

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: P557540

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-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: P557540  
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-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

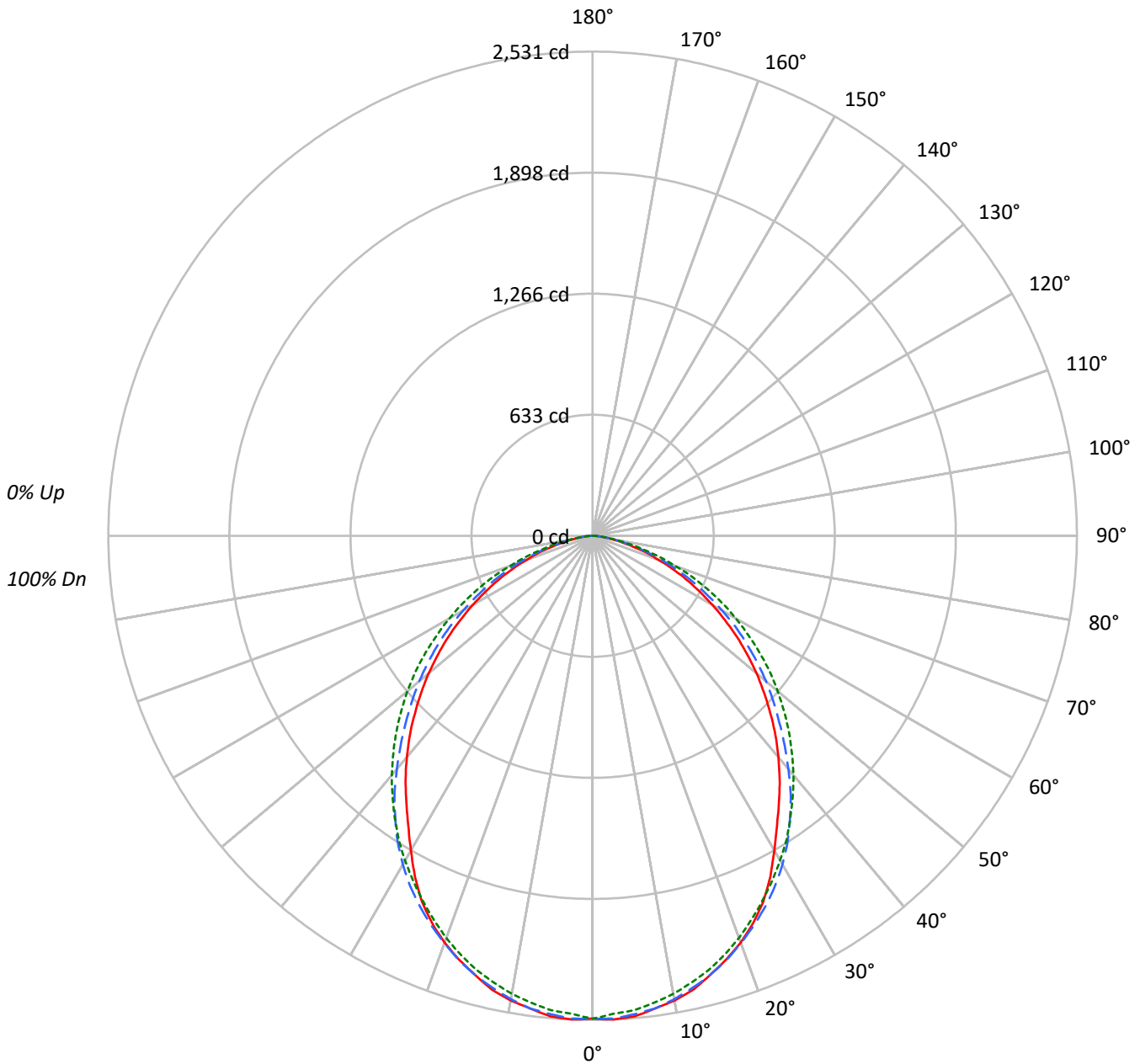
Lumens per Lamp: N/A  
Luminaire Lumens: 5837.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6793	6793	6793
5°	6811	6782	6725
10°	6739	6720	6644
15°	6619	6619	6544
20°	6479	6487	6404
25°	6266	6343	6243
30°	5900	6165	6090
35°	5575	5910	5919
40°	5304	5590	5737
45°	5001	5252	5521
50°	4681	4949	5286
55°	4318	4604	5000
60°	3888	4202	4651
65°	3433	3736	4230
70°	2862	3182	3594
75°	2249	2541	2813
80°	1609	1788	1984
85°	1047	1047	988



