

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: P557131

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-81-94-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: P557131  
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-LD4-2HI-50-UNV-81-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

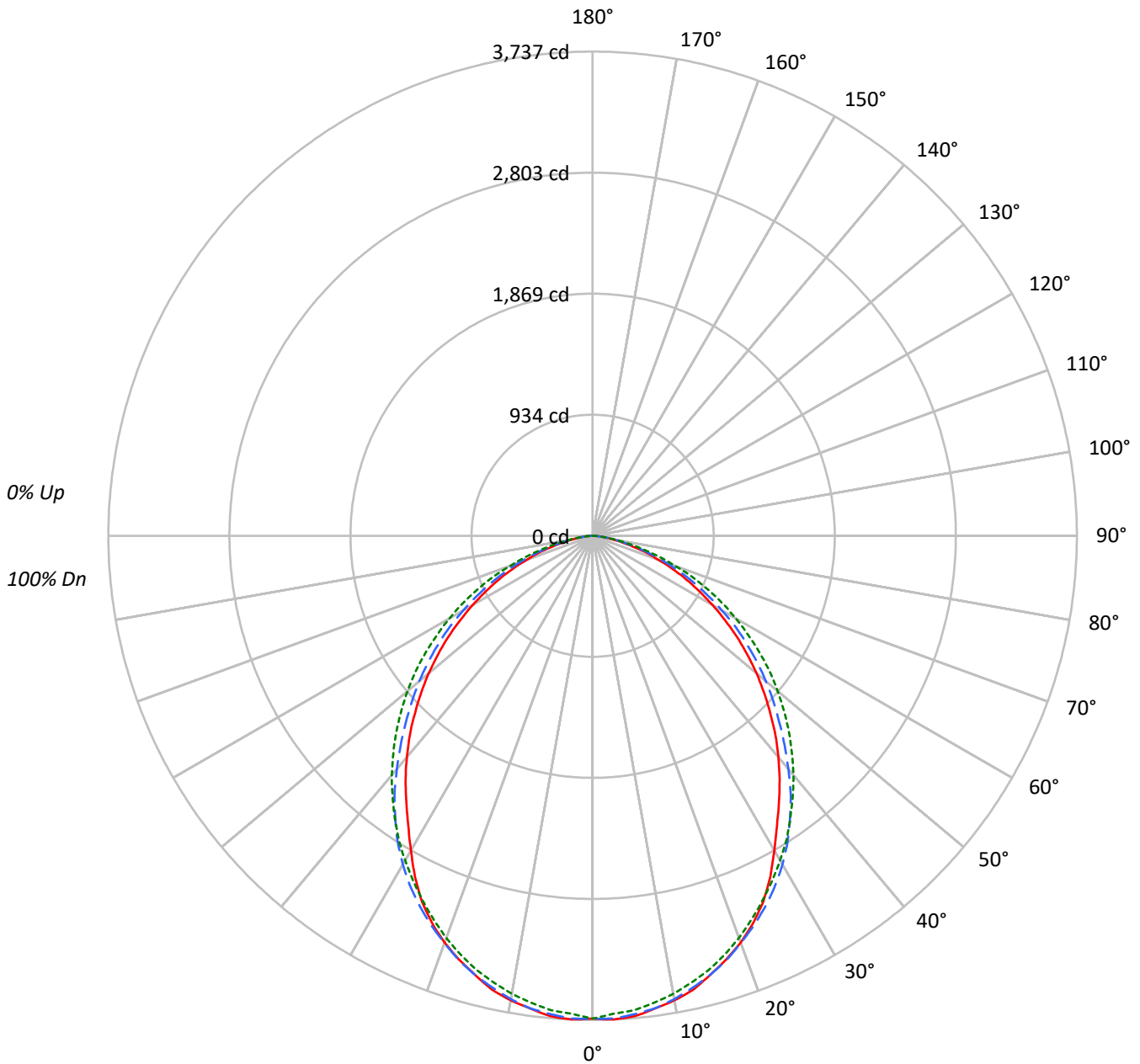
Lumens per Lamp: N/A  
Luminaire Lumens: 8618.0 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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									
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°	10030	10030	10030
5°	10056	10014	9928
10°	9950	9922	9809
15°	9773	9773	9661
20°	9566	9578	9455
25°	9251	9366	9217
30°	8711	9103	8992
35°	8231	8725	8739
40°	7831	8254	8470
45°	7383	7754	8152
50°	6911	7307	7804
55°	6375	6798	7383
60°	5741	6203	6866
65°	5069	5516	6245
70°	4224	4698	5306
75°	3320	3751	4154
80°	2374	2641	2929
85°	1547	1547	1460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	350.9	4.1
10°-20°	985.8	11.4
20°-30°	1440.6	16.7
30°-40°	1635.2	19.0
40°-50°	1578.6	18.3
50°-60°	1302.2	15.1
60°-70°	867.2	10.1
70°-80°	388.0	4.5
80°-90°	69.4	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°	2777.3	32.2
0°-40°	4412.6	51.2
0°-60°	7293.4	84.6
0°-90°	8618.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8618.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3727	3727	3727	3727	3727	
5°	3723	3721	3707	3687	3676	352
15°	3508	3517	3508	3492	3468	989
25°	3116	3140	3154	3131	3104	1427
35°	2506	2540	2656	2670	2660	1570
45°	1940	1973	2038	2131	2142	1497
