

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: P558282

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-81-94-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: P558282  
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-LD4-3STD-35-UNV-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

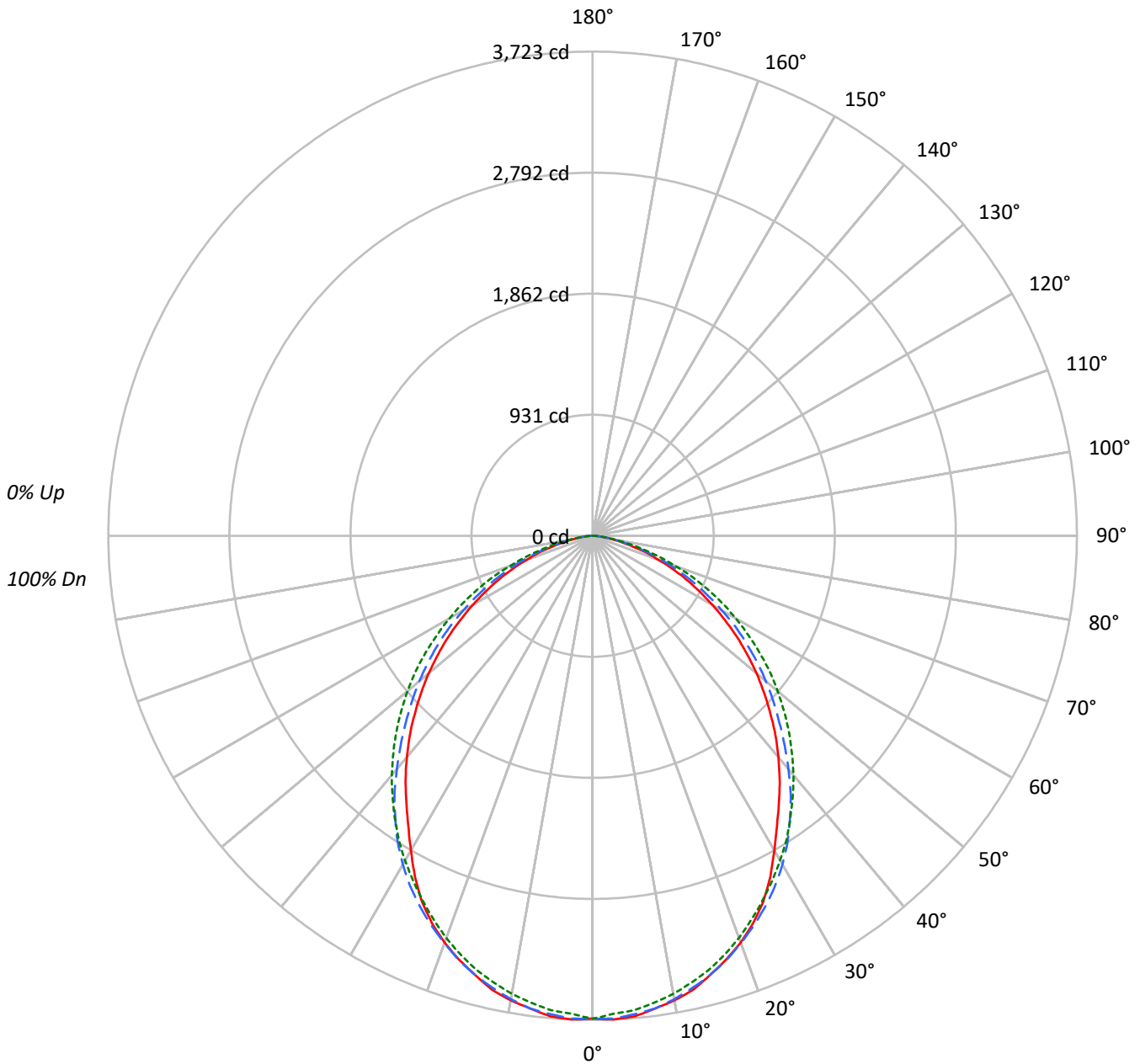
Lumens per Lamp: N/A  
Luminaire Lumens: 8586.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	9992	9992	9992
5°	10019	9977	9892
10°	9912	9885	9772
15°	9737	9737	9625
20°	9531	9543	9420
25°	9217	9331	9183
30°	8679	9069	8958
35°	8201	8693	8707
40°	7802	8223	8439
45°	7356	7725	8122
50°	6886	7280	7775
55°	6351	6773	7355
60°	5720	6180	6840
65°	5050	5495	6222
70°	4209	4681	5286
75°	3307	3738	4138
80°	2365	2631	2918
85°	1541	1541	1454



