

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: P556906

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-94-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: P556906  
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-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

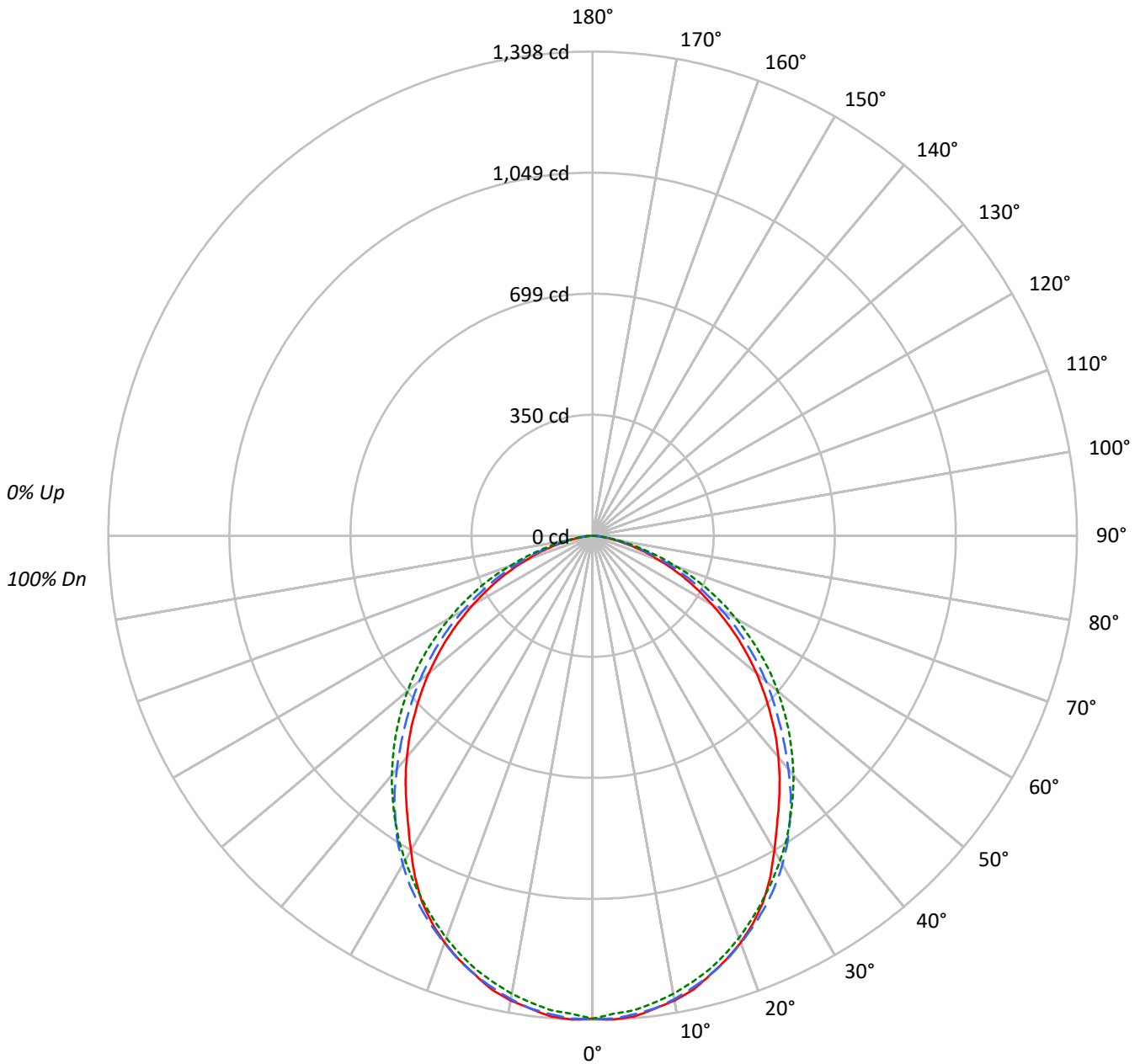
Lumens per Lamp: N/A  
Luminaire Lumens: 3224.0 lumens  
Efficiency: N/A  
Efficacy: 96.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P556906

