

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: P557450

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-UNV-81-94-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: P557450  
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-30-UNV-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

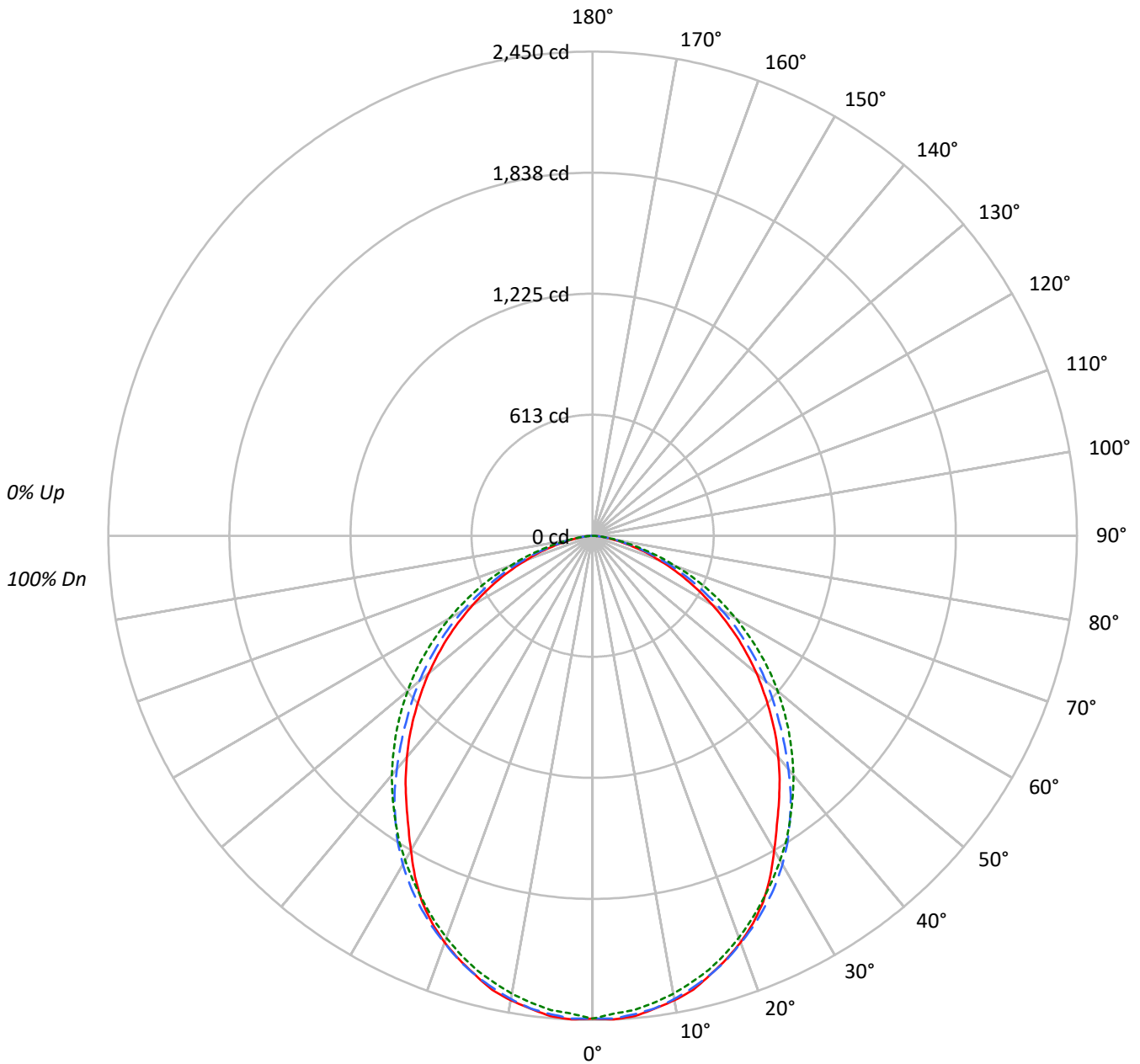
Lumens per Lamp: N/A  
Luminaire Lumens: 5649.0 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P557450

