

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: P557856

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-93-84-EDD-90**

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: P557856  
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-40-UNV-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

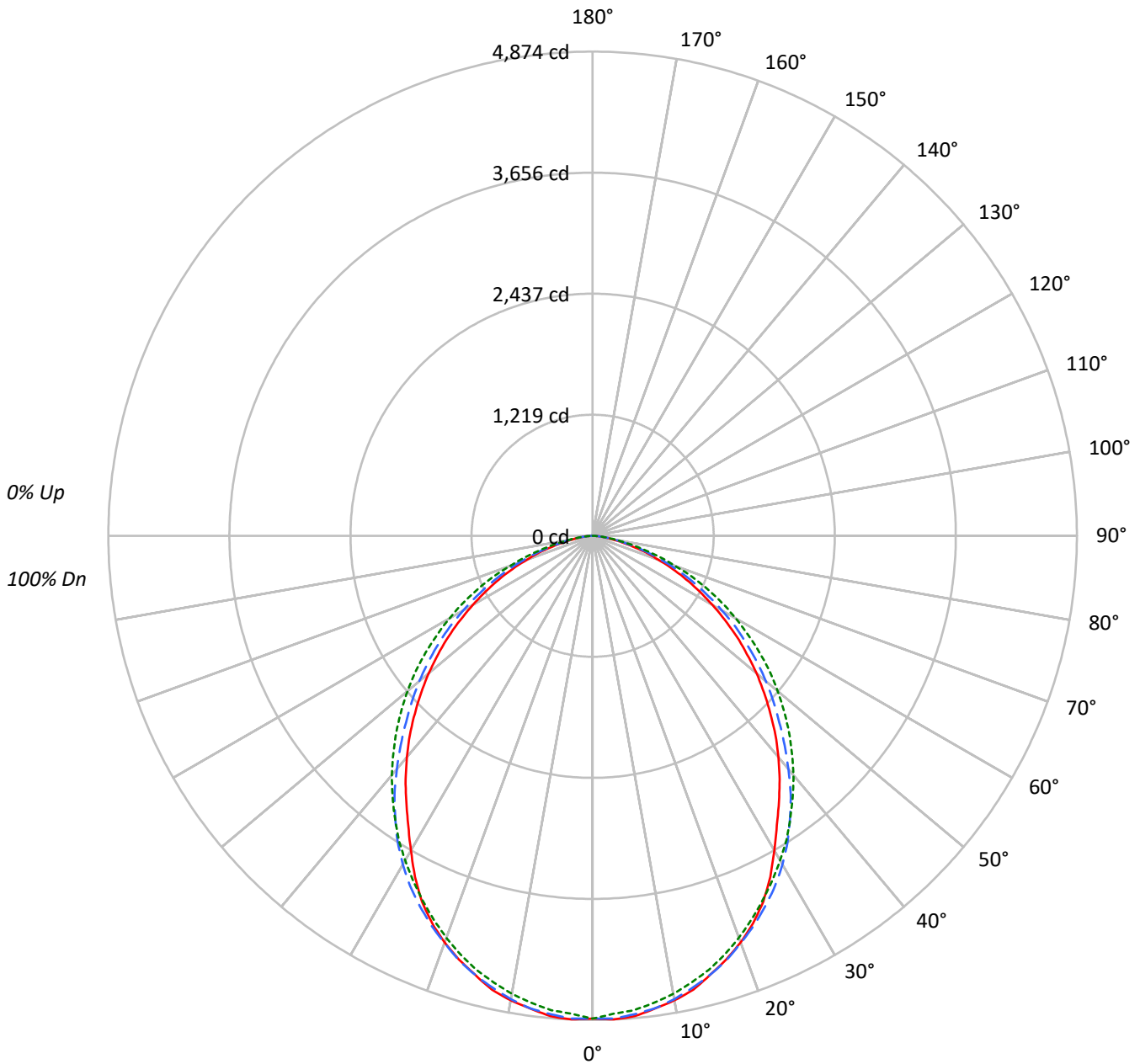
Lumens per Lamp: N/A  
Luminaire Lumens: 11239.0 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	13080	13080	13080
5°	13115	13059	12948
10°	12975	12940	12792
15°	12745	12745	12600
20°	12475	12491	12331
25°	12064	12214	12020
30°	11361	11871	11726
35°	10735	11379	11397
40°	10213	10764	11046
45°	9629	10112	10631
50°	9013	9529	10178
55°	8314	8866	9628
60°	7487	8090	8955
65°	6611	7193	8145
70°	5509	6127	6920
75°	4329	4893	5417
80°	3096	3443	3820
85°	2019	2019	1902



