

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: P556458

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-94-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: P556458  
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-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

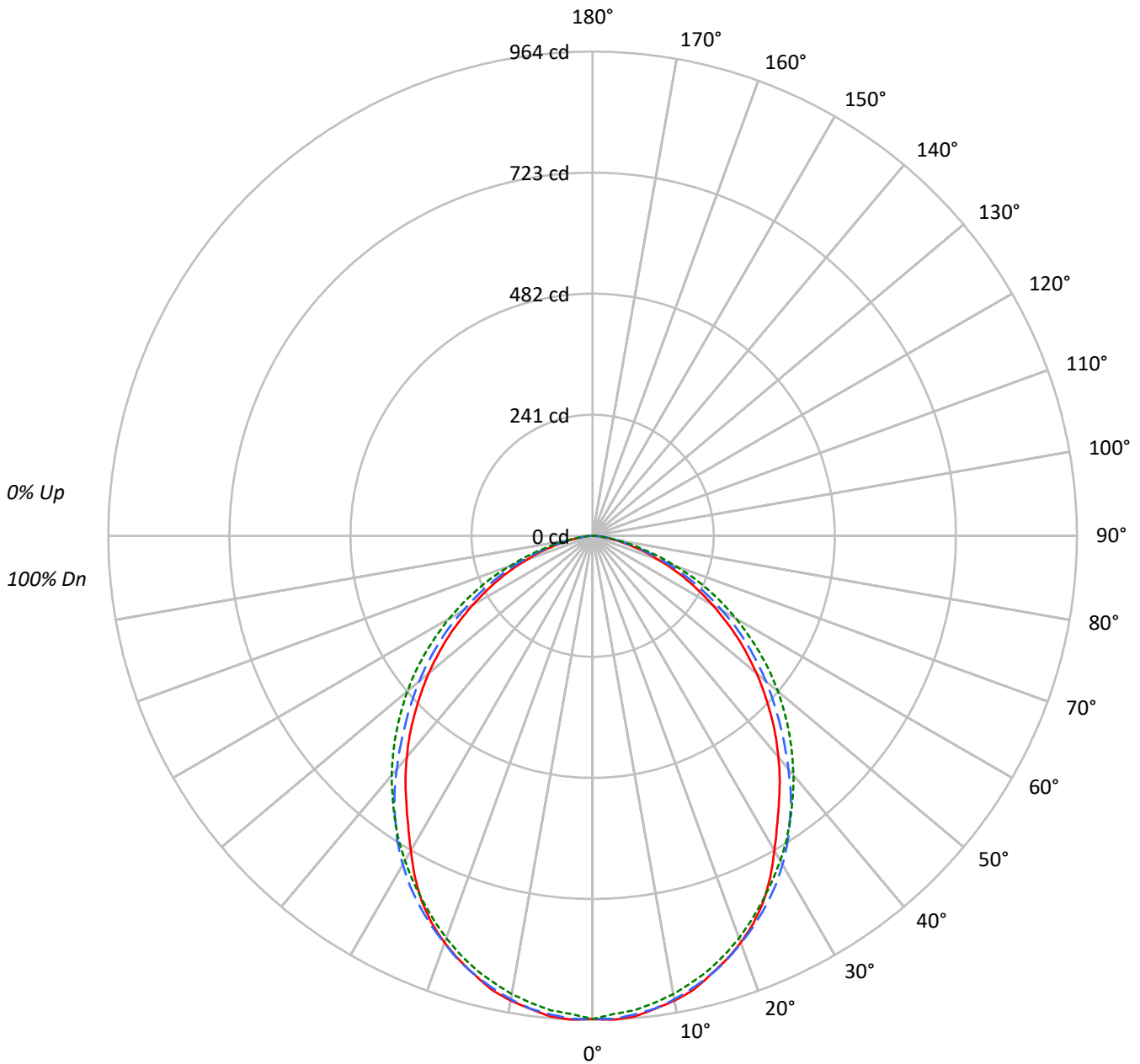
Lumens per Lamp: N/A  
Luminaire Lumens: 2224.0 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2588	2588	2588
5°	2595	2584	2562
10°	2568	2561	2531
15°	2522	2522	2493
20°	2469	2472	2440
25°	2387	2417	2379
30°	2248	2349	2321
35°	2124	2252	2255
40°	2021	2130	2186
45°	1905	2001	2104
50°	1783	1886	2014
55°	1645	1754	1905
60°	1482	1601	1772
65°	1308	1424	1612
70°	1090	1212	1369
75°	857	968	1072
80°	612	682	756
85°	398	398	377



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.6	4.1
10°-20°	254.4	11.4
20°-30°	371.8	16.7
30°-40°	422.0	19.0
40°-50°	407.4	18.3
50°-60°	336.1	15.1
60°-70°	223.8	10.1
70°-80°	100.1	4.5
80°-90°	17.9	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°	716.7	32.2
0°-40°	1138.7	51.2
0°-60°	1882.2	84.6
0°-90°	2224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	962	962	962	962	962	
5°	961	960	957	952	948	91
15°	905	908	905	901	895	255
25°	804	810	814	808	801	368
35°	647	656	685	689	686	405
45°	501	509	526	550	553	386
55°	351	357	374	395	406	313
65°	205	211	224	239	253	204
75°	82	87	93	98	103	90
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°	961.8	961.8	961.8	961.8	961.8
2.5°	964.4	964.8	962.6	956.6	953.0
5°	960.7	960.3	956.6	951.5	948.5
7.5°	950.0	950.7	949.6	942.2	938.2
10°	939.7	940.0	937.1	931.2	926.4
12.5°	926.4	926.0	921.9	919.0	911.2
15°	905.3	907.5	905.3	901.2	894.9
17.5°	885.0	885.0	886.4	879.4	874.6
20°	862.1	863.2	863.2	857.6	852.1
22.5°	835.5	838.8	839.9	834.0	827.3
25°	804.0	810.3	814.0	808.1	801.1
27.5°	766.0	775.6	786.7	782.2	774.5
30°	723.5	737.5	756.0	752.3	746.8
32.5°	683.2	697.3	722.8	721.3	718.3
35°	646.6	655.5	685.4	689.1	686.5
37.5°	611.9	620.0	648.1	656.6	654.4
40°	575.3	584.2	606.4	621.5	622.2
42.5°	539.1	547.6	565.7	587.5	587.5
45°	500.7	509.2	525.8	549.8	552.8
47.5°	463.0	471.9	488.1	512.1	516.9
50°	426.0	434.2	450.4	473.7	481.1
52.5°	387.6	396.5	412.4	433.8	444.5
55°	350.7	356.6	373.9	394.6	406.1
57.5°	312.2	317.8	337.4	355.1	366.9
60°	275.3	282.3	297.5	315.6	329.2
62.5°	239.8	247.2	260.1	276.0	291.5
65°	205.4	211.0	223.6	239.4	253.1
67.5°	172.2	177.0	189.6	200.6	215.1
70°	138.6	144.8	154.1	164.8	174.0
72.5°	111.6	114.2	121.9	129.7	139.3
75°	82.4	86.8	93.1	97.5	103.1
77.5°	59.1	61.7	65.4	69.1	74.3
80°	39.5	40.6	44.0	44.7	48.8
82.5°	24.0	24.8	25.5	25.9	27.3
85°	12.9	12.9	12.9	12.2	12.2
87.5°	7.4	7.4	6.3	5.2	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)