

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: P557312

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-84-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: P557312  
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-40-UNV-81-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

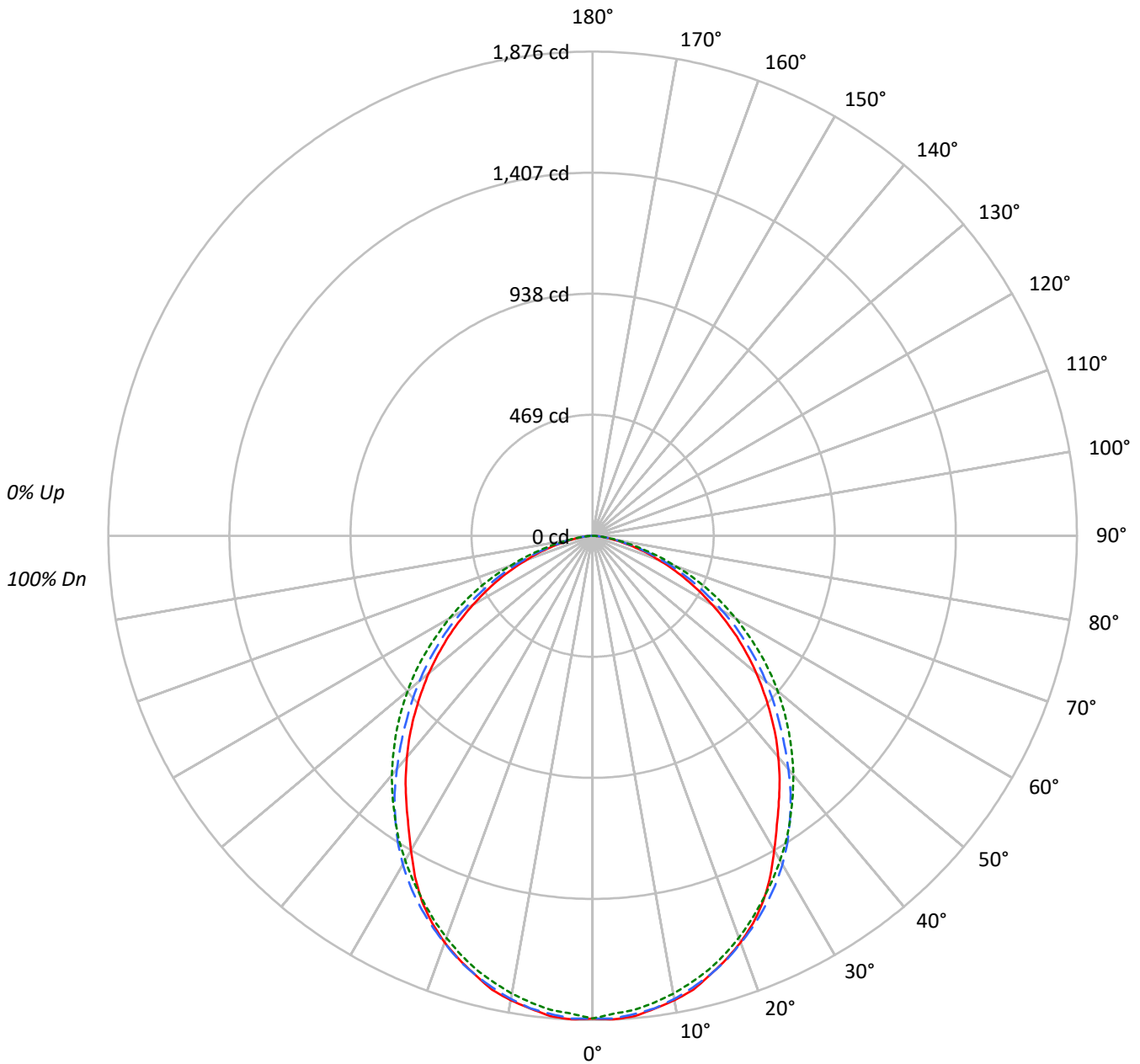
Lumens per Lamp: N/A  
Luminaire Lumens: 4325.0 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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: P557312

