

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: P558413

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-81-96-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: P558413  
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-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

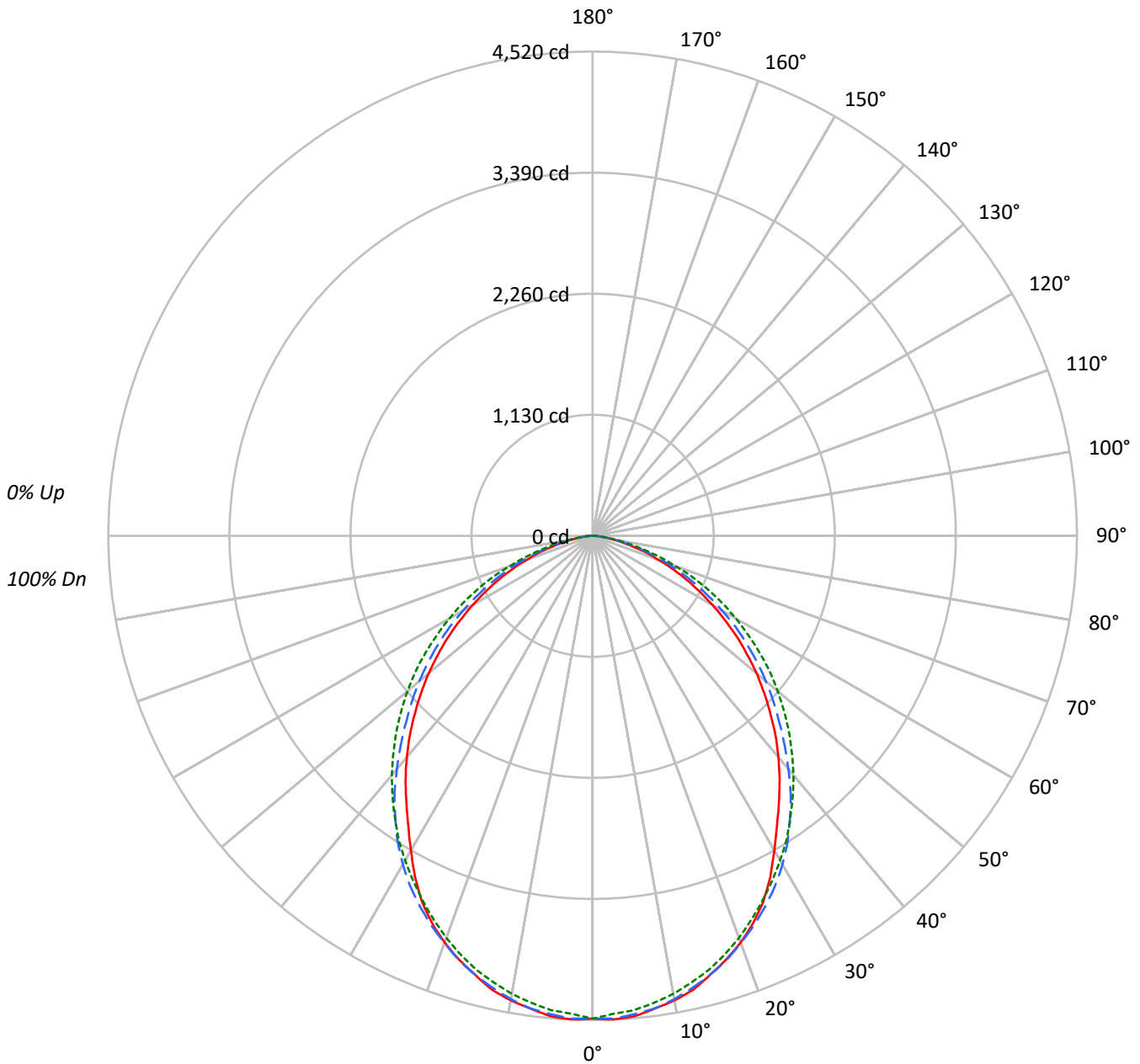
Lumens per Lamp: N/A  
Luminaire Lumens: 10423.0 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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									
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°	12130	12130	12130
5°	12162	12111	12008
10°	12033	12000	11863
15°	11820	11820	11685
20°	11570	11584	11436
25°	11188	11327	11147
30°	10536	11009	10875
35°	9955	10553	10570
40°	9472	9983	10244
45°	8930	9378	9859
50°	8359	8838	9439
55°	7710	8222	8929
60°	6943	7502	8304
65°	6131	6671	7553
70°	5109	5681	6417
75°	4015	4537	5024
80°	2872	3194	3543
85°	1871	1871	1763



