

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: P558086

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-81-87-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: P558086  
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-81-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

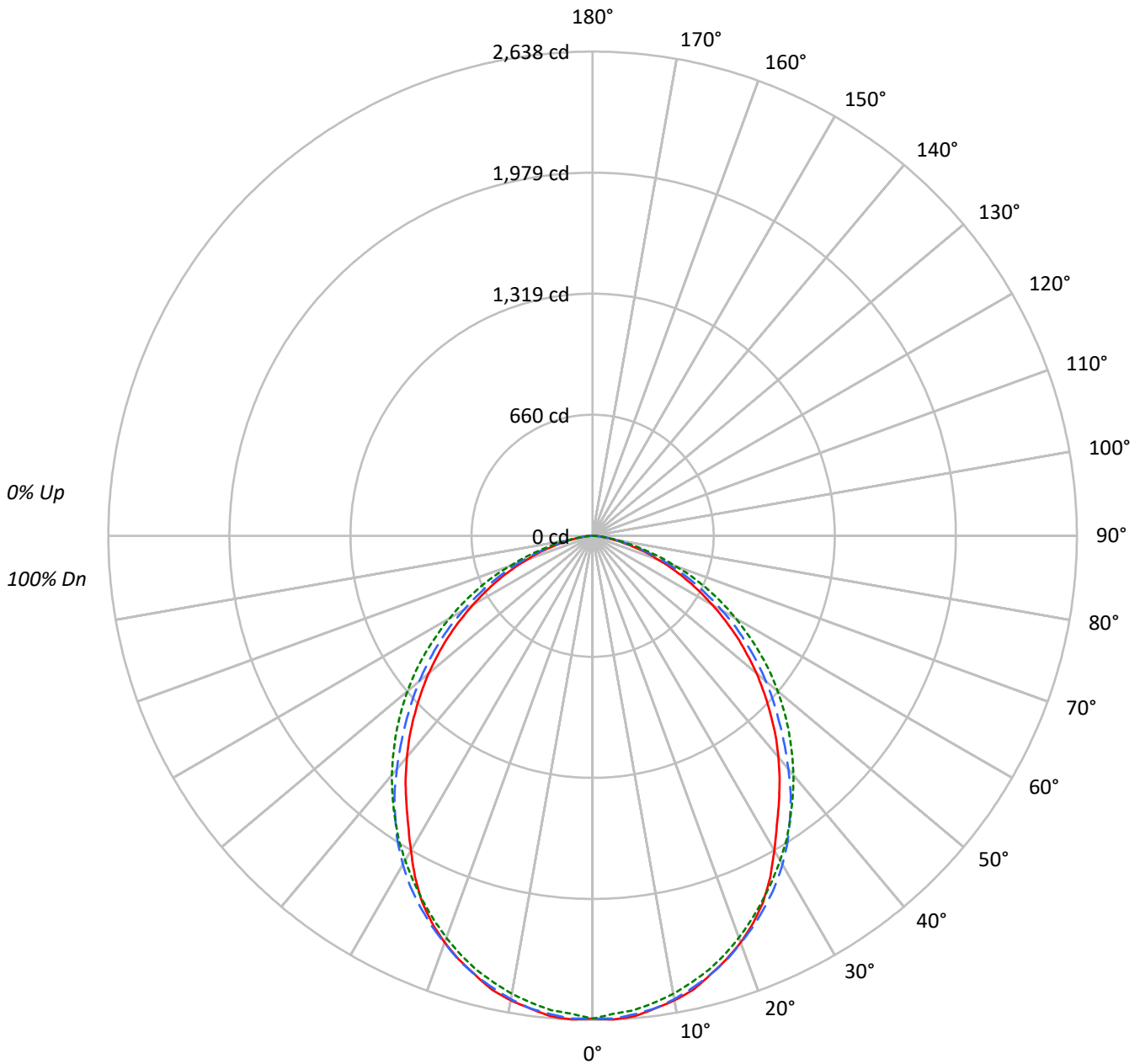
Lumens per Lamp: N/A  
Luminaire Lumens: 6083.0 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				20				
RC	80				70				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			100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86			86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73			73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63			63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54			54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47			47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42			42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37			37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34			34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30			30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28			28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7079	7079	7079
5°	7098	7068	7008
10°	7023	7003	6923
15°	6898	6898	6819
20°	6752	6761	6674
25°	6530	6611	6506
30°	6149	6425	6347
35°	5810	6159	6169
40°	5528	5826	5978
45°	5211	5473	5754
50°	4878	5158	5509
55°	4500	4799	5211
60°	4052	4379	4846
65°	3578	3893	4408
70°	2982	3316	3745
75°	2344	2648	2932
80°	1675	1864	2067
85°	1093	1093	1031



