

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: P556340

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-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: P556340  
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-LD4-1HI-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

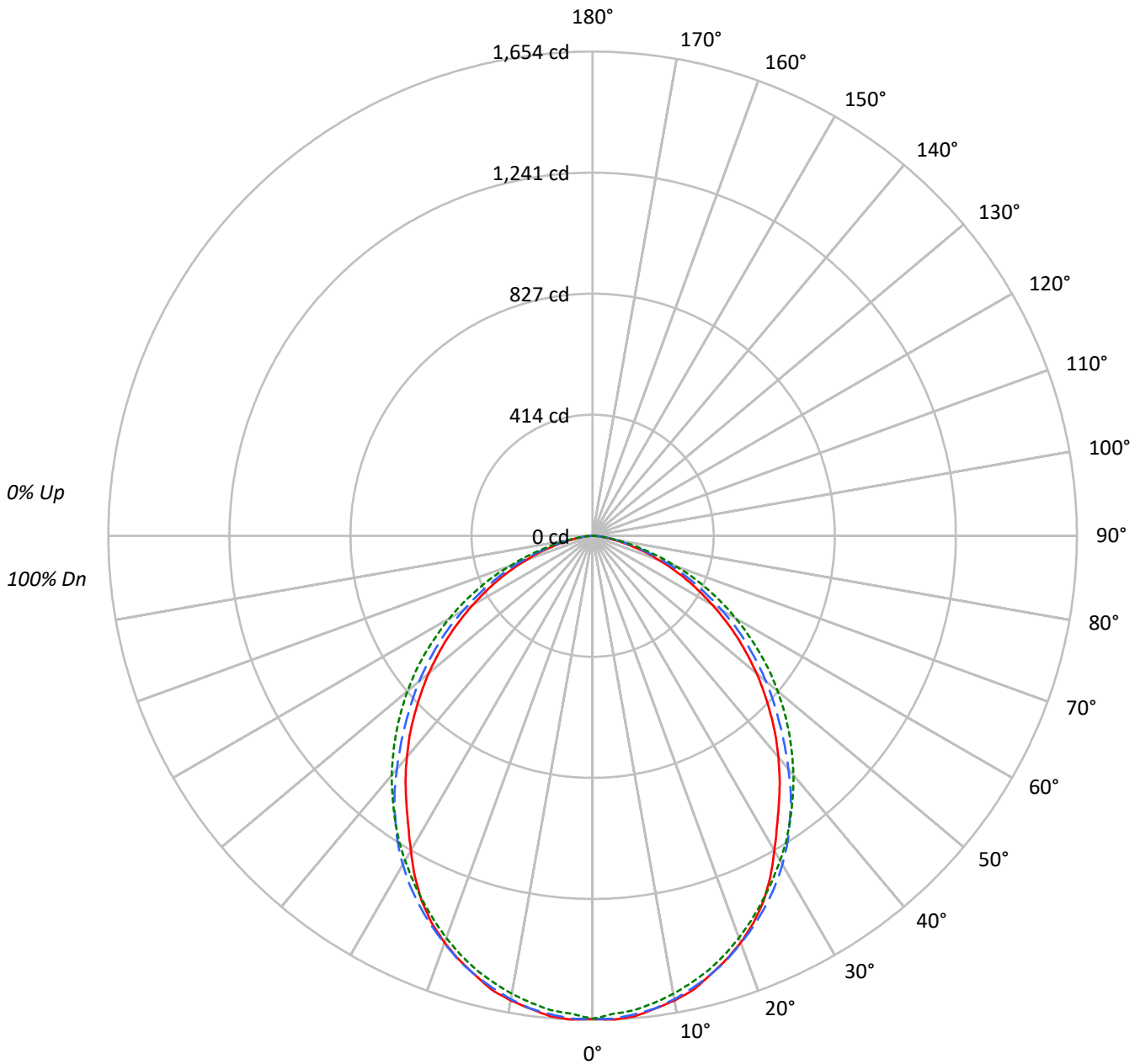
Lumens per Lamp: N/A  
Luminaire Lumens: 3815.0 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	4440	4440	4440
5°	4452	4433	4395
10°	4405	4392	4342
15°	4326	4326	4277
20°	4235	4240	4186
25°	4095	4146	4080
30°	3856	4030	3980
35°	3644	3863	3869
40°	3467	3654	3750
45°	3269	3433	3608
50°	3059	3235	3455
55°	2822	3009	3268
60°	2541	2746	3040
65°	2244	2442	2765
70°	1870	2079	2349
75°	1469	1660	1838
80°	1051	1168	1297
85°	685	685	645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.3	4.1
10°-20°	436.4	11.4
20°-30°	637.7	16.7
30°-40°	723.9	19.0
40°-50°	698.8	18.3
50°-60°	576.5	15.1
60°-70°	383.9	10.1
70°-80°	171.8	4.5
80°-90°	30.7	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°	1229.5	32.2
0°-40°	1953.3	51.2
0°-60°	3228.6	84.6
0°-90°	3815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3815.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1650	1650	1650	1650	1650	
5°	1648	1647	1641	1632	1627	156
15°	1553	1557	1553	1546	1535	438
25°	1379	1390	1396	1386	1374	632
35°	1109	1124	1176	1182	1178	695
45°	859	873	902	943	948	663
55°	602	612	641	677	697	537
