

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: P556718

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-97-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: P556718  
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-93-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

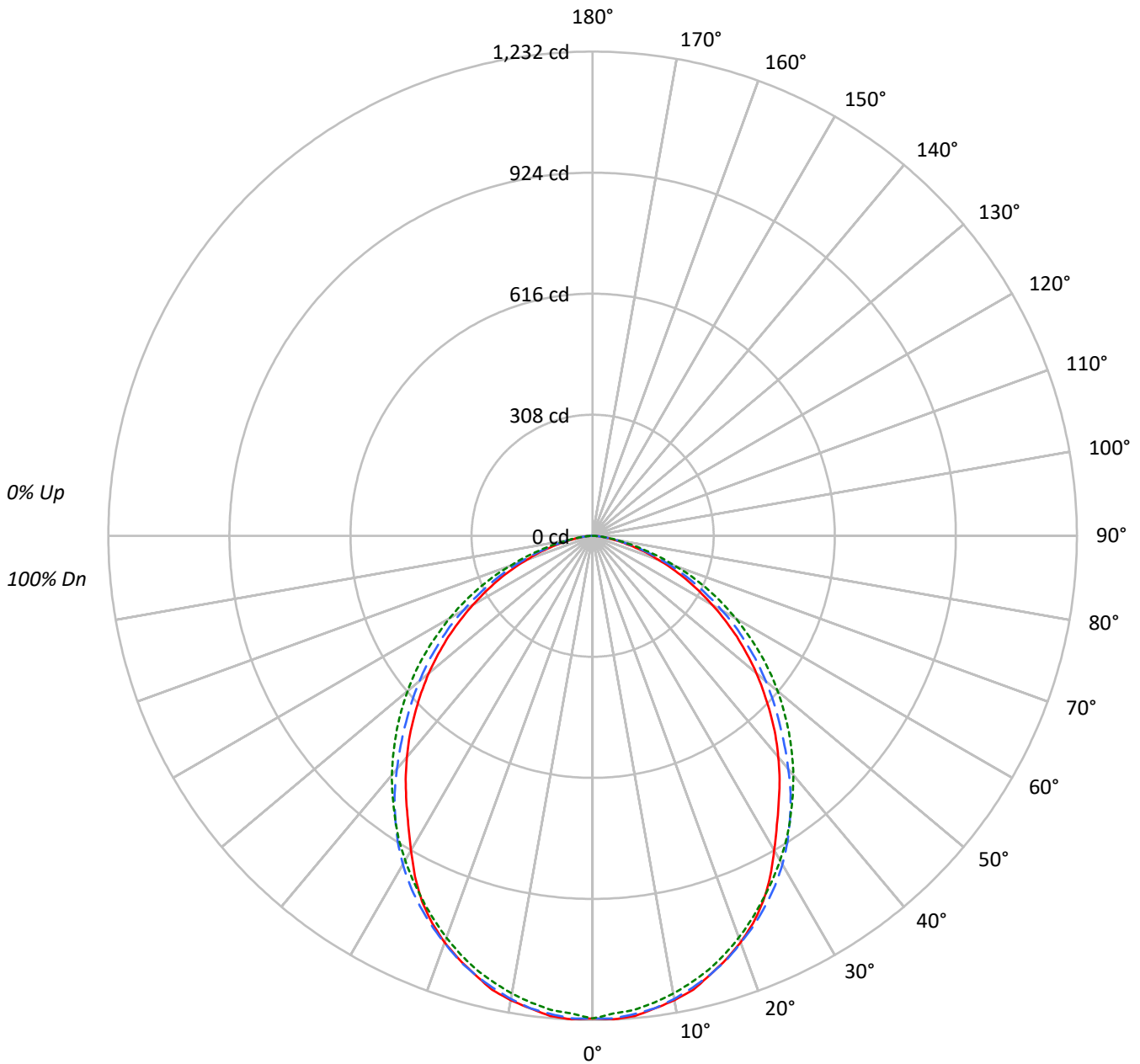
Lumens per Lamp: N/A  
Luminaire Lumens: 2840.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3305	3305	3305
5°	3314	3300	3272
10°	3279	3270	3232
15°	3221	3221	3184
20°	3152	3156	3116
25°	3048	3086	3037
30°	2871	3000	2963
35°	2712	2875	2880
40°	2581	2720	2791
45°	2433	2555	2686
50°	2277	2408	2572
55°	2101	2240	2433
60°	1892	2044	2263
65°	1670	1818	2058
70°	1392	1548	1748
75°	1094	1236	1368
80°	783	871	965
85°	509	509	482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.6	4.1
10°-20°	324.9	11.4
20°-30°	474.7	16.7
30°-40°	538.9	19.0
40°-50°	520.2	18.3
50°-60°	429.1	15.1
60°-70°	285.8	10.1
70°-80°	127.9	4.5
80°-90°	22.9	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°	915.3	32.2
0°-40°	1454.1	51.2
0°-60°	2403.5	84.6
0°-90°	2840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2840.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1227	1226	1222	1215	1211	116
15°	1156	1159	1156	1151	1143	326
25°	1027	1035	1040	1032	1023	470
35°	826	837	875	880	877	517
45°	639	650	671	702	706	493
55°	448	455	478	504	519	400
65°	262	269	286	306	323	260
75°	105	111	119	125	132	115
85°	16	16	16	16	16	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1228.2	1228.2	1228.2	1228.2	1228.2
2.5°	1231.5	1232.0	1229.2	1221.6	1216.9
5°	1226.8	1226.3	1221.6	1215.0	1211.2
7.5°	1213.1	1214.1	1212.7	1203.2	1198.0
10°	1199.9	1200.4	1196.6	1189.1	1182.9
12.5°	1182.9	1182.5	1177.3	1173.5	1163.6
15°	1156.0	1158.9	1156.0	1150.8	1142.8
17.5°	1130.1	1130.1	1132.0	1123.0	1116.9
20°	1100.8	1102.2	1102.2	1095.2	1088.1
22.5°	1066.9	1071.1	1072.5	1065.0	1056.5
25°	1026.7	1034.8	1039.5	1031.9	1023.0
27.5°	978.1	990.4	1004.6	998.9	989.0
30°	923.9	941.8	965.4	960.7	953.6
32.5°	872.5	890.4	922.9	921.1	917.3
35°	825.7	837.1	875.3	880.0	876.7
37.5°	781.4	791.8	827.6	838.5	835.6
40°	734.7	746.0	774.3	793.7	794.6
42.5°	688.4	699.3	722.4	750.2	750.2
45°	639.4	650.2	671.4	702.1	705.9
47.5°	591.2	602.6	623.3	654.0	660.1
50°	544.0	554.4	575.2	604.9	614.3
52.5°	495.0	506.3	526.6	554.0	567.6
55°	447.8	455.3	477.5	503.9	518.6
57.5°	398.7	405.8	430.8	453.4	468.5
60°	351.5	360.5	379.8	403.0	420.4
62.5°	306.2	315.7	332.2	352.5	372.3
65°	262.3	269.4	285.5	305.8	323.2
67.5°	219.9	226.0	242.1	256.2	274.6
70°	176.9	185.0	196.8	210.4	222.2
72.5°	142.5	145.8	155.7	165.6	177.9
75°	105.2	110.9	118.9	124.6	131.6
77.5°	75.5	78.8	83.5	88.2	94.8
80°	50.5	51.9	56.2	57.1	62.3
82.5°	30.7	31.6	32.6	33.0	34.9
85°	16.5	16.5	16.5	15.6	15.6
87.5°	9.4	9.4	8.0	6.6	4.7
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)