

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: P557334

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-82-87-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: P557334  
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-82-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

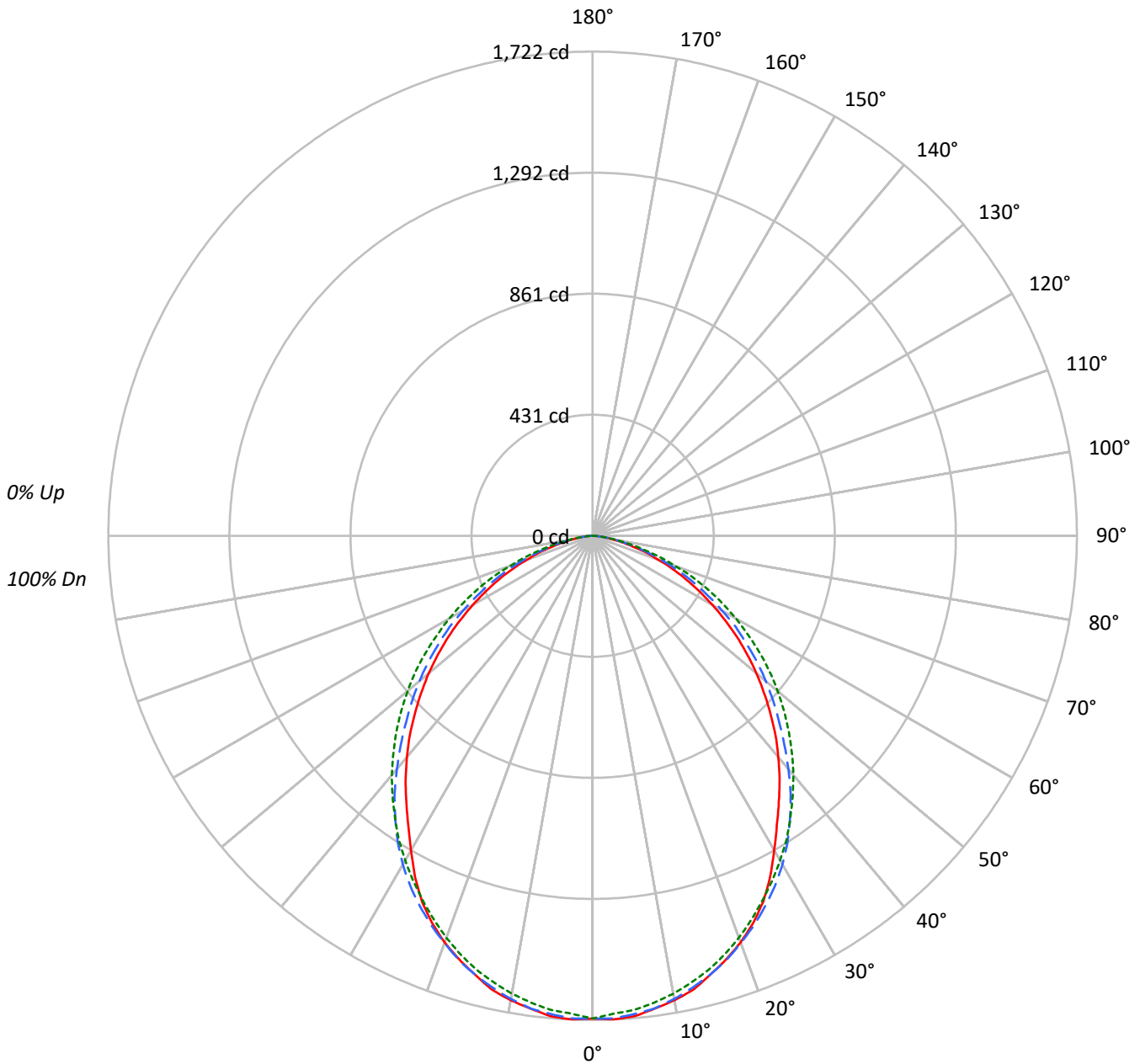
Lumens per Lamp: N/A  
Luminaire Lumens: 3970.0 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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: P557334

