

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: P556318

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-82-97-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: P556318  
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-40-UNV-82-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

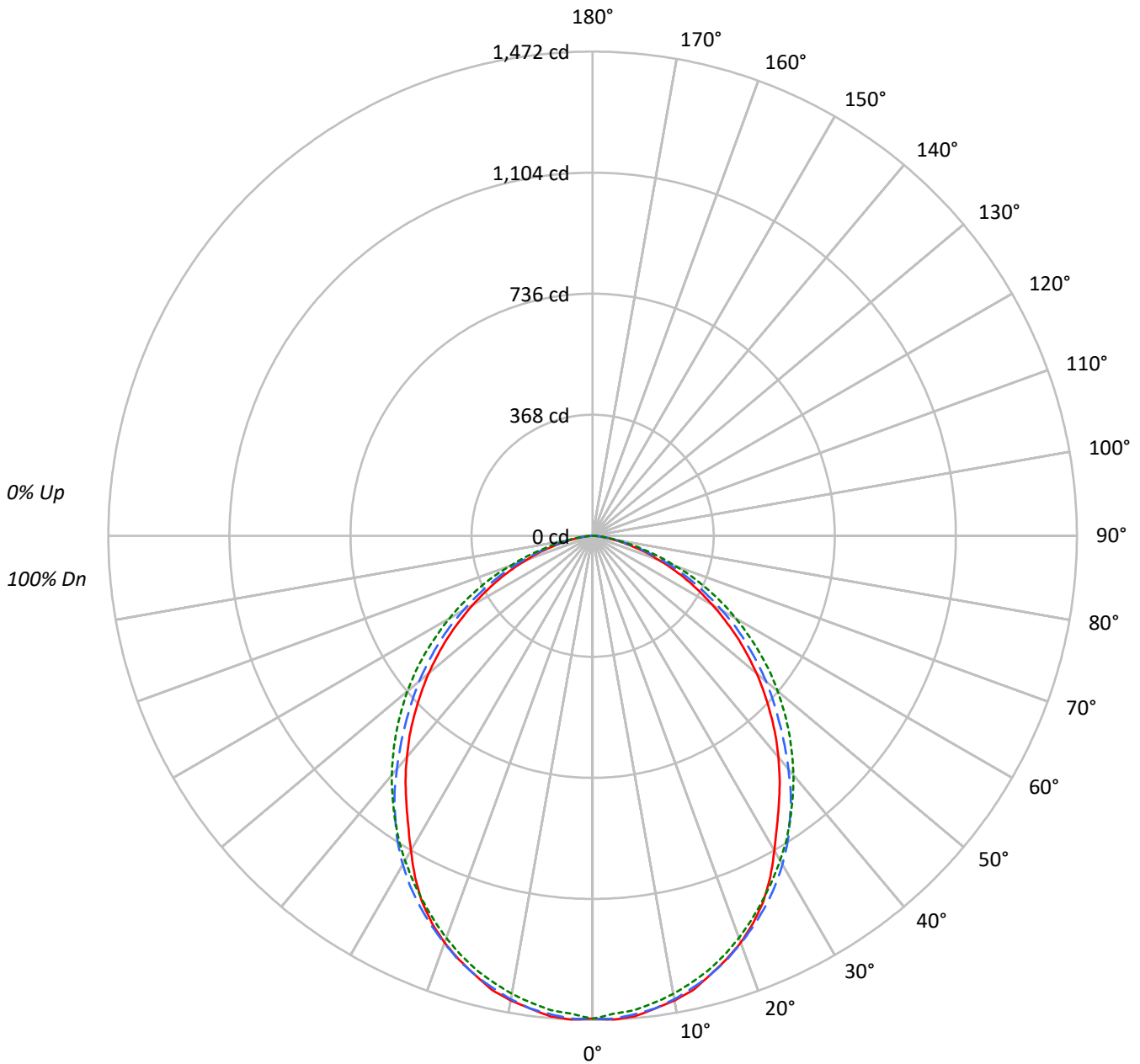
Lumens per Lamp: N/A  
Luminaire Lumens: 3395.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3951	3951	3951
5°	3962	3945	3911
10°	3919	3909	3864
15°	3850	3850	3806
20°	3769	3773	3725
25°	3644	3689	3631
30°	3432	3586	3542
35°	3243	3437	3443
40°	3085	3251	3337
45°	2909	3055	3211
50°	2723	2879	3075
55°	2511	2678	2908
60°	2261	2444	2705
65°	1997	2173	2460
70°	1664	1851	2090
75°	1308	1477	1637
80°	936	1040	1155
85°	608	608	574