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.7	4.1
10°-20°	695.8	11.4
20°-30°	1016.9	16.7
30°-40°	1154.2	19.0
40°-50°	1114.2	18.3
50°-60°	919.2	15.1
60°-70°	612.1	10.1
70°-80°	273.9	4.5
80°-90°	49.0	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°	1960.4	32.2
0°-40°	3114.6	51.2
0°-60°	5148.0	84.6
0°-90°	6083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6083.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2631	2631	2631	2631	2631	
5°	2628	2627	2617	2602	2594	249
15°	2476	2482	2476	2465	2448	698
25°	2199	2216	2226	2210	2191	1007
35°	1769	1793	1875	1885	1878	1108
45°	1369	1393	1438	1504	1512	1057
55°	959	975	1023	1079	1111	856
65°	562	577	611	655	692	557
75°	225	238	255	267	282	246
85°	35	35	35	33	33	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2630.7	2630.7	2630.7	2630.7	2630.7
2.5°	2637.8	2638.8	2632.8	2616.6	2606.5
5°	2627.7	2626.7	2616.6	2602.4	2594.4
7.5°	2598.4	2600.4	2597.4	2577.2	2566.1
10°	2570.1	2571.1	2563.0	2546.9	2533.7
12.5°	2533.7	2532.7	2521.6	2513.5	2492.3
15°	2476.1	2482.2	2476.1	2465.0	2447.8
17.5°	2420.5	2420.5	2424.6	2405.4	2392.2
20°	2357.9	2360.9	2360.9	2345.7	2330.6
22.5°	2285.1	2294.2	2297.2	2281.1	2262.9
25°	2199.2	2216.4	2226.5	2210.3	2191.1
27.5°	2095.1	2121.4	2151.7	2139.6	2118.3
30°	1978.9	2017.3	2067.8	2057.7	2042.5
32.5°	1868.7	1907.1	1976.8	1972.8	1964.7
35°	1768.6	1792.9	1874.8	1884.9	1877.8
37.5°	1673.6	1695.9	1772.7	1795.9	1789.9
40°	1573.6	1597.8	1658.5	1699.9	1701.9
42.5°	1474.5	1497.8	1547.3	1606.9	1606.9
45°	1369.4	1392.7	1438.2	1503.9	1511.9
47.5°	1266.4	1290.6	1335.1	1400.8	1413.9
50°	1165.3	1187.5	1232.0	1295.7	1315.9
52.5°	1060.2	1084.4	1127.9	1186.5	1215.8
55°	959.1	975.3	1022.8	1079.4	1110.7
57.5°	854.0	869.2	922.7	971.2	1003.6
60°	752.9	772.1	813.6	863.1	900.5
62.5°	655.9	676.1	711.5	755.0	797.4
65°	561.9	577.1	611.4	654.9	692.3
67.5°	471.0	484.1	518.5	548.8	588.2
70°	379.0	396.2	421.4	450.8	476.0
72.5°	305.2	312.3	333.5	354.7	381.0
75°	225.4	237.5	254.7	266.8	282.0
77.5°	161.7	168.8	178.9	189.0	203.1
80°	108.1	111.2	120.3	122.3	133.4
82.5°	65.7	67.7	69.7	70.7	74.8
85°	35.4	35.4	35.4	33.4	33.4
87.5°	20.2	20.2	17.2	14.1	10.1
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)