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.6	4.1
10°-20°	982.2	11.4
20°-30°	1435.3	16.7
30°-40°	1629.2	19.0
40°-50°	1572.7	18.3
50°-60°	1297.4	15.1
60°-70°	863.9	10.1
70°-80°	386.6	4.5
80°-90°	69.2	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°	2767.0	32.2
0°-40°	4396.2	51.2
0°-60°	7266.3	84.6
0°-90°	8586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8586.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3713	3713	3713	3713	3713	
5°	3709	3708	3693	3673	3662	351
15°	3495	3504	3495	3479	3455	985
25°	3104	3128	3143	3120	3093	1422
35°	2496	2531	2646	2660	2650	1564
45°	1933	1966	2030	2123	2134	1491
55°	1354	1377	1444	1524	1568	1208
65°	793	814	863	924	977	786
75°	318	335	360	377	398	348
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°	3713.2	3713.2	3713.2	3713.2	3713.2
2.5°	3723.2	3724.6	3716.1	3693.3	3679.0
5°	3708.9	3707.5	3693.3	3673.3	3661.9
7.5°	3667.6	3670.4	3666.1	3637.6	3621.9
10°	3627.6	3629.1	3617.6	3594.8	3576.3
12.5°	3576.3	3574.9	3559.2	3547.7	3517.8
15°	3495.0	3503.5	3495.0	3479.3	3455.0
17.5°	3416.5	3416.5	3422.2	3395.1	3376.6
20°	3328.1	3332.3	3332.3	3310.9	3289.5
22.5°	3225.4	3238.2	3242.5	3219.6	3194.0
25°	3104.1	3128.4	3142.6	3119.8	3092.7
27.5°	2957.2	2994.3	3037.1	3019.9	2990.0
30°	2793.1	2847.3	2918.7	2904.4	2883.0
32.5°	2637.6	2691.8	2790.3	2784.6	2773.1
35°	2496.4	2530.6	2646.2	2660.5	2650.5
37.5°	2362.3	2393.7	2502.1	2534.9	2526.4
40°	2221.1	2255.3	2340.9	2399.4	2402.3
42.5°	2081.3	2114.1	2184.0	2268.2	2268.2
45°	1932.9	1965.7	2029.9	2122.7	2134.1
47.5°	1787.4	1821.7	1884.4	1977.2	1995.7
50°	1644.8	1676.2	1738.9	1828.8	1857.3
52.5°	1496.4	1530.7	1592.0	1674.7	1716.1
55°	1353.8	1376.6	1443.6	1523.5	1567.7
57.5°	1205.4	1226.8	1302.4	1370.9	1416.5
60°	1062.8	1089.9	1148.3	1218.2	1271.0
62.5°	925.8	954.3	1004.3	1065.6	1125.5
65°	793.1	814.5	863.0	924.4	977.2
67.5°	664.8	683.3	731.8	774.6	830.2
70°	534.9	559.2	594.9	636.2	671.9
72.5°	430.8	440.8	470.8	500.7	537.8
75°	318.1	335.2	359.5	376.6	398.0
77.5°	228.2	238.2	252.5	266.8	286.7
80°	152.6	156.9	169.8	172.6	188.3
82.5°	92.7	95.6	98.4	99.9	105.6
85°	49.9	49.9	49.9	47.1	47.1
87.5°	28.5	28.5	24.3	20.0	14.3
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)