

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: P557738

Luminaire Tested: **FUSL-12-4-LD4-3HI-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: P557738  
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-LD4-3HI-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**

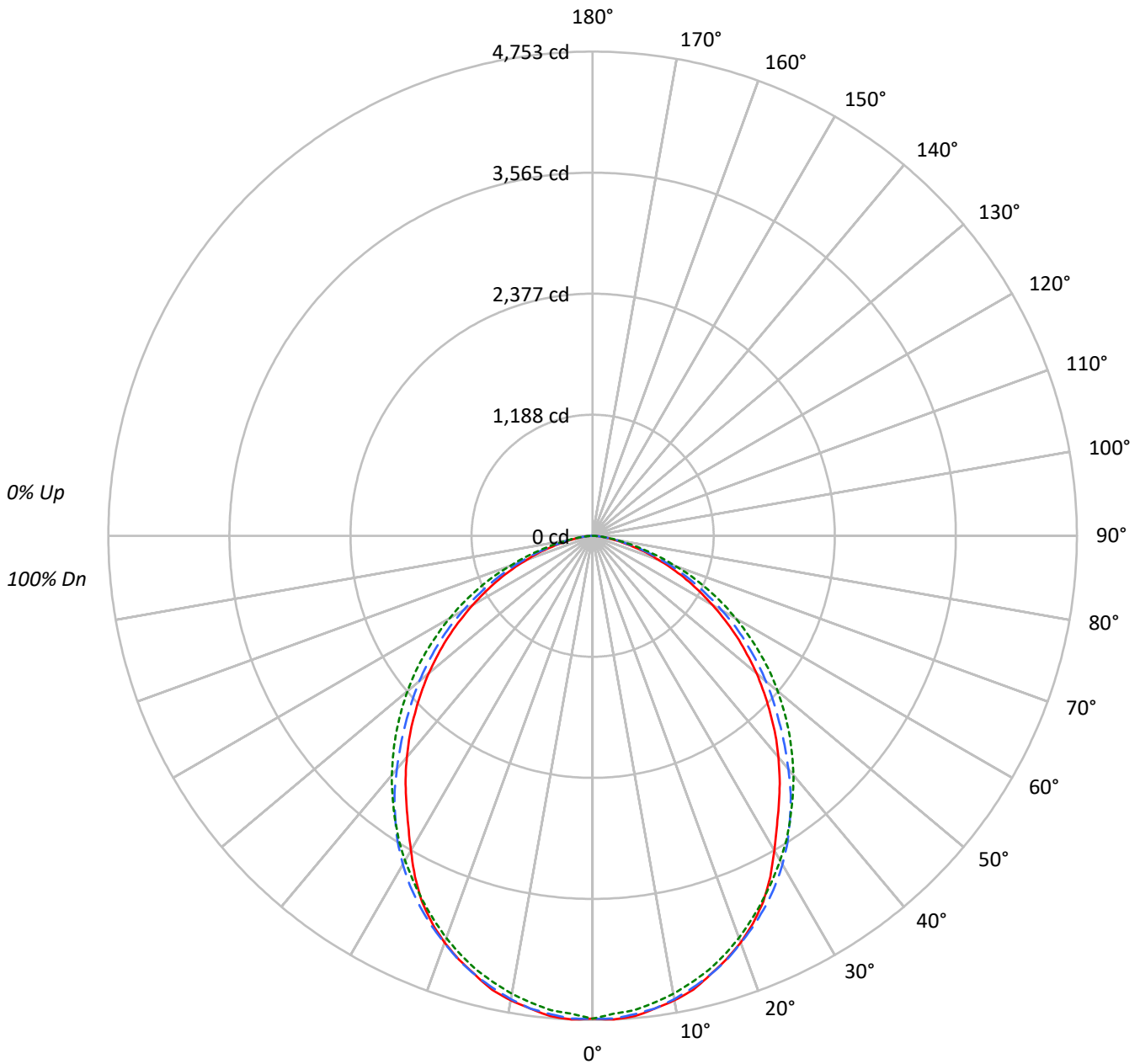
Lumens per Lamp: N/A  
Luminaire Lumens: 10961.0 lumens  
Efficiency: N/A  
Efficacy: 84.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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									
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°	12756	12756	12756
5°	12790	12736	12628
10°	12654	12619	12475
15°	12430	12430	12288
20°	12167	12182	12026
25°	11766	11912	11723
30°	11080	11578	11436
35°	10469	11098	11115
40°	9961	10498	10773
45°	9391	9862	10368
50°	8790	9293	9926
55°	8108	8647	9390
60°	7302	7890	8733
65°	6447	7016	7943
70°	5373	5975	6748
75°	4222	4771	5283
80°	3020	3358	3725
85°	1967	1967	1856



