

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: P557198

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-81-97-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: P557198  
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-LD4-2LO-30-UNV-81-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

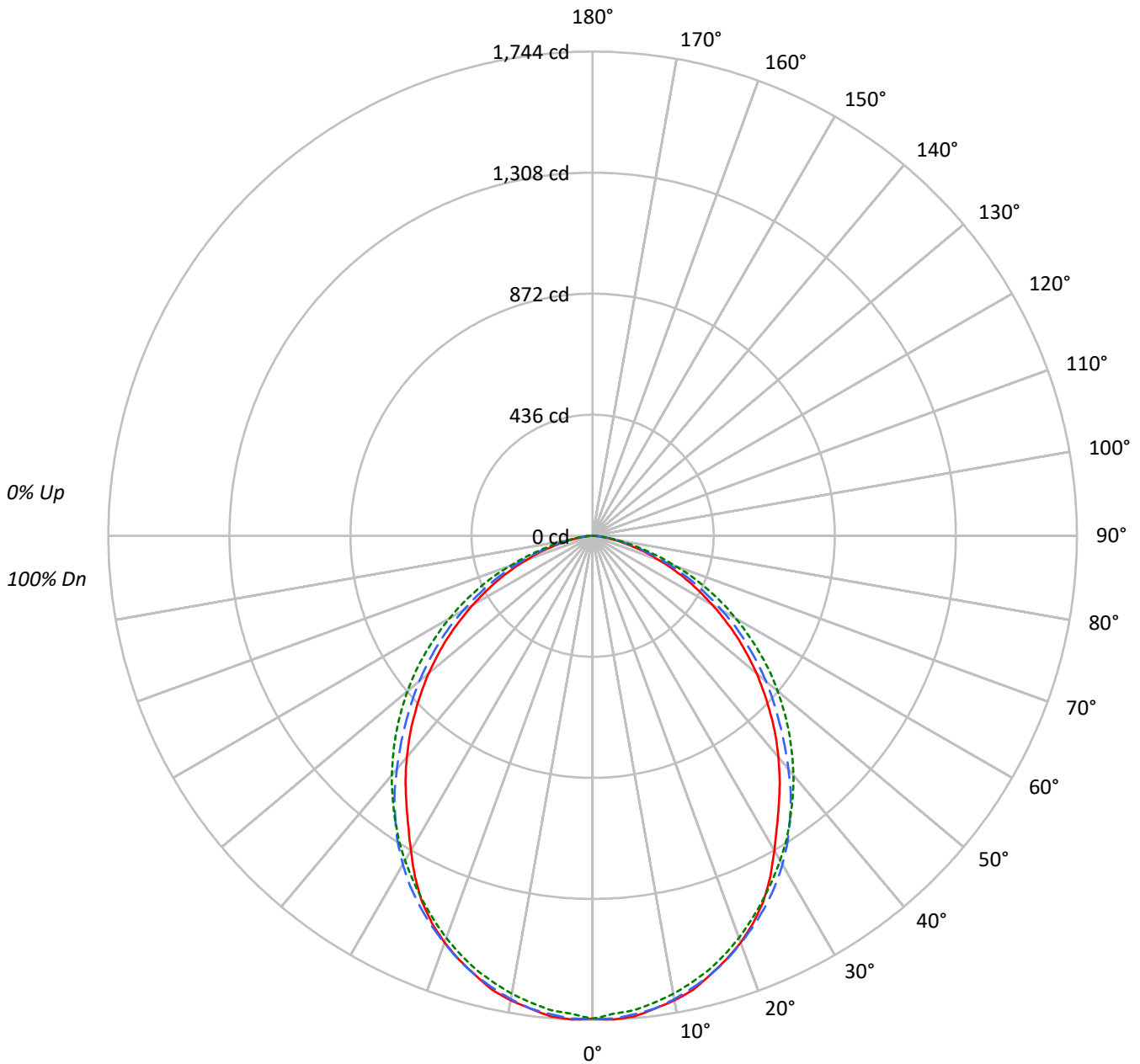
Lumens per Lamp: N/A  
Luminaire Lumens: 4022.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	4681	4681	4681
5°	4693	4673	4634
10°	4643	4630	4578
15°	4561	4561	4509
20°	4464	4470	4413
25°	4317	4371	4301
30°	4066	4248	4196
35°	3842	4072	4079
40°	3655	3852	3953
45°	3446	3619	3804
50°	3226	3410	3642
55°	2975	3173	3445
60°	2679	2895	3204
65°	2365	2574	2914
70°	1972	2193	2476
75°	1549	1751	1938
80°	1108	1232	1367
85°	722	722	682