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-82-87-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557334

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-82-87-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°	4620	4620	4620
5°	4632	4613	4574
10°	4583	4571	4518
15°	4502	4502	4450
20°	4407	4412	4356
25°	4262	4314	4246
30°	4013	4193	4142
35°	3792	4019	4026
40°	3608	3802	3902
45°	3401	3572	3755
50°	3184	3366	3595
55°	2937	3132	3401
60°	2645	2858	3163
65°	2335	2541	2877
70°	1946	2164	2445
75°	1529	1728	1913
80°	1094	1216	1350
85°	713	713	673



TEST NUMBER: P557334

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-82-87-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.7	4.1
10°-20°	454.1	11.4
20°-30°	663.6	16.7
30°-40°	753.3	19.0
40°-50°	727.2	18.3
50°-60°	599.9	15.1
60°-70°	399.5	10.1
70°-80°	178.8	4.5
80°-90°	32.0	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°	1279.4	32.2
0°-40°	2032.7	51.2
0°-60°	3359.8	84.6
0°-90°	3970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3970.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1717	1717	1717	1717	1717	
5°	1715	1714	1708	1698	1693	162
15°	1616	1620	1616	1609	1598	456
25°	1435	1446	1453	1442	1430	657
35°	1154	1170	1224	1230	1226	723
45°	894	909	939	982	987	690
55°	626	636	668	704	725	559
65°	367	377	399	427	452	364
75°	147	155	166	174	184	161
85°	23	23	23	22	22	31
90°	0	0	0	0	0	



TEST NUMBER: P557334

CATALOG NUMBER: FUSL-12-4-LD4-2LO-40-UNV-82-87-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1716.9	1716.9	1716.9	1716.9	1716.9
2.5°	1721.5	1722.2	1718.2	1707.7	1701.1
5°	1714.9	1714.3	1707.7	1698.5	1693.2
7.5°	1695.8	1697.1	1695.2	1682.0	1674.7
10°	1677.3	1678.0	1672.7	1662.2	1653.6
12.5°	1653.6	1652.9	1645.7	1640.4	1626.6
15°	1616.0	1620.0	1616.0	1608.7	1597.5
17.5°	1579.7	1579.7	1582.4	1569.8	1561.3
20°	1538.8	1540.8	1540.8	1530.9	1521.0
22.5°	1491.3	1497.3	1499.3	1488.7	1476.8
25°	1435.3	1446.5	1453.1	1442.5	1430.0
27.5°	1367.3	1384.5	1404.3	1396.4	1382.5
30°	1291.5	1316.5	1349.5	1342.9	1333.0
32.5°	1219.6	1244.7	1290.2	1287.5	1282.3
35°	1154.3	1170.1	1223.5	1230.1	1225.5
37.5°	1092.3	1106.8	1156.9	1172.1	1168.1
40°	1027.0	1042.8	1082.4	1109.4	1110.8
42.5°	962.3	977.5	1009.8	1048.8	1048.8
45°	893.7	908.9	938.6	981.5	986.8
47.5°	826.5	842.3	871.3	914.2	922.8
50°	760.5	775.0	804.0	845.6	858.8
52.5°	691.9	707.7	736.1	774.4	793.5
55°	626.0	636.5	667.5	704.4	724.9
57.5°	557.4	567.3	602.2	633.9	655.0
60°	491.4	503.9	531.0	563.3	587.7
62.5°	428.1	441.3	464.4	492.7	520.4
65°	366.7	376.6	399.1	427.4	451.8
67.5°	307.4	315.9	338.4	358.2	383.9
70°	247.3	258.6	275.1	294.2	310.7
72.5°	199.2	203.8	217.7	231.5	248.7
75°	147.1	155.0	166.2	174.1	184.0
77.5°	105.5	110.2	116.7	123.3	132.6
80°	70.6	72.6	78.5	79.8	87.1
82.5°	42.9	44.2	45.5	46.2	48.8
85°	23.1	23.1	23.1	21.8	21.8
87.5°	13.2	13.2	11.2	9.2	6.6
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)