

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: P557177

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-80-88-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: P557177  
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-80-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

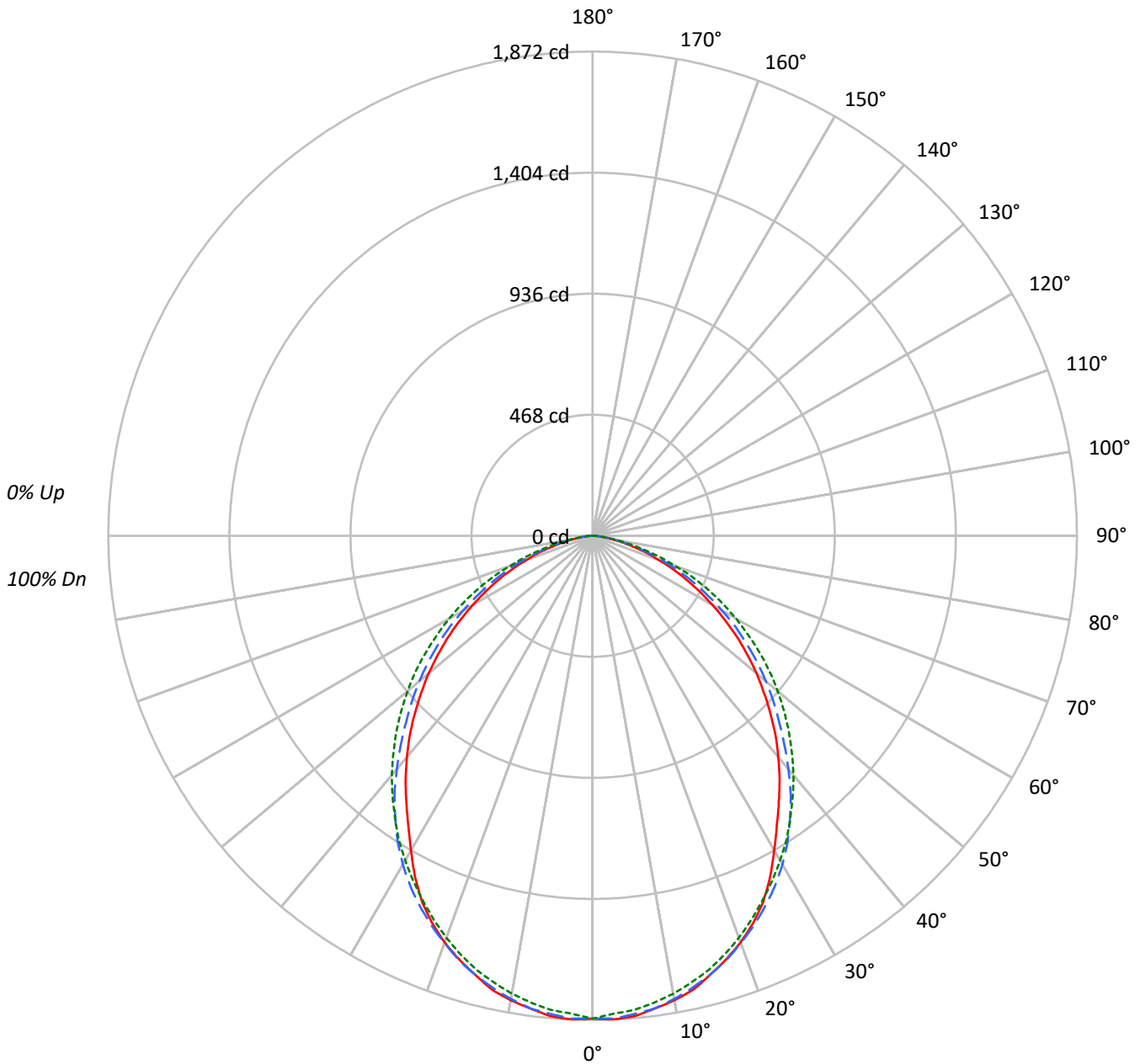
Lumens per Lamp: N/A  
Luminaire Lumens: 4316.0 lumens  
Efficiency: N/A  
Efficacy: 92.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P557177

