

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: P557509

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-81-86-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: P557509  
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-35-UNV-81-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

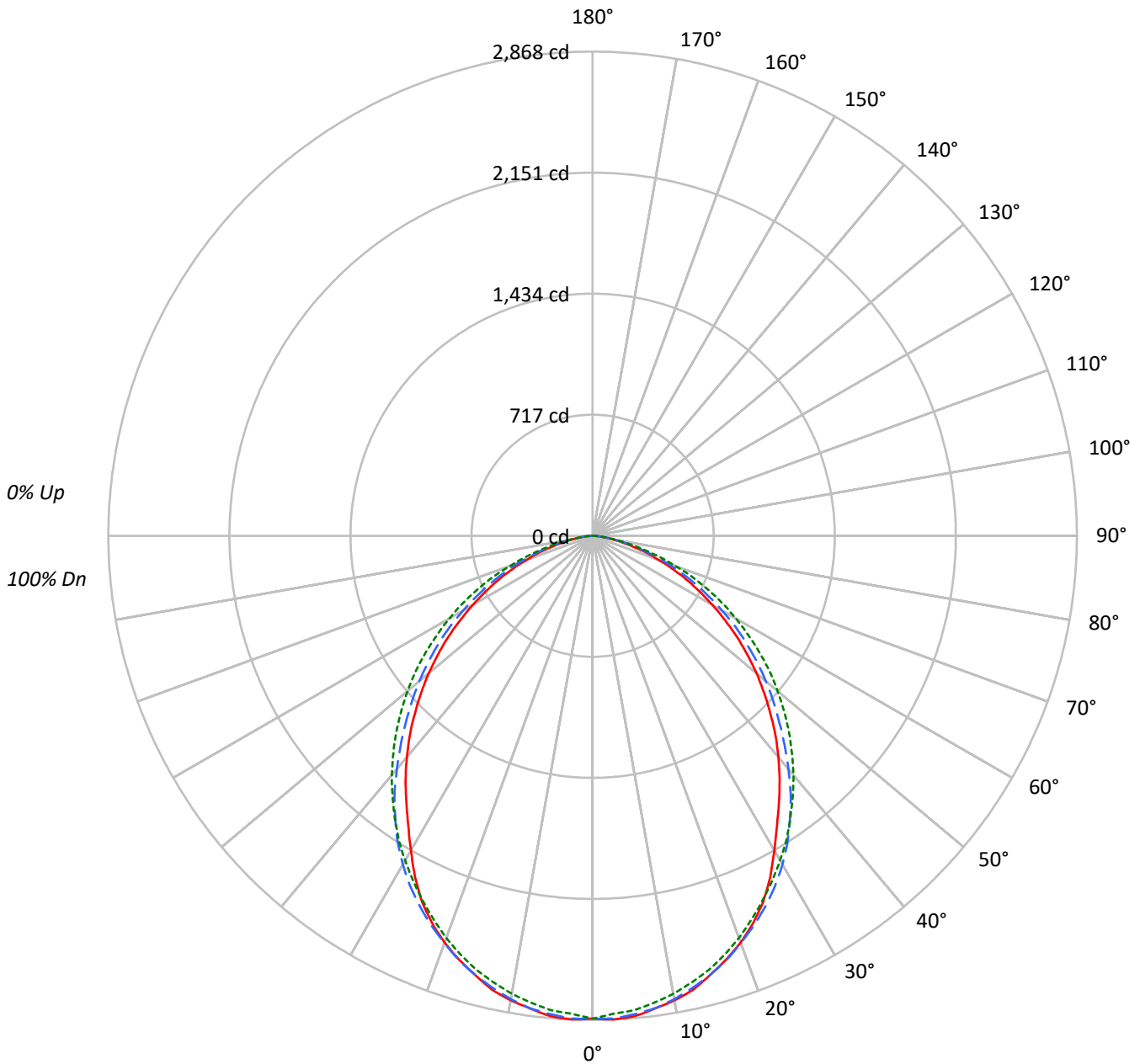
Lumens per Lamp: N/A  
Luminaire Lumens: 6614.0 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (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°	7697	7697	7697
5°	7718	7685	7620
10°	7636	7615	7528
15°	7500	7500	7415
20°	7342	7351	7257
25°	7100	7188	7074
30°	6686	6986	6901
35°	6317	6696	6707
40°	6010	6335	6500
45°	5667	5951	6256
50°	5304	5608	5990
55°	4892	5218	5666
60°	4406	4761	5269
65°	3890	4233	4793
70°	3242	3605	4072
75°	2548	2879	3188
80°	1822	2027	2249
85°	1189	1189	1121