65°	352	362	384	411	434	349
75°	141	149	160	167	177	155
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1654.3	1655.0	1651.2	1641.0	1634.7
5°	1648.0	1647.4	1641.0	1632.1	1627.1
7.5°	1629.6	1630.9	1629.0	1616.3	1609.3
10°	1611.9	1612.5	1607.4	1597.3	1589.0
12.5°	1589.0	1588.4	1581.4	1576.4	1563.1
15°	1552.9	1556.7	1552.9	1545.9	1535.2
17.5°	1518.0	1518.0	1520.6	1508.5	1500.3
20°	1478.8	1480.7	1480.7	1471.1	1461.6
22.5°	1433.1	1438.8	1440.7	1430.6	1419.2
25°	1379.2	1390.0	1396.4	1386.2	1374.2
27.5°	1314.0	1330.4	1349.4	1341.8	1328.5
30°	1241.1	1265.1	1296.8	1290.5	1281.0
32.5°	1172.0	1196.1	1239.8	1237.3	1232.2
35°	1109.2	1124.4	1175.8	1182.1	1177.7
37.5°	1049.6	1063.6	1111.8	1126.3	1122.5
40°	986.9	1002.1	1040.1	1066.1	1067.4
42.5°	924.8	939.4	970.4	1007.8	1007.8
45°	858.9	873.4	902.0	943.2	948.2
47.5°	794.2	809.4	837.3	878.5	886.7
50°	730.8	744.8	772.7	812.6	825.3
52.5°	664.9	680.1	707.4	744.1	762.5
55°	601.5	611.7	641.4	676.9	696.6
57.5°	535.6	545.1	578.7	609.1	629.4
60°	472.2	484.3	510.2	541.3	564.8
62.5°	411.4	424.0	446.2	473.5	500.1
65°	352.4	361.9	383.5	410.7	434.2
67.5°	295.4	303.6	325.2	344.2	368.9
70°	237.7	248.5	264.3	282.7	298.5
72.5°	191.4	195.9	209.2	222.5	239.0
75°	141.3	149.0	159.7	167.3	176.8
77.5°	101.4	105.9	112.2	118.5	127.4
80°	67.8	69.7	75.4	76.7	83.7
82.5°	41.2	42.5	43.7	44.4	46.9
85°	22.2	22.2	22.2	20.9	20.9
87.5°	12.7	12.7	10.8	8.9	6.3
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)