

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: P557733

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-93-86-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: P557733  
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-30-UNV-93-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

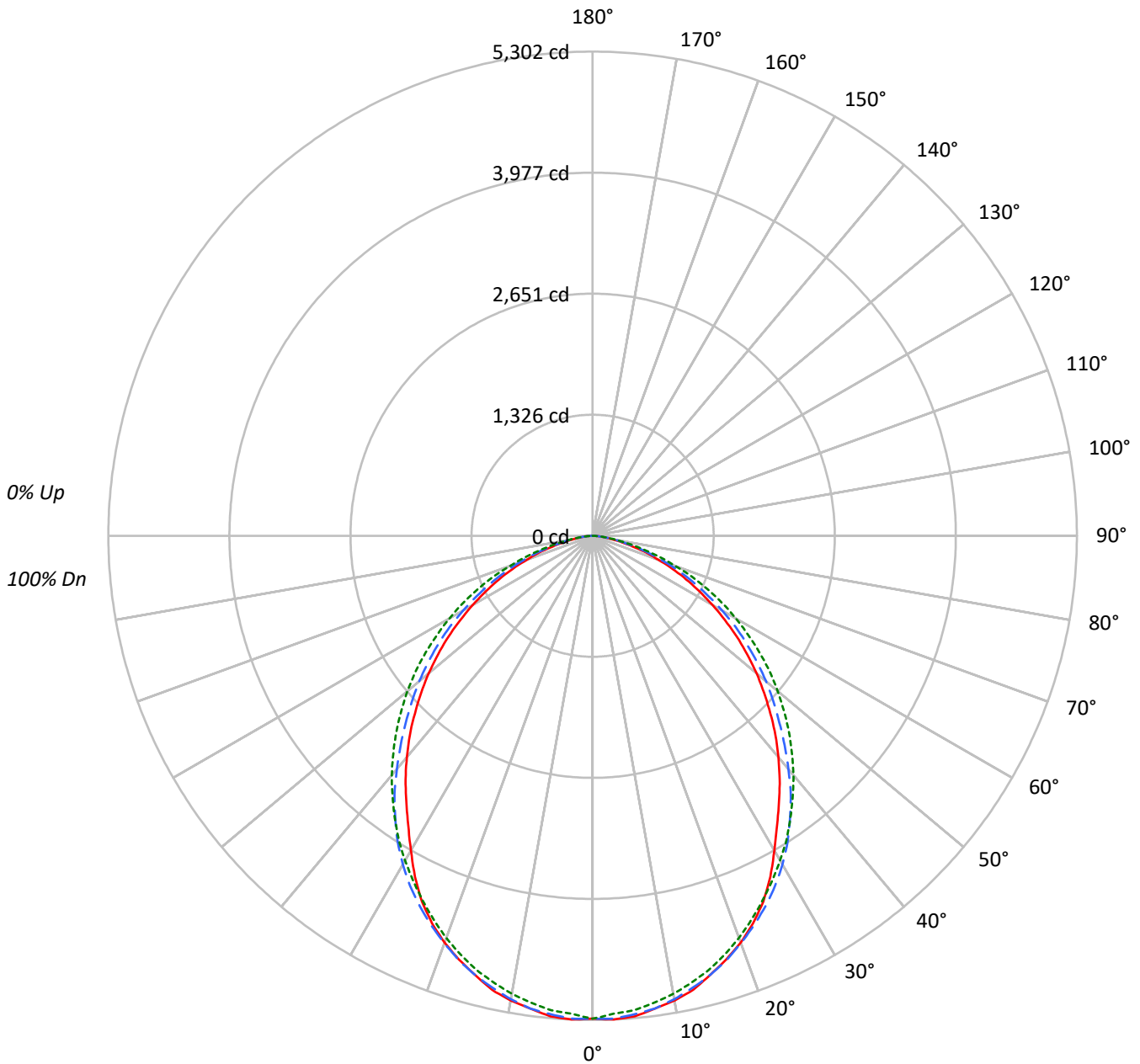
Lumens per Lamp: N/A  
Luminaire Lumens: 12228.0 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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					
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								
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°	14231	14231	14231
5°	14269	14208	14088
10°	14117	14078	13917
15°	13867	13867	13708
20°	13573	13591	13416
25°	13126	13289	13078
30°	12360	12916	12758
35°	11679	12380	12400
40°	11112	11711	12018
45°	10476	11002	11566
50°	9807	10368	11074
55°	9045	9646	10475
60°	8146	8802	9742
65°	7193	7826	8862
70°	5995	6666	7529
75°	4711	5323	5893
80°	3369	3747	4156
85°	2195	2195	2069



