

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: P557108

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-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: P557108  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

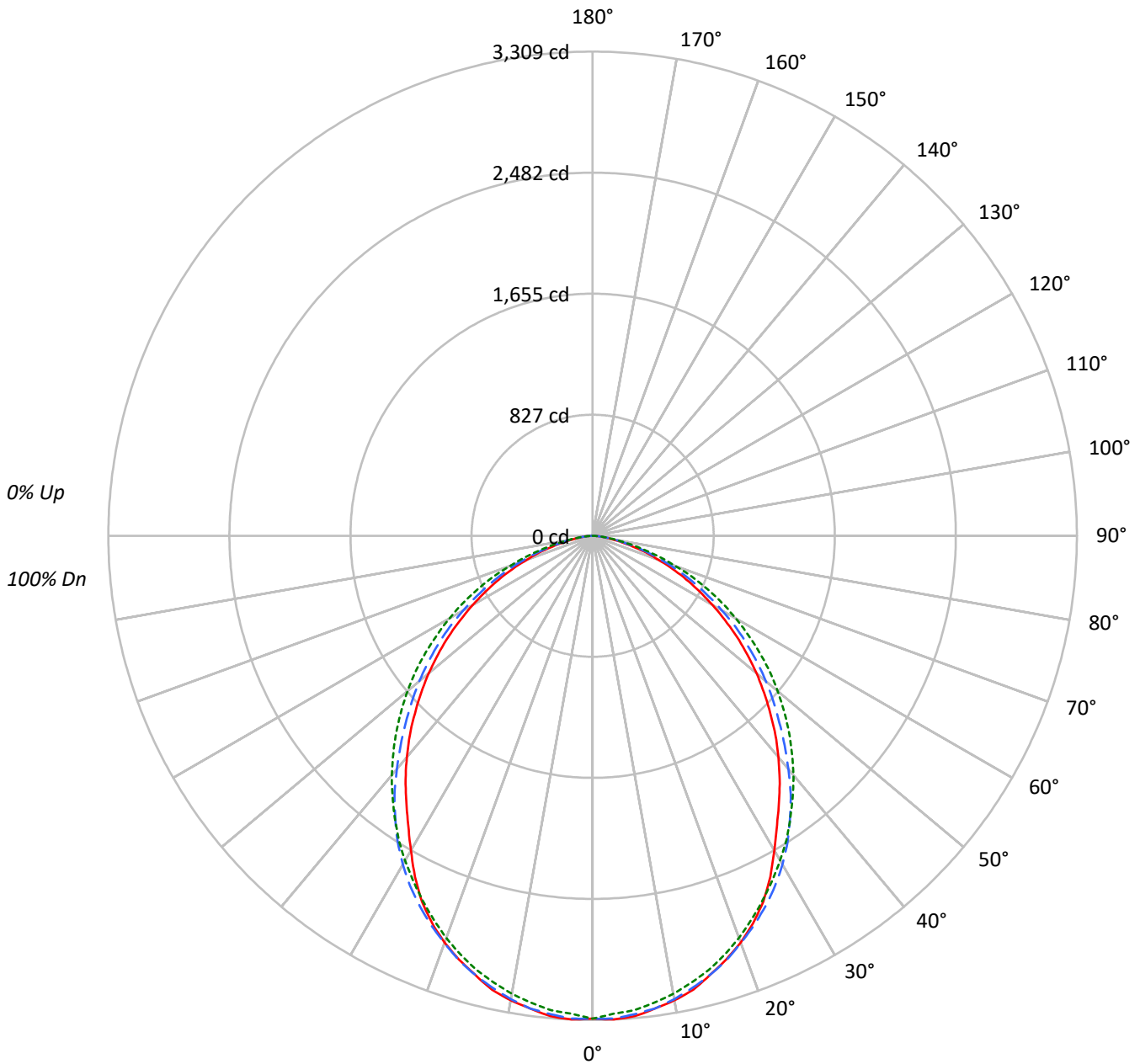
Lumens per Lamp: N/A  
Luminaire Lumens: 7631.0 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (Ain): 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°	8881	8881	8881
5°	8904	8867	8792
10°	8810	8786	8685
15°	8654	8654	8555
20°	8470	8481	8373
25°	8191	8293	8161
30°	7713	8060	7962
35°	7289	7726	7739
40°	6934	7308	7500
45°	6538	6866	7218
50°	6120	6470	6911
55°	5645	6020	6537
60°	5083	5493	6080
65°	4488	4884	5530
70°	3740	4160	4699
75°	2939	3322	3677
80°	2103	2338	2594
85°	1371	1371	1291



