

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: P557604

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-93-86-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: P557604  
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-93-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

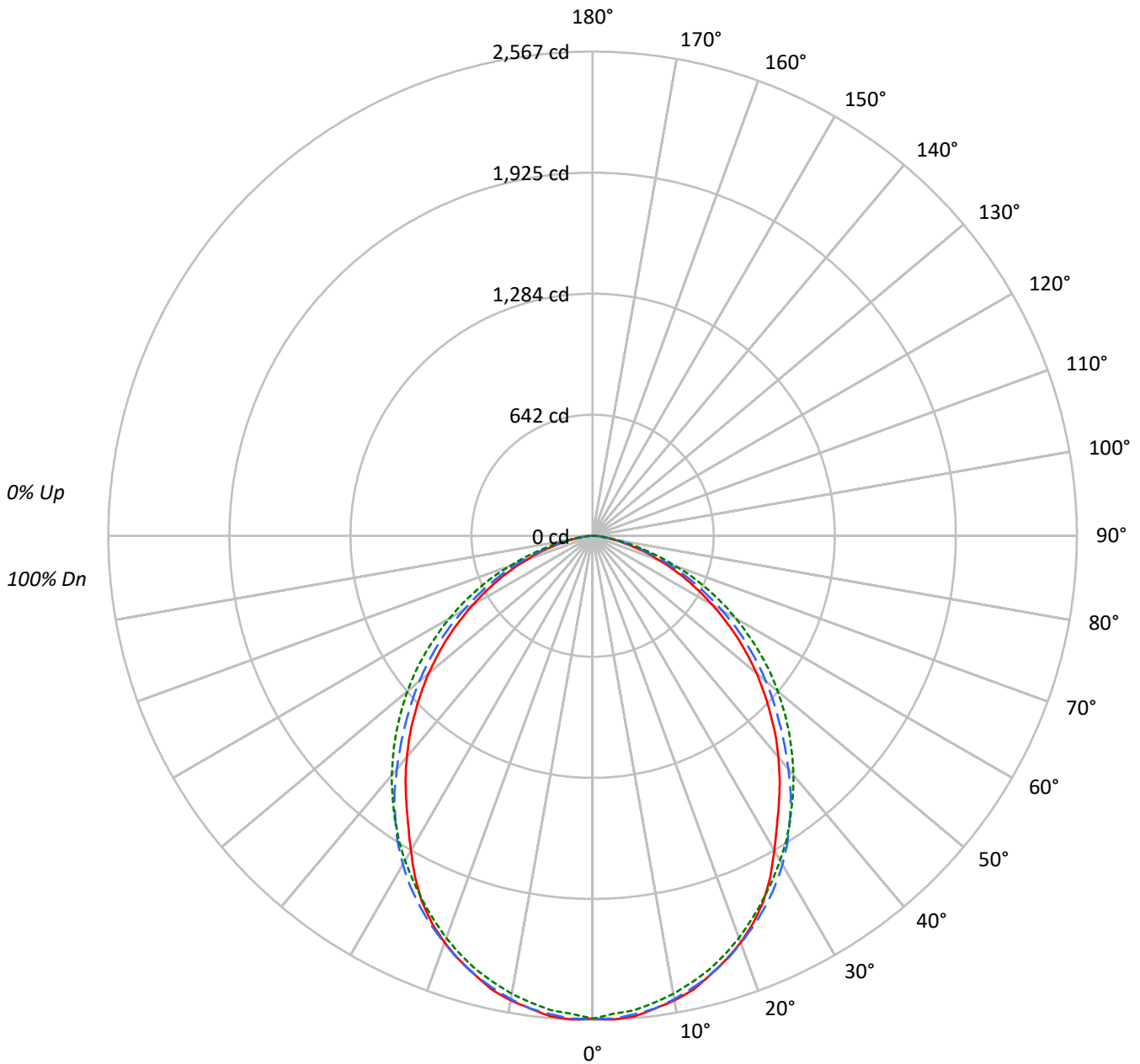
Lumens per Lamp: N/A  
Luminaire Lumens: 5920.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	6889	6889	6889
5°	6908	6879	6820
10°	6835	6816	6738
15°	6713	6713	6637
20°	6571	6580	6495
25°	6355	6434	6331
30°	5984	6253	6177
35°	5655	5994	6003
40°	5380	5670	5818
45°	5072	5326	5600
50°	4748	5020	5361
55°	4379	4670	5071
60°	3944	4261	4717
65°	3482	3789	4290
70°	2902	3227	3645
75°	2280	2577	2853
80°	1630	1813	2011
85°	1062	1062	1003