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.2	4.1
10°-20°	388.4	11.4
20°-30°	567.5	16.7
30°-40°	644.2	19.0
40°-50°	621.9	18.3
50°-60°	513.0	15.1
60°-70°	341.6	10.1
70°-80°	152.9	4.5
80°-90°	27.3	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°	1094.1	32.2
0°-40°	1738.3	51.2
0°-60°	2873.2	84.6
0°-90°	3395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3395.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1468	1468	1468	1468	1468	
5°	1467	1466	1460	1452	1448	139
15°	1382	1385	1382	1376	1366	390
25°	1227	1237	1243	1234	1223	562
35°	987	1001	1046	1052	1048	618
45°	764	777	803	839	844	590
55°	535	544	571	602	620	478
65°	314	322	341	366	386	311
75°	126	133	142	149	157	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°	1468.2	1468.2	1468.2	1468.2	1468.2
2.5°	1472.2	1472.8	1469.4	1460.4	1454.7
5°	1466.6	1466.0	1460.4	1452.5	1447.9
7.5°	1450.2	1451.3	1449.6	1438.4	1432.1
10°	1434.4	1435.0	1430.5	1421.4	1414.1
12.5°	1414.1	1413.5	1407.3	1402.8	1391.0
15°	1381.9	1385.3	1381.9	1375.7	1366.2
17.5°	1350.9	1350.9	1353.2	1342.5	1335.1
20°	1316.0	1317.6	1317.6	1309.2	1300.7
22.5°	1275.3	1280.4	1282.1	1273.1	1262.9
25°	1227.4	1237.0	1242.6	1233.6	1222.9
27.5°	1169.3	1184.0	1200.9	1194.1	1182.3
30°	1104.4	1125.9	1154.1	1148.4	1140.0
32.5°	1042.9	1064.4	1103.3	1101.0	1096.5
35°	987.1	1000.6	1046.3	1052.0	1048.0
37.5°	934.1	946.5	989.4	1002.3	999.0
40°	878.2	891.8	925.6	948.7	949.9
42.5°	823.0	835.9	863.6	896.9	896.9
45°	764.3	777.3	802.7	839.3	843.8
47.5°	706.8	720.3	745.1	781.8	789.1
50°	650.4	662.8	687.6	723.1	734.4
52.5°	591.7	605.2	629.5	662.2	678.6
55°	535.3	544.3	570.8	602.4	619.9
57.5°	476.6	485.1	515.0	542.1	560.1
60°	420.2	430.9	454.1	481.7	502.6
62.5°	366.1	377.4	397.1	421.4	445.0
65°	313.6	322.1	341.3	365.5	386.4
67.5°	262.9	270.2	289.4	306.3	328.3
70°	211.5	221.1	235.2	251.6	265.7
72.5°	170.3	174.3	186.1	198.0	212.7
75°	125.8	132.6	142.1	148.9	157.4
77.5°	90.2	94.2	99.8	105.5	113.4
80°	60.4	62.0	67.1	68.3	74.5
82.5°	36.7	37.8	38.9	39.5	41.7
85°	19.7	19.7	19.7	18.6	18.6
87.5°	11.3	11.3	9.6	7.9	5.6
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)