

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: P558092

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-81-96-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: P558092  
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-LD4-3LO-40-UNV-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

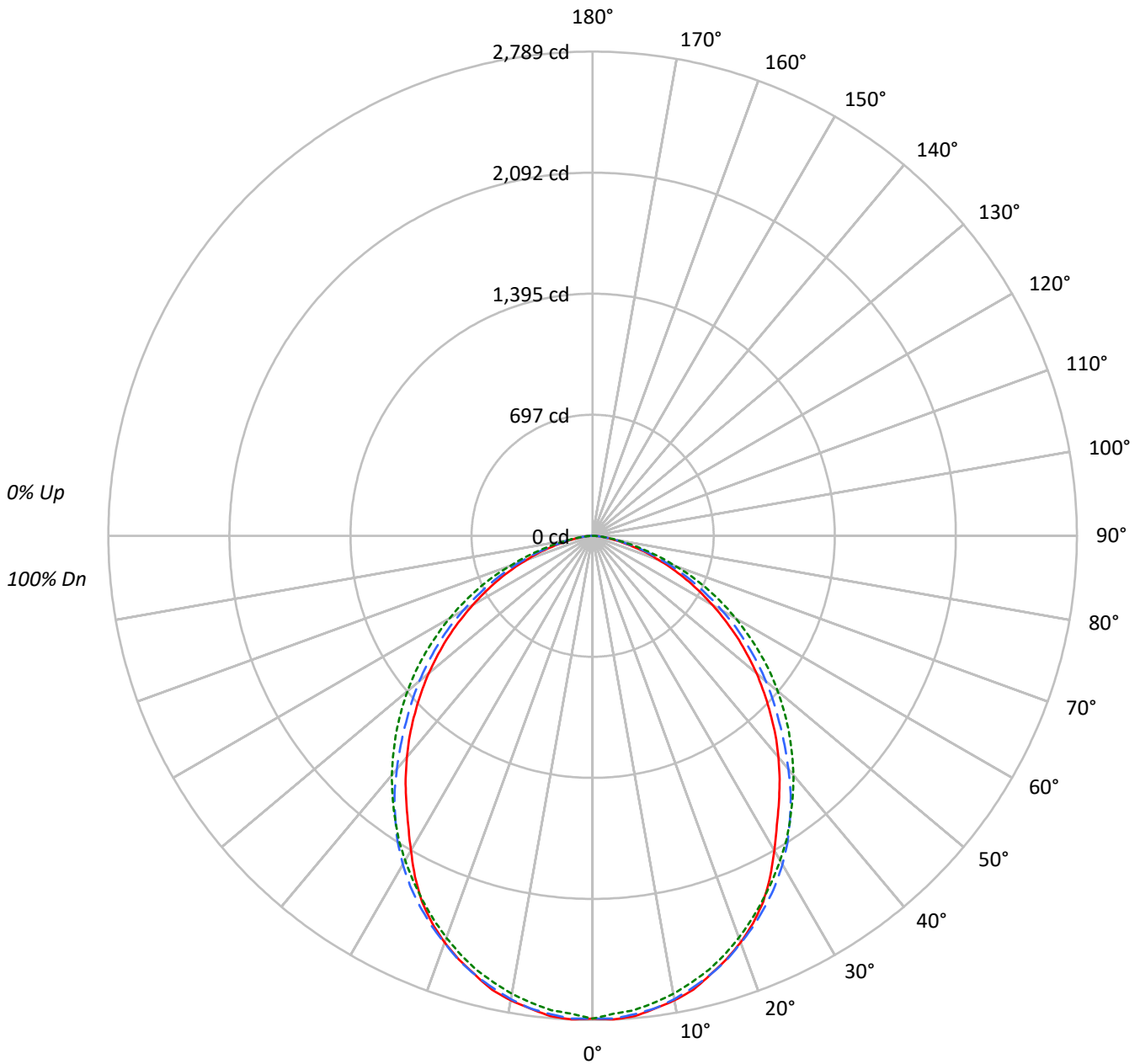
Lumens per Lamp: N/A  
Luminaire Lumens: 6431.0 lumens  
Efficiency: N/A  
Efficacy: 91.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	7484	7484	7484
5°	7504	7472	7409
10°	7424	7404	7320
15°	7293	7293	7209
20°	7139	7148	7056
25°	6903	6989	6878
30°	6501	6793	6710
35°	6142	6511	6522
40°	5844	6159	6321
45°	5510	5786	6083
50°	5158	5453	5824
55°	4757	5073	5509
60°	4284	4629	5124
65°	3783	4116	4660
70°	3153	3506	3960
75°	2478	2800	3099
80°	1771	1970	2185
85°	1155	1155	1090



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	261.9	4.1
10°-20°	735.6	11.4
20°-30°	1075.0	16.7
30°-40°	1220.3	19.0
40°-50°	1178.0	18.3
50°-60°	971.8	15.1
60°-70°	647.1	10.1
70°-80°	289.6	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°	2072.5	32.2
0°-40°	3292.8	51.2
0°-60°	5442.5	84.6
0°-90°	6431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6431.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2781	2781	2781	2781	2781	
5°	2778	2777	2766	2751	2743	263
15°	2618	2624	2618	2606	2588	738
25°	2325	2343	2354	2337	2316	1065
35°	1870	1896	1982	1993	1985	1172
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	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°	2781.2	2781.2	2781.2	2781.2	2781.2
2.5°	2788.7	2789.8	2783.4	2766.3	2755.6
5°	2778.0	2777.0	2766.3	2751.3	2742.8
7.5°	2747.1	2749.2	2746.0	2724.6	2712.9
10°	2717.1	2718.2	2709.7	2692.6	2678.7
12.5°	2678.7	2677.6	2665.8	2657.3	2634.9
15°	2617.8	2624.2	2617.8	2606.0	2587.8
17.5°	2559.0	2559.0	2563.3	2543.0	2529.1
20°	2492.8	2496.0	2496.0	2479.9	2463.9
22.5°	2415.8	2425.4	2428.6	2411.5	2392.3
25°	2325.0	2343.2	2353.9	2336.8	2316.5
27.5°	2214.9	2242.7	2274.8	2262.0	2239.5
30°	2092.1	2132.7	2186.1	2175.4	2159.4
32.5°	1975.6	2016.2	2089.9	2085.7	2077.1
35°	1869.8	1895.5	1982.0	1992.7	1985.2
37.5°	1769.4	1792.9	1874.1	1898.7	1892.3
40°	1663.6	1689.3	1753.4	1797.2	1799.3
42.5°	1558.9	1583.5	1635.8	1698.9	1698.9
45°	1447.8	1472.4	1520.4	1589.9	1598.4
47.5°	1338.8	1364.4	1411.5	1480.9	1494.8
50°	1232.0	1255.5	1302.5	1369.8	1391.2
52.5°	1120.8	1146.5	1192.4	1254.4	1285.4
55°	1014.0	1031.1	1081.3	1141.1	1174.3
57.5°	902.9	918.9	975.5	1026.8	1061.0
60°	796.0	816.3	860.1	912.5	952.0
62.5°	693.4	714.8	752.2	798.2	843.0
65°	594.1	610.1	646.4	692.4	731.9
67.5°	497.9	511.8	548.1	580.2	621.9
70°	400.7	418.8	445.6	476.5	503.3
72.5°	322.7	330.2	352.6	375.0	402.8
75°	238.3	251.1	269.3	282.1	298.1
77.5°	171.0	178.4	189.1	199.8	214.8
80°	114.3	117.5	127.1	129.3	141.0
82.5°	69.5	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)