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-93-94-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556906

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-93-94-EDD-90

**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°	3752	3752	3752
5°	3762	3746	3714
10°	3722	3712	3669
15°	3656	3656	3614
20°	3579	3583	3537
25°	3461	3504	3448
30°	3259	3405	3364
35°	3079	3264	3269
40°	2930	3088	3169
45°	2762	2901	3049
50°	2586	2734	2920
55°	2385	2543	2762
60°	2148	2321	2569
65°	1896	2064	2336
70°	1581	1758	1985
75°	1241	1404	1553
80°	888	987	1096
85°	577	577	546



TEST NUMBER: P556906

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-93-94-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.3	4.1
10°-20°	368.8	11.4
20°-30°	538.9	16.7
30°-40°	611.7	19.0
40°-50°	590.5	18.3
50°-60°	487.2	15.1
60°-70°	324.4	10.1
70°-80°	145.2	4.5
80°-90°	26.0	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°	1039.0	32.2
0°-40°	1650.7	51.2
0°-60°	2728.4	84.6
0°-90°	3224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1394	1394	1394	1394	1394	
5°	1393	1392	1387	1379	1375	132
15°	1312	1316	1312	1306	1297	370
25°	1166	1175	1180	1172	1161	534
35°	937	950	994	999	995	587
45°	726	738	762	797	801	560
55°	508	517	542	572	589	454
65°	298	306	324	347	367	295
75°	119	126	135	141	149	131
85°	19	19	19	18	18	25
90°	0	0	0	0	0	



TEST NUMBER: P556906

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-93-94-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1394.3	1394.3	1394.3	1394.3	1394.3
2.5°	1398.0	1398.6	1395.4	1386.8	1381.4
5°	1392.7	1392.2	1386.8	1379.3	1375.0
7.5°	1377.2	1378.2	1376.6	1365.9	1360.0
10°	1362.2	1362.7	1358.4	1349.8	1342.9
12.5°	1342.9	1342.3	1336.4	1332.2	1320.9
15°	1312.3	1315.6	1312.3	1306.5	1297.3
17.5°	1282.9	1282.9	1285.0	1274.8	1267.9
20°	1249.7	1251.3	1251.3	1243.2	1235.2
22.5°	1211.1	1215.9	1217.5	1209.0	1199.3
25°	1165.6	1174.7	1180.0	1171.5	1161.3
27.5°	1110.4	1124.3	1140.4	1134.0	1122.7
30°	1048.8	1069.2	1095.9	1090.6	1082.5
32.5°	990.4	1010.8	1047.7	1045.6	1041.3
35°	937.4	950.2	993.6	999.0	995.2
37.5°	887.0	898.8	939.5	951.8	948.6
40°	834.0	846.9	879.0	901.0	902.0
42.5°	781.5	793.8	820.1	851.7	851.7
45°	725.8	738.1	762.2	797.0	801.3
47.5°	671.2	684.0	707.6	742.4	749.4
50°	617.6	629.4	653.0	686.7	697.4
52.5°	561.9	574.8	597.8	628.9	644.4
55°	508.3	516.9	542.1	572.1	588.7
57.5°	452.6	460.7	489.0	514.8	531.9
60°	399.1	409.2	431.2	457.4	477.3
62.5°	347.6	358.3	377.1	400.1	422.6
65°	297.8	305.9	324.1	347.1	366.9
67.5°	249.6	256.6	274.8	290.9	311.7
70°	200.9	210.0	223.4	238.9	252.3
72.5°	161.8	165.5	176.8	188.0	201.9
75°	119.4	125.9	135.0	141.4	149.4
77.5°	85.7	89.5	94.8	100.2	107.7
80°	57.3	58.9	63.7	64.8	70.7
82.5°	34.8	35.9	37.0	37.5	39.6
85°	18.7	18.7	18.7	17.7	17.7
87.5°	10.7	10.7	9.1	7.5	5.4
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)