

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: P558446

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-97-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: P558446  
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-LD4-3STD-50-UNV-93-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

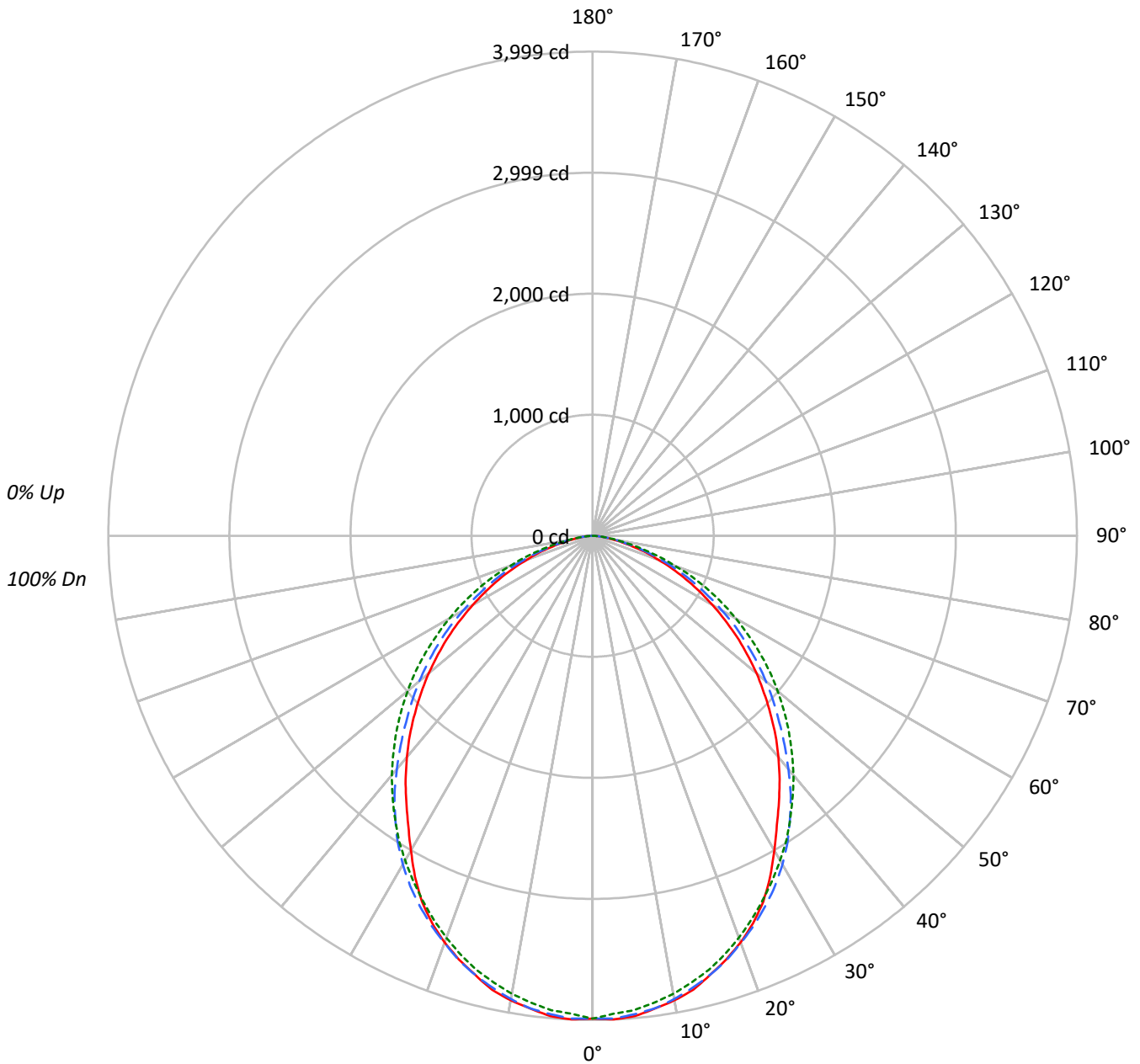
Lumens per Lamp: N/A  
Luminaire Lumens: 9221.0 lumens  
Efficiency: N/A  
Efficacy: 92.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	10731	10731	10731
5°	10760	10714	10623
10°	10646	10616	10495
15°	10457	10457	10337
20°	10235	10249	10117
25°	9898	10021	9862
30°	9321	9740	9621
35°	8807	9336	9351
40°	8379	8831	9063
45°	7900	8297	8722
50°	7395	7818	8351
55°	6821	7274	7899
60°	6143	6638	7346
65°	5424	5902	6682
70°	4520	5027	5677
75°	3552	4014	4444
80°	2540	2825	3133
85°	1655	1655	1562



