

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: P557577

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-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: P557577  
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-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

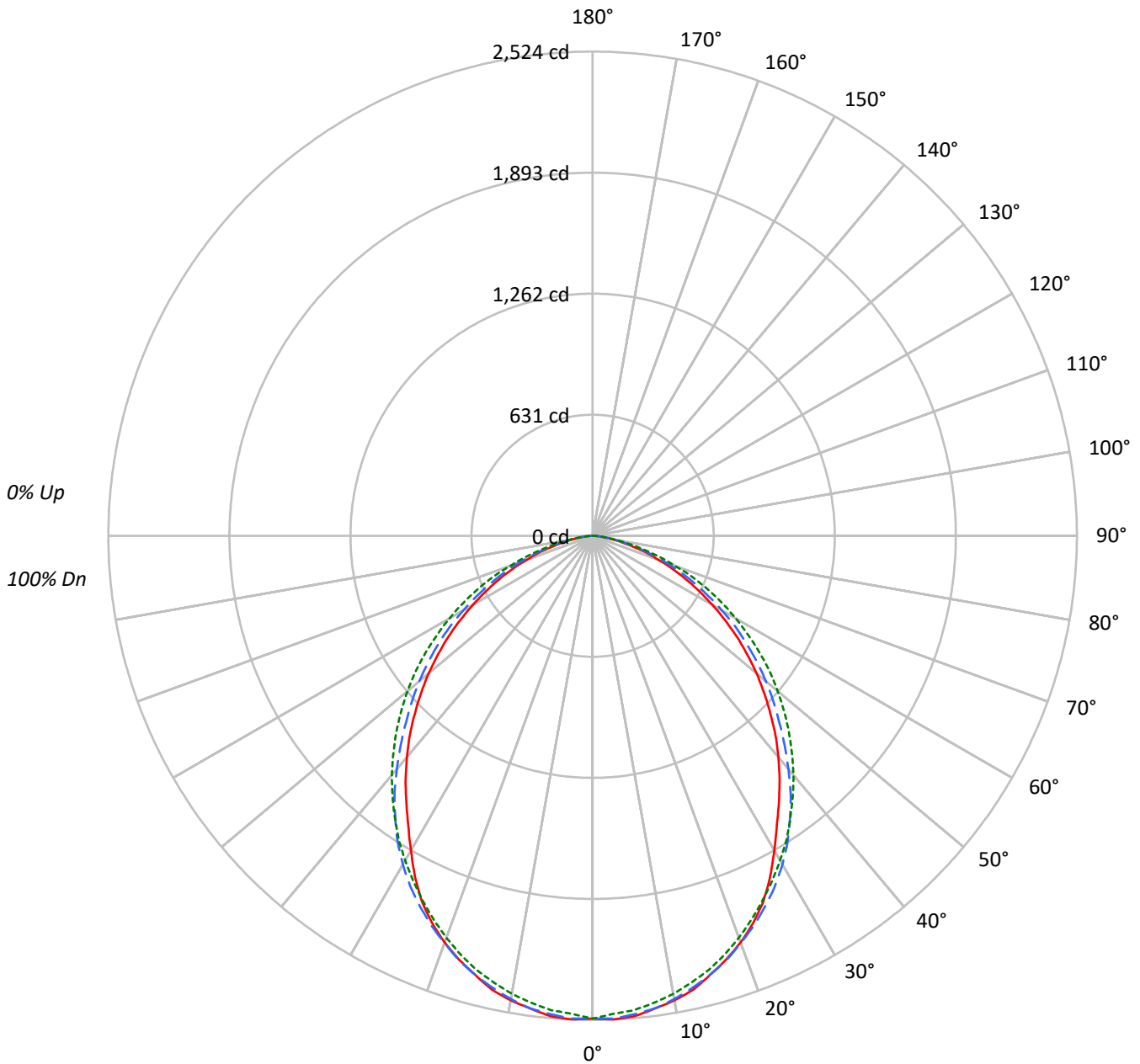
Lumens per Lamp: N/A  
Luminaire Lumens: 5820.0 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6773	6773	6773
5°	6791	6763	6705
10°	6719	6701	6624
15°	6600	6600	6525
20°	6460	6468	6385
25°	6247	6325	6225
30°	5883	6147	6072
35°	5559	5892	5902
40°	5289	5574	5720
45°	4986	5237	5505
50°	4667	4935	5271
55°	4305	4591	4986
60°	3877	4189	4637
65°	3423	3725	4218
70°	2853	3172	3583
75°	2242	2534	2805
80°	1604	1784	1977
85°	1044	1044	985



