

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: P557055

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-80-97-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: P557055  
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-40-UNV-80-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND  
4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

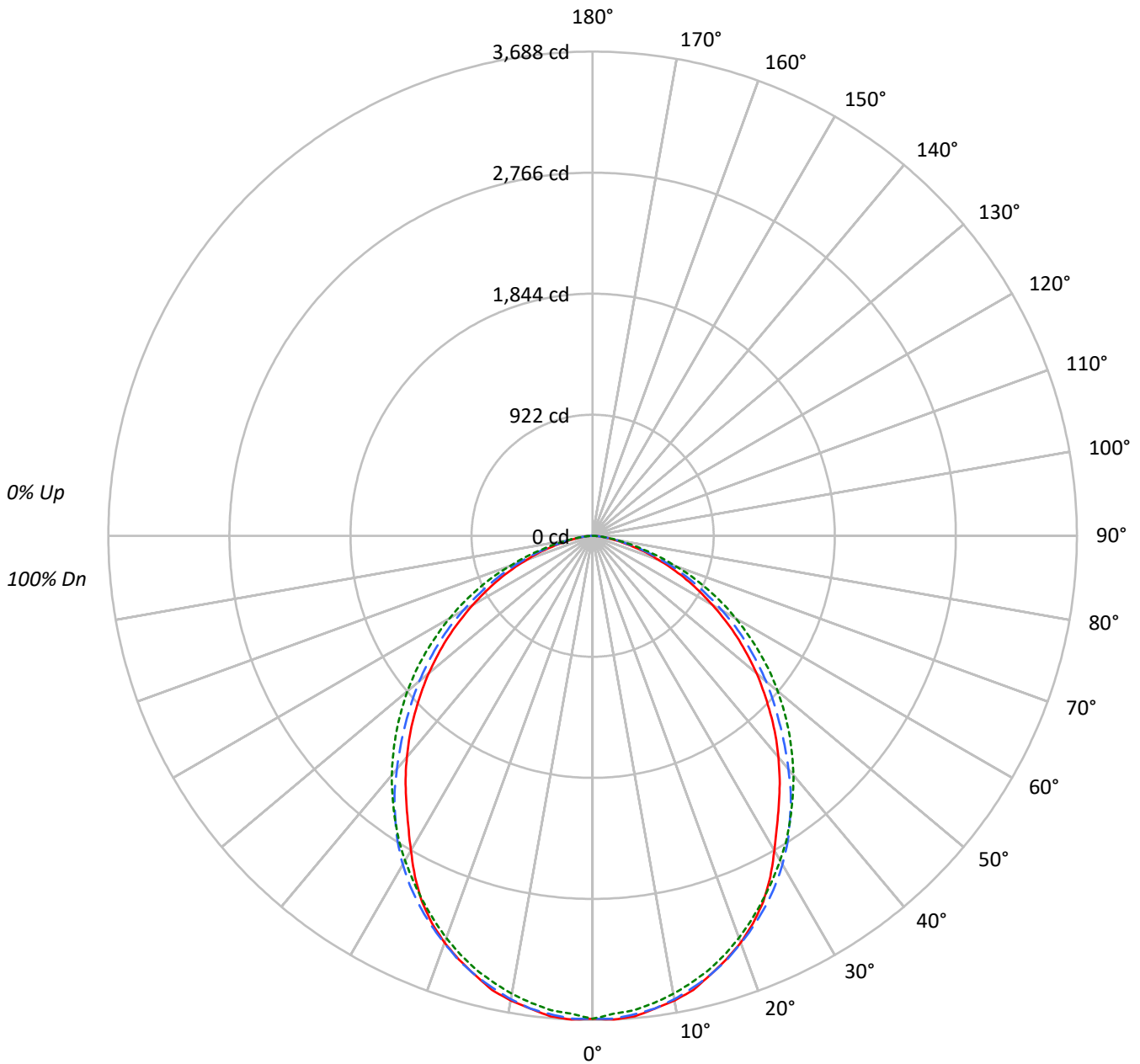
Lumens per Lamp: N/A  
Luminaire Lumens: 8506.0 lumens  
Efficiency: N/A  
Efficacy: 98.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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°	9899	9899	9899
5°	9926	9883	9799
10°	9820	9793	9681
15°	9646	9646	9536
20°	9442	9454	9332
25°	9131	9244	9097
30°	8598	8985	8875
35°	8124	8612	8626
40°	7730	8147	8360
45°	7287	7653	8046
50°	6821	7212	7703
55°	6292	6710	7286
60°	5667	6123	6777
65°	5004	5444	6164
70°	4170	4637	5237
75°	3276	3702	4100
80°	2343	2607	2890
85°	1528	1528	1439



