

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: P558433

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-84-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: P558433  
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-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE  
AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

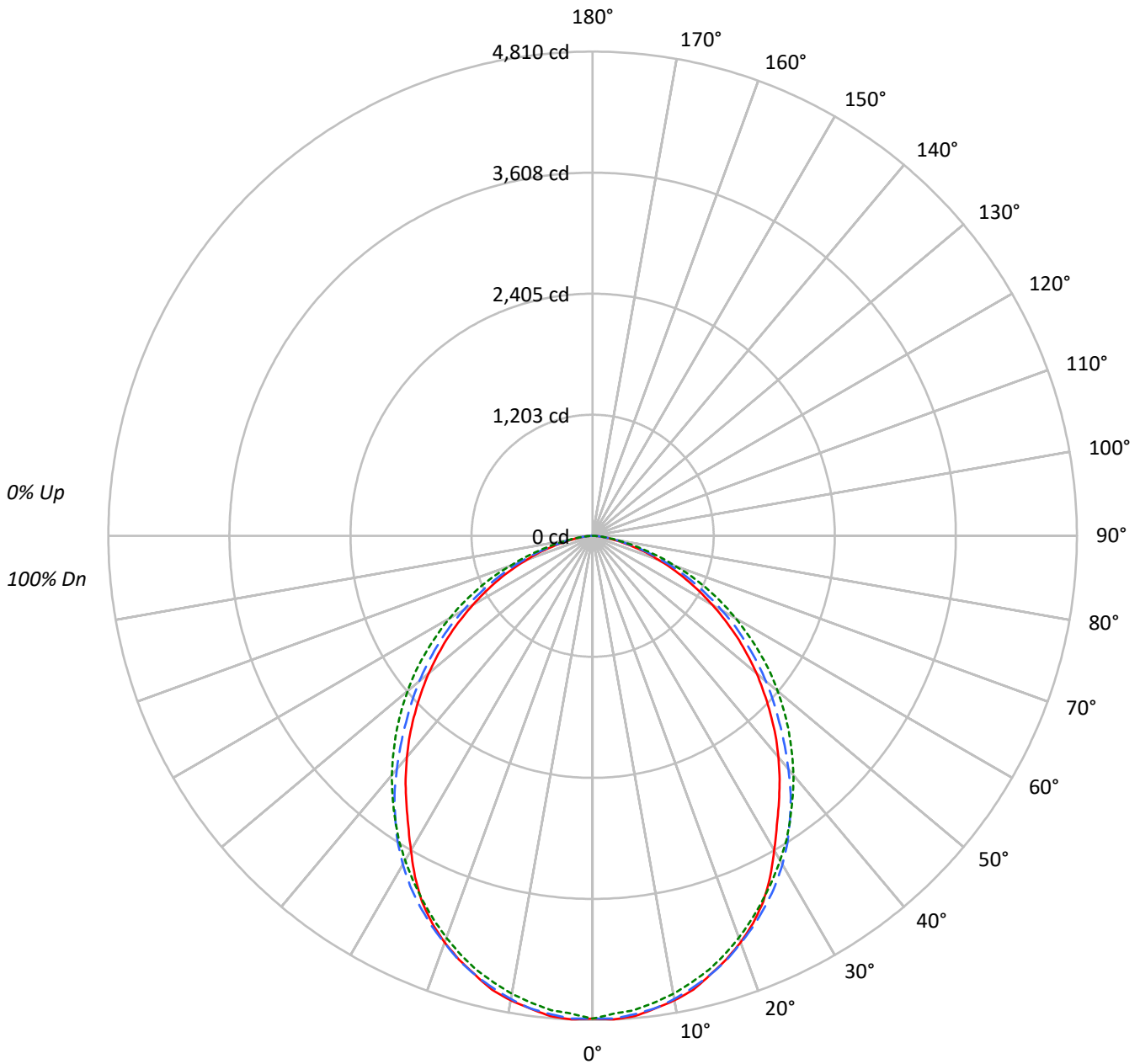
Lumens per Lamp: N/A  
Luminaire Lumens: 11091.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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°	12908	12908	12908
5°	12942	12887	12777
10°	12804	12769	12623
15°	12577	12577	12433
20°	12311	12327	12169
25°	11905	12053	11862
30°	11211	11715	11572
35°	10593	11229	11247
40°	10079	10622	10901
45°	9502	9979	10491
50°	8894	9404	10044
55°	8204	8749	9501
60°	7388	7984	8837
65°	6523	7098	8038
70°	5437	6046	6829
75°	4272	4828	5345
80°	3056	3398	3769
85°	1991	1991	1877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	451.6	4.1
10°-20°	1268.7	11.4
20°-30°	1854.0	16.7
30°-40°	2104.5	19.0
40°-50°	2031.6	18.3
50°-60°	1675.9	15.1
60°-70°	1116.0	10.1
70°-80°	499.4	4.5
80°-90°	89.3	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°	3574.3	32.2
0°-40°	5678.8	51.2
0°-60°	9386.2	84.6
0°-90°	11091.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11091.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4797	4797	4797	4797	4797	
5°	4791	4789	4771	4745	4730	453
15°	4515	4526	4515	4494	4463	1273
25°	4010	4041	4060	4030	3995	1836
35°	3225	3269	3418	3437	3424	2020
45°	2497	2539	2622	2742	2757	1926
55°	1749	1778	1865	1968	2025	1561