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.1	4.1
10°-20°	677.2	11.4
20°-30°	989.6	16.7
30°-40°	1123.3	19.0
40°-50°	1084.4	18.3
50°-60°	894.5	15.1
60°-70°	595.7	10.1
70°-80°	266.6	4.5
80°-90°	47.7	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°	1907.8	32.2
0°-40°	3031.1	51.2
0°-60°	5010.1	84.6
0°-90°	5920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5920.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2560	2560	2560	2560	2560	
5°	2557	2556	2546	2533	2525	242
15°	2410	2416	2410	2399	2382	679
25°	2140	2157	2167	2151	2132	980
35°	1721	1745	1824	1834	1828	1078
45°	1333	1355	1400	1464	1471	1028
55°	933	949	995	1050	1081	833
65°	547	562	595	637	674	542
75°	219	231	248	260	274	240
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°	2560.2	2560.2	2560.2	2560.2	2560.2
2.5°	2567.1	2568.1	2562.2	2546.5	2536.6
5°	2557.3	2556.3	2546.5	2532.7	2524.8
7.5°	2528.8	2530.7	2527.8	2508.1	2497.3
10°	2501.2	2502.2	2494.3	2478.6	2465.8
12.5°	2465.8	2464.8	2454.0	2446.2	2425.5
15°	2409.8	2415.7	2409.8	2398.9	2382.2
17.5°	2355.7	2355.7	2359.6	2340.9	2328.1
20°	2294.7	2297.6	2297.6	2282.9	2268.1
22.5°	2223.9	2232.7	2235.7	2219.9	2202.2
25°	2140.3	2157.0	2166.8	2151.1	2132.4
27.5°	2039.0	2064.5	2094.0	2082.2	2061.6
30°	1925.8	1963.2	2012.4	2002.6	1987.8
32.5°	1818.6	1856.0	1923.9	1919.9	1912.1
35°	1721.3	1744.9	1824.5	1834.4	1827.5
37.5°	1628.8	1650.4	1725.2	1747.8	1741.9
40°	1531.4	1555.0	1614.0	1654.4	1656.3
42.5°	1435.0	1457.7	1505.9	1563.9	1563.9
45°	1332.7	1355.4	1399.6	1463.6	1471.4
47.5°	1232.4	1256.0	1299.3	1363.2	1376.0
50°	1134.1	1155.7	1199.0	1260.9	1280.6
52.5°	1031.8	1055.4	1097.7	1154.7	1183.2
55°	933.4	949.2	995.4	1050.5	1080.9
57.5°	831.1	845.9	898.0	945.2	976.7
60°	732.8	751.5	791.8	840.0	876.4
62.5°	638.3	658.0	692.4	734.7	776.0
65°	546.9	561.6	595.1	637.4	673.7
67.5°	458.3	471.1	504.6	534.1	572.4
70°	368.8	385.6	410.2	438.7	463.3
72.5°	297.0	303.9	324.6	345.2	370.8
75°	219.3	231.1	247.9	259.7	274.4
77.5°	157.4	164.3	174.1	183.9	197.7
80°	105.2	108.2	117.0	119.0	129.8
82.5°	63.9	65.9	67.9	68.9	72.8
85°	34.4	34.4	34.4	32.5	32.5
87.5°	19.7	19.7	16.7	13.8	9.8
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)