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-81-84-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557312

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-81-84-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°	5033	5033	5033
5°	5047	5025	4983
10°	4993	4979	4923
15°	4905	4905	4849
20°	4801	4807	4745
25°	4643	4700	4626
30°	4372	4568	4512
35°	4131	4379	4386
40°	3930	4142	4251
45°	3706	3891	4091
50°	3468	3667	3917
55°	3199	3412	3705
60°	2881	3113	3446
65°	2544	2768	3134
70°	2120	2357	2662
75°	1666	1883	2085
80°	1192	1325	1471
85°	778	778	732



TEST NUMBER: P557312

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-81-84-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.1	4.1
10°-20°	494.7	11.4
20°-30°	723.0	16.7
30°-40°	820.7	19.0
40°-50°	792.2	18.3
50°-60°	653.5	15.1
60°-70°	435.2	10.1
70°-80°	194.7	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°	1393.8	32.2
0°-40°	2214.5	51.2
0°-60°	3660.2	84.6
0°-90°	4325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4325.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1870	1870	1870	1870	1870	
5°	1868	1868	1860	1850	1845	177
15°	1760	1765	1760	1753	1740	496
25°	1564	1576	1583	1572	1558	716
35°	1258	1275	1333	1340	1335	788
45°	974	990	1022	1069	1075	751
55°	682	693	727	767	790	609
65°	400	410	435	466	492	396
75°	160	169	181	190	200	175
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



TEST NUMBER: P557312

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-81-84-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1870.5	1870.5	1870.5	1870.5	1870.5
2.5°	1875.5	1876.2	1871.9	1860.4	1853.2
5°	1868.3	1867.6	1860.4	1850.3	1844.6
7.5°	1847.5	1848.9	1846.7	1832.4	1824.5
10°	1827.3	1828.1	1822.3	1810.8	1801.5
12.5°	1801.5	1800.7	1792.8	1787.1	1772.0
15°	1760.5	1764.8	1760.5	1752.6	1740.4
17.5°	1721.0	1721.0	1723.9	1710.2	1700.9
20°	1676.4	1678.6	1678.6	1667.8	1657.0
22.5°	1624.7	1631.2	1633.3	1621.8	1608.9
25°	1563.6	1575.8	1583.0	1571.5	1557.9
27.5°	1489.6	1508.3	1529.8	1521.2	1506.1
30°	1407.0	1434.3	1470.2	1463.0	1452.2
32.5°	1328.6	1356.0	1405.5	1402.7	1396.9
35°	1257.5	1274.8	1333.0	1340.1	1335.1
37.5°	1190.0	1205.8	1260.4	1276.9	1272.6
40°	1118.8	1136.1	1179.2	1208.6	1210.1
42.5°	1048.4	1064.9	1100.1	1142.5	1142.5
45°	973.7	990.2	1022.5	1069.2	1075.0
47.5°	900.4	917.6	949.2	995.9	1005.3
50°	828.5	844.3	875.9	921.2	935.6
52.5°	753.8	771.0	801.9	843.6	864.4
55°	681.9	693.4	727.2	767.4	789.7
57.5°	607.2	618.0	656.1	690.6	713.5
60°	535.3	549.0	578.5	613.7	640.3
62.5°	466.4	480.7	505.9	536.8	567.0
65°	399.5	410.3	434.7	465.6	492.2
67.5°	334.9	344.2	368.6	390.2	418.2
70°	269.5	281.7	299.6	320.5	338.4
72.5°	217.0	222.0	237.1	252.2	270.9
75°	160.2	168.9	181.1	189.7	200.5
77.5°	115.0	120.0	127.2	134.4	144.4
80°	76.9	79.0	85.5	86.9	94.9
82.5°	46.7	48.1	49.6	50.3	53.2
85°	25.2	25.2	25.2	23.7	23.7
87.5°	14.4	14.4	12.2	10.1	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)