

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: P556980

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-80-86-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: P556980  
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-35-UNV-80-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

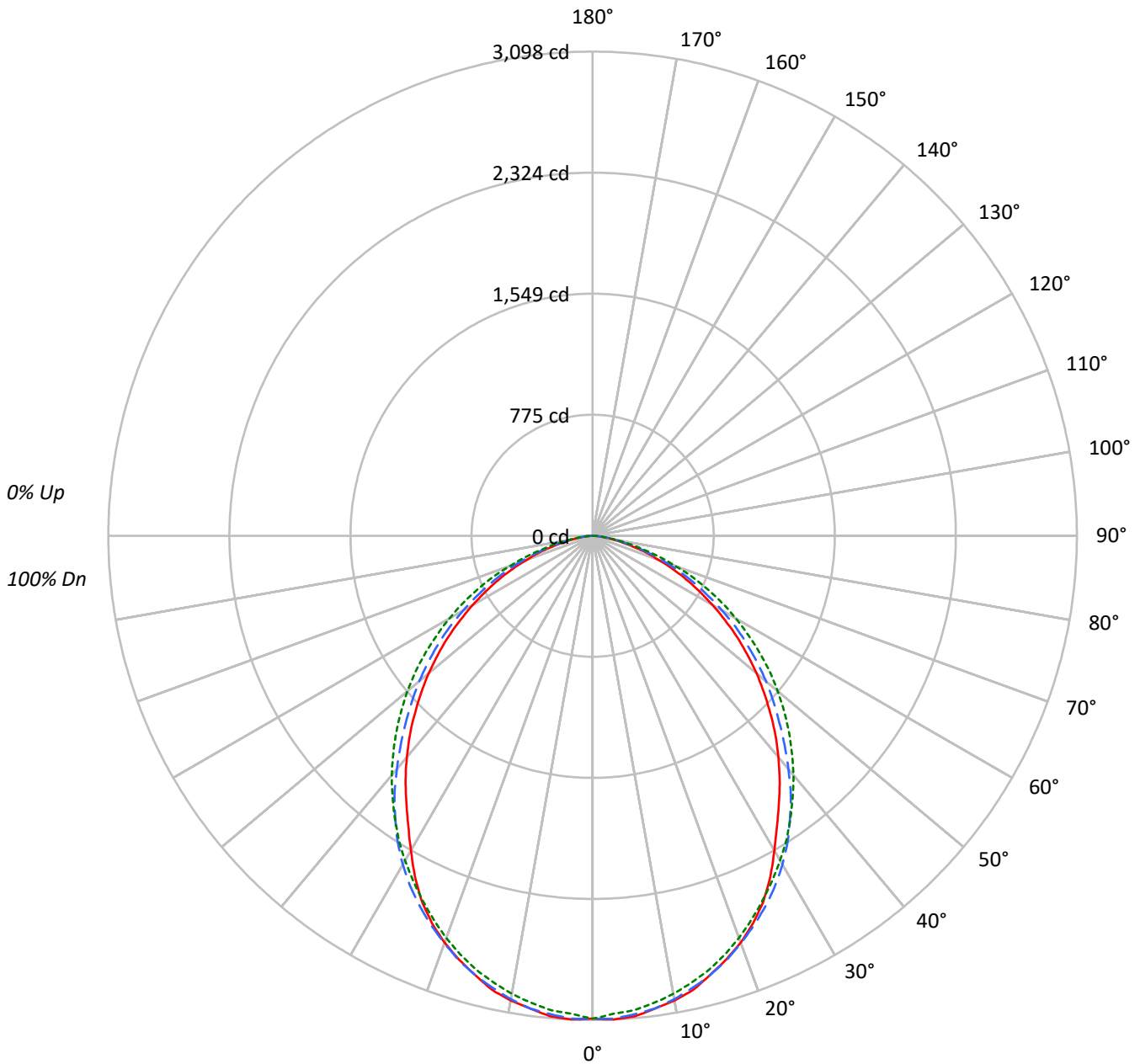
Lumens per Lamp: N/A  
Luminaire Lumens: 7145.0 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				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°	8315	8315	8315
5°	8337	8302	8232
10°	8249	8226	8132
15°	8103	8103	8010
20°	7931	7941	7839
25°	7670	7765	7641
30°	7222	7547	7455
35°	6824	7234	7246
40°	6493	6843	7022
45°	6121	6428	6758
50°	5730	6058	6471
55°	5286	5636	6121
60°	4760	5143	5692
65°	4202	4573	5178
70°	3503	3895	4399
75°	2752	3110	3444
80°	1968	2190	2428
85°	1281	1281	1210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	290.9	4.1
10°-20°	817.3	11.4
20°-30°	1194.4	16.7
30°-40°	1355.7	19.0
40°-50°	1308.8	18.3
50°-60°	1079.6	15.1
60°-70°	718.9	10.1
70°-80°	321.7	4.5
80°-90°	57.5	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°	2302.6	32.2
0°-40°	3658.4	51.2
0°-60°	6046.8	84.6
0°-90°	7145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7145.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3090	3090	3090	3090	3090	
5°	3086	3085	3073	3057	3047	292
15°	2908	2916	2908	2895	2875	820
25°	2583	2603	2615	2596	2574	1183
35°	2077	2106	2202	2214	2206	1302
45°	1608	1636	1689	1766	1776	1241
55°	1127	1146	1201	1268	1305	1006
