

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: P557320

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-88-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: P557320  
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-81-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

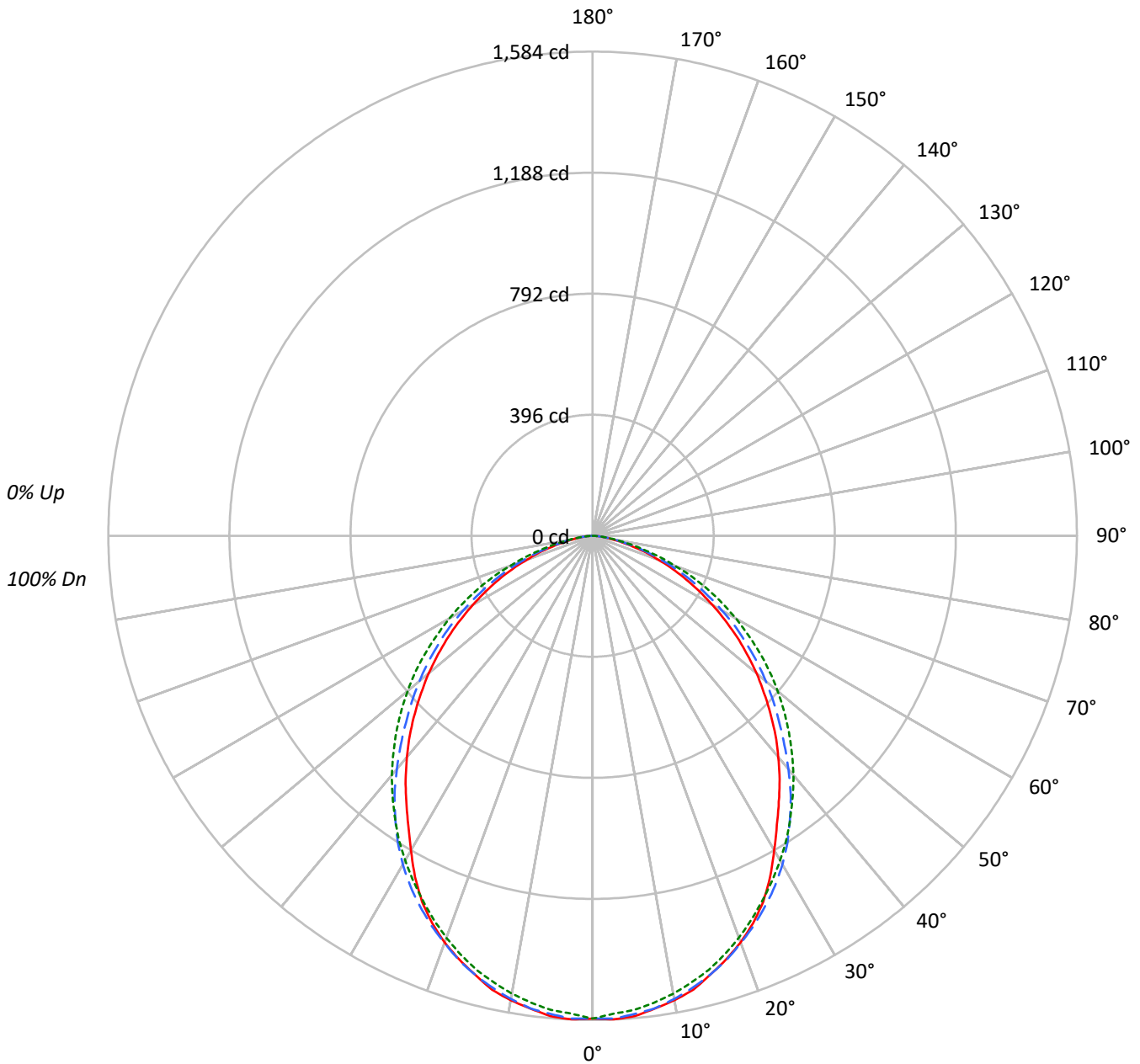
Lumens per Lamp: N/A  
Luminaire Lumens: 3652.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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### Luminous Intensity Polar Plot





