

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: P557655

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-82-87-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: P557655  
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-LD4-2STD-50-UNV-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

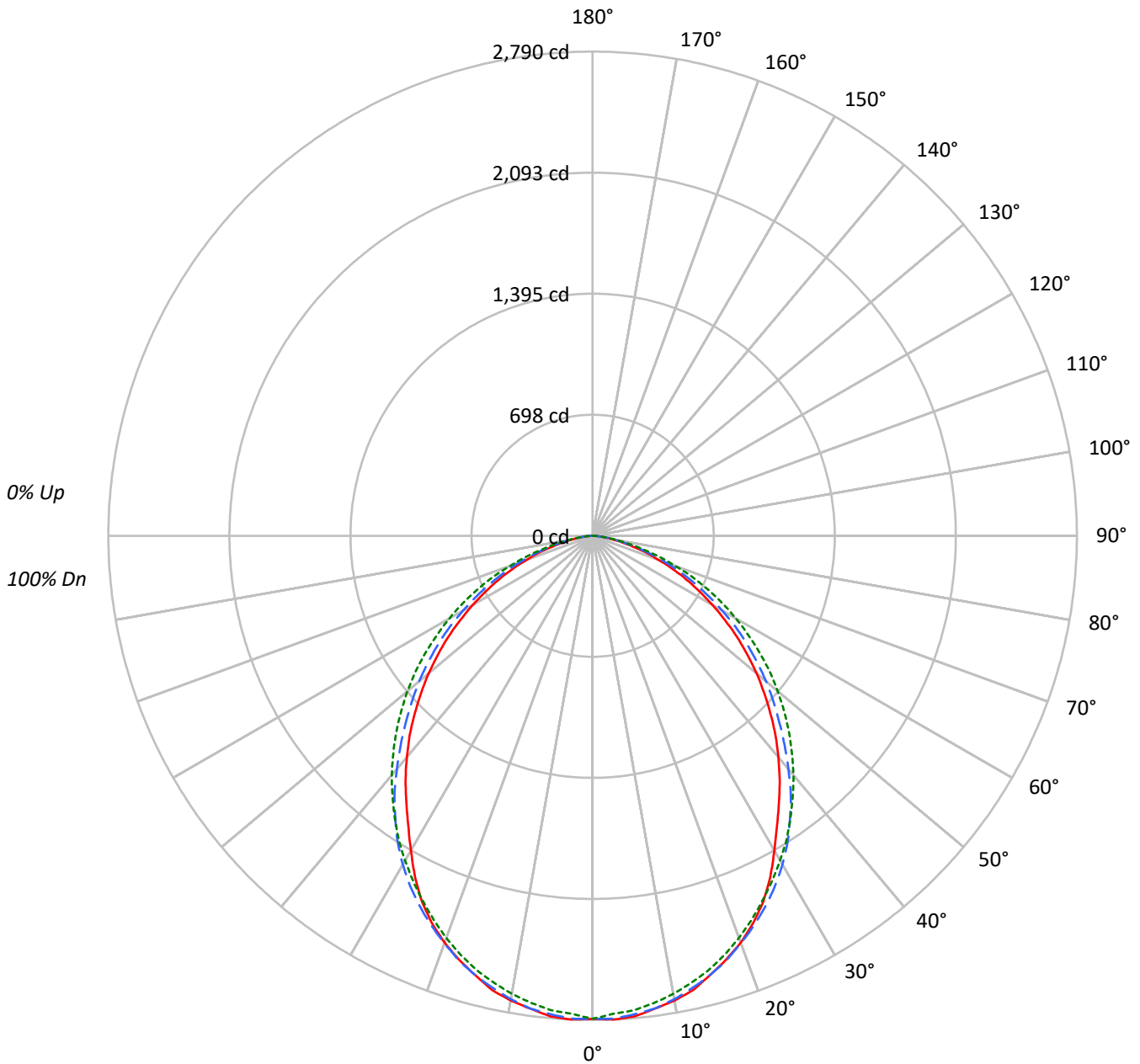
Lumens per Lamp: N/A  
Luminaire Lumens: 6435.0 lumens  
Efficiency: N/A  
Efficacy: 96.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	7489	7489	7489
5°	7509	7477	7414
10°	7429	7409	7324
15°	7297	7297	7214
20°	7143	7152	7060
25°	6907	6993	6882
30°	6505	6797	6714
35°	6146	6515	6526
40°	5848	6163	6324
45°	5513	5790	6087
50°	5161	5456	5827
55°	4760	5076	5513
60°	4287	4632	5127
65°	3785	4118	4663
70°	3154	3508	3962
75°	2479	2801	3101
80°	1773	1971	2187
85°	1155	1155	1090



