

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: P557014

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-82-87-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: P557014  
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-35-UNV-82-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

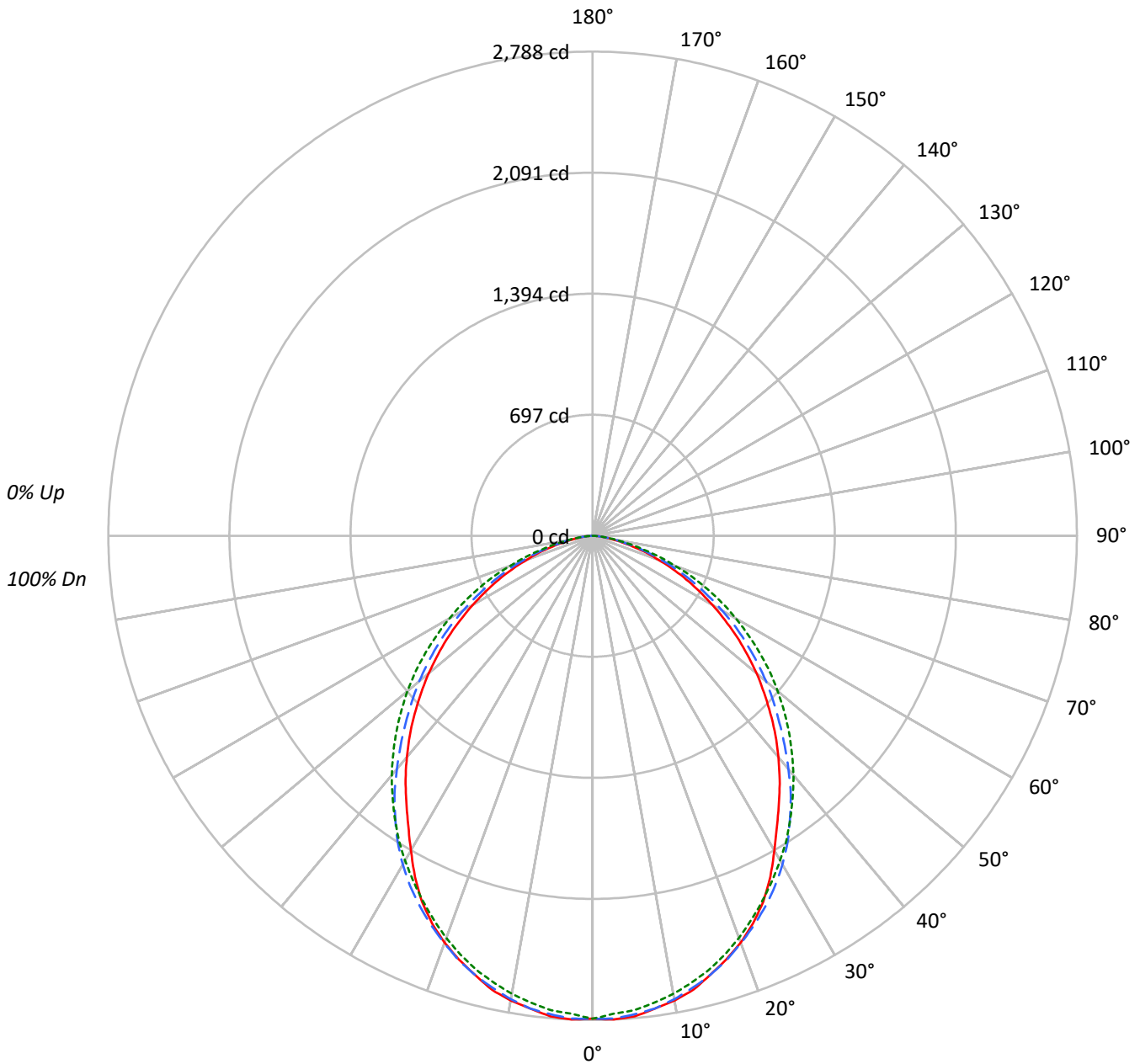
Lumens per Lamp: N/A  
Luminaire Lumens: 6430.0 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (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°	7483	7483	7483
5°	7503	7471	7408
10°	7423	7403	7318
15°	7292	7292	7208
20°	7137	7147	7055
25°	6902	6988	6877
30°	6499	6792	6709
35°	6141	6510	6521
40°	5843	6158	6320
45°	5509	5785	6082
50°	5157	5452	5823
55°	4756	5072	5508
60°	4283	4628	5123
65°	3782	4115	4660
70°	3152	3505	3959
75°	2477	2799	3099
80°	1771	1970	2185
85°	1155	1155	1090