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.8	4.1
10°-20°	460.1	11.4
20°-30°	672.3	16.7
30°-40°	763.2	19.0
40°-50°	736.7	18.3
50°-60°	607.7	15.1
60°-70°	404.7	10.1
70°-80°	181.1	4.5
80°-90°	32.4	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°	1296.2	32.2
0°-40°	2059.3	51.2
0°-60°	3403.8	84.6
0°-90°	4022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4022.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1739	1739	1739	1739	1739	
5°	1737	1737	1730	1721	1715	164
15°	1637	1641	1637	1630	1618	462
25°	1454	1465	1472	1461	1449	666
35°	1169	1185	1240	1246	1242	733
45°	906	921	951	994	1000	699
55°	634	645	676	714	734	566
65°	372	382	404	433	458	368
75°	149	157	168	176	186	163
85°	23	23	23	22	22	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1739.4	1739.4	1739.4	1739.4	1739.4
2.5°	1744.1	1744.8	1740.7	1730.1	1723.4
5°	1737.4	1736.7	1730.1	1720.7	1715.4
7.5°	1718.0	1719.4	1717.4	1704.0	1696.6
10°	1699.3	1700.0	1694.6	1683.9	1675.3
12.5°	1675.3	1674.6	1667.2	1661.9	1647.9
15°	1637.2	1641.2	1637.2	1629.8	1618.5
17.5°	1600.4	1600.4	1603.1	1590.4	1581.7
20°	1559.0	1561.0	1561.0	1551.0	1540.9
22.5°	1510.9	1516.9	1518.9	1508.2	1496.2
25°	1454.1	1465.4	1472.1	1461.4	1448.7
27.5°	1385.2	1402.6	1422.7	1414.6	1400.6
30°	1308.4	1333.8	1367.2	1360.5	1350.5
32.5°	1235.6	1261.0	1307.1	1304.4	1299.0
35°	1169.4	1185.4	1239.6	1246.3	1241.6
37.5°	1106.6	1121.3	1172.1	1187.5	1183.4
40°	1040.4	1056.5	1096.6	1124.0	1125.3
42.5°	975.0	990.3	1023.1	1062.5	1062.5
45°	905.5	920.8	950.9	994.3	999.7
47.5°	837.3	853.3	882.7	926.2	934.9
50°	770.5	785.2	814.6	856.7	870.0
52.5°	701.0	717.0	745.7	784.5	803.9
55°	634.2	644.8	676.3	713.7	734.4
57.5°	564.7	574.7	610.1	642.2	663.6
60°	497.8	510.5	537.9	570.7	595.4
62.5°	433.7	447.0	470.4	499.2	527.2
65°	371.5	381.6	404.3	433.0	457.7
67.5°	311.4	320.1	342.8	362.9	388.9
70°	250.6	261.9	278.7	298.0	314.7
72.5°	201.8	206.5	220.5	234.5	251.9
75°	149.0	157.0	168.4	176.4	186.4
77.5°	106.9	111.6	118.3	125.0	134.3
80°	71.5	73.5	79.5	80.9	88.2
82.5°	43.4	44.8	46.1	46.8	49.4
85°	23.4	23.4	23.4	22.1	22.1
87.5°	13.4	13.4	11.4	9.4	6.7
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)