65°	1024	1052	1115	1194	1262	1016
75°	411	433	464	486	514	449
85°	64	64	64	61	61	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4796.6	4796.6	4796.6	4796.6	4796.6
2.5°	4809.5	4811.3	4800.3	4770.8	4752.3
5°	4791.0	4789.2	4770.8	4745.0	4730.2
7.5°	4737.6	4741.3	4735.8	4698.9	4678.6
10°	4686.0	4687.9	4673.1	4643.6	4619.7
12.5°	4619.7	4617.8	4597.6	4582.8	4544.1
15°	4514.6	4525.7	4514.6	4494.4	4463.0
17.5°	4413.3	4413.3	4420.7	4385.6	4361.7
20°	4299.0	4304.6	4304.6	4276.9	4249.3
22.5°	4166.4	4182.9	4188.5	4159.0	4125.8
25°	4009.7	4041.1	4059.5	4030.0	3995.0
27.5°	3819.9	3867.8	3923.1	3901.0	3862.3
30°	3608.0	3678.0	3770.2	3751.8	3724.1
32.5°	3407.2	3477.2	3604.3	3597.0	3582.2
35°	3224.7	3269.0	3418.2	3436.7	3423.8
37.5°	3051.5	3092.1	3232.1	3274.5	3263.4
40°	2869.1	2913.3	3023.9	3099.4	3103.1
42.5°	2688.5	2730.9	2821.2	2929.9	2929.9
45°	2496.9	2539.3	2622.2	2742.0	2756.7
47.5°	2308.9	2353.1	2434.2	2554.0	2577.9
50°	2124.6	2165.2	2246.3	2362.4	2399.2
52.5°	1933.0	1977.2	2056.5	2163.3	2216.8
55°	1748.7	1778.2	1864.8	1968.0	2025.1
57.5°	1557.1	1584.7	1682.4	1770.8	1829.8
60°	1372.8	1407.8	1483.4	1573.7	1641.9
62.5°	1195.9	1232.8	1297.3	1376.5	1453.9
65°	1024.5	1052.2	1114.8	1194.1	1262.3
67.5°	858.7	882.7	945.3	1000.6	1072.5
70°	691.0	722.3	768.4	821.8	867.9
72.5°	556.5	569.4	608.1	646.8	694.7
75°	410.9	433.0	464.4	486.5	514.1
77.5°	294.8	307.7	326.2	344.6	370.4
80°	197.2	202.7	219.3	223.0	243.2
82.5°	119.8	123.5	127.1	129.0	136.4
85°	64.5	64.5	64.5	60.8	60.8
87.5°	36.9	36.9	31.3	25.8	18.4
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)