

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: P556791

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-80-87-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: P556791  
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-40-UNV-80-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

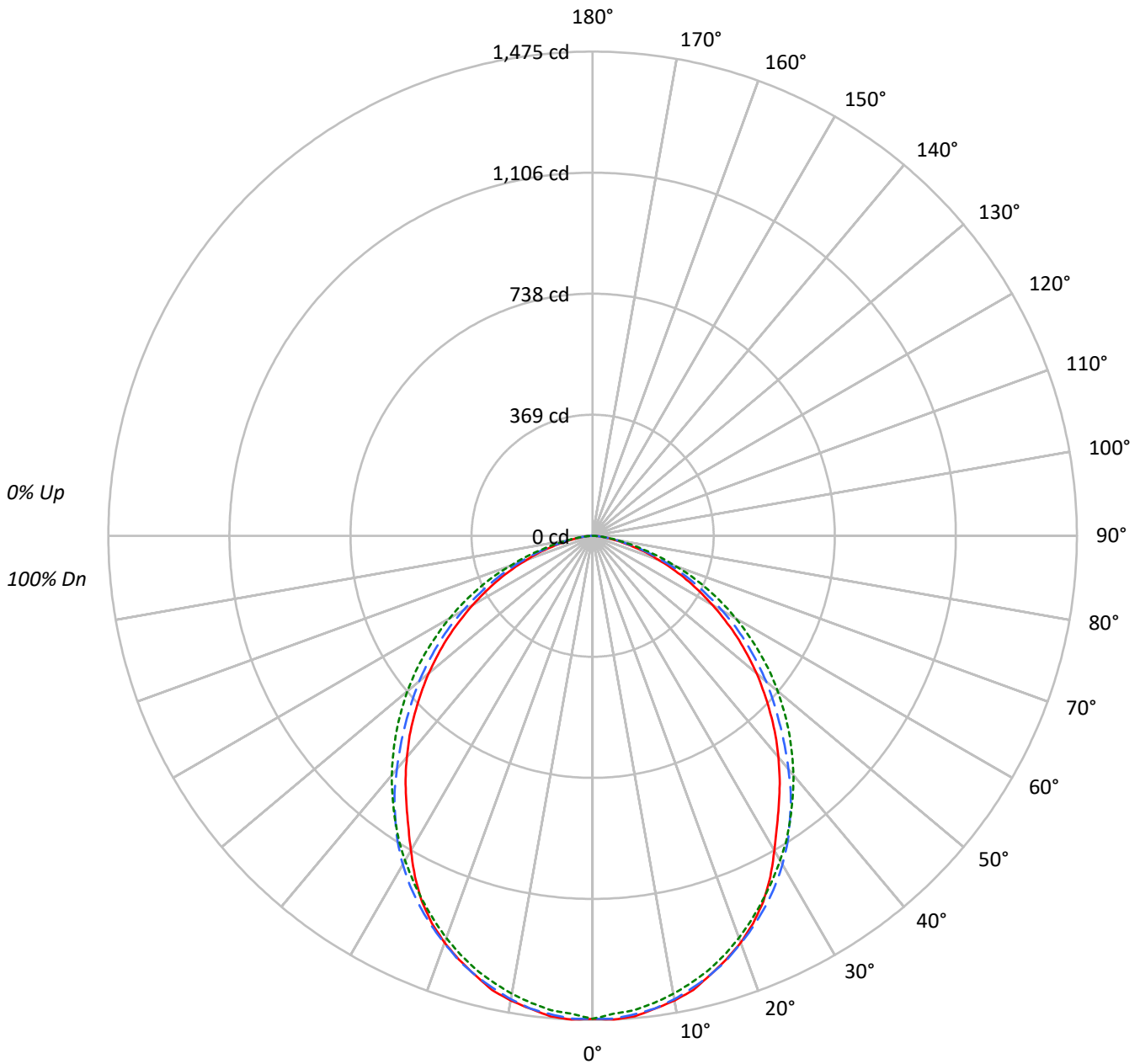
Lumens per Lamp: N/A  
Luminaire Lumens: 3402.0 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (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°	3959	3959	3959
5°	3970	3953	3919
10°	3928	3917	3872
15°	3858	3858	3814
20°	3776	3781	3733
25°	3652	3697	3638
30°	3439	3593	3549
35°	3249	3444	3450
40°	3092	3258	3344
45°	2915	3061	3218
50°	2728	2884	3081
55°	2517	2684	2914
60°	2266	2449	2710
65°	2001	2178	2465
70°	1668	1854	2094
75°	1310	1481	1640
80°	938	1043	1156
85°	611	611	577



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.5	4.1
10°-20°	389.2	11.4
20°-30°	568.7	16.7
30°-40°	645.5	19.0
40°-50°	623.2	18.3
50°-60°	514.1	15.1
60°-70°	342.3	10.1
70°-80°	153.2	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°	1096.4	32.2
0°-40°	1741.9	51.2
0°-60°	2879.1	84.6
0°-90°	3402.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3402.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1470	1469	1463	1456	1451	139
15°	1385	1388	1385	1379	1369	390
25°	1230	1240	1245	1236	1225	563
35°	989	1003	1048	1054	1050	620
45°	766	779	804	841	846	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°	1471.3	1471.3	1471.3	1471.3	1471.3
2.5°	1475.2	1475.8	1472.4	1463.4	1457.7
5°	1469.6	1469.0	1463.4	1455.5	1450.9
7.5°	1453.2	1454.3	1452.6	1441.3	1435.1
10°	1437.4	1437.9	1433.4	1424.4	1417.0
12.5°	1417.0	1416.5	1410.2	1405.7	1393.8
15°	1384.8	1388.2	1384.8	1378.6	1369.0
17.5°	1353.7	1353.7	1356.0	1345.2	1337.9
20°	1318.7	1320.4	1320.4	1311.9	1303.4
22.5°	1278.0	1283.1	1284.8	1275.7	1265.5
25°	1229.9	1239.5	1245.2	1236.1	1225.4
27.5°	1171.7	1186.4	1203.4	1196.6	1184.7
30°	1106.7	1128.2	1156.4	1150.8	1142.3
32.5°	1045.1	1066.6	1105.6	1103.3	1098.8
35°	989.1	1002.7	1048.5	1054.1	1050.2
37.5°	936.0	948.4	991.4	1004.4	1001.0
40°	880.1	893.6	927.5	950.7	951.8
42.5°	824.7	837.7	865.4	898.7	898.7
45°	765.9	778.9	804.3	841.1	845.6
47.5°	708.2	721.8	746.7	783.4	790.7
50°	651.7	664.1	689.0	724.6	735.9
52.5°	592.9	606.5	630.8	663.6	680.0
55°	536.4	545.4	572.0	603.7	621.2
57.5°	477.6	486.1	516.0	543.2	561.3
60°	421.1	431.8	455.0	482.7	503.6
62.5°	366.8	378.1	397.9	422.2	446.0
65°	314.3	322.7	342.0	366.3	387.2
67.5°	263.4	270.7	290.0	306.9	329.0
70°	212.0	221.6	235.7	252.1	266.2
72.5°	170.7	174.7	186.5	198.4	213.1
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	67.3	68.4	74.6
82.5°	36.7	37.9	39.0	39.6	41.8
85°	19.8	19.8	19.8	18.7	18.7
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)