

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: P556893

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-82-96-EDD**

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: P556893  
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-LD4-1STD-50-UNV-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

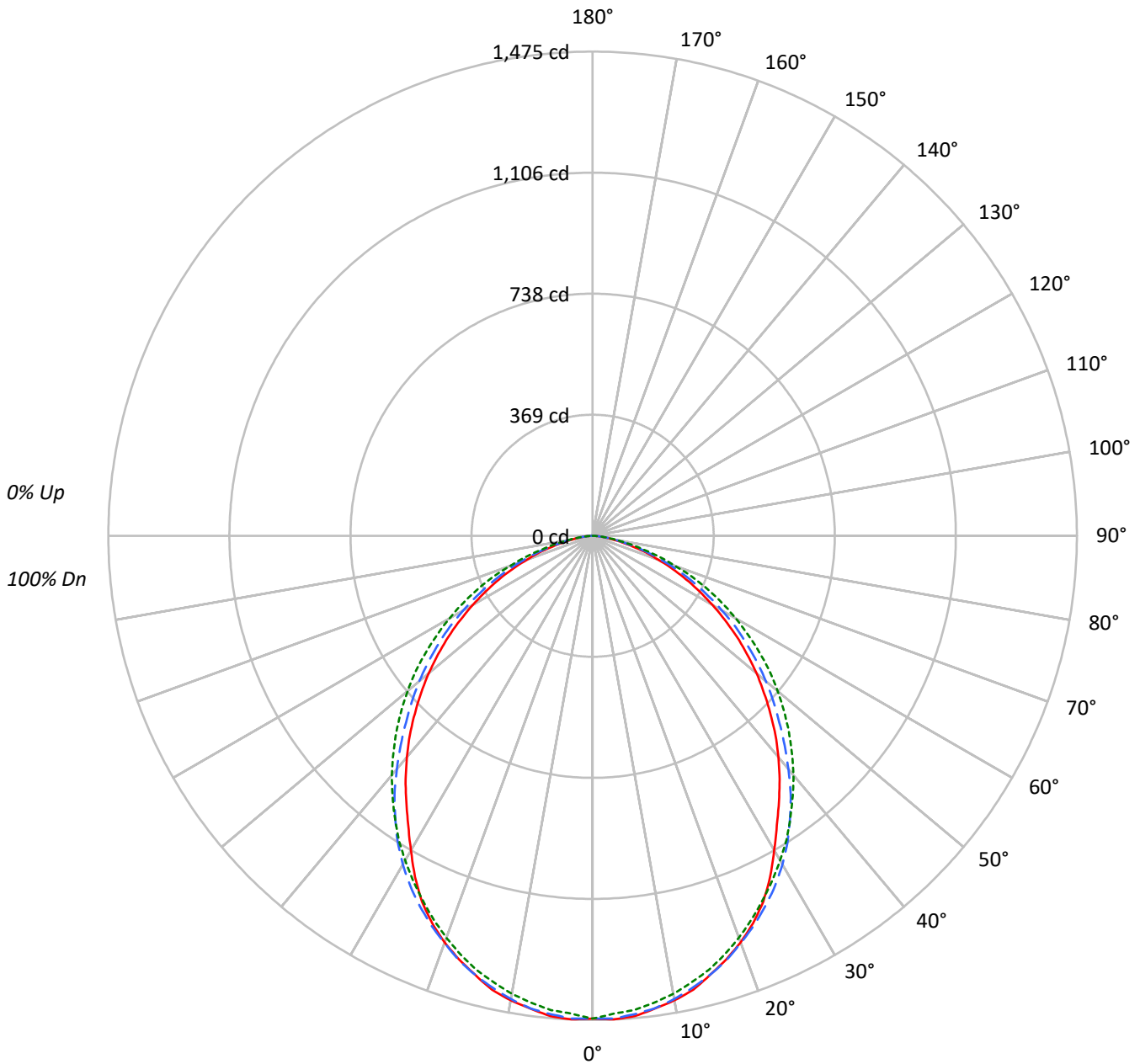
Lumens per Lamp: N/A  
Luminaire Lumens: 3401.0 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	3958	3958	3958
5°	3968	3952	3918
10°	3926	3916	3871
15°	3857	3857	3813
20°	3775	3780	3731
25°	3651	3696	3637
30°	3438	3592	3549
35°	3249	3443	3449
40°	3091	3257	3343
45°	2914	3060	3217
50°	2727	2884	3080
55°	2516	2683	2913
60°	2266	2448	2710
65°	2001	2177	2465
70°	1667	1854	2094
75°	1310	1481	1640
80°	938	1041	1156
85°	611	611	574