55°	1359	1382	1449	1529	1574	1213
65°	796	818	866	928	981	789
75°	319	336	361	378	400	349
85°	50	50	50	47	47	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3727.1	3727.1	3727.1	3727.1	3727.1
2.5°	3737.1	3738.5	3729.9	3707.0	3692.7
5°	3722.8	3721.3	3707.0	3687.0	3675.5
7.5°	3681.2	3684.1	3679.8	3651.2	3635.4
10°	3641.2	3642.6	3631.1	3608.2	3589.6
12.5°	3589.6	3588.2	3572.4	3561.0	3530.9
15°	3508.0	3516.6	3508.0	3492.2	3467.9
17.5°	3429.2	3429.2	3435.0	3407.8	3389.1
20°	3340.5	3344.8	3344.8	3323.3	3301.8
22.5°	3237.4	3250.3	3254.6	3231.6	3205.9
25°	3115.7	3140.0	3154.3	3131.4	3104.2
27.5°	2968.2	3005.4	3048.4	3031.2	3001.1
30°	2803.5	2857.9	2929.5	2915.2	2893.7
32.5°	2647.5	2701.9	2800.7	2794.9	2783.5
35°	2505.7	2540.1	2656.1	2670.4	2660.3
37.5°	2371.1	2402.6	2511.4	2544.4	2535.8
40°	2229.4	2263.7	2349.6	2408.3	2411.2
42.5°	2089.0	2122.0	2192.1	2276.6	2276.6
45°	1940.1	1973.1	2037.5	2130.6	2142.0
47.5°	1794.1	1828.5	1891.5	1984.5	2003.1
50°	1650.9	1682.4	1745.4	1835.6	1864.2
52.5°	1502.0	1536.4	1597.9	1681.0	1722.5
55°	1358.8	1381.7	1449.0	1529.2	1573.6
57.5°	1209.9	1231.4	1307.3	1376.0	1421.8
60°	1066.7	1093.9	1152.6	1222.8	1275.8
62.5°	929.3	957.9	1008.0	1069.6	1129.7
65°	796.1	817.6	866.3	927.8	980.8
67.5°	667.2	685.8	734.5	777.5	833.3
70°	536.9	561.3	597.1	638.6	674.4
72.5°	432.4	442.4	472.5	502.6	539.8
75°	319.3	336.5	360.8	378.0	399.5
77.5°	229.1	239.1	253.4	267.8	287.8
80°	153.2	157.5	170.4	173.3	189.0
82.5°	93.1	95.9	98.8	100.2	106.0
85°	50.1	50.1	50.1	47.3	47.3
87.5°	28.6	28.6	24.3	20.0	14.3
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)