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	424.4	4.1
10°-20°	1192.3	11.4
20°-30°	1742.3	16.7
30°-40°	1977.7	19.0
40°-50°	1909.2	18.3
50°-60°	1575.0	15.1
60°-70°	1048.8	10.1
70°-80°	469.3	4.5
80°-90°	83.9	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°	3359.0	32.2
0°-40°	5336.8	51.2
0°-60°	8820.9	84.6
0°-90°	10423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10423.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4508	4508	4508	4508	4508	
5°	4502	4501	4483	4459	4445	426
15°	4243	4253	4243	4224	4194	1196
25°	3768	3798	3815	3787	3754	1726
35°	3030	3072	3212	3230	3218	1899
45°	2346	2386	2464	2577	2591	1810
55°	1643	1671	1752	1850	1903	1467
65°	963	989	1048	1122	1186	955
75°	386	407	436	457	483	422
85°	61	61	61	57	57	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4507.7	4507.7	4507.7	4507.7	4507.7
2.5°	4519.8	4521.5	4511.1	4483.4	4466.1
5°	4502.5	4500.8	4483.4	4459.2	4445.3
7.5°	4452.3	4455.7	4450.5	4415.9	4396.8
10°	4403.8	4405.5	4391.7	4363.9	4341.4
12.5°	4341.4	4339.7	4320.7	4306.8	4270.4
15°	4242.7	4253.1	4242.7	4223.7	4194.2
17.5°	4147.5	4147.5	4154.4	4121.5	4099.0
20°	4040.1	4045.3	4045.3	4019.3	3993.4
22.5°	3915.4	3931.0	3936.2	3908.5	3877.3
25°	3768.2	3797.7	3815.0	3787.3	3754.4
27.5°	3589.9	3634.9	3686.8	3666.1	3629.7
30°	3390.7	3456.5	3543.1	3525.8	3499.8
32.5°	3202.0	3267.8	3387.3	3380.3	3366.5
35°	3030.5	3072.1	3212.3	3229.7	3217.5
37.5°	2867.7	2905.8	3037.4	3077.3	3066.9
40°	2696.3	2737.9	2841.8	2912.8	2916.2
42.5°	2526.6	2566.4	2651.3	2753.4	2753.4
45°	2346.5	2386.3	2464.2	2576.8	2590.7
47.5°	2169.9	2211.4	2287.6	2400.2	2422.7
50°	1996.7	2034.8	2111.0	2220.1	2254.7
52.5°	1816.6	1858.1	1932.6	2033.0	2083.3
55°	1643.4	1671.1	1752.5	1849.5	1903.2
57.5°	1463.3	1489.3	1581.1	1664.2	1719.6
60°	1290.1	1323.0	1394.0	1478.9	1543.0
62.5°	1123.9	1158.5	1219.1	1293.6	1366.3
65°	962.8	988.8	1047.7	1122.2	1186.2
67.5°	807.0	829.5	888.4	940.3	1007.9
70°	649.4	678.8	722.1	772.3	815.6
72.5°	523.0	535.1	571.5	607.8	652.9
75°	386.2	407.0	436.4	457.2	483.2
77.5°	277.1	289.2	306.5	323.8	348.1
80°	185.3	190.5	206.1	209.5	228.6
82.5°	112.6	116.0	119.5	121.2	128.1
85°	60.6	60.6	60.6	57.1	57.1
87.5°	34.6	34.6	29.4	24.2	17.3
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)