

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: P557137

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-82-84-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: P557137  
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-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

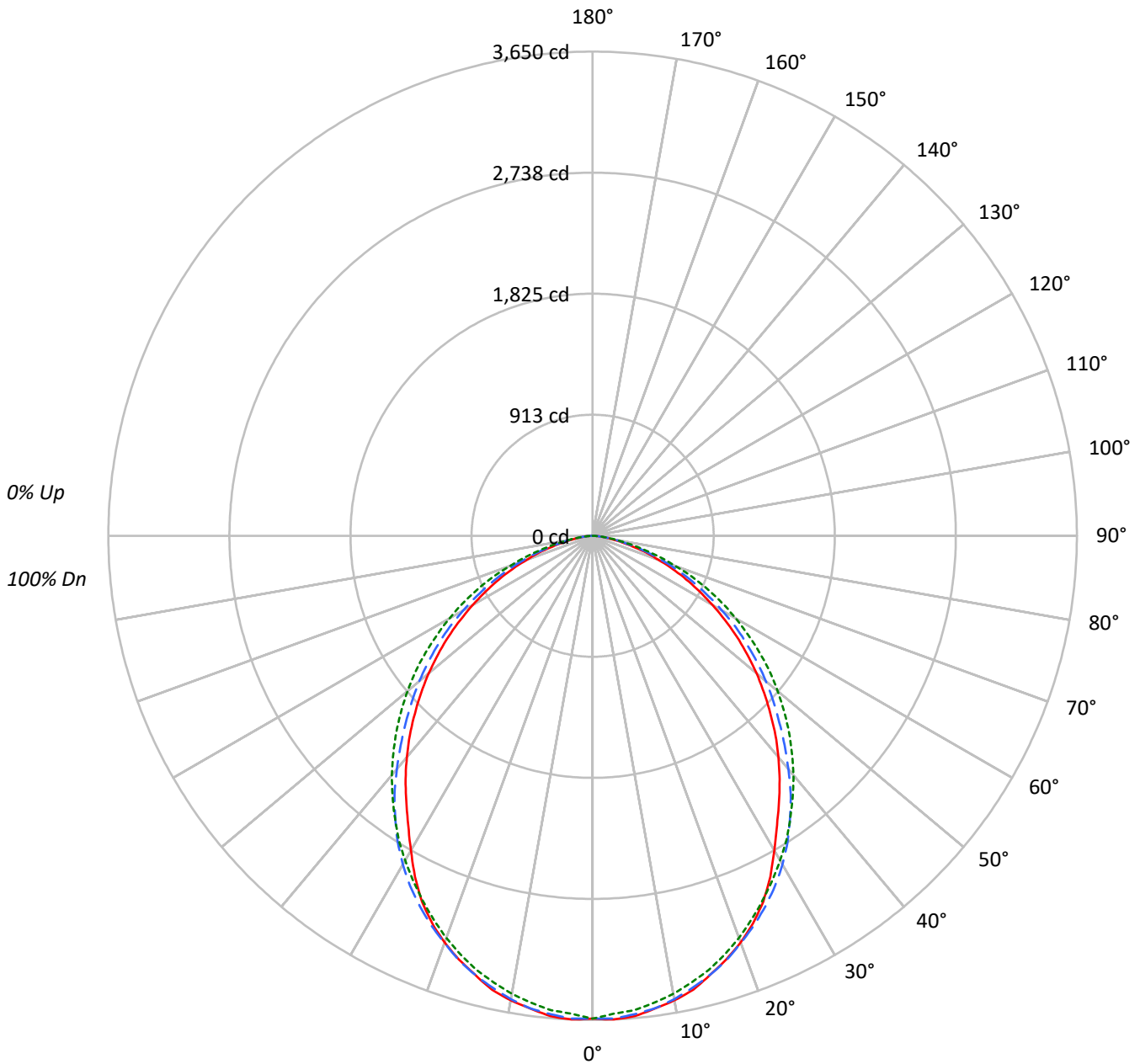
Lumens per Lamp: N/A  
Luminaire Lumens: 8417.0 lumens  
Efficiency: N/A  
Efficacy: 97.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (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°	9795	9795	9795
5°	9822	9780	9697
10°	9717	9691	9580
15°	9545	9545	9436
20°	9343	9355	9235
25°	9035	9147	9002
30°	8508	8891	8782
35°	8040	8522	8536
40°	7649	8061	8273
45°	7211	7573	7962
50°	6750	7137	7623
55°	6226	6640	7210
60°	5607	6058	6706
65°	4951	5387	6099
70°	4126	4588	5183
75°	3243	3664	4057
80°	2318	2579	2861
85°	1510	1510	1423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	342.7	4.1
10°-20°	962.8	11.4
20°-30°	1407.0	16.7
30°-40°	1597.1	19.0
40°-50°	1541.8	18.3
50°-60°	1271.8	15.1
60°-70°	847.0	10.1
70°-80°	379.0	4.5
80°-90°	67.8	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°	2712.6	32.2
0°-40°	4309.7	51.2
0°-60°	7123.3	84.6
0°-90°	8417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8417.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3640	3640	3640	3640	3640	
5°	3636	3634	3621	3601	3590	344
15°	3426	3435	3426	3411	3387	966
25°	3043	3067	3081	3058	3032	1394
35°	2447	2481	2594	2608	2598	1533
45°	1895	1927	1990	2081	2092	1462
55°	1327	1350	1415	1494	1537	1184
