

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: P557172

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-80-86-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: P557172  
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-80-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

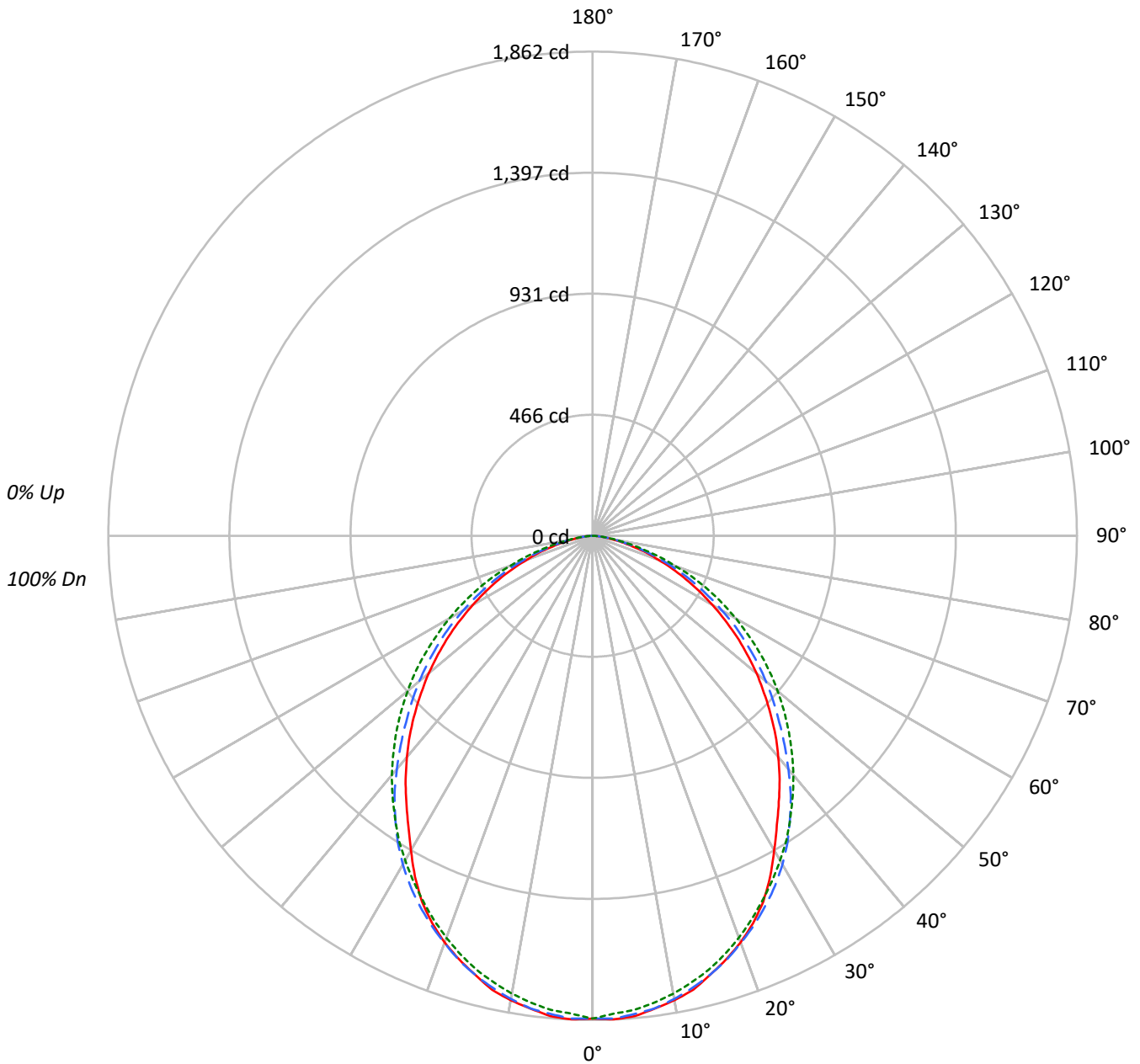
Lumens per Lamp: N/A  
Luminaire Lumens: 4293.0 lumens  
Efficiency: N/A  
Efficacy: 91.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (Ain): 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: P557172