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	269.3	4.1
10°-20°	756.6	11.4
20°-30°	1105.6	16.7
30°-40°	1255.0	19.0
40°-50°	1211.5	18.3
50°-60°	999.4	15.1
60°-70°	665.5	10.1
70°-80°	297.8	4.5
80°-90°	53.3	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°	2131.5	32.2
0°-40°	3386.5	51.2
0°-60°	5597.4	84.6
0°-90°	6614.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6614.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2860	2860	2860	2860	2860	
5°	2857	2856	2845	2830	2821	270
15°	2692	2699	2692	2680	2662	759
25°	2391	2410	2421	2403	2382	1095
35°	1923	1949	2038	2049	2042	1205
45°	1489	1514	1564	1635	1644	1149
55°	1043	1060	1112	1174	1208	931
65°	611	628	665	712	753	606
75°	245	258	277	290	307	268
85°	38	38	38	36	36	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2860.4	2860.4	2860.4	2860.4	2860.4
2.5°	2868.1	2869.2	2862.6	2845.0	2834.0
5°	2857.1	2856.0	2845.0	2829.6	2820.8
7.5°	2825.2	2827.4	2824.1	2802.1	2790.1
10°	2794.5	2795.6	2786.8	2769.2	2754.9
12.5°	2754.9	2753.8	2741.7	2732.9	2709.8
15°	2692.3	2698.8	2692.3	2680.2	2661.5
17.5°	2631.8	2631.8	2636.2	2615.3	2601.0
20°	2563.7	2567.0	2567.0	2550.5	2534.0
22.5°	2484.6	2494.5	2497.8	2480.2	2460.4
25°	2391.2	2409.8	2420.8	2403.3	2382.4
27.5°	2278.0	2306.5	2339.5	2326.3	2303.3
30°	2151.6	2193.4	2248.3	2237.3	2220.8
32.5°	2031.8	2073.6	2149.4	2145.0	2136.2
35°	1923.0	1949.4	2038.4	2049.4	2041.7
37.5°	1819.7	1843.9	1927.4	1952.7	1946.1
40°	1711.0	1737.3	1803.3	1848.3	1850.5
42.5°	1603.3	1628.5	1682.4	1747.2	1747.2
45°	1489.0	1514.3	1563.7	1635.1	1643.9
47.5°	1376.9	1403.3	1451.6	1523.0	1537.3
50°	1267.0	1291.2	1339.5	1408.8	1430.7
52.5°	1152.7	1179.1	1226.3	1290.1	1322.0
55°	1042.8	1060.4	1112.1	1173.6	1207.7
57.5°	928.6	945.0	1003.3	1056.0	1091.2
60°	818.7	839.5	884.6	938.4	979.1
62.5°	713.2	735.2	773.6	820.9	867.0
65°	611.0	627.5	664.8	712.1	752.7
67.5°	512.1	526.4	563.7	596.7	639.5
70°	412.1	430.8	458.2	490.1	517.6
72.5°	331.9	339.6	362.6	385.7	414.3
75°	245.1	258.2	276.9	290.1	306.6
77.5°	175.8	183.5	194.5	205.5	220.9
80°	117.6	120.9	130.8	133.0	145.1
82.5°	71.4	73.6	75.8	76.9	81.3
85°	38.5	38.5	38.5	36.3	36.3
87.5°	22.0	22.0	18.7	15.4	11.0
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)