

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: P556700

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-82-96-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: P556700  
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-82-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

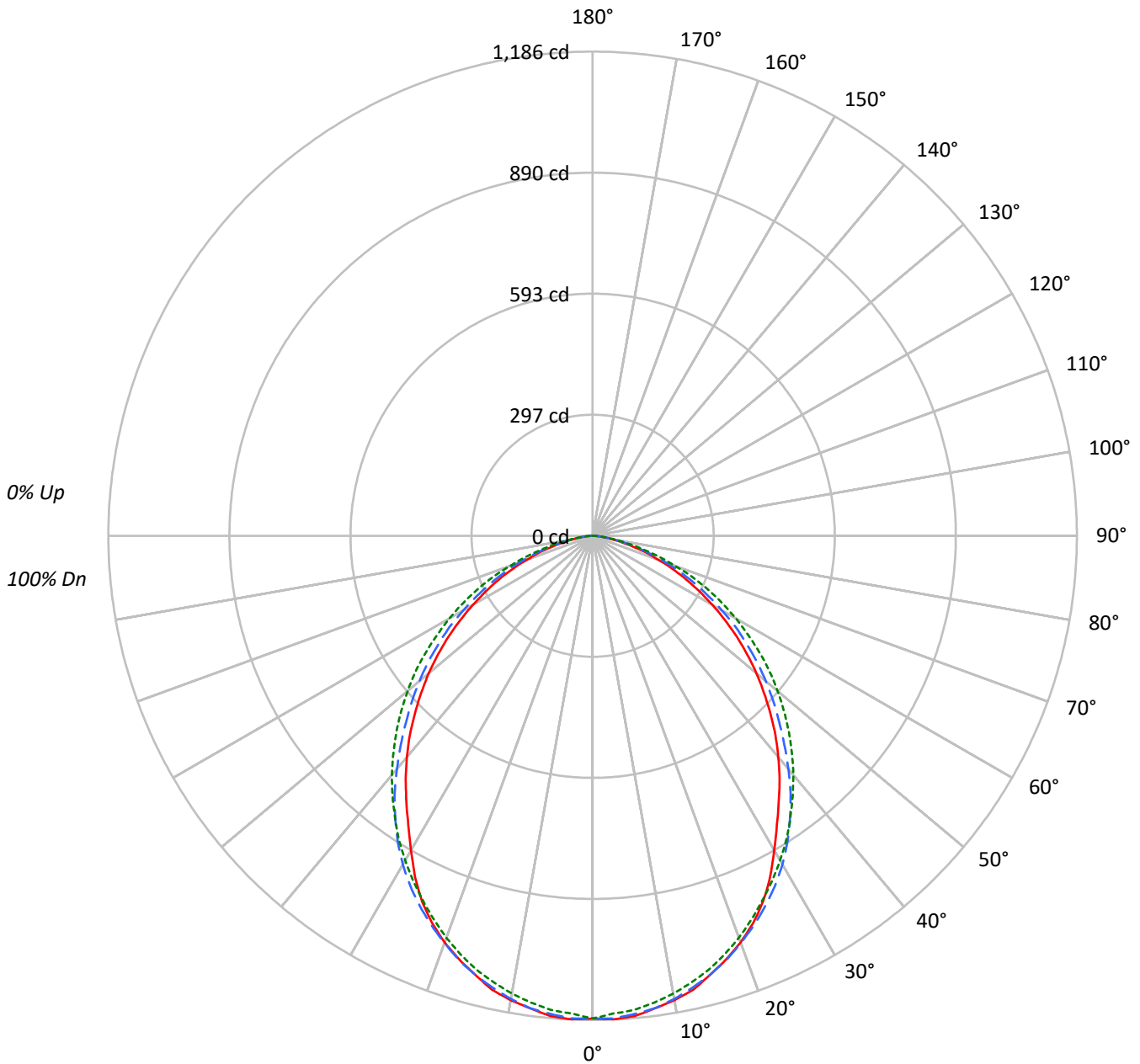
Lumens per Lamp: N/A  
Luminaire Lumens: 2734.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3182	3182	3182
5°	3190	3177	3150
10°	3156	3148	3112
15°	3100	3100	3065
20°	3035	3039	3000
25°	2935	2971	2924
30°	2764	2888	2852
35°	2611	2768	2773
40°	2485	2618	2687
45°	2342	2460	2586
50°	2192	2318	2476
55°	2023	2157	2342
60°	1821	1968	2178
65°	1608	1750	1982
70°	1340	1490	1683
75°	1053	1190	1317
80°	753	838	930
85°	491	491	463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.3	4.1
10°-20°	312.7	11.4
20°-30°	457.0	16.7
30°-40°	518.8	19.0
40°-50°	500.8	18.3
50°-60°	413.1	15.1
60°-70°	275.1	10.1
70°-80°	123.1	4.5
80°-90°	22.0	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°	881.1	32.2
0°-40°	1399.9	51.2
0°-60°	2313.7	84.6
0°-90°	2734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2734.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1182	1182	1182	1182	1182	
5°	1181	1181	1176	1170	1166	112
15°	1113	1116	1113	1108	1100	314
25°	988	996	1001	993	985	453
35°	795	806	843	847	844	498
45°	616	626	646	676	680	475
55°	431	438	460	485	499	385
65°	253	259	275	294	311	250
75°	101	107	114	120	127	111
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°	1182.4	1182.4	1182.4	1182.4	1182.4
2.5°	1185.6	1186.0	1183.3	1176.0	1171.5
5°	1181.0	1180.6	1176.0	1169.7	1166.0
7.5°	1167.8	1168.8	1167.4	1158.3	1153.3
10°	1155.1	1155.6	1152.0	1144.7	1138.8
12.5°	1138.8	1138.3	1133.3	1129.7	1120.2
15°	1112.9	1115.6	1112.9	1107.9	1100.2
17.5°	1087.9	1087.9	1089.7	1081.1	1075.2
20°	1059.7	1061.1	1061.1	1054.3	1047.5
22.5°	1027.0	1031.1	1032.5	1025.2	1017.0
25°	988.4	996.1	1000.7	993.4	984.8
27.5°	941.6	953.4	967.1	961.6	952.1
30°	889.4	906.7	929.4	924.8	918.0
32.5°	839.9	857.1	888.5	886.7	883.0
35°	794.9	805.8	842.6	847.2	844.0
37.5°	752.2	762.2	796.7	807.2	804.5
40°	707.3	718.2	745.4	764.0	764.9
42.5°	662.7	673.2	695.4	722.2	722.2
45°	615.5	625.9	646.4	675.9	679.5
47.5°	569.2	580.1	600.0	629.6	635.5
50°	523.7	533.7	553.7	582.3	591.4
52.5°	476.5	487.4	506.9	533.3	546.4
55°	431.1	438.3	459.7	485.1	499.2
57.5°	383.8	390.6	414.7	436.5	451.1
60°	338.4	347.0	365.7	387.9	404.7
62.5°	294.8	303.9	319.8	339.3	358.4
65°	252.6	259.4	274.8	294.3	311.2
67.5°	211.7	217.6	233.0	246.7	264.4
70°	170.3	178.1	189.4	202.6	213.9
72.5°	137.2	140.4	149.9	159.4	171.2
75°	101.3	106.7	114.5	119.9	126.7
77.5°	72.7	75.9	80.4	84.9	91.3
80°	48.6	50.0	54.1	55.0	60.0
82.5°	29.5	30.4	31.3	31.8	33.6
85°	15.9	15.9	15.9	15.0	15.0
87.5°	9.1	9.1	7.7	6.4	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)