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-86-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557172

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-86-EDD-90

**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°	4996	4996	4996
5°	5009	4988	4946
10°	4956	4943	4886
15°	4868	4868	4813
20°	4765	4771	4710
25°	4608	4665	4591
30°	4340	4534	4479
35°	4100	4346	4353
40°	3901	4112	4219
45°	3678	3863	4061
50°	3443	3640	3888
55°	3176	3386	3678
60°	2860	3090	3420
65°	2525	2748	3111
70°	2105	2340	2643
75°	1654	1868	2069
80°	1182	1316	1460
85°	772	772	726



TEST NUMBER: P557172

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-86-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.8	4.1
10°-20°	491.1	11.4
20°-30°	717.6	16.7
30°-40°	814.6	19.0
40°-50°	786.4	18.3
50°-60°	648.7	15.1
60°-70°	432.0	10.1
70°-80°	193.3	4.5
80°-90°	34.6	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°	1383.5	32.2
0°-40°	2198.1	51.2
0°-60°	3633.1	84.6
0°-90°	4293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4293.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1857	1857	1857	1857	1857	
5°	1854	1854	1847	1837	1831	176
15°	1748	1752	1748	1740	1728	493
25°	1552	1564	1571	1560	1546	711
35°	1248	1265	1323	1330	1325	782
45°	966	983	1015	1061	1067	746
55°	677	688	722	762	784	604
65°	397	407	432	462	489	393
75°	159	168	180	188	199	174
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



TEST NUMBER: P557172

CATALOG NUMBER: FUSL-12-4-LD4-2LO-30-UNV-80-86-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1856.6	1856.6	1856.6	1856.6	1856.6
2.5°	1861.6	1862.3	1858.0	1846.6	1839.5
5°	1854.5	1853.8	1846.6	1836.6	1830.9
7.5°	1833.8	1835.2	1833.1	1818.8	1811.0
10°	1813.8	1814.5	1808.8	1797.4	1788.1
12.5°	1788.1	1787.4	1779.6	1773.9	1758.9
15°	1747.5	1751.8	1747.5	1739.6	1727.5
17.5°	1708.3	1708.3	1711.1	1697.6	1688.3
20°	1664.0	1666.2	1666.2	1655.5	1644.8
22.5°	1612.7	1619.1	1621.2	1609.8	1597.0
25°	1552.1	1564.2	1571.3	1559.9	1546.3
27.5°	1478.6	1497.1	1518.5	1510.0	1495.0
30°	1396.6	1423.7	1459.3	1452.2	1441.5
32.5°	1318.8	1345.9	1395.1	1392.3	1386.6
35°	1248.2	1265.3	1323.1	1330.2	1325.2
37.5°	1181.2	1196.8	1251.1	1267.5	1263.2
40°	1110.5	1127.7	1170.5	1199.7	1201.1
42.5°	1040.6	1057.0	1092.0	1134.1	1134.1
45°	966.5	982.9	1015.0	1061.3	1067.0
47.5°	893.7	910.8	942.2	988.6	997.8
50°	822.4	838.1	869.5	914.4	928.7
52.5°	748.2	765.3	796.0	837.4	858.0
55°	676.9	688.3	721.8	761.8	783.9
57.5°	602.7	613.4	651.2	685.4	708.3
60°	531.4	544.9	574.2	609.1	635.5
62.5°	462.9	477.2	502.1	532.8	562.8
65°	396.6	407.3	431.5	462.2	488.6
67.5°	332.4	341.7	365.9	387.3	415.1
70°	267.5	279.6	297.4	318.1	335.9
72.5°	215.4	220.4	235.4	250.4	268.9
75°	159.1	167.6	179.7	188.3	199.0
77.5°	114.1	119.1	126.2	133.4	143.4
80°	76.3	78.5	84.9	86.3	94.2
82.5°	46.4	47.8	49.2	49.9	52.8
85°	25.0	25.0	25.0	23.5	23.5
87.5°	14.3	14.3	12.1	10.0	7.1
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)