

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: P558025

Luminaire Tested: **FUSL-12-4-LD4-3LO-35-UNV-81-88-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: P558025  
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-35-UNV-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

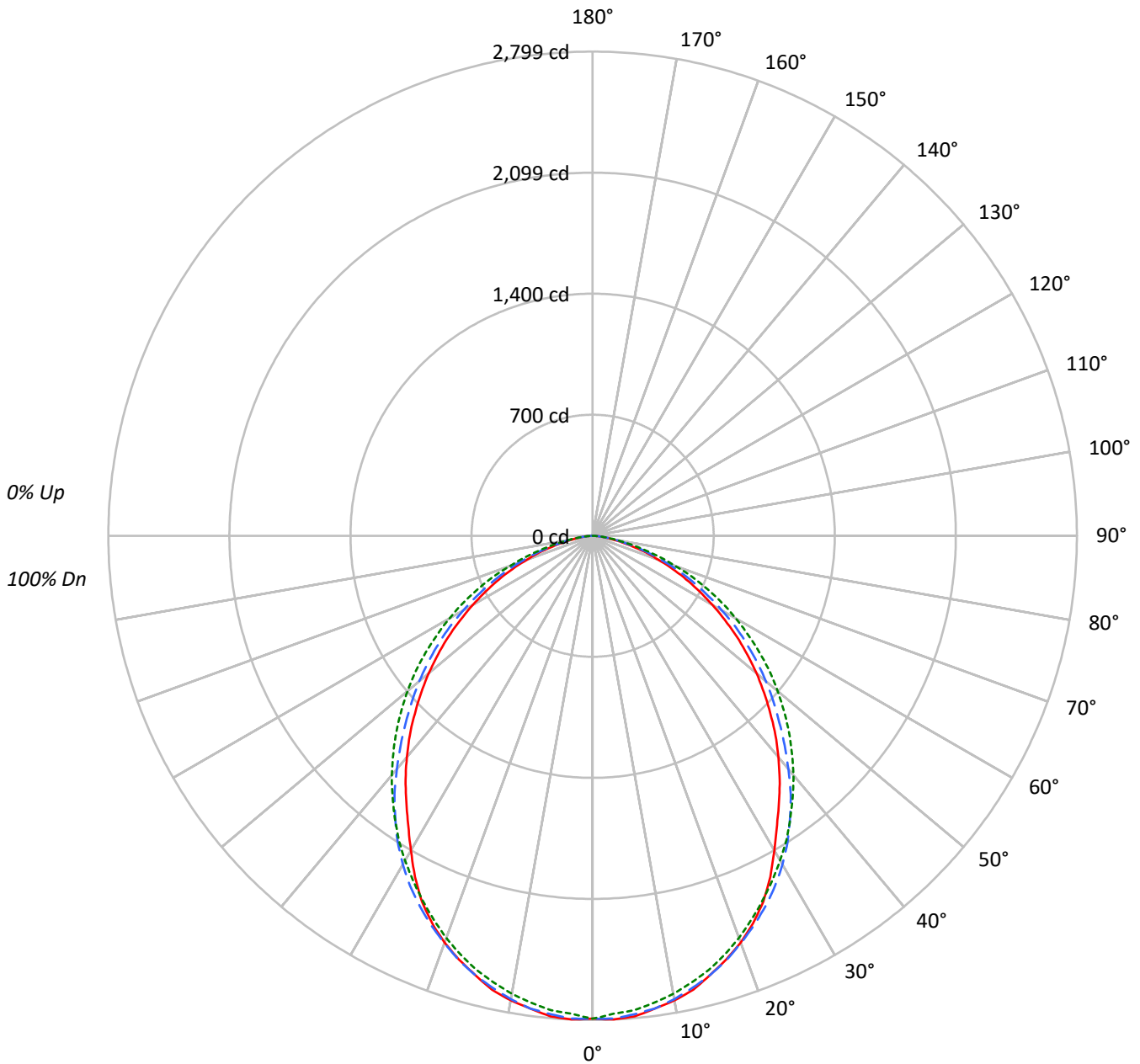
Lumens per Lamp: N/A  
Luminaire Lumens: 6455.0 lumens  
Efficiency: N/A  
Efficacy: 92.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (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°	7512	7512	7512
5°	7532	7500	7437
10°	7452	7432	7347
15°	7320	7320	7236
20°	7165	7174	7082
25°	6929	7015	6904
30°	6525	6818	6735
35°	6165	6535	6546
40°	5866	6182	6344
45°	5530	5808	6106
50°	5177	5473	5845
55°	4775	5092	5529
60°	4300	4646	5143
65°	3797	4131	4677
70°	3164	3519	3974
75°	2487	2810	3111
80°	1779	1977	2194
85°	1158	1158	1093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	262.8	4.1
10°-20°	738.4	11.4
20°-30°	1079.0	16.7
30°-40°	1224.8	19.0
40°-50°	1182.4	18.3
50°-60°	975.4	15.1
60°-70°	649.5	10.1
70°-80°	290.7	4.5
80°-90°	52.0	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°	2080.3	32.2
0°-40°	3305.1	51.2
0°-60°	5462.8	84.6
0°-90°	6455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6455.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2792	2792	2792	2792	2792	
5°	2788	2787	2777	2762	2753	264
15°	2628	2634	2628	2616	2598	741
25°	2334	2352	2363	2346	2325	1069
35°	1877	1902	1989	2000	1993	1176
45°	1453	1478	1526	1596	1604	1121
55°	1018	1035	1085	1145	1179	908
