

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: P557927

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-93-87-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: P557927  
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-93-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

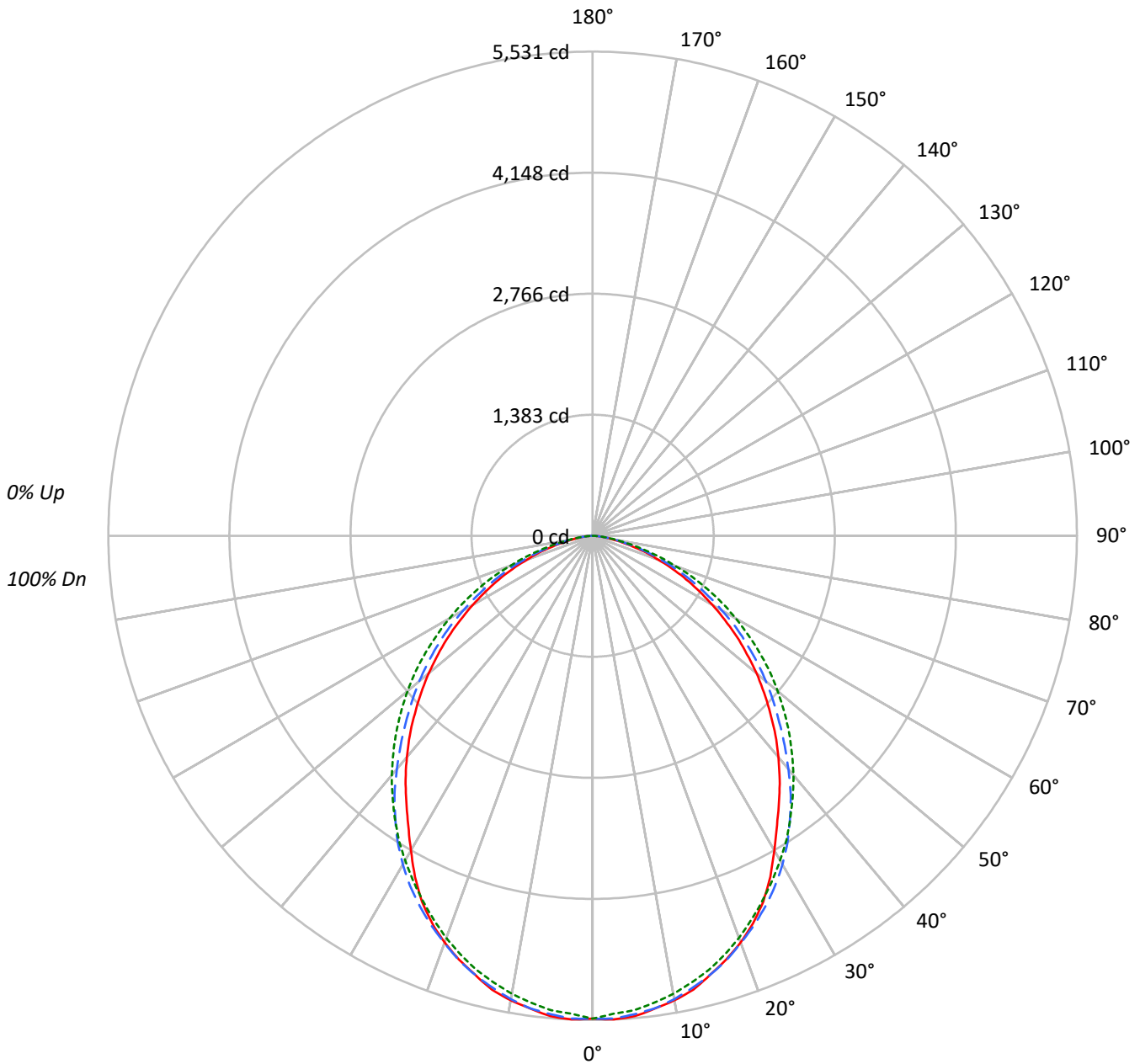
Lumens per Lamp: N/A  
Luminaire Lumens: 12755.0 lumens  
Efficiency: N/A  
Efficacy: 98.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14844	14844	14844
5°	14884	14820	14695
10°	14726	14685	14517
15°	14464	14464	14299
20°	14158	14176	13994
25°	13692	13862	13642
30°	12893	13473	13308
35°	12183	12914	12935
40°	11591	12216	12536
45°	10928	11476	12065
50°	10229	10815	11551
55°	9435	10062	10927
60°	8497	9181	10162
65°	7503	8164	9243
70°	6253	6953	7853
75°	4914	5552	6147
80°	3515	3908	4334
85°	2291	2291	2158



