	201
75°	82	86	92	96	102	89
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°	951.4	951.4	951.4	951.4	951.4
2.5°	954.0	954.4	952.2	946.3	942.7
5°	950.3	950.0	946.3	941.2	938.3
7.5°	939.7	940.5	939.4	932.1	928.1
10°	929.5	929.9	927.0	921.1	916.4
12.5°	916.4	916.0	912.0	909.0	901.4
15°	895.5	897.7	895.5	891.5	885.3
17.5°	875.4	875.4	876.9	869.9	865.2
20°	852.8	853.8	853.8	848.4	842.9
22.5°	826.4	829.7	830.8	825.0	818.4
25°	795.4	801.6	805.2	799.4	792.4
27.5°	757.7	767.2	778.2	773.8	766.1
30°	715.7	729.6	747.8	744.2	738.7
32.5°	675.8	689.7	715.0	713.5	710.6
35°	639.7	648.4	678.0	681.7	679.1
37.5°	605.3	613.3	641.1	649.5	647.3
40°	569.1	577.9	599.8	614.8	615.5
42.5°	533.3	541.7	559.6	581.2	581.2
45°	495.3	503.7	520.1	543.9	546.8
47.5°	458.0	466.8	482.8	506.6	511.4
50°	421.4	429.5	445.6	468.6	475.9
52.5°	383.4	392.2	407.9	429.1	439.7
55°	346.9	352.7	369.9	390.4	401.7
57.5°	308.9	314.3	333.7	351.3	363.0
60°	272.3	279.3	294.2	312.2	325.7
62.5°	237.2	244.5	257.3	273.0	288.4
65°	203.2	208.7	221.1	236.9	250.4
67.5°	170.3	175.1	187.5	198.5	212.7
70°	137.1	143.3	152.4	163.0	172.2
72.5°	110.4	112.9	120.6	128.3	137.8
75°	81.5	85.9	92.1	96.5	102.0
77.5°	58.5	61.0	64.7	68.4	73.5
80°	39.1	40.2	43.5	44.2	48.2
82.5°	23.8	24.5	25.2	25.6	27.0
85°	12.8	12.8	12.8	12.1	12.1
87.5°	7.3	7.3	6.2	5.1	3.7
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)