

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: P557915

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-82-94-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: P557915  
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-50-UNV-82-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 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**

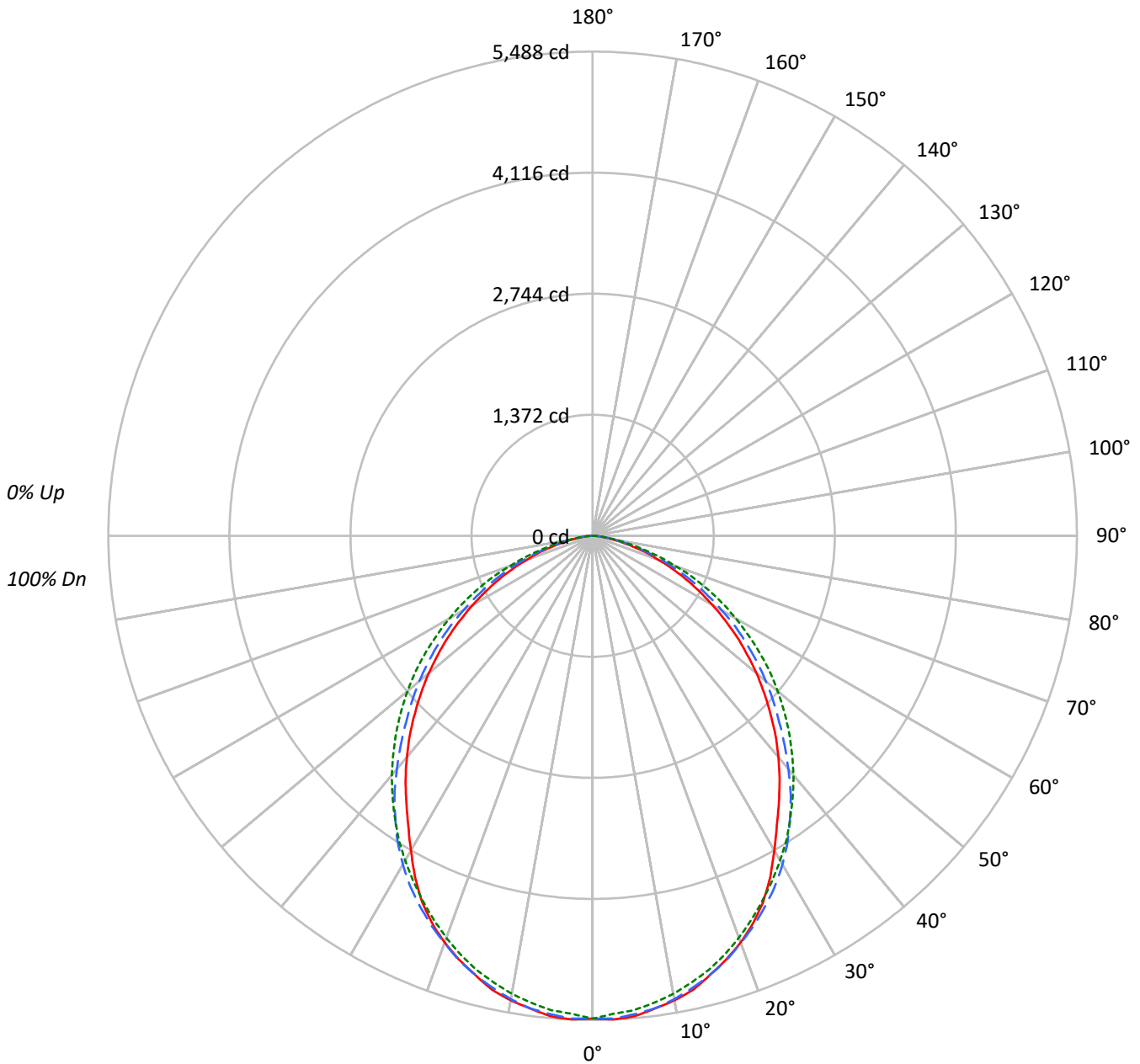
Lumens per Lamp: N/A  
Luminaire Lumens: 12655.0 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	14728	14728	14728
5°	14767	14704	14579
10°	14610	14570	14403
15°	14351	14351	14187
20°	14047	14065	13885
25°	13585	13753	13534
30°	12792	13367	13204
35°	12087	12812	12833
40°	11500	12120	12438
45°	10842	11386	11970
50°	10149	10730	11460
55°	9361	9983	10841
60°	8430	9110	10083
65°	7443	8099	9171
70°	6204	6899	7792
75°	4875	5508	6099
80°	3487	3877	4300
85°	2272	2272	2143