65°	660	678	718	769	813	654
75°	265	279	299	313	331	289
85°	42	42	42	39	39	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3090.0	3090.0	3090.0	3090.0	3090.0
2.5°	3098.3	3099.5	3092.4	3073.4	3061.5
5°	3086.5	3085.3	3073.4	3056.8	3047.3
7.5°	3052.0	3054.4	3050.9	3027.1	3014.1
10°	3018.8	3020.0	3010.5	2991.5	2976.1
12.5°	2976.1	2974.9	2961.8	2952.3	2927.4
15°	2908.4	2915.5	2908.4	2895.3	2875.2
17.5°	2843.1	2843.1	2847.9	2825.3	2809.9
20°	2769.5	2773.1	2773.1	2755.3	2737.5
22.5°	2684.0	2694.7	2698.3	2679.3	2657.9
25°	2583.1	2603.3	2615.2	2596.2	2573.6
27.5°	2460.9	2491.7	2527.3	2513.1	2488.2
30°	2324.3	2369.5	2428.8	2416.9	2399.1
32.5°	2195.0	2240.1	2322.0	2317.2	2307.7
35°	2077.4	2105.9	2202.1	2213.9	2205.6
37.5°	1965.8	1992.0	2082.2	2109.5	2102.4
40°	1848.3	1876.8	1948.0	1996.7	1999.1
42.5°	1732.0	1759.3	1817.5	1887.5	1887.5
45°	1608.5	1635.8	1689.2	1766.4	1775.9
47.5°	1487.4	1515.9	1568.2	1645.3	1660.8
50°	1368.7	1394.8	1447.1	1521.9	1545.6
52.5°	1245.3	1273.8	1324.8	1393.7	1428.1
55°	1126.6	1145.6	1201.3	1267.8	1304.6
57.5°	1003.1	1020.9	1083.8	1140.8	1178.8
60°	884.4	906.9	955.6	1013.8	1057.7
62.5°	770.4	794.2	835.7	886.8	936.6
65°	660.0	677.8	718.2	769.2	813.2
67.5°	553.2	568.6	609.0	644.6	690.9
70°	445.2	465.3	495.0	529.4	559.1
72.5°	358.5	366.8	391.7	416.7	447.5
75°	264.7	279.0	299.1	313.4	331.2
77.5°	189.9	198.2	210.1	222.0	238.6
80°	127.0	130.6	141.3	143.6	156.7
82.5°	77.2	79.5	81.9	83.1	87.8
85°	41.5	41.5	41.5	39.2	39.2
87.5°	23.7	23.7	20.2	16.6	11.9
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)