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	497.9	4.1
10°-20°	1398.8	11.4
20°-30°	2044.1	16.7
30°-40°	2320.2	19.0
40°-50°	2239.8	18.3
50°-60°	1847.7	15.1
60°-70°	1230.4	10.1
70°-80°	550.6	4.5
80°-90°	98.5	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°	3940.7	32.2
0°-40°	6261.0	51.2
0°-60°	10348.5	84.6
0°-90°	12228.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12228.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5288	5288	5288	5288	5288	
5°	5282	5280	5260	5231	5215	500
15°	4978	4990	4978	4955	4921	1403
25°	4421	4455	4476	4443	4404	2025
35°	3555	3604	3769	3789	3775	2228
45°	2753	2800	2891	3023	3039	2124
55°	1928	1960	2056	2170	2233	1721
65°	1130	1160	1229	1316	1392	1120
75°	453	477	512	536	567	495
85°	71	71	71	67	67	96
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5288.3	5288.3	5288.3	5288.3	5288.3
2.5°	5302.5	5304.5	5292.4	5259.9	5239.5
5°	5282.2	5280.2	5259.9	5231.4	5215.2
7.5°	5223.3	5227.3	5221.3	5180.6	5158.3
10°	5166.4	5168.4	5152.2	5119.7	5093.3
12.5°	5093.3	5091.2	5068.9	5052.6	5010.0
15°	4977.5	4989.6	4977.5	4955.1	4920.6
17.5°	4865.7	4865.7	4873.8	4835.2	4808.8
20°	4739.8	4745.9	4745.9	4715.4	4684.9
22.5°	4593.5	4611.8	4617.9	4585.4	4548.8
25°	4420.8	4455.3	4475.6	4443.1	4404.5
27.5°	4211.5	4264.4	4325.3	4300.9	4258.3
30°	3977.9	4055.1	4156.7	4136.4	4105.9
32.5°	3756.5	3833.7	3973.8	3965.7	3949.5
35°	3555.3	3604.1	3768.6	3789.0	3774.7
37.5°	3364.4	3409.1	3563.5	3610.2	3598.0
40°	3163.2	3212.0	3333.9	3417.2	3421.2
42.5°	2964.1	3010.9	3110.4	3230.3	3230.3
45°	2752.8	2799.6	2891.0	3023.0	3039.3
47.5°	2545.6	2594.4	2683.8	2815.8	2842.2
50°	2342.5	2387.1	2476.5	2604.5	2645.2
52.5°	2131.2	2179.9	2267.3	2385.1	2444.0
55°	1928.0	1960.5	2056.0	2169.8	2232.7
57.5°	1716.7	1747.2	1854.9	1952.4	2017.4
60°	1513.6	1552.2	1635.5	1735.0	1810.2
62.5°	1318.5	1359.2	1430.3	1517.6	1602.9
65°	1129.6	1160.1	1229.1	1316.5	1391.7
67.5°	946.7	973.1	1042.2	1103.2	1182.4
70°	761.9	796.4	847.2	906.1	956.9
72.5°	613.5	627.8	670.4	713.1	765.9
75°	453.1	477.4	512.0	536.3	566.8
77.5°	325.1	339.3	359.6	379.9	408.4
80°	217.4	223.5	241.8	245.8	268.2
82.5°	132.1	136.1	140.2	142.2	150.3
85°	71.1	71.1	71.1	67.0	67.0
87.5°	40.6	40.6	34.5	28.4	20.3
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)