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	515.3	4.1
10°-20°	1447.6	11.4
20°-30°	2115.4	16.7
30°-40°	2401.2	19.0
40°-50°	2318.0	18.3
50°-60°	1912.2	15.1
60°-70°	1273.4	10.1
70°-80°	569.8	4.5
80°-90°	102.0	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°	4078.3	32.2
0°-40°	6479.6	51.2
0°-60°	10709.8	84.6
0°-90°	12655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12655.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5473	5473	5473	5473	5473	
5°	5467	5465	5444	5414	5397	517
15°	5151	5164	5151	5128	5092	1452
25°	4575	4611	4632	4598	4558	2095
35°	3680	3730	3900	3921	3907	2305
45°	2849	2897	2992	3129	3145	2198
55°	1995	2029	2128	2246	2311	1781
65°	1169	1201	1272	1362	1440	1159
75°	469	494	530	555	587	513
85°	74	74	74	69	69	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5473.0	5473.0	5473.0	5473.0	5473.0
2.5°	5487.7	5489.8	5477.2	5443.5	5422.5
5°	5466.7	5464.6	5443.5	5414.1	5397.3
7.5°	5405.7	5409.9	5403.6	5361.5	5338.4
10°	5346.8	5348.9	5332.1	5298.4	5271.1
12.5°	5271.1	5269.0	5245.9	5229.1	5184.9
15°	5151.3	5163.9	5151.3	5128.1	5092.4
17.5°	5035.6	5035.6	5044.0	5004.1	4976.8
20°	4905.3	4911.6	4911.6	4880.0	4848.5
22.5°	4753.9	4772.8	4779.1	4745.5	4707.6
25°	4575.2	4610.9	4631.9	4598.3	4558.3
27.5°	4358.6	4413.3	4476.3	4451.1	4407.0
30°	4116.8	4196.7	4301.8	4280.8	4249.3
32.5°	3887.6	3967.5	4112.6	4104.2	4087.4
35°	3679.5	3729.9	3900.2	3921.3	3906.6
37.5°	3481.8	3528.1	3687.9	3736.2	3723.6
40°	3273.7	3324.1	3450.3	3536.5	3540.7
42.5°	3067.6	3116.0	3219.0	3343.1	3343.1
45°	2849.0	2897.3	2991.9	3128.6	3145.4
47.5°	2634.5	2685.0	2777.5	2914.1	2941.5
50°	2424.3	2470.5	2563.0	2695.5	2737.5
52.5°	2205.6	2256.0	2346.5	2468.4	2529.4
55°	1995.3	2029.0	2127.8	2245.5	2310.7
57.5°	1776.7	1808.2	1919.6	2020.6	2087.8
60°	1566.4	1606.4	1692.6	1795.6	1873.4
62.5°	1364.6	1406.6	1480.2	1570.6	1658.9
65°	1169.0	1200.6	1272.0	1362.5	1440.3
67.5°	979.8	1007.1	1078.6	1141.7	1223.7
70°	788.5	824.2	876.8	937.7	990.3
72.5°	635.0	649.7	693.8	738.0	792.7
75°	468.9	494.1	529.8	555.1	586.6
77.5°	336.4	351.1	372.2	393.2	422.6
80°	225.0	231.3	250.2	254.4	277.5
82.5°	136.7	140.9	145.1	147.2	155.6
85°	73.6	73.6	73.6	69.4	69.4
87.5°	42.1	42.1	35.7	29.4	21.0
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)