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	375.5	4.1
10°-20°	1054.8	11.4
20°-30°	1541.4	16.7
30°-40°	1749.7	19.0
40°-50°	1689.0	18.3
50°-60°	1393.3	15.1
60°-70°	927.8	10.1
70°-80°	415.2	4.5
80°-90°	74.3	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°	2971.7	32.2
0°-40°	4721.3	51.2
0°-60°	7803.7	84.6
0°-90°	9221.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9221.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3988	3988	3988	3988	3988	
5°	3983	3982	3966	3945	3933	377
15°	3753	3763	3753	3737	3710	1058
25°	3334	3360	3375	3350	3321	1527
35°	2681	2718	2842	2857	2846	1680
45°	2076	2111	2180	2280	2292	1602
55°	1454	1478	1550	1636	1684	1298
65°	852	875	927	993	1049	845
75°	342	360	386	404	427	374
85°	54	54	54	51	51	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3987.8	3987.8	3987.8	3987.8	3987.8
2.5°	3998.6	4000.1	3990.9	3966.4	3951.1
5°	3983.2	3981.7	3966.4	3944.9	3932.7
7.5°	3938.8	3941.9	3937.3	3906.6	3889.8
10°	3895.9	3897.5	3885.2	3860.7	3840.8
12.5°	3840.8	3839.2	3822.4	3810.1	3778.0
15°	3753.4	3762.6	3753.4	3736.6	3710.5
17.5°	3669.2	3669.2	3675.3	3646.2	3626.3
20°	3574.2	3578.8	3578.8	3555.8	3532.8
22.5°	3463.9	3477.7	3482.3	3457.8	3430.2
25°	3333.7	3359.7	3375.0	3350.5	3321.4
27.5°	3175.9	3215.7	3261.7	3243.3	3211.1
30°	2999.7	3057.9	3134.5	3119.2	3096.2
32.5°	2832.7	2890.9	2996.6	2990.5	2978.2
35°	2681.0	2717.8	2841.9	2857.2	2846.5
37.5°	2537.0	2570.7	2687.2	2722.4	2713.2
40°	2385.4	2422.1	2514.0	2576.9	2579.9
42.5°	2235.2	2270.5	2345.5	2435.9	2435.9
45°	2075.9	2111.1	2180.1	2279.6	2291.9
47.5°	1919.6	1956.4	2023.8	2123.4	2143.3
50°	1766.4	1800.1	1867.5	1964.0	1994.7
52.5°	1607.1	1643.9	1709.7	1798.6	1843.0
55°	1453.9	1478.4	1550.4	1636.2	1683.7
57.5°	1294.6	1317.5	1398.7	1472.3	1521.3
60°	1141.4	1170.5	1233.3	1308.3	1365.0
62.5°	994.3	1024.9	1078.5	1144.4	1208.8
65°	851.8	874.8	926.9	992.7	1049.4
67.5°	713.9	733.8	785.9	831.9	891.6
70°	574.5	600.6	638.9	683.3	721.6
72.5°	462.7	473.4	505.6	537.7	577.6
75°	341.6	360.0	386.1	404.5	427.4
77.5°	245.1	255.8	271.2	286.5	307.9
80°	163.9	168.5	182.3	185.4	202.2
82.5°	99.6	102.6	105.7	107.2	113.4
85°	53.6	53.6	53.6	50.6	50.6
87.5°	30.6	30.6	26.0	21.4	15.3
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)