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	237.7	4.1
10°-20°	667.7	11.4
20°-30°	975.7	16.7
30°-40°	1107.6	19.0
40°-50°	1069.2	18.3
50°-60°	882.0	15.1
60°-70°	587.3	10.1
70°-80°	262.8	4.5
80°-90°	47.0	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°	1881.1	32.2
0°-40°	2988.7	51.2
0°-60°	4939.8	84.6
0°-90°	5837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5837.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2524	2524	2524	2524	2524	
5°	2521	2520	2511	2497	2489	239
15°	2376	2382	2376	2365	2349	670
25°	2110	2127	2136	2121	2102	966
35°	1697	1720	1799	1809	1802	1063
45°	1314	1336	1380	1443	1451	1014
55°	920	936	981	1036	1066	821
65°	539	554	587	628	664	535
75°	216	228	244	256	271	237
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°	2524.4	2524.4	2524.4	2524.4	2524.4
2.5°	2531.1	2532.1	2526.3	2510.8	2501.1
5°	2521.4	2520.5	2510.8	2497.2	2489.4
7.5°	2493.3	2495.3	2492.3	2473.0	2462.3
10°	2466.2	2467.1	2459.4	2443.9	2431.3
12.5°	2431.3	2430.3	2419.6	2411.9	2391.5
15°	2376.0	2381.8	2376.0	2365.3	2348.8
17.5°	2322.6	2322.6	2326.5	2308.1	2295.5
20°	2262.5	2265.4	2265.4	2250.9	2236.3
22.5°	2192.7	2201.4	2204.3	2188.8	2171.3
25°	2110.3	2126.7	2136.4	2120.9	2102.5
27.5°	2010.4	2035.6	2064.7	2053.0	2032.7
30°	1898.8	1935.7	1984.2	1974.5	1959.9
32.5°	1793.1	1830.0	1896.9	1893.0	1885.3
35°	1697.1	1720.4	1799.0	1808.7	1801.9
37.5°	1606.0	1627.3	1701.0	1723.3	1717.5
40°	1510.0	1533.2	1591.4	1631.2	1633.1
42.5°	1414.9	1437.2	1484.7	1542.0	1542.0
45°	1314.1	1336.4	1380.0	1443.0	1450.8
47.5°	1215.1	1238.4	1281.1	1344.1	1356.7
50°	1118.2	1139.5	1182.2	1243.3	1262.7
52.5°	1017.3	1040.6	1082.3	1138.5	1166.7
55°	920.3	935.8	981.4	1035.7	1065.8
57.5°	819.5	834.0	885.4	932.0	963.0
60°	722.5	740.9	780.7	828.2	864.1
62.5°	629.4	648.8	682.7	724.4	765.2
65°	539.2	553.7	586.7	628.4	664.3
67.5°	451.9	464.5	497.5	526.6	564.4
70°	363.7	380.2	404.4	432.5	456.8
72.5°	292.9	299.7	320.0	340.4	365.6
75°	216.3	227.9	244.4	256.0	270.6
77.5°	155.2	162.0	171.7	181.3	194.9
80°	103.8	106.7	115.4	117.3	128.0
82.5°	63.0	65.0	66.9	67.9	71.8
85°	33.9	33.9	33.9	32.0	32.0
87.5°	19.4	19.4	16.5	13.6	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)