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	446.3	4.1
10°-20°	1253.8	11.4
20°-30°	1832.3	16.7
30°-40°	2079.8	19.0
40°-50°	2007.7	18.3
50°-60°	1656.3	15.1
60°-70°	1102.9	10.1
70°-80°	493.5	4.5
80°-90°	88.3	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°	3532.4	32.2
0°-40°	5612.2	51.2
0°-60°	9276.2	84.6
0°-90°	10961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10961.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4740	4740	4740	4740	4740	
5°	4735	4733	4715	4689	4675	448
15°	4462	4473	4462	4442	4411	1258
25°	3963	3994	4012	3983	3948	1815
35°	3187	3231	3378	3396	3384	1997
45°	2468	2510	2591	2710	2724	1904
55°	1728	1757	1843	1945	2001	1542
65°	1012	1040	1102	1180	1248	1004
75°	406	428	459	481	508	444
85°	64	64	64	60	60	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4740.3	4740.3	4740.3	4740.3	4740.3
2.5°	4753.1	4754.9	4744.0	4714.9	4696.6
5°	4734.9	4733.1	4714.9	4689.4	4674.8
7.5°	4682.1	4685.7	4680.3	4643.8	4623.8
10°	4631.1	4632.9	4618.3	4589.2	4565.5
12.5°	4565.5	4563.7	4543.7	4529.1	4490.9
15°	4461.7	4472.6	4461.7	4441.7	4410.7
17.5°	4361.6	4361.6	4368.8	4334.2	4310.6
20°	4248.6	4254.1	4254.1	4226.8	4199.5
22.5°	4117.5	4133.9	4139.4	4110.2	4077.5
25°	3962.7	3993.7	4011.9	3982.8	3948.2
27.5°	3775.2	3822.5	3877.1	3855.3	3817.0
30°	3565.7	3634.9	3726.0	3707.8	3680.5
32.5°	3367.2	3436.4	3562.1	3554.8	3540.2
35°	3186.9	3230.6	3378.2	3396.4	3383.6
37.5°	3015.8	3055.8	3194.2	3236.1	3225.2
40°	2835.5	2879.2	2988.4	3063.1	3066.7
42.5°	2657.0	2698.9	2788.1	2895.6	2895.6
45°	2467.6	2509.5	2591.4	2709.8	2724.4
47.5°	2281.9	2325.6	2405.7	2524.1	2547.7
50°	2099.7	2139.8	2219.9	2334.7	2371.1
52.5°	1910.3	1954.1	2032.4	2138.0	2190.8
55°	1728.2	1757.4	1843.0	1944.9	2001.4
57.5°	1538.8	1566.2	1662.7	1750.1	1808.4
60°	1356.7	1391.3	1466.0	1555.2	1622.6
62.5°	1181.9	1218.3	1282.1	1360.4	1436.9
65°	1012.5	1039.9	1101.8	1180.1	1247.5
67.5°	848.6	872.3	934.2	988.9	1059.9
70°	682.9	713.9	759.4	812.2	857.7
72.5°	550.0	562.7	601.0	639.2	686.6
75°	406.1	428.0	458.9	480.8	508.1
77.5°	291.4	304.1	322.3	340.5	366.0
80°	194.9	200.3	216.7	220.4	240.4
82.5°	118.4	122.0	125.7	127.5	134.8
85°	63.7	63.7	63.7	60.1	60.1
87.5°	36.4	36.4	31.0	25.5	18.2
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)