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	346.4	4.1
10°-20°	973.0	11.4
20°-30°	1421.9	16.7
30°-40°	1614.0	19.0
40°-50°	1558.1	18.3
50°-60°	1285.3	15.1
60°-70°	855.9	10.1
70°-80°	383.0	4.5
80°-90°	68.5	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°	2741.2	32.2
0°-40°	4355.2	51.2
0°-60°	7198.6	84.6
0°-90°	8506.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8506.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3679	3679	3679	3679	3679	
5°	3674	3673	3659	3639	3628	348
15°	3462	3471	3462	3447	3423	976
25°	3075	3099	3113	3091	3064	1408
35°	2473	2507	2622	2636	2626	1550
45°	1915	1947	2011	2103	2114	1477
55°	1341	1364	1430	1509	1553	1197
65°	786	807	855	916	968	779
75°	315	332	356	373	394	345
85°	50	50	50	47	47	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3678.6	3678.6	3678.6	3678.6	3678.6
2.5°	3688.5	3689.9	3681.5	3658.8	3644.7
5°	3674.4	3673.0	3658.8	3639.1	3627.7
7.5°	3633.4	3636.2	3632.0	3603.7	3588.2
10°	3593.8	3595.2	3583.9	3561.3	3543.0
12.5°	3543.0	3541.5	3526.0	3514.7	3485.0
15°	3462.4	3470.9	3462.4	3446.9	3422.8
17.5°	3384.7	3384.7	3390.3	3363.5	3345.1
20°	3297.1	3301.3	3301.3	3280.1	3258.9
22.5°	3195.3	3208.0	3212.3	3189.6	3164.2
25°	3075.2	3099.2	3113.3	3090.7	3063.9
27.5°	2929.6	2966.4	3008.8	2991.8	2962.1
30°	2767.1	2820.8	2891.5	2877.3	2856.1
32.5°	2613.1	2666.8	2764.3	2758.6	2747.3
35°	2473.1	2507.1	2621.5	2635.7	2625.8
37.5°	2340.3	2371.4	2478.8	2511.3	2502.8
40°	2200.4	2234.3	2319.1	2377.0	2379.9
42.5°	2061.9	2094.4	2163.6	2247.0	2247.0
45°	1914.9	1947.4	2011.0	2102.9	2114.2
47.5°	1770.8	1804.7	1866.9	1958.7	1977.1
50°	1629.4	1660.5	1722.7	1811.8	1840.0
52.5°	1482.5	1516.4	1577.2	1659.1	1700.1
55°	1341.2	1363.8	1430.2	1509.3	1553.1
57.5°	1194.2	1215.4	1290.3	1358.1	1403.3
60°	1052.9	1079.7	1137.6	1206.9	1259.2
62.5°	917.2	945.4	994.9	1055.7	1115.0
65°	785.8	807.0	855.0	915.8	968.1
67.5°	658.6	676.9	725.0	767.4	822.5
70°	530.0	554.0	589.3	630.3	665.6
72.5°	426.8	436.7	466.4	496.0	532.8
75°	315.1	332.1	356.1	373.1	394.3
77.5°	226.1	236.0	250.1	264.3	284.1
80°	151.2	155.5	168.2	171.0	186.5
82.5°	91.9	94.7	97.5	98.9	104.6
85°	49.5	49.5	49.5	46.6	46.6
87.5°	28.3	28.3	24.0	19.8	14.1
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)