

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: P556908

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-96-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: P556908  
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-93-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

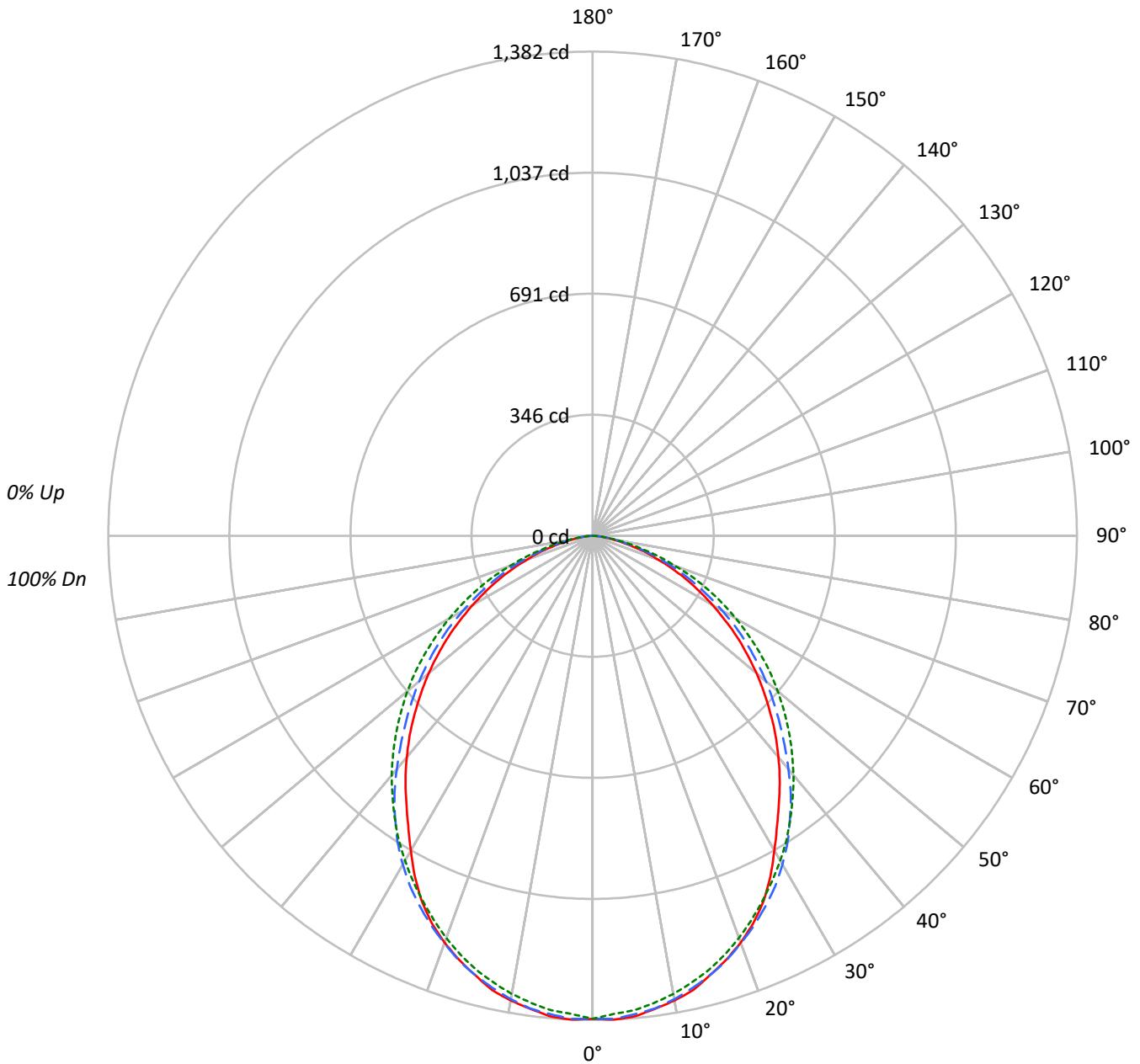
Lumens per Lamp: N/A  
Luminaire Lumens: 3188.0 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3710	3710	3710
5°	3720	3704	3673
10°	3680	3670	3628
15°	3615	3615	3574
20°	3539	3543	3498
25°	3422	3465	3409
30°	3223	3367	3326
35°	3045	3228	3233
40°	2897	3053	3133
45°	2731	2868	3016
50°	2557	2703	2887
55°	2358	2515	2731
60°	2124	2295	2540
65°	1875	2040	2310
70°	1563	1738	1963
75°	1228	1388	1537
80°	879	976	1083
85°	571	571	540