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	261.8	4.1
10°-20°	735.5	11.4
20°-30°	1074.9	16.7
30°-40°	1220.1	19.0
40°-50°	1177.8	18.3
50°-60°	971.6	15.1
60°-70°	647.0	10.1
70°-80°	289.5	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°	2072.2	32.2
0°-40°	3292.3	51.2
0°-60°	5441.7	84.6
0°-90°	6430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6430.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2781	2781	2781	2781	2781	
5°	2778	2776	2766	2751	2742	263
15°	2617	2624	2617	2606	2587	738
25°	2325	2343	2354	2336	2316	1065
35°	1870	1895	1982	1992	1985	1171
45°	1448	1472	1520	1590	1598	1117
55°	1014	1031	1081	1141	1174	905
65°	594	610	646	692	732	589
75°	238	251	269	282	298	260
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°	2780.8	2780.8	2780.8	2780.8	2780.8
2.5°	2788.3	2789.4	2782.9	2765.9	2755.2
5°	2777.6	2776.5	2765.9	2750.9	2742.3
7.5°	2746.6	2748.8	2745.6	2724.2	2712.4
10°	2716.7	2717.8	2709.2	2692.1	2678.3
12.5°	2678.3	2677.2	2665.4	2656.9	2634.5
15°	2617.4	2623.8	2617.4	2605.6	2587.4
17.5°	2558.6	2558.6	2562.9	2542.6	2528.7
20°	2492.4	2495.6	2495.6	2479.5	2463.5
22.5°	2415.4	2425.1	2428.3	2411.2	2391.9
25°	2324.6	2342.8	2353.5	2336.4	2316.1
27.5°	2214.6	2242.4	2274.4	2261.6	2239.2
30°	2091.7	2132.3	2185.8	2175.1	2159.1
32.5°	1975.3	2015.9	2089.6	2085.3	2076.8
35°	1869.5	1895.2	1981.7	1992.4	1984.9
37.5°	1769.1	1792.6	1873.8	1898.4	1892.0
40°	1663.4	1689.0	1753.1	1796.9	1799.0
42.5°	1558.7	1583.2	1635.6	1698.6	1698.6
45°	1447.6	1472.1	1520.2	1589.6	1598.2
47.5°	1338.6	1364.2	1411.2	1480.7	1494.6
50°	1231.8	1255.3	1302.3	1369.6	1390.9
52.5°	1120.7	1146.3	1192.2	1254.2	1285.2
55°	1013.8	1030.9	1081.1	1141.0	1174.1
57.5°	902.7	918.7	975.4	1026.6	1060.8
60°	795.9	816.2	860.0	912.3	951.9
62.5°	693.3	714.7	752.1	798.0	842.9
65°	594.0	610.0	646.3	692.3	731.8
67.5°	497.8	511.7	548.0	580.1	621.8
70°	400.6	418.8	445.5	476.5	503.2
72.5°	322.6	330.1	352.5	375.0	402.8
75°	238.2	251.1	269.2	282.0	298.1
77.5°	170.9	178.4	189.1	199.8	214.7
80°	114.3	117.5	127.1	129.3	141.0
82.5°	69.4	71.6	73.7	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)