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**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°	4250	4250	4250
5°	4262	4243	4207
10°	4216	4204	4156
15°	4142	4142	4094
20°	4054	4059	4007
25°	3920	3969	3906
30°	3691	3857	3810
35°	3488	3697	3704
40°	3319	3498	3589
45°	3129	3286	3454
50°	2929	3096	3307
55°	2701	2881	3128
60°	2433	2629	2909
65°	2148	2337	2646
70°	1790	1991	2249
75°	1407	1590	1760
80°	1006	1119	1241
85°	655	655	618



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.7	4.1
10°-20°	417.8	11.4
20°-30°	610.5	16.7
30°-40°	693.0	19.0
40°-50°	668.9	18.3
50°-60°	551.8	15.1
60°-70°	367.5	10.1
70°-80°	164.4	4.5
80°-90°	29.4	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°	1176.9	32.2
0°-40°	1869.9	51.2
0°-60°	3090.7	84.6
0°-90°	3652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3652.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1578	1577	1571	1562	1558	149
15°	1487	1490	1487	1480	1470	419
25°	1320	1331	1337	1327	1316	605
35°	1062	1076	1126	1132	1127	665
45°	822	836	863	903	908	634
55°	576	586	614	648	667	514
65°	337	346	367	393	416	335
75°	135	143	153	160	169	148
85°	21	21	21	20	20	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1579.4	1579.4	1579.4	1579.4	1579.4
2.5°	1583.6	1584.2	1580.6	1570.9	1564.8
5°	1577.6	1577.0	1570.9	1562.4	1557.6
7.5°	1560.0	1561.2	1559.4	1547.2	1540.6
10°	1543.0	1543.6	1538.7	1529.0	1521.1
12.5°	1521.1	1520.5	1513.9	1509.0	1496.3
15°	1486.6	1490.2	1486.6	1479.9	1469.6
17.5°	1453.2	1453.2	1455.6	1444.1	1436.2
20°	1415.6	1417.4	1417.4	1408.3	1399.2
22.5°	1371.9	1377.3	1379.2	1369.5	1358.5
25°	1320.3	1330.6	1336.7	1327.0	1315.5
27.5°	1257.8	1273.6	1291.8	1284.5	1271.8
30°	1188.0	1211.1	1241.4	1235.4	1226.3
32.5°	1121.9	1145.0	1186.8	1184.4	1179.5
35°	1061.8	1076.4	1125.5	1131.6	1127.4
37.5°	1004.8	1018.1	1064.3	1078.2	1074.6
40°	944.7	959.3	995.7	1020.6	1021.8
42.5°	885.3	899.2	928.9	964.7	964.7
45°	822.2	836.1	863.4	902.9	907.7
47.5°	760.3	774.8	801.5	841.0	848.9
50°	699.6	712.9	739.6	777.9	790.0
52.5°	636.5	651.1	677.1	712.3	729.9
55°	575.8	585.5	614.0	648.0	666.8
57.5°	512.7	521.8	554.0	583.1	602.5
60°	452.0	463.6	488.4	518.2	540.6
62.5°	393.8	405.9	427.2	453.2	478.7
65°	337.4	346.5	367.1	393.2	415.6
67.5°	282.8	290.6	311.3	329.5	353.1
70°	227.5	237.8	253.0	270.6	285.8
72.5°	183.2	187.5	200.2	213.0	228.7
75°	135.3	142.6	152.9	160.2	169.3
77.5°	97.1	101.3	107.4	113.5	122.0
80°	64.9	66.7	72.2	73.4	80.1
82.5°	39.4	40.7	41.9	42.5	44.9
85°	21.2	21.2	21.2	20.0	20.0
87.5°	12.1	12.1	10.3	8.5	6.1
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)