

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: P557571

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-81-85-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: P557571  
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-40-UNV-81-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

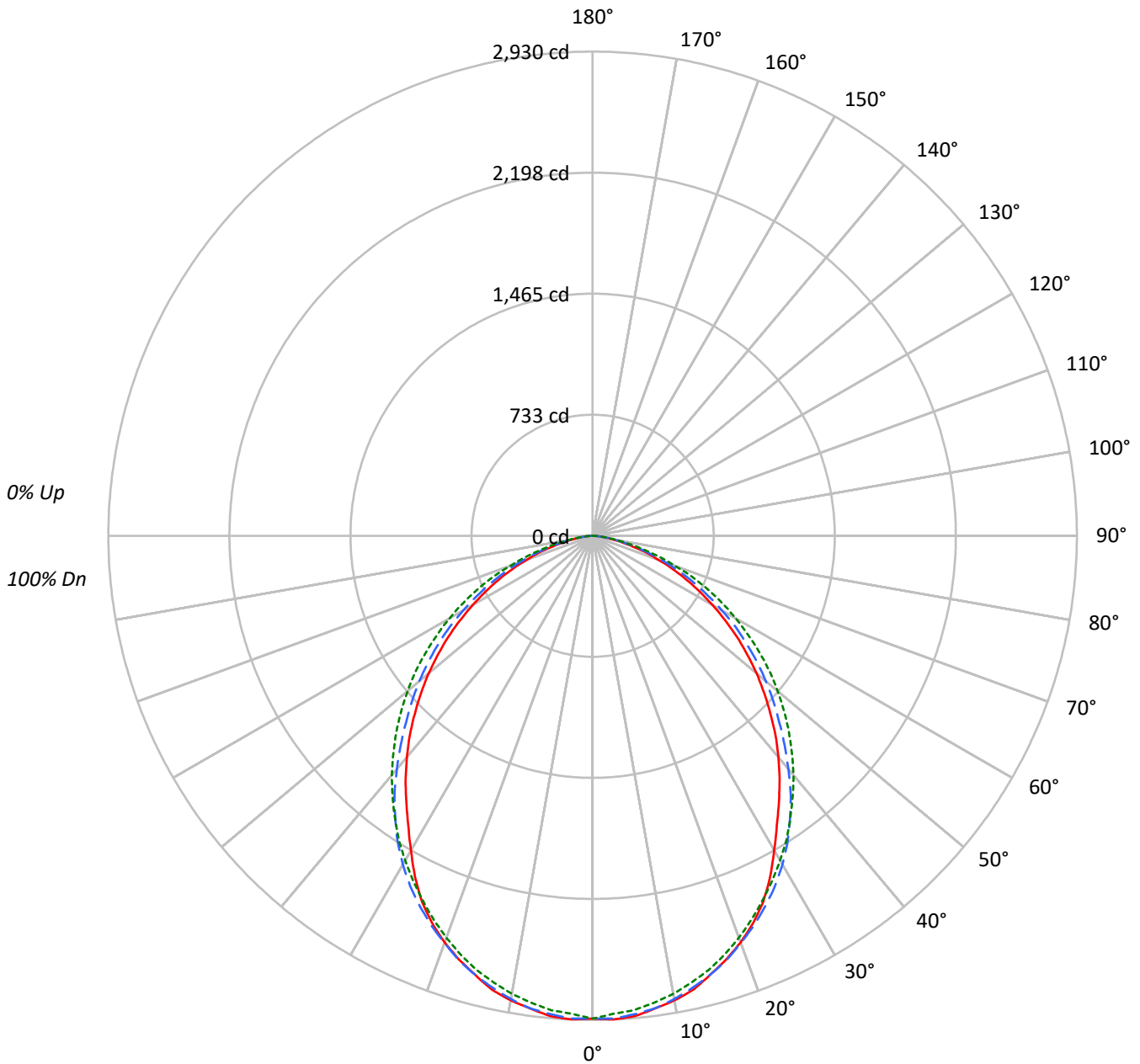
Lumens per Lamp: N/A  
Luminaire Lumens: 6756.0 lumens  
Efficiency: N/A  
Efficacy: 101.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	7863	7863	7863
5°	7883	7850	7783
10°	7800	7778	7689
15°	7662	7662	7574
20°	7499	7509	7412
25°	7252	7342	7225
30°	6829	7136	7049
35°	6453	6840	6851
40°	6139	6471	6640
45°	5788	6079	6390
50°	5418	5728	6118
55°	4997	5329	5788
60°	4500	4863	5382
65°	3974	4324	4896
70°	3312	3683	4160
75°	2602	2941	3256
80°	1861	2070	2297
85°	1213	1213	1142



