

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: P556256

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-93-84-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: P556256  
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-35-UNV-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

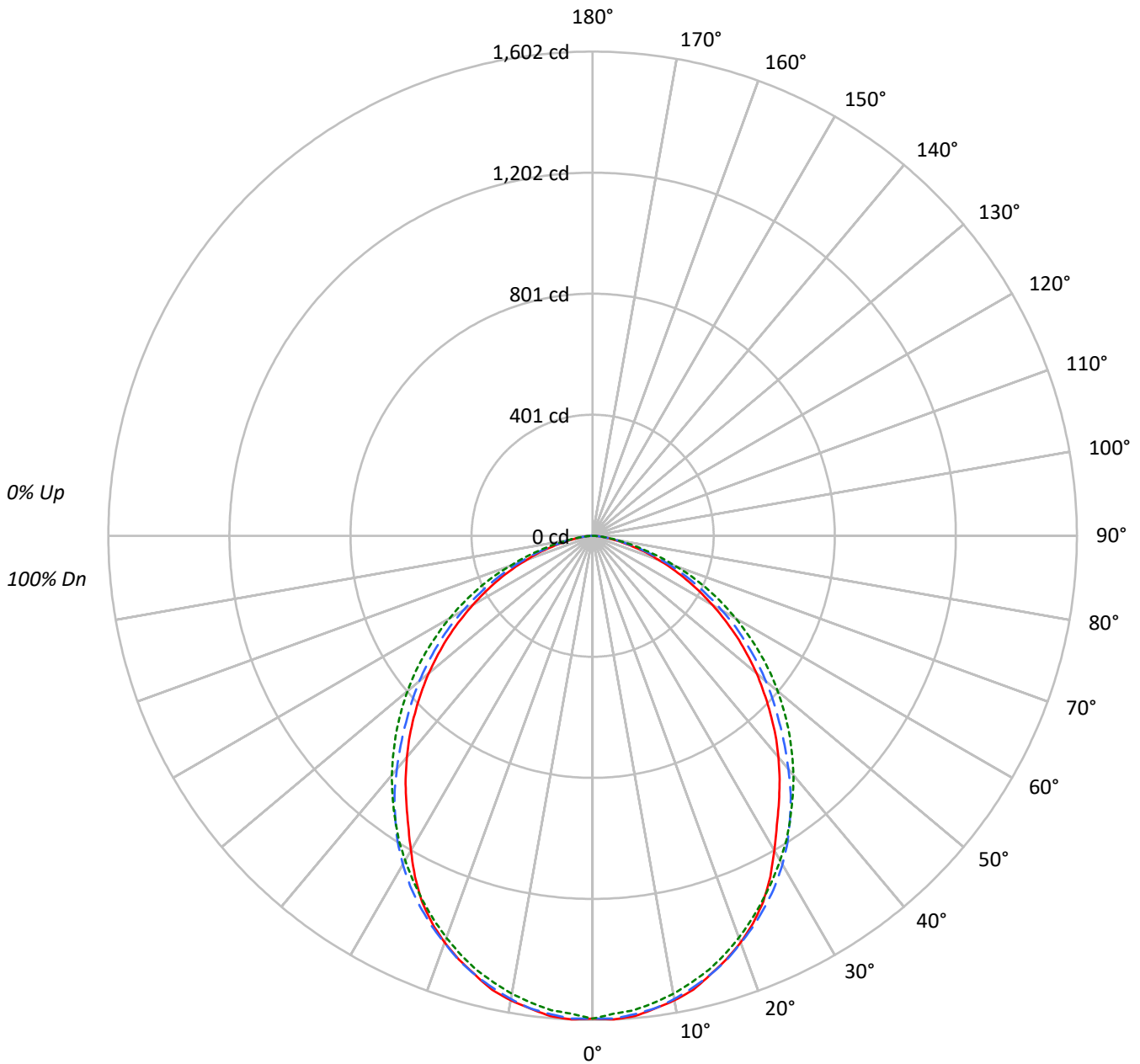
Lumens per Lamp: N/A  
Luminaire Lumens: 3694.0 lumens  
Efficiency: N/A  
Efficacy: 85.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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