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	519.4	4.1
10°-20°	1459.0	11.4
20°-30°	2132.1	16.7
30°-40°	2420.2	19.0
40°-50°	2336.4	18.3
50°-60°	1927.3	15.1
60°-70°	1283.4	10.1
70°-80°	574.3	4.5
80°-90°	102.7	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°	4110.6	32.2
0°-40°	6530.8	51.2
0°-60°	10794.5	84.6
0°-90°	12755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12755.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5516	5516	5516	5516	5516	
5°	5510	5508	5486	5457	5440	522
15°	5192	5205	5192	5169	5133	1464
25°	4611	4647	4668	4635	4594	2112
35°	3709	3759	3931	3952	3937	2324
45°	2872	2920	3016	3153	3170	2216
55°	2011	2045	2145	2263	2329	1795
65°	1178	1210	1282	1373	1452	1168
75°	473	498	534	560	591	517
85°	74	74	74	70	70	100
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5516.2	5516.2	5516.2	5516.2	5516.2
2.5°	5531.0	5533.2	5520.4	5486.5	5465.3
5°	5509.9	5507.7	5486.5	5456.9	5439.9
7.5°	5448.4	5452.6	5446.3	5403.9	5380.6
10°	5389.1	5391.2	5374.2	5340.3	5312.8
12.5°	5312.8	5310.6	5287.3	5270.4	5225.9
15°	5192.0	5204.7	5192.0	5168.7	5132.6
17.5°	5075.4	5075.4	5083.9	5043.6	5016.1
20°	4944.0	4950.4	4950.4	4918.6	4886.8
22.5°	4791.5	4810.5	4816.9	4783.0	4744.8
25°	4611.3	4647.3	4668.5	4634.6	4594.4
27.5°	4393.0	4448.1	4511.7	4486.3	4441.8
30°	4149.3	4229.9	4335.8	4314.6	4282.8
32.5°	3918.4	3998.9	4145.1	4136.6	4119.7
35°	3708.6	3759.4	3931.1	3952.3	3937.4
37.5°	3509.4	3556.0	3717.0	3765.8	3753.1
40°	3299.6	3350.4	3477.6	3564.4	3568.7
42.5°	3091.9	3140.6	3244.5	3369.5	3369.5
45°	2871.5	2920.2	3015.6	3153.3	3170.3
47.5°	2655.3	2706.2	2799.4	2937.2	2964.7
50°	2443.4	2490.0	2583.3	2716.8	2759.2
52.5°	2223.0	2273.9	2365.0	2487.9	2549.4
55°	2011.1	2045.0	2144.6	2263.3	2329.0
57.5°	1790.7	1822.5	1934.8	2036.5	2104.3
60°	1578.8	1619.0	1705.9	1809.8	1888.2
62.5°	1375.3	1417.7	1491.9	1583.0	1672.0
65°	1178.3	1210.0	1282.1	1373.2	1451.6
67.5°	987.5	1015.1	1087.1	1150.7	1233.4
70°	794.7	830.7	883.7	945.2	998.1
72.5°	640.0	654.8	699.3	743.8	798.9
75°	472.6	498.0	534.0	559.5	591.2
77.5°	339.1	353.9	375.1	396.3	426.0
80°	226.8	233.1	252.2	256.4	279.7
82.5°	137.7	142.0	146.2	148.3	156.8
85°	74.2	74.2	74.2	69.9	69.9
87.5°	42.4	42.4	36.0	29.7	21.2
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)