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	310.7	4.1
10°-20°	872.9	11.4
20°-30°	1275.6	16.7
30°-40°	1448.0	19.0
40°-50°	1397.8	18.3
50°-60°	1153.1	15.1
60°-70°	767.8	10.1
70°-80°	343.6	4.5
80°-90°	61.5	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°	2459.3	32.2
0°-40°	3907.2	51.2
0°-60°	6458.1	84.6
0°-90°	7631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7631.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3300	3300	3300	3300	3300	
5°	3296	3295	3282	3265	3255	312
15°	3106	3114	3106	3092	3071	876
25°	2759	2780	2793	2773	2749	1263
35°	2219	2249	2352	2364	2356	1390
45°	1718	1747	1804	1887	1897	1325
55°	1203	1224	1283	1354	1393	1074
65°	705	724	767	822	868	699
75°	283	298	320	335	354	309
85°	44	44	44	42	42	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3300.2	3300.2	3300.2	3300.2	3300.2
2.5°	3309.1	3310.4	3302.7	3282.5	3269.8
5°	3296.4	3295.1	3282.5	3264.7	3254.6
7.5°	3259.6	3262.2	3258.4	3233.0	3219.1
10°	3224.1	3225.4	3215.3	3195.0	3178.5
12.5°	3178.5	3177.2	3163.3	3153.1	3126.5
15°	3106.2	3113.8	3106.2	3092.3	3070.7
17.5°	3036.5	3036.5	3041.6	3017.5	3001.0
20°	2957.9	2961.7	2961.7	2942.7	2923.7
22.5°	2866.6	2878.0	2881.8	2861.5	2838.7
25°	2758.8	2780.4	2793.1	2772.8	2748.7
27.5°	2628.3	2661.2	2699.3	2684.0	2657.4
30°	2482.4	2530.6	2594.0	2581.3	2562.3
32.5°	2344.3	2392.4	2479.9	2474.8	2464.7
35°	2218.7	2249.2	2351.9	2364.5	2355.7
37.5°	2099.6	2127.5	2223.8	2253.0	2245.4
40°	1974.0	2004.5	2080.5	2132.5	2135.1
42.5°	1849.8	1879.0	1941.1	2015.9	2015.9
45°	1717.9	1747.1	1804.1	1886.6	1896.7
47.5°	1588.6	1619.0	1674.8	1757.2	1773.7
50°	1461.8	1489.7	1545.5	1625.4	1650.7
52.5°	1330.0	1360.4	1414.9	1488.5	1525.2
55°	1203.2	1223.5	1283.1	1354.1	1393.4
57.5°	1071.3	1090.3	1157.5	1218.4	1259.0
60°	944.5	968.6	1020.6	1082.7	1129.7
62.5°	822.8	848.2	892.6	947.1	1000.3
65°	704.9	723.9	767.0	821.6	868.5
67.5°	590.8	607.3	650.4	688.4	737.9
70°	475.4	497.0	528.7	565.5	597.2
72.5°	382.9	391.8	418.4	445.0	478.0
75°	282.7	297.9	319.5	334.7	353.7
77.5°	202.9	211.7	224.4	237.1	254.8
80°	135.7	139.5	150.9	153.4	167.4
82.5°	82.4	84.9	87.5	88.7	93.8
85°	44.4	44.4	44.4	41.8	41.8
87.5°	25.4	25.4	21.6	17.7	12.7
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)