65°	596	612	649	695	735	591
75°	239	252	270	283	299	262
85°	38	38	38	35	35	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2791.6	2791.6	2791.6	2791.6	2791.6
2.5°	2799.1	2800.2	2793.8	2776.6	2765.9
5°	2788.4	2787.3	2776.6	2761.6	2753.0
7.5°	2757.3	2759.4	2756.2	2734.8	2723.0
10°	2727.3	2728.3	2719.8	2702.6	2688.7
12.5°	2688.7	2687.6	2675.8	2667.2	2644.7
15°	2627.5	2634.0	2627.5	2615.7	2597.5
17.5°	2568.5	2568.5	2572.8	2552.5	2538.5
20°	2502.1	2505.3	2505.3	2489.2	2473.1
22.5°	2424.8	2434.5	2437.7	2420.5	2401.2
25°	2333.7	2351.9	2362.6	2345.5	2325.1
27.5°	2223.2	2251.1	2283.3	2270.4	2247.9
30°	2099.9	2140.6	2194.3	2183.5	2167.4
32.5°	1983.0	2023.7	2097.7	2093.4	2084.9
35°	1876.8	1902.5	1989.4	2000.1	1992.6
37.5°	1776.0	1799.6	1881.1	1905.8	1899.3
40°	1669.8	1695.6	1759.9	1803.9	1806.0
42.5°	1564.7	1589.4	1641.9	1705.2	1705.2
45°	1453.2	1477.9	1526.1	1595.8	1604.4
47.5°	1343.8	1369.5	1416.7	1486.4	1500.4
50°	1236.5	1260.1	1307.3	1374.9	1396.3
52.5°	1125.0	1150.8	1196.9	1259.1	1290.2
55°	1017.8	1034.9	1085.3	1145.4	1178.6
57.5°	906.2	922.3	979.2	1030.6	1065.0
60°	799.0	819.4	863.3	915.9	955.6
62.5°	696.0	717.5	755.0	801.1	846.2
65°	596.3	612.4	648.8	695.0	734.6
67.5°	499.8	513.7	550.2	582.3	624.2
70°	402.2	420.4	447.2	478.3	505.1
72.5°	323.9	331.4	353.9	376.4	404.3
75°	239.2	252.0	270.3	283.1	299.2
77.5°	171.6	179.1	189.8	200.6	215.6
80°	114.8	118.0	127.6	129.8	141.6
82.5°	69.7	71.9	74.0	75.1	79.4
85°	37.5	37.5	37.5	35.4	35.4
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)