

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: P557222

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-93-87-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: P557222  
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-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

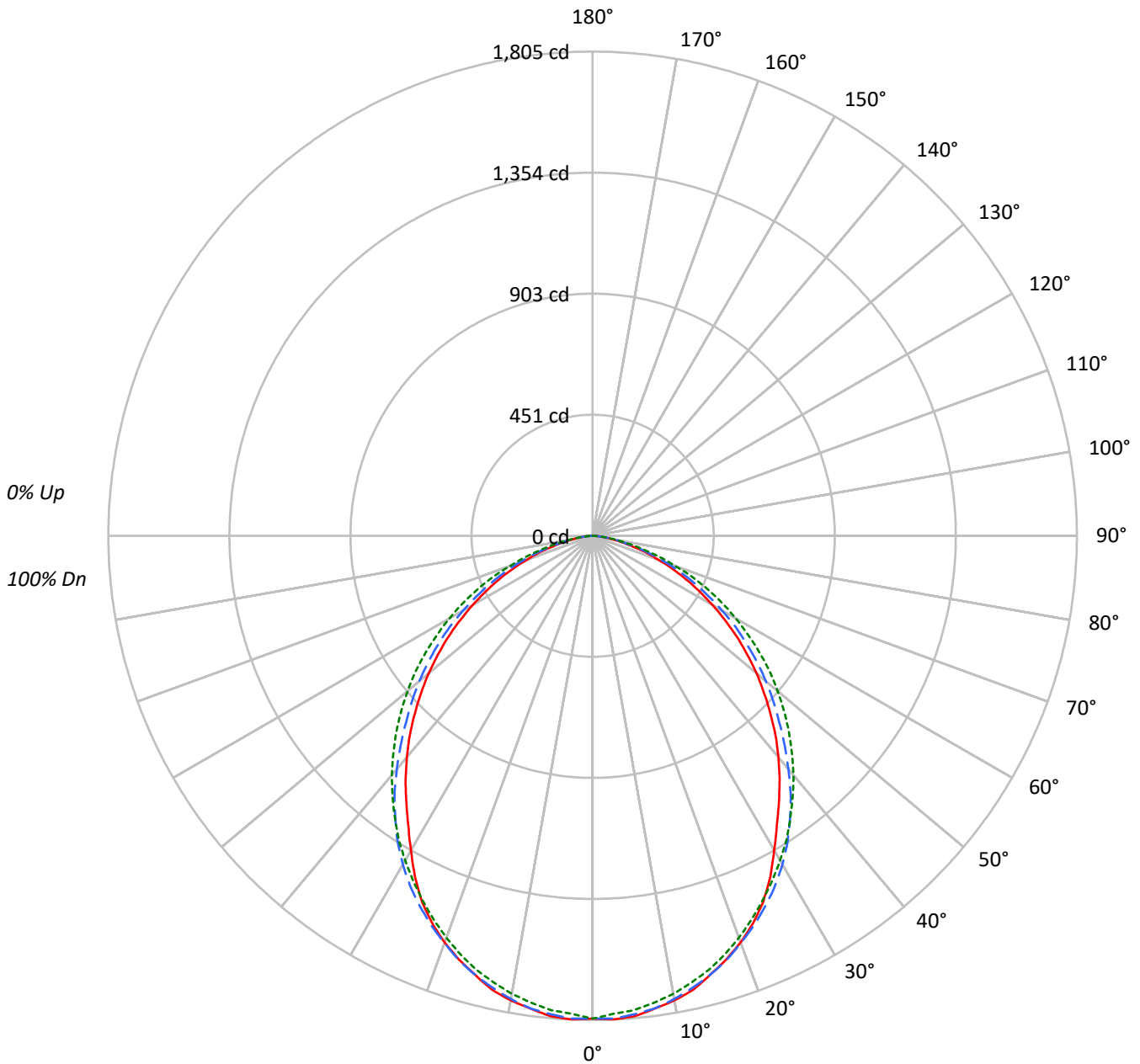
Lumens per Lamp: N/A  
Luminaire Lumens: 4162.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4844	4844	4844
5°	4857	4836	4795
10°	4805	4792	4737
15°	4720	4720	4666
20°	4620	4626	4566
25°	4468	4523	4451
30°	4207	4396	4342
35°	3975	4214	4221
40°	3782	3986	4091
45°	3566	3745	3937
50°	3338	3529	3769
55°	3079	3283	3566
60°	2773	2996	3316
65°	2448	2664	3016
70°	2040	2269	2563
75°	1603	1812	2006
80°	1147	1275	1415
85°	747	747	704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.5	4.1
10°-20°	476.1	11.4
20°-30°	695.7	16.7
30°-40°	789.7	19.0
40°-50°	762.4	18.3
50°-60°	628.9	15.1
60°-70°	418.8	10.1
70°-80°	187.4	4.5
80°-90°	33.5	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°	1341.3	32.2
0°-40°	2131.0	51.2
0°-60°	3522.3	84.6
0°-90°	4162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4162.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1800	1800	1800	1800	1800	
5°	1798	1797	1790	1781	1775	170
15°	1694	1698	1694	1687	1675	478
25°	1505	1516	1523	1512	1499	689
35°	1210	1227	1283	1290	1285	758
45°	937	953	984	1029	1034	723
55°	656	667	700	738	760	586
65°	384	395	418	448	474	381
