

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: P556756

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-86-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: P556756  
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-35-UNV-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

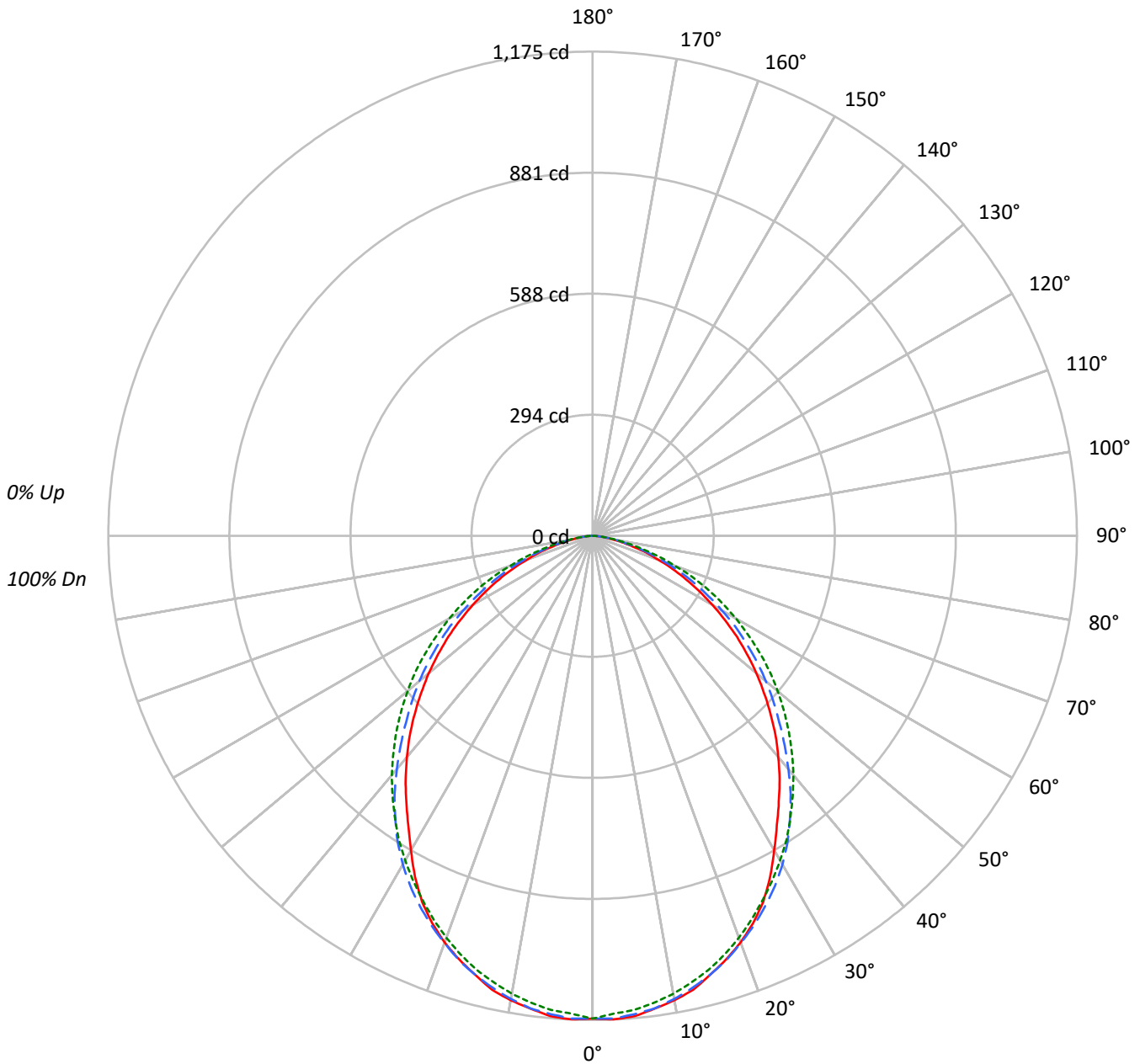
Lumens per Lamp: N/A  
Luminaire Lumens: 2709.0 lumens  
Efficiency: N/A  
Efficacy: 81.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3153	3153	3153
5°	3161	3148	3121
10°	3128	3119	3083
15°	3072	3072	3037
20°	3007	3011	2972
25°	2908	2944	2897
30°	2738	2861	2826
35°	2587	2743	2747
40°	2462	2595	2662
45°	2321	2437	2562
50°	2172	2297	2453
55°	2004	2137	2320
60°	1805	1950	2158
65°	1593	1734	1963
70°	1328	1477	1668
75°	1044	1179	1306
80°	747	831	921
85°	488	488	460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.3	4.1
10°-20°	309.9	11.4
20°-30°	452.8	16.7
30°-40°	514.0	19.0
40°-50°	496.2	18.3
50°-60°	409.3	15.1
60°-70°	272.6	10.1
70°-80°	122.0	4.5
80°-90°	21.8	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°	873.0	32.2
0°-40°	1387.1	51.2
0°-60°	2292.6	84.6
0°-90°	2709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2709.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1170	1170	1165	1159	1155	111
15°	1103	1105	1103	1098	1090	311
25°	979	987	992	984	976	449
35°	788	798	835	839	836	493
45°	610	620	640	670	673	471
55°	427	434	456	481	495	381
65°	250	257	272	292	308	248
75°	100	106	113	119	126	110
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1171.6	1171.6	1171.6	1171.6	1171.6
2.5°	1174.7	1175.2	1172.5	1165.3	1160.8
5°	1170.2	1169.8	1165.3	1159.0	1155.4
7.5°	1157.2	1158.1	1156.7	1147.7	1142.8
10°	1144.6	1145.0	1141.4	1134.2	1128.4
12.5°	1128.4	1127.9	1123.0	1119.4	1109.9
15°	1102.7	1105.4	1102.7	1097.8	1090.1
17.5°	1078.0	1078.0	1079.8	1071.2	1065.4
20°	1050.0	1051.4	1051.4	1044.6	1037.9
22.5°	1017.6	1021.7	1023.0	1015.8	1007.7
25°	979.4	987.0	991.5	984.3	975.8
27.5°	933.0	944.7	958.2	952.8	943.4
30°	881.3	898.4	920.9	916.4	909.6
32.5°	832.2	849.3	880.4	878.6	875.0
35°	787.6	798.5	834.9	839.4	836.3
37.5°	745.3	755.2	789.4	799.8	797.1
40°	700.8	711.6	738.6	757.0	757.9
42.5°	656.7	667.0	689.1	715.6	715.6
45°	609.9	620.2	640.5	669.7	673.3
47.5°	564.0	574.8	594.6	623.8	629.7
50°	518.9	528.9	548.7	577.0	586.0
52.5°	472.1	482.9	502.3	528.4	541.5
55°	427.1	434.3	455.5	480.7	494.6
57.5°	380.3	387.1	410.9	432.5	446.9
60°	335.3	343.9	362.3	384.4	401.0
62.5°	292.1	301.1	316.9	336.2	355.1
65°	250.2	257.0	272.3	291.7	308.3
67.5°	209.7	215.6	230.9	244.4	261.9
70°	168.8	176.4	187.7	200.7	212.0
72.5°	135.9	139.1	148.5	158.0	169.7
75°	100.4	105.8	113.4	118.8	125.6
77.5°	72.0	75.2	79.7	84.2	90.5
80°	48.2	49.5	53.6	54.5	59.4
82.5°	29.3	30.2	31.1	31.5	33.3
85°	15.8	15.8	15.8	14.9	14.9
87.5°	9.0	9.0	7.7	6.3	4.5
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)