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.5	4.1
10°-20°	389.0	11.4
20°-30°	568.5	16.7
30°-40°	645.3	19.0
40°-50°	623.0	18.3
50°-60°	513.9	15.1
60°-70°	342.2	10.1
70°-80°	153.1	4.5
80°-90°	27.4	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°	1096.0	32.2
0°-40°	1741.4	51.2
0°-60°	2878.3	84.6
0°-90°	3401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3401.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1469	1469	1463	1455	1450	139
15°	1384	1388	1384	1378	1369	390
25°	1230	1239	1245	1236	1225	563
35°	989	1002	1048	1054	1050	620
45°	766	779	804	841	845	591
55°	536	545	572	604	621	479
65°	314	323	342	366	387	312
75°	126	133	142	149	158	138
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1470.8	1470.8	1470.8	1470.8	1470.8
2.5°	1474.8	1475.4	1472.0	1462.9	1457.3
5°	1469.1	1468.6	1462.9	1455.0	1450.5
7.5°	1452.8	1453.9	1452.2	1440.9	1434.7
10°	1436.9	1437.5	1433.0	1423.9	1416.6
12.5°	1416.6	1416.0	1409.8	1405.3	1393.4
15°	1384.4	1387.8	1384.4	1378.2	1368.6
17.5°	1353.3	1353.3	1355.6	1344.8	1337.5
20°	1318.3	1320.0	1320.0	1311.5	1303.0
22.5°	1277.6	1282.7	1284.4	1275.3	1265.2
25°	1229.6	1239.2	1244.8	1235.8	1225.0
27.5°	1171.4	1186.1	1203.0	1196.2	1184.4
30°	1106.4	1127.9	1156.1	1150.5	1142.0
32.5°	1044.8	1066.3	1105.3	1103.0	1098.5
35°	988.9	1002.4	1048.2	1053.8	1049.9
37.5°	935.7	948.2	991.1	1004.1	1000.7
40°	879.8	893.4	927.3	950.4	951.6
42.5°	824.4	837.4	865.1	898.4	898.4
45°	765.7	778.6	804.1	840.8	845.3
47.5°	708.0	721.6	746.4	783.2	790.5
50°	651.5	663.9	688.8	724.4	735.7
52.5°	592.7	606.3	630.6	663.4	679.8
55°	536.2	545.3	571.8	603.5	621.0
57.5°	477.5	485.9	515.9	543.0	561.1
60°	421.0	431.7	454.9	482.6	503.5
62.5°	366.7	378.0	397.8	422.1	445.8
65°	314.2	322.6	341.9	366.2	387.1
67.5°	263.3	270.7	289.9	306.8	328.9
70°	211.9	221.5	235.6	252.0	266.1
72.5°	170.6	174.6	186.5	198.3	213.0
75°	126.0	132.8	142.4	149.2	157.7
77.5°	90.4	94.4	100.0	105.7	113.6
80°	60.5	62.2	67.2	68.4	74.6
82.5°	36.7	37.9	39.0	39.6	41.8
85°	19.8	19.8	19.8	18.6	18.6
87.5°	11.3	11.3	9.6	7.9	5.7
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)