

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: P556684

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-81-96-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: P556684  
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-30-UNV-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

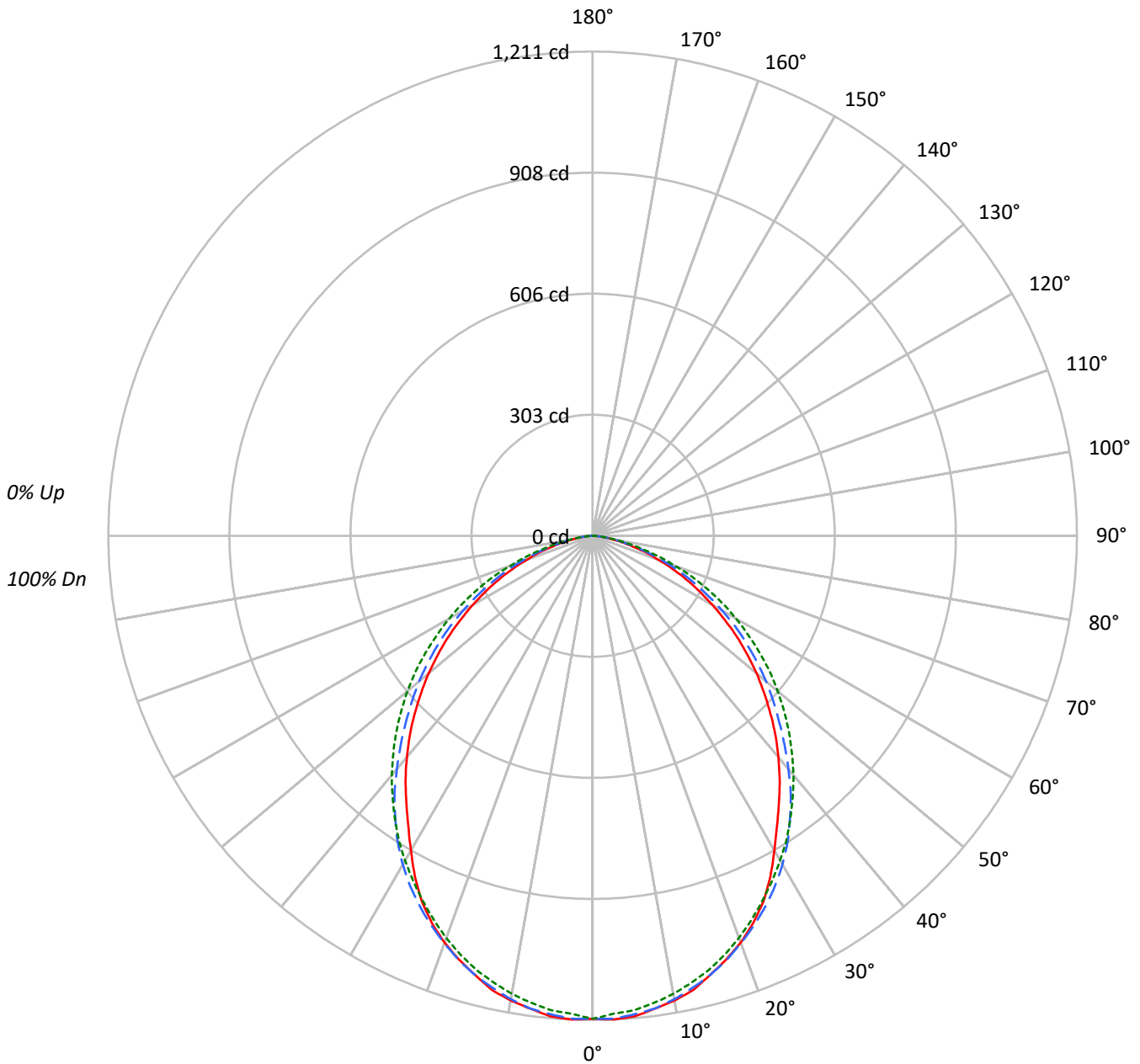
Lumens per Lamp: N/A  
Luminaire Lumens: 2793.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3250	3250	3250
5°	3259	3245	3218
10°	3225	3216	3179
15°	3167	3167	3131
20°	3100	3104	3064
25°	2998	3035	2987
30°	2823	2950	2914
35°	2668	2828	2832
40°	2538	2675	2745
45°	2393	2513	2642
50°	2240	2368	2529
55°	2066	2203	2393
60°	1861	2011	2225
65°	1643	1787	2024
70°	1369	1522	1720
75°	1076	1215	1346
80°	770	855	950
85°	500	500	472