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	262.0	4.1
10°-20°	736.1	11.4
20°-30°	1075.7	16.7
30°-40°	1221.0	19.0
40°-50°	1178.7	18.3
50°-60°	972.4	15.1
60°-70°	647.5	10.1
70°-80°	289.7	4.5
80°-90°	51.8	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°	2073.8	32.2
0°-40°	3294.8	51.2
0°-60°	5445.9	84.6
0°-90°	6435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6435.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2783	2783	2783	2783	2783	
5°	2780	2779	2768	2753	2744	263
15°	2619	2626	2619	2608	2590	738
25°	2326	2345	2355	2338	2318	1065
35°	1871	1897	1983	1994	1986	1172
45°	1449	1473	1521	1591	1599	1118
55°	1015	1032	1082	1142	1175	906
65°	594	610	647	693	732	589
75°	238	251	269	282	298	261
85°	37	37	37	35	35	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2783.0	2783.0	2783.0	2783.0	2783.0
2.5°	2790.5	2791.5	2785.1	2768.0	2757.3
5°	2779.8	2778.7	2768.0	2753.0	2744.5
7.5°	2748.8	2750.9	2747.7	2726.3	2714.5
10°	2718.8	2719.9	2711.3	2694.2	2680.3
12.5°	2680.3	2679.3	2667.5	2659.0	2636.5
15°	2619.4	2625.8	2619.4	2607.6	2589.5
17.5°	2560.6	2560.6	2564.9	2544.6	2530.7
20°	2494.3	2497.5	2497.5	2481.5	2465.4
22.5°	2417.3	2426.9	2430.2	2413.0	2393.8
25°	2326.4	2344.6	2355.3	2338.2	2317.9
27.5°	2216.3	2244.1	2276.2	2263.4	2240.9
30°	2093.4	2134.0	2187.5	2176.8	2160.7
32.5°	1976.8	2017.5	2091.2	2087.0	2078.4
35°	1871.0	1896.7	1983.3	1993.9	1986.5
37.5°	1770.5	1794.0	1875.3	1899.9	1893.4
40°	1664.7	1690.3	1754.5	1798.3	1800.4
42.5°	1559.9	1584.5	1636.9	1699.9	1699.9
45°	1448.7	1473.3	1521.4	1590.9	1599.4
47.5°	1339.6	1365.3	1412.3	1481.8	1495.7
50°	1232.7	1256.2	1303.3	1370.6	1392.0
52.5°	1121.5	1147.2	1193.2	1255.2	1286.2
55°	1014.6	1031.7	1082.0	1141.8	1175.0
57.5°	903.4	919.5	976.1	1027.4	1061.7
60°	796.5	816.8	860.7	913.0	952.6
62.5°	693.9	715.3	752.7	798.6	843.6
65°	594.4	610.5	646.8	692.8	732.4
67.5°	498.2	512.1	548.5	580.5	622.2
70°	400.9	419.1	445.8	476.8	503.6
72.5°	322.9	330.4	352.8	375.3	403.1
75°	238.4	251.2	269.4	282.3	298.3
77.5°	171.1	178.5	189.2	199.9	214.9
80°	114.4	117.6	127.2	129.4	141.1
82.5°	69.5	71.6	73.8	74.8	79.1
85°	37.4	37.4	37.4	35.3	35.3
87.5°	21.4	21.4	18.2	15.0	10.7
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)