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.8	4.1
10°-20°	364.7	11.4
20°-30°	532.9	16.7
30°-40°	604.9	19.0
40°-50°	584.0	18.3
50°-60°	481.7	15.1
60°-70°	320.8	10.1
70°-80°	143.6	4.5
80°-90°	25.7	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°	1027.4	32.2
0°-40°	1632.3	51.2
0°-60°	2698.0	84.6
0°-90°	3188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3188.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1379	1379	1379	1379	1379	
5°	1377	1377	1371	1364	1360	130
15°	1298	1301	1298	1292	1283	366
25°	1153	1162	1167	1158	1148	528
35°	927	940	982	988	984	581
45°	718	730	754	788	792	554
55°	503	511	536	566	582	449
65°	294	302	320	343	363	292
75°	118	124	134	140	148	129
85°	18	18	18	18	18	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1378.7	1378.7	1378.7	1378.7	1378.7
2.5°	1382.4	1383.0	1379.8	1371.3	1366.0
5°	1377.1	1376.6	1371.3	1363.9	1359.7
7.5°	1361.8	1362.8	1361.2	1350.7	1344.8
10°	1346.9	1347.5	1343.2	1334.8	1327.9
12.5°	1327.9	1327.3	1321.5	1317.3	1306.2
15°	1297.7	1300.9	1297.7	1291.9	1282.9
17.5°	1268.6	1268.6	1270.7	1260.6	1253.7
20°	1235.7	1237.3	1237.3	1229.4	1221.4
22.5°	1197.6	1202.3	1203.9	1195.5	1185.9
25°	1152.6	1161.6	1166.9	1158.4	1148.3
27.5°	1098.0	1111.8	1127.7	1121.3	1110.2
30°	1037.1	1057.2	1083.7	1078.4	1070.5
32.5°	979.4	999.5	1036.0	1033.9	1029.7
35°	926.9	939.6	982.5	987.8	984.1
37.5°	877.1	888.8	929.0	941.2	938.0
40°	824.7	837.4	869.2	890.9	892.0
42.5°	772.8	785.0	810.9	842.2	842.2
45°	717.7	729.9	753.7	788.1	792.4
47.5°	663.7	676.4	699.7	734.1	741.0
50°	610.7	622.4	645.7	679.0	689.6
52.5°	555.6	568.3	591.1	621.8	637.2
55°	502.7	511.1	536.0	565.7	582.1
57.5°	447.6	455.5	483.6	509.0	526.0
60°	394.6	404.7	426.4	452.3	471.9
62.5°	343.8	354.3	372.9	395.7	417.9
65°	294.5	302.4	320.4	343.2	362.8
67.5°	246.8	253.7	271.7	287.6	308.3
70°	198.6	207.6	220.9	236.2	249.5
72.5°	160.0	163.7	174.8	185.9	199.7
75°	118.1	124.5	133.5	139.8	147.8
77.5°	84.7	88.5	93.8	99.0	106.5
80°	56.7	58.3	63.0	64.1	69.9
82.5°	34.4	35.5	36.5	37.1	39.2
85°	18.5	18.5	18.5	17.5	17.5
87.5°	10.6	10.6	9.0	7.4	5.3
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)