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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°	4299	4299	4299
5°	4310	4292	4256
10°	4265	4253	4204
15°	4189	4189	4141
20°	4101	4106	4053
25°	3965	4015	3951
30°	3734	3902	3854
35°	3528	3740	3746
40°	3357	3538	3631
45°	3165	3323	3494
50°	2962	3132	3345
55°	2732	2914	3164
60°	2461	2659	2943
65°	2173	2364	2677
70°	1811	2013	2275
75°	1423	1608	1780
80°	1018	1131	1255
85°	664	664	627



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.4	4.1
10°-20°	422.6	11.4
20°-30°	617.5	16.7
30°-40°	700.9	19.0
40°-50°	676.6	18.3
50°-60°	558.2	15.1
60°-70°	371.7	10.1
70°-80°	166.3	4.5
80°-90°	29.8	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°	1190.5	32.2
0°-40°	1891.4	51.2
0°-60°	3126.2	84.6
0°-90°	3694.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3694.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1598	1598	1598	1598	1598	
5°	1596	1595	1589	1580	1576	151
15°	1504	1507	1504	1497	1486	424
25°	1336	1346	1352	1342	1331	612
35°	1074	1089	1138	1145	1140	673
45°	832	846	873	913	918	642
55°	582	592	621	656	674	520
65°	341	350	371	398	420	338
75°	137	144	155	162	171	150
85°	22	22	22	20	20	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1597.6	1597.6	1597.6	1597.6	1597.6
2.5°	1601.9	1602.5	1598.8	1589.0	1582.8
5°	1595.7	1595.1	1589.0	1580.4	1575.5
7.5°	1577.9	1579.1	1577.3	1565.0	1558.3
10°	1560.7	1561.3	1556.4	1546.6	1538.6
12.5°	1538.6	1538.0	1531.3	1526.4	1513.5
15°	1503.7	1507.3	1503.7	1496.9	1486.5
17.5°	1469.9	1469.9	1472.4	1460.7	1452.7
20°	1431.9	1433.7	1433.7	1424.5	1415.3
22.5°	1387.7	1393.2	1395.0	1385.2	1374.2
25°	1335.5	1345.9	1352.1	1342.2	1330.6
27.5°	1272.3	1288.2	1306.6	1299.3	1286.4
30°	1201.7	1225.0	1255.7	1249.6	1240.4
32.5°	1134.8	1158.1	1200.5	1198.0	1193.1
35°	1074.0	1088.8	1138.5	1144.6	1140.3
37.5°	1016.3	1029.9	1076.5	1090.6	1086.9
40°	955.6	970.3	1007.1	1032.3	1033.5
42.5°	895.4	909.6	939.6	975.8	975.8
45°	831.6	845.7	873.3	913.2	918.2
47.5°	769.0	783.7	810.7	850.6	858.6
50°	707.6	721.1	748.1	786.8	799.1
52.5°	643.8	658.5	684.9	720.5	738.3
55°	582.4	592.3	621.1	655.5	674.5
57.5°	518.6	527.8	560.3	589.8	609.4
60°	457.2	468.9	494.1	524.1	546.8
62.5°	398.3	410.6	432.1	458.5	484.2
65°	341.2	350.4	371.3	397.7	420.4
67.5°	286.0	294.0	314.8	333.3	357.2
70°	230.2	240.6	255.9	273.7	289.1
72.5°	185.3	189.6	202.5	215.4	231.4
75°	136.9	144.2	154.7	162.0	171.2
77.5°	98.2	102.5	108.6	114.8	123.4
80°	65.7	67.5	73.0	74.3	81.0
82.5°	39.9	41.1	42.3	43.0	45.4
85°	21.5	21.5	21.5	20.3	20.3
87.5°	12.3	12.3	10.4	8.6	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)