

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: P556904

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-88-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: P556904  
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-93-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

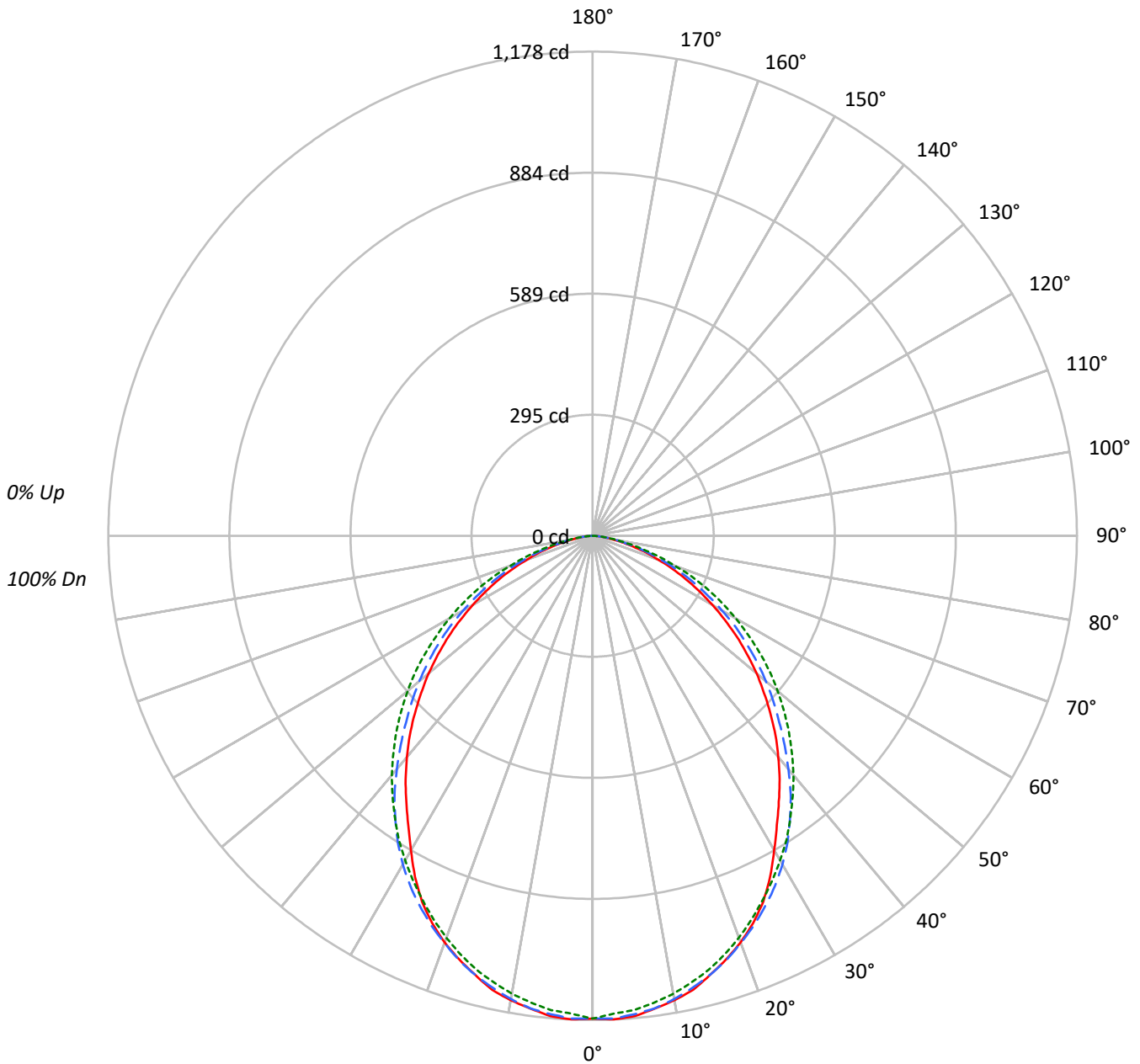
Lumens per Lamp: N/A  
Luminaire Lumens: 2716.0 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3161	3161	3161
5°	3169	3156	3129
10°	3136	3127	3091
15°	3080	3080	3045
20°	3015	3019	2980
25°	2915	2952	2905
30°	2745	2869	2834
35°	2594	2750	2754
40°	2468	2601	2669
45°	2327	2444	2569
50°	2178	2303	2460
55°	2009	2143	2327
60°	1809	1955	2164
65°	1598	1738	1968
70°	1331	1481	1672
75°	1046	1182	1309
80°	748	832	924
85°	488	488	460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.6	4.1
10°-20°	310.7	11.4
20°-30°	454.0	16.7
30°-40°	515.4	19.0
40°-50°	497.5	18.3
50°-60°	410.4	15.1
60°-70°	273.3	10.1
70°-80°	122.3	4.5
80°-90°	21.9	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°	875.3	32.2
0°-40°	1390.6	51.2
0°-60°	2298.5	84.6
0°-90°	2716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2716.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1175	1175	1175	1175	1175	
5°	1173	1173	1168	1162	1158	111
15°	1106	1108	1106	1101	1093	312
25°	982	990	994	987	978	450
35°	790	800	837	842	838	495
45°	611	622	642	672	675	472
55°	428	436	457	482	496	382
65°	251	258	273	292	309	249
75°	101	106	114	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°	1174.6	1174.6	1174.6	1174.6	1174.6
2.5°	1177.8	1178.2	1175.5	1168.3	1163.8
5°	1173.2	1172.8	1168.3	1162.0	1158.4
7.5°	1160.2	1161.1	1159.7	1150.7	1145.7
10°	1147.5	1148.0	1144.4	1137.1	1131.3
12.5°	1131.3	1130.8	1125.9	1122.3	1112.8
15°	1105.6	1108.3	1105.6	1100.6	1092.9
17.5°	1080.7	1080.7	1082.5	1074.0	1068.1
20°	1052.8	1054.1	1054.1	1047.3	1040.6
22.5°	1020.3	1024.3	1025.7	1018.5	1010.3
25°	981.9	989.6	994.1	986.9	978.3
27.5°	935.4	947.2	960.7	955.3	945.8
30°	883.5	900.7	923.3	918.7	912.0
32.5°	834.4	851.5	882.6	880.8	877.2
35°	789.7	800.5	837.1	841.6	838.4
37.5°	747.3	757.2	791.5	801.9	799.2
40°	702.6	713.4	740.5	759.0	759.9
42.5°	658.4	668.8	690.9	717.5	717.5
45°	611.4	621.8	642.1	671.5	675.1
47.5°	565.4	576.2	596.1	625.4	631.3
50°	520.3	530.2	550.1	578.5	587.5
52.5°	473.4	484.2	503.6	529.8	542.9
55°	428.2	435.5	456.7	481.9	495.9
57.5°	381.3	388.1	412.0	433.6	448.1
60°	336.2	344.8	363.3	385.4	402.1
62.5°	292.9	301.9	317.7	337.1	356.0
65°	250.9	257.7	273.0	292.4	309.1
67.5°	210.3	216.1	231.5	245.0	262.6
70°	169.2	176.9	188.2	201.3	212.5
72.5°	136.3	139.4	148.9	158.4	170.1
75°	100.6	106.0	113.7	119.1	125.9
77.5°	72.2	75.4	79.9	84.4	90.7
80°	48.3	49.6	53.7	54.6	59.6
82.5°	29.3	30.2	31.1	31.6	33.4
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)