75°	154	162	174	183	193	169
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1800.0	1800.0	1800.0	1800.0	1800.0
2.5°	1804.8	1805.5	1801.3	1790.3	1783.4
5°	1797.9	1797.2	1790.3	1780.6	1775.1
7.5°	1777.8	1779.2	1777.1	1763.3	1755.7
10°	1758.5	1759.2	1753.6	1742.6	1733.6
12.5°	1733.6	1732.9	1725.3	1719.7	1705.2
15°	1694.2	1698.3	1694.2	1686.6	1674.8
17.5°	1656.1	1656.1	1658.9	1645.8	1636.8
20°	1613.3	1615.3	1615.3	1605.0	1594.6
22.5°	1563.5	1569.7	1571.8	1560.7	1548.3
25°	1504.7	1516.4	1523.4	1512.3	1499.2
27.5°	1433.5	1451.4	1472.2	1463.9	1449.4
30°	1353.9	1380.2	1414.8	1407.9	1397.5
32.5°	1278.6	1304.8	1352.6	1349.8	1344.3
35°	1210.1	1226.7	1282.7	1289.6	1284.8
37.5°	1145.1	1160.3	1212.9	1228.8	1224.6
40°	1076.7	1093.3	1134.7	1163.1	1164.5
42.5°	1008.9	1024.8	1058.7	1099.5	1099.5
45°	937.0	952.9	984.0	1028.9	1034.5
47.5°	866.4	883.0	913.5	958.4	967.4
50°	797.3	812.5	842.9	886.5	900.3
52.5°	725.4	742.0	771.7	811.8	831.9
55°	656.2	667.3	699.8	738.5	760.0
57.5°	584.3	594.7	631.3	664.5	686.7
60°	515.2	528.3	556.7	590.5	616.1
62.5°	448.8	462.6	486.8	516.5	545.6
65°	384.5	394.8	418.4	448.1	473.7
67.5°	322.2	331.2	354.7	375.5	402.4
70°	259.3	271.1	288.4	308.4	325.7
72.5°	208.8	213.7	228.2	242.7	260.7
75°	154.2	162.5	174.3	182.6	192.9
77.5°	110.6	115.5	122.4	129.3	139.0
80°	74.0	76.1	82.3	83.7	91.3
82.5°	44.9	46.3	47.7	48.4	51.2
85°	24.2	24.2	24.2	22.8	22.8
87.5°	13.8	13.8	11.8	9.7	6.9
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)