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	457.6	4.1
10°-20°	1285.6	11.4
20°-30°	1878.7	16.7
30°-40°	2132.6	19.0
40°-50°	2058.7	18.3
50°-60°	1698.3	15.1
60°-70°	1130.9	10.1
70°-80°	506.1	4.5
80°-90°	90.5	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°	3622.0	32.2
0°-40°	5754.6	51.2
0°-60°	9511.5	84.6
0°-90°	11239.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11239.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4861	4861	4861	4861	4861	
5°	4855	4853	4834	4808	4793	460
15°	4575	4586	4575	4554	4523	1290
25°	4063	4095	4114	4084	4048	1861
35°	3268	3313	3464	3482	3469	2047
45°	2530	2573	2657	2778	2794	1952
55°	1772	1802	1890	1994	2052	1582
65°	1038	1066	1130	1210	1279	1029
75°	416	439	471	493	521	455
85°	65	65	65	62	62	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4860.6	4860.6	4860.6	4860.6	4860.6
2.5°	4873.6	4875.5	4864.3	4834.4	4815.8
5°	4855.0	4853.1	4834.4	4808.3	4793.4
7.5°	4800.8	4804.6	4799.0	4761.6	4741.1
10°	4748.5	4750.4	4735.5	4705.6	4681.3
12.5°	4681.3	4679.4	4658.9	4644.0	4604.8
15°	4574.9	4586.1	4574.9	4554.3	4522.6
17.5°	4472.2	4472.2	4479.6	4444.2	4419.9
20°	4356.4	4362.0	4362.0	4334.0	4306.0
22.5°	4222.0	4238.8	4244.4	4214.5	4180.9
25°	4063.2	4095.0	4113.7	4083.8	4048.3
27.5°	3870.9	3919.5	3975.5	3953.1	3913.9
30°	3656.2	3727.1	3820.5	3801.8	3773.8
32.5°	3452.6	3523.6	3652.4	3645.0	3630.0
35°	3267.8	3312.6	3463.8	3482.5	3469.4
37.5°	3092.2	3133.3	3275.2	3318.2	3307.0
40°	2907.4	2952.2	3064.2	3140.8	3144.5
42.5°	2724.4	2767.3	2858.8	2969.0	2969.0
45°	2530.2	2573.1	2657.2	2778.5	2793.5
47.5°	2339.7	2384.5	2466.7	2588.1	2612.4
50°	2153.0	2194.1	2276.2	2393.9	2431.2
52.5°	1958.8	2003.6	2083.9	2192.2	2246.4
55°	1772.1	1801.9	1889.7	1994.3	2052.2
57.5°	1577.9	1605.9	1704.8	1794.5	1854.2
60°	1391.1	1426.6	1503.2	1594.7	1663.8
62.5°	1211.9	1249.2	1314.6	1394.9	1473.3
65°	1038.2	1066.2	1129.7	1210.0	1279.1
67.5°	870.2	894.4	957.9	1013.9	1086.8
70°	700.2	732.0	778.7	832.8	879.5
72.5°	563.9	577.0	616.2	655.4	704.0
75°	416.4	438.8	470.6	493.0	521.0
77.5°	298.8	311.8	330.5	349.2	375.3
80°	199.8	205.4	222.2	225.9	246.5
82.5°	121.4	125.1	128.8	130.7	138.2
85°	65.4	65.4	65.4	61.6	61.6
87.5°	37.3	37.3	31.7	26.1	18.7
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)