65°	778	798	846	906	958	771
75°	312	329	352	369	390	341
85°	49	49	49	46	46	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3640.1	3640.1	3640.1	3640.1	3640.1
2.5°	3649.9	3651.3	3642.9	3620.6	3606.6
5°	3635.9	3634.5	3620.6	3601.0	3589.8
7.5°	3595.4	3598.2	3594.0	3566.0	3550.6
10°	3556.2	3557.6	3546.4	3524.1	3505.9
12.5°	3505.9	3504.5	3489.1	3477.9	3448.5
15°	3426.2	3434.6	3426.2	3410.8	3387.0
17.5°	3349.3	3349.3	3354.9	3328.3	3310.1
20°	3262.6	3266.8	3266.8	3245.8	3224.8
22.5°	3161.9	3174.5	3178.7	3156.3	3131.1
25°	3043.0	3066.8	3080.8	3058.4	3031.8
27.5°	2899.0	2935.3	2977.3	2960.5	2931.1
30°	2738.1	2791.3	2861.2	2847.2	2826.2
32.5°	2585.7	2638.9	2735.3	2729.8	2718.6
35°	2447.3	2480.8	2594.1	2608.1	2598.3
37.5°	2315.8	2346.6	2452.9	2485.0	2476.6
40°	2177.4	2210.9	2294.8	2352.2	2355.0
42.5°	2040.3	2072.5	2141.0	2223.5	2223.5
45°	1894.9	1927.0	1990.0	2080.9	2092.1
47.5°	1752.2	1785.8	1847.3	1938.2	1956.4
50°	1612.4	1643.2	1704.7	1792.8	1820.8
52.5°	1467.0	1500.5	1560.7	1641.8	1682.3
55°	1327.1	1349.5	1415.2	1493.5	1536.9
57.5°	1181.7	1202.7	1276.8	1343.9	1388.6
60°	1041.8	1068.4	1125.7	1194.3	1246.0
62.5°	907.6	935.6	984.5	1044.6	1103.4
65°	777.5	798.5	846.1	906.2	957.9
67.5°	651.7	669.9	717.4	759.4	813.9
70°	524.4	548.2	583.1	623.7	658.7
72.5°	422.3	432.1	461.5	490.9	527.2
75°	311.9	328.6	352.4	369.2	390.2
77.5°	223.8	233.5	247.5	261.5	281.1
80°	149.6	153.8	166.4	169.2	184.6
82.5°	90.9	93.7	96.5	97.9	103.5
85°	48.9	48.9	48.9	46.1	46.1
87.5°	28.0	28.0	23.8	19.6	14.0
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)