

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: P557149

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-82-96-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: P557149  
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-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

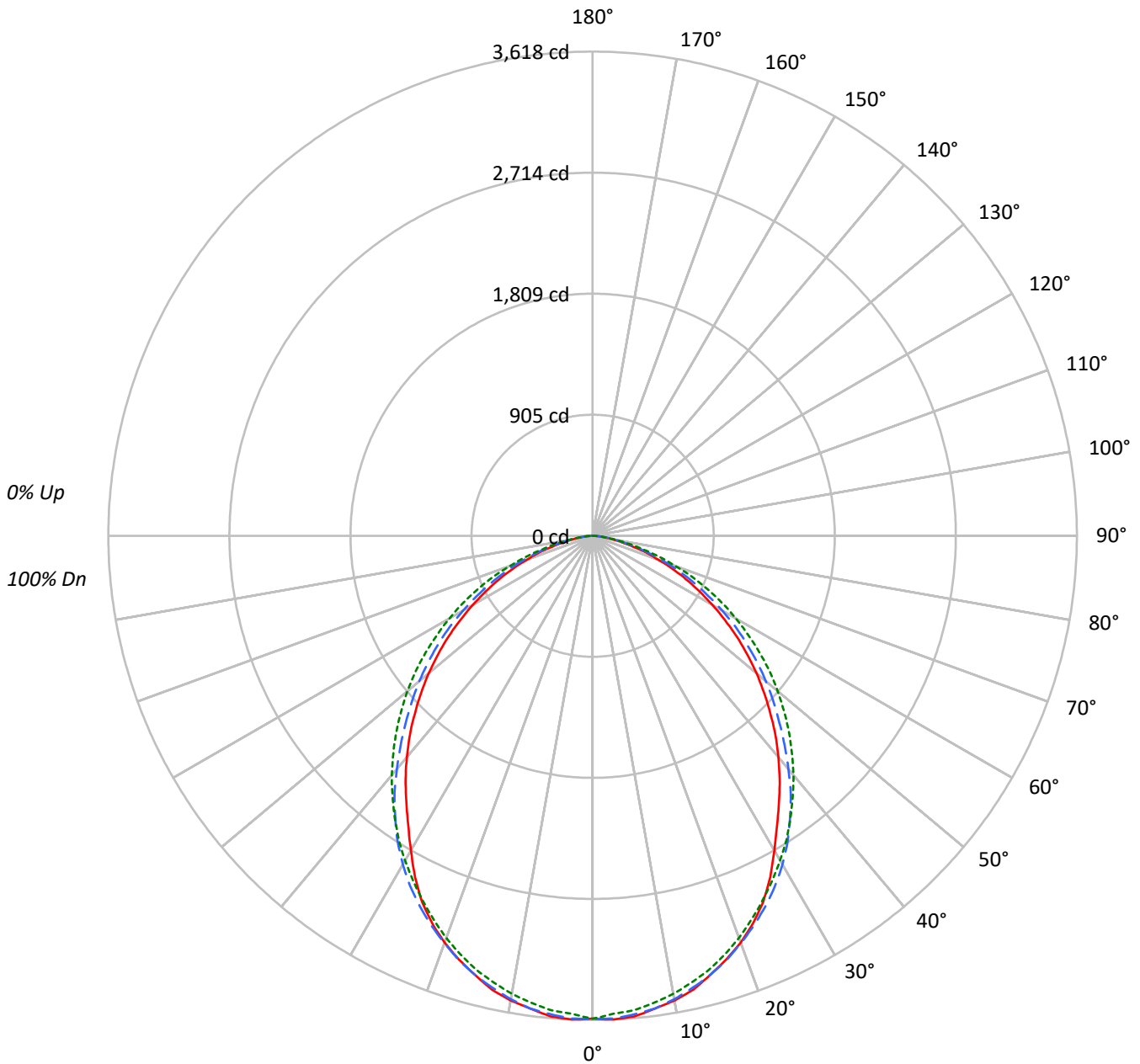
Lumens per Lamp: N/A  
Luminaire Lumens: 8344.0 lumens  
Efficiency: N/A  
Efficacy: 96.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9711	9711	9711
5°	9736	9695	9613
10°	9633	9607	9497
15°	9462	9462	9354
20°	9262	9274	9155
25°	8957	9068	8924
30°	8434	8813	8706
35°	7970	8448	8462
40°	7582	7991	8201
45°	7148	7507	7892
50°	6692	7075	7556
55°	6172	6582	7148
60°	5558	6006	6648
65°	4908	5340	6046
70°	4091	4548	5138
75°	3214	3633	4022
80°	2298	2557	2836
85°	1497	1497	1411