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	275.1	4.1
10°-20°	772.8	11.4
20°-30°	1129.3	16.7
30°-40°	1281.9	19.0
40°-50°	1237.5	18.3
50°-60°	1020.9	15.1
60°-70°	679.8	10.1
70°-80°	304.2	4.5
80°-90°	54.4	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°	2177.3	32.2
0°-40°	3459.2	51.2
0°-60°	5717.6	84.6
0°-90°	6756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6756.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2922	2922	2922	2922	2922	
5°	2918	2917	2906	2890	2881	276
15°	2750	2757	2750	2738	2719	775
25°	2442	2462	2473	2455	2434	1119
35°	1964	1991	2082	2093	2086	1231
45°	1521	1547	1597	1670	1679	1174
55°	1065	1083	1136	1199	1234	951
65°	624	641	679	727	769	619
75°	250	264	283	296	313	274
85°	39	39	39	37	37	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2921.8	2921.8	2921.8	2921.8	2921.8
2.5°	2929.7	2930.8	2924.0	2906.1	2894.9
5°	2918.4	2917.3	2906.1	2890.4	2881.4
7.5°	2885.9	2888.1	2884.8	2862.3	2850.0
10°	2854.4	2855.6	2846.6	2828.6	2814.0
12.5°	2814.0	2812.9	2800.6	2791.6	2768.0
15°	2750.1	2756.8	2750.1	2737.7	2718.6
17.5°	2688.3	2688.3	2692.8	2671.5	2656.9
20°	2618.7	2622.1	2622.1	2605.3	2588.4
22.5°	2537.9	2548.0	2551.4	2533.4	2513.2
25°	2442.5	2461.6	2472.8	2454.8	2433.5
27.5°	2326.9	2356.1	2389.7	2376.3	2352.7
30°	2197.8	2240.5	2296.6	2285.4	2268.5
32.5°	2075.5	2118.1	2195.6	2191.1	2182.1
35°	1964.3	1991.3	2082.2	2093.4	2085.6
37.5°	1858.8	1883.5	1968.8	1994.6	1987.9
40°	1747.7	1774.6	1842.0	1888.0	1890.2
42.5°	1637.7	1663.5	1718.5	1784.7	1784.7
45°	1521.0	1546.8	1597.3	1670.2	1679.2
47.5°	1406.5	1433.4	1482.8	1555.7	1570.3
50°	1294.2	1318.9	1368.3	1439.0	1461.5
52.5°	1177.5	1204.4	1252.7	1317.8	1350.3
55°	1065.2	1083.2	1135.9	1198.8	1233.6
57.5°	948.5	965.3	1024.8	1078.7	1114.6
60°	836.2	857.6	903.6	958.6	1000.1
62.5°	728.5	750.9	790.2	838.5	885.6
65°	624.1	640.9	679.1	727.4	768.9
67.5°	523.1	537.7	575.8	609.5	653.3
70°	420.9	440.0	468.1	500.6	528.7
72.5°	339.0	346.8	370.4	394.0	423.2
75°	250.3	263.8	282.9	296.3	313.2
77.5°	179.6	187.5	198.7	209.9	225.6
80°	120.1	123.5	133.6	135.8	148.2
82.5°	73.0	75.2	77.5	78.6	83.1
85°	39.3	39.3	39.3	37.0	37.0
87.5°	22.4	22.4	19.1	15.7	11.2
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)