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	237.0	4.1
10°-20°	665.8	11.4
20°-30°	972.9	16.7
30°-40°	1104.3	19.0
40°-50°	1066.1	18.3
50°-60°	879.4	15.1
60°-70°	585.6	10.1
70°-80°	262.1	4.5
80°-90°	46.9	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°	1875.6	32.2
0°-40°	2980.0	51.2
0°-60°	4925.4	84.6
0°-90°	5820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5820.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2517	2517	2517	2517	2517	
5°	2514	2513	2504	2490	2482	238
15°	2369	2375	2369	2358	2342	668
25°	2104	2120	2130	2115	2096	964
35°	1692	1715	1794	1803	1797	1060
45°	1310	1332	1376	1439	1447	1011
55°	918	933	979	1033	1063	819
65°	538	552	585	627	662	533
75°	216	227	244	255	270	236
85°	34	34	34	32	32	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2517.0	2517.0	2517.0	2517.0	2517.0
2.5°	2523.8	2524.7	2518.9	2503.5	2493.8
5°	2514.1	2513.1	2503.5	2489.9	2482.2
7.5°	2486.1	2488.0	2485.1	2465.8	2455.1
10°	2459.0	2459.9	2452.2	2436.7	2424.2
12.5°	2424.2	2423.2	2412.6	2404.8	2384.5
15°	2369.1	2374.9	2369.1	2358.4	2342.0
17.5°	2315.9	2315.9	2319.7	2301.4	2288.8
20°	2255.9	2258.8	2258.8	2244.3	2229.8
22.5°	2186.3	2195.0	2197.9	2182.4	2165.0
25°	2104.1	2120.5	2130.2	2114.7	2096.4
27.5°	2004.5	2029.7	2058.7	2047.1	2026.8
30°	1893.3	1930.1	1978.4	1968.7	1954.2
32.5°	1787.9	1824.7	1891.4	1887.5	1879.8
35°	1692.2	1715.4	1793.7	1803.4	1796.6
37.5°	1601.3	1622.6	1696.0	1718.3	1712.5
40°	1505.6	1528.8	1586.8	1626.4	1628.4
42.5°	1410.8	1433.0	1480.4	1537.5	1537.5
45°	1310.2	1332.5	1376.0	1438.8	1446.6
47.5°	1211.6	1234.8	1277.4	1340.2	1352.8
50°	1114.9	1136.2	1178.7	1239.6	1259.0
52.5°	1014.3	1037.5	1079.1	1135.2	1163.3
55°	917.6	933.1	978.6	1032.7	1062.7
57.5°	817.1	831.6	882.8	929.2	960.2
60°	720.4	738.8	778.4	825.8	861.6
62.5°	627.6	646.9	680.7	722.3	762.9
65°	537.6	552.1	585.0	626.6	662.4
67.5°	450.6	463.2	496.1	525.1	562.8
70°	362.6	379.0	403.2	431.3	455.4
72.5°	292.0	298.8	319.1	339.4	364.5
75°	215.6	227.2	243.7	255.3	269.8
77.5°	154.7	161.5	171.2	180.8	194.4
80°	103.5	106.4	115.1	117.0	127.6
82.5°	62.9	64.8	66.7	67.7	71.6
85°	33.8	33.8	33.8	31.9	31.9
87.5°	19.3	19.3	16.4	13.5	9.7
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)