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	339.8	4.1
10°-20°	954.5	11.4
20°-30°	1394.8	16.7
30°-40°	1583.3	19.0
40°-50°	1528.4	18.3
50°-60°	1260.8	15.1
60°-70°	839.6	10.1
70°-80°	375.7	4.5
80°-90°	67.2	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°	2689.0	32.2
0°-40°	4272.3	51.2
0°-60°	7061.5	84.6
0°-90°	8344.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8344.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3609	3609	3609	3609	3609	
5°	3604	3603	3589	3570	3559	341
15°	3396	3405	3396	3381	3358	957
25°	3017	3040	3054	3032	3006	1381
35°	2426	2459	2572	2586	2576	1520
45°	1878	1910	1973	2063	2074	1449
55°	1316	1338	1403	1481	1524	1174
65°	771	792	839	898	950	764
75°	309	326	349	366	387	338
85°	48	48	48	46	46	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3608.6	3608.6	3608.6	3608.6	3608.6
2.5°	3618.3	3619.7	3611.3	3589.2	3575.3
5°	3604.4	3603.0	3589.2	3569.7	3558.7
7.5°	3564.2	3567.0	3562.8	3535.1	3519.8
10°	3525.4	3526.8	3515.7	3493.5	3475.5
12.5°	3475.5	3474.1	3458.8	3447.8	3418.6
15°	3396.5	3404.8	3396.5	3381.2	3357.6
17.5°	3320.2	3320.2	3325.8	3299.4	3281.4
20°	3234.3	3238.4	3238.4	3217.6	3196.8
22.5°	3134.4	3146.9	3151.1	3128.9	3103.9
25°	3016.6	3040.2	3054.0	3031.9	3005.5
27.5°	2873.8	2909.9	2951.5	2934.8	2905.7
30°	2714.4	2767.1	2836.4	2822.5	2801.7
32.5°	2563.3	2616.0	2711.6	2706.1	2695.0
35°	2426.0	2459.3	2571.6	2585.5	2575.8
37.5°	2295.7	2326.2	2431.6	2463.5	2455.2
40°	2158.5	2191.8	2274.9	2331.8	2334.5
42.5°	2022.6	2054.5	2122.4	2204.2	2204.2
45°	1878.4	1910.3	1972.7	2062.8	2073.9
47.5°	1737.0	1770.3	1831.3	1921.4	1939.4
50°	1598.4	1628.9	1689.9	1777.2	1805.0
52.5°	1454.2	1487.5	1547.1	1627.5	1667.7
55°	1315.6	1337.8	1402.9	1480.6	1523.6
57.5°	1171.4	1192.2	1265.7	1332.2	1376.6
60°	1032.8	1059.1	1116.0	1183.9	1235.2
62.5°	899.7	927.4	976.0	1035.6	1093.8
65°	770.8	791.6	838.7	898.3	949.6
67.5°	646.0	664.0	711.2	752.8	806.8
70°	519.9	543.4	578.1	618.3	653.0
72.5°	418.7	428.4	457.5	486.6	522.6
75°	309.1	325.8	349.4	366.0	386.8
77.5°	221.8	231.5	245.4	259.2	278.6
80°	148.3	152.5	165.0	167.7	183.0
82.5°	90.1	92.9	95.7	97.0	102.6
85°	48.5	48.5	48.5	45.7	45.7
87.5°	27.7	27.7	23.6	19.4	13.9
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)