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-94-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557450

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-94-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°	6574	6574	6574
5°	6592	6564	6508
10°	6522	6504	6429
15°	6406	6406	6333
20°	6270	6279	6198
25°	6064	6139	6042
30°	5710	5967	5894
35°	5396	5719	5729
40°	5133	5410	5552
45°	4840	5083	5343
50°	4530	4790	5116
55°	4179	4456	4839
60°	3763	4066	4500
65°	3323	3615	4094
70°	2769	3079	3478
75°	2176	2459	2723
80°	1556	1731	1920
85°	1013	1013	957



TEST NUMBER: P557450

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-94-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.0	4.1
10°-20°	646.2	11.4
20°-30°	944.3	16.7
30°-40°	1071.9	19.0
40°-50°	1034.7	18.3
50°-60°	853.6	15.1
60°-70°	568.4	10.1
70°-80°	254.4	4.5
80°-90°	45.5	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°	1820.5	32.2
0°-40°	2892.4	51.2
0°-60°	4780.7	84.6
0°-90°	5649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5649.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2443	2443	2443	2443	2443	
5°	2440	2439	2430	2417	2409	231
15°	2299	2305	2299	2289	2273	648
25°	2042	2058	2068	2053	2035	935
35°	1642	1665	1741	1750	1744	1029
45°	1272	1293	1336	1397	1404	981
55°	891	906	950	1002	1032	795
65°	522	536	568	608	643	517
75°	209	221	236	248	262	229
85°	33	33	33	31	31	44
90°	0	0	0	0	0	



TEST NUMBER: P557450

CATALOG NUMBER: FUSL-12-4-LD4-2STD-30-UNV-81-94-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2443.0	2443.0	2443.0	2443.0	2443.0
2.5°	2449.6	2450.6	2444.9	2429.9	2420.5
5°	2440.2	2439.3	2429.9	2416.8	2409.3
7.5°	2413.0	2414.9	2412.1	2393.3	2383.0
10°	2386.7	2387.7	2380.2	2365.1	2352.9
12.5°	2352.9	2352.0	2341.7	2334.2	2314.5
15°	2299.4	2305.1	2299.4	2289.1	2273.2
17.5°	2247.8	2247.8	2251.6	2233.7	2221.5
20°	2189.6	2192.5	2192.5	2178.4	2164.3
22.5°	2122.1	2130.5	2133.3	2118.3	2101.4
25°	2042.3	2058.2	2067.6	2052.6	2034.8
27.5°	1945.6	1970.0	1998.2	1986.9	1967.2
30°	1837.7	1873.3	1920.3	1910.9	1896.8
32.5°	1735.4	1771.0	1835.8	1832.1	1824.5
35°	1642.5	1665.0	1741.0	1750.4	1743.8
37.5°	1554.2	1574.9	1646.2	1667.8	1662.2
40°	1461.3	1483.8	1540.2	1578.6	1580.5
42.5°	1369.3	1390.9	1436.9	1492.3	1492.3
45°	1271.7	1293.3	1335.6	1396.6	1404.1
47.5°	1176.0	1198.5	1239.8	1300.8	1313.0
50°	1082.1	1102.8	1144.1	1203.2	1222.0
52.5°	984.5	1007.1	1047.4	1101.9	1129.1
55°	890.7	905.7	949.8	1002.4	1031.5
57.5°	793.1	807.2	856.9	901.9	932.0
60°	699.2	717.1	755.5	801.5	836.2
62.5°	609.1	627.9	660.7	701.1	740.5
65°	521.8	535.9	567.8	608.2	642.9
67.5°	437.4	449.6	481.5	509.6	546.2
70°	352.0	367.9	391.4	418.6	442.1
72.5°	283.4	290.0	309.7	329.4	353.8
75°	209.3	220.6	236.5	247.8	261.9
77.5°	150.2	156.7	166.1	175.5	188.6
80°	100.4	103.2	111.7	113.6	123.9
82.5°	61.0	62.9	64.8	65.7	69.5
85°	32.8	32.8	32.8	31.0	31.0
87.5°	18.8	18.8	16.0	13.1	9.4
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)