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P557177

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-88-EDD

**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°	5023	5023	5023
5°	5036	5015	4972
10°	4983	4969	4912
15°	4894	4894	4839
20°	4791	4797	4735
25°	4633	4690	4616
30°	4363	4559	4503
35°	4122	4370	4377
40°	3922	4134	4242
45°	3698	3883	4083
50°	3461	3659	3908
55°	3193	3405	3697
60°	2875	3106	3439
65°	2539	2762	3128
70°	2116	2353	2657
75°	1663	1879	2080
80°	1189	1322	1468
85°	775	775	732



TEST NUMBER: P557177

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.7	4.1
10°-20°	493.7	11.4
20°-30°	721.5	16.7
30°-40°	819.0	19.0
40°-50°	790.6	18.3
50°-60°	652.2	15.1
60°-70°	434.3	10.1
70°-80°	194.3	4.5
80°-90°	34.8	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°	1390.9	32.2
0°-40°	2209.9	51.2
0°-60°	3652.6	84.6
0°-90°	4316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4316.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1867	1867	1867	1867	1867	
5°	1864	1864	1856	1846	1841	176
15°	1757	1761	1757	1749	1737	495
25°	1560	1573	1580	1568	1555	715
35°	1255	1272	1330	1337	1332	786
45°	972	988	1020	1067	1073	750
55°	680	692	726	766	788	607
65°	399	410	434	465	491	395
75°	160	168	181	189	200	175
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



TEST NUMBER: P557177

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1866.6	1866.6	1866.6	1866.6	1866.6
2.5°	1871.6	1872.3	1868.0	1856.5	1849.3
5°	1864.4	1863.7	1856.5	1846.5	1840.7
7.5°	1843.6	1845.0	1842.9	1828.6	1820.7
10°	1823.5	1824.3	1818.5	1807.0	1797.7
12.5°	1797.7	1797.0	1789.1	1783.4	1768.3
15°	1756.8	1761.1	1756.8	1749.0	1736.8
17.5°	1717.4	1717.4	1720.3	1706.6	1697.3
20°	1672.9	1675.1	1675.1	1664.3	1653.6
22.5°	1621.3	1627.8	1629.9	1618.4	1605.5
25°	1560.4	1572.6	1579.7	1568.3	1554.6
27.5°	1486.5	1505.2	1526.7	1518.1	1503.0
30°	1404.0	1431.3	1467.1	1460.0	1449.2
32.5°	1325.9	1353.1	1402.6	1399.7	1394.0
35°	1254.9	1272.1	1330.2	1337.4	1332.3
37.5°	1187.5	1203.3	1257.8	1274.3	1269.9
40°	1116.5	1133.7	1176.7	1206.1	1207.6
42.5°	1046.2	1062.7	1097.8	1140.2	1140.2
45°	971.6	988.1	1020.4	1067.0	1072.8
47.5°	898.5	915.7	947.3	993.9	1003.2
50°	826.8	842.6	874.1	919.3	933.6
52.5°	752.2	769.4	800.3	841.9	862.6
55°	680.5	692.0	725.7	765.8	788.1
57.5°	605.9	616.7	654.7	689.1	712.1
60°	534.2	547.8	577.2	612.4	638.9
62.5°	465.4	479.7	504.8	535.7	565.8
65°	398.7	409.5	433.8	464.7	491.2
67.5°	334.2	343.5	367.9	389.4	417.3
70°	268.9	281.1	299.0	319.8	337.7
72.5°	216.6	221.6	236.6	251.7	270.3
75°	159.9	168.5	180.7	189.3	200.1
77.5°	114.7	119.8	126.9	134.1	144.1
80°	76.7	78.9	85.3	86.8	94.7
82.5°	46.6	48.0	49.5	50.2	53.1
85°	25.1	25.1	25.1	23.7	23.7
87.5°	14.3	14.3	12.2	10.0	7.2
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)