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.7	4.1
10°-20°	319.5	11.4
20°-30°	466.9	16.7
30°-40°	530.0	19.0
40°-50°	511.6	18.3
50°-60°	422.0	15.1
60°-70°	281.0	10.1
70°-80°	125.8	4.5
80°-90°	22.5	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°	900.1	32.2
0°-40°	1430.1	51.2
0°-60°	2363.7	84.6
0°-90°	2793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2793.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1208	1208	1208	1208	1208	
5°	1206	1206	1201	1195	1191	114
15°	1137	1140	1137	1132	1124	321
25°	1010	1018	1022	1015	1006	462
35°	812	823	861	865	862	509
45°	629	639	660	690	694	485
55°	440	448	470	496	510	393
65°	258	265	281	301	318	256
75°	104	109	117	122	130	113
85°	16	16	16	15	15	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1207.9	1207.9	1207.9	1207.9	1207.9
2.5°	1211.1	1211.6	1208.8	1201.4	1196.8
5°	1206.5	1206.0	1201.4	1194.9	1191.2
7.5°	1193.1	1194.0	1192.6	1183.3	1178.2
10°	1180.1	1180.5	1176.8	1169.4	1163.4
12.5°	1163.4	1162.9	1157.8	1154.1	1144.3
15°	1136.9	1139.7	1136.9	1131.8	1123.9
17.5°	1111.4	1111.4	1113.2	1104.4	1098.4
20°	1082.6	1084.0	1084.0	1077.0	1070.1
22.5°	1049.2	1053.4	1054.8	1047.3	1039.0
25°	1009.8	1017.6	1022.3	1014.9	1006.0
27.5°	962.0	974.0	987.9	982.4	972.6
30°	908.6	926.2	949.4	944.8	937.8
32.5°	858.0	875.6	907.7	905.8	902.1
35°	812.1	823.2	860.8	865.4	862.2
37.5°	768.5	778.7	813.9	824.6	821.8
40°	722.5	733.6	761.5	780.5	781.4
42.5°	677.0	687.7	710.4	737.8	737.8
45°	628.8	639.4	660.3	690.5	694.2
47.5°	581.4	592.6	613.0	643.2	649.2
50°	535.0	545.2	565.7	594.9	604.2
52.5°	486.8	497.9	517.9	544.8	558.2
55°	440.4	447.8	469.6	495.6	510.0
57.5°	392.1	399.1	423.7	445.9	460.8
60°	345.7	354.5	373.6	396.3	413.5
62.5°	301.2	310.4	326.7	346.6	366.1
65°	258.0	265.0	280.7	300.7	317.9
67.5°	216.2	222.3	238.1	252.0	270.1
70°	174.0	181.9	193.5	207.0	218.6
72.5°	140.1	143.4	153.1	162.9	174.9
75°	103.5	109.0	116.9	122.5	129.5
77.5°	74.2	77.5	82.1	86.8	93.3
80°	49.7	51.0	55.2	56.1	61.3
82.5°	30.2	31.1	32.0	32.5	34.3
85°	16.2	16.2	16.2	15.3	15.3
87.5°	9.3	9.3	7.9	6.5	4.6
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)