

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: P556577

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-84-EDD**

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: P556577  
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-LD4-1LO-40-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

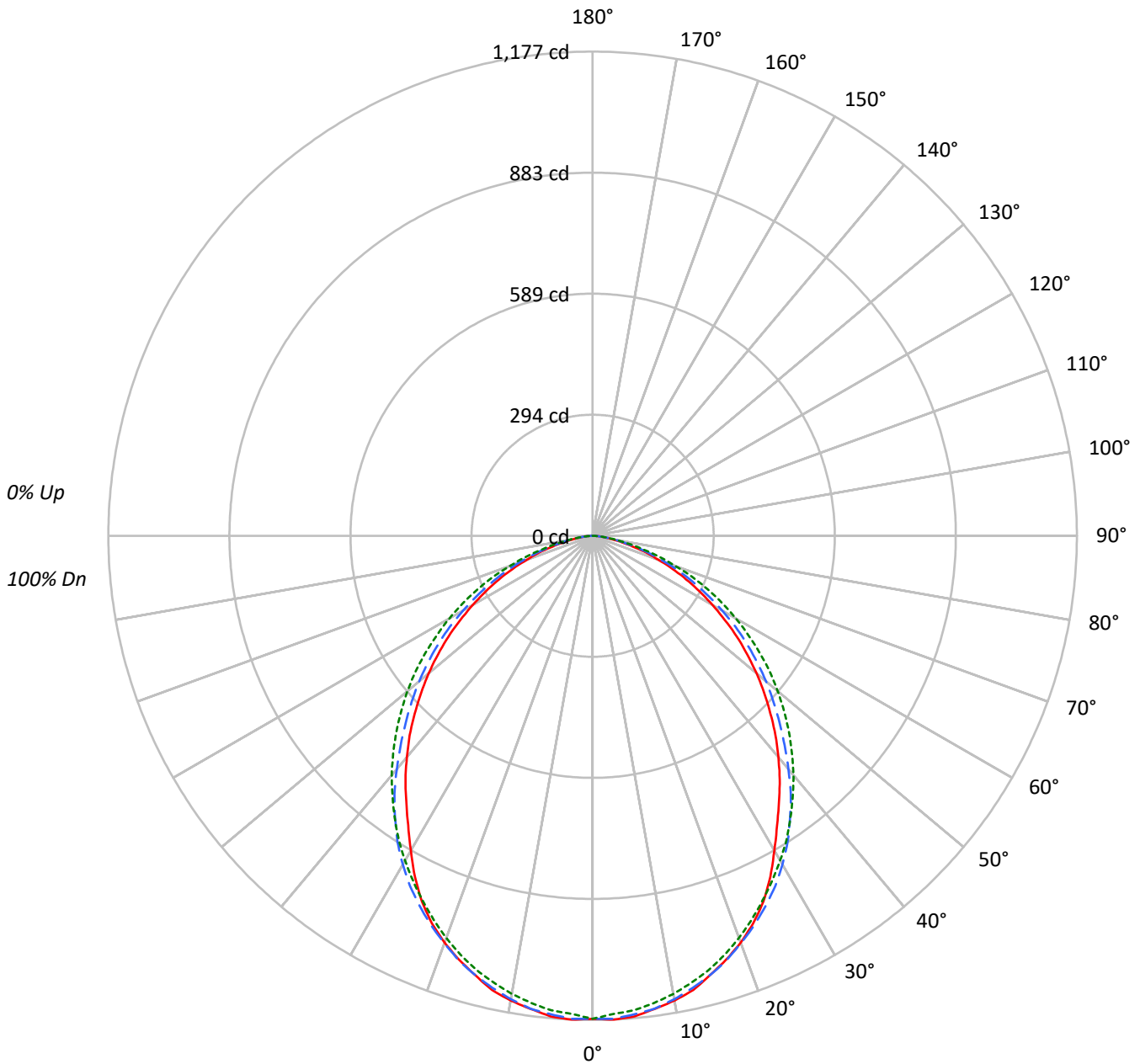
Lumens per Lamp: N/A  
Luminaire Lumens: 2715.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3160	3160	3160
5°	3168	3155	3128
10°	3134	3126	3090
15°	3079	3079	3044
20°	3014	3017	2979
25°	2915	2950	2904
30°	2744	2868	2833
35°	2593	2749	2753
40°	2467	2600	2668
45°	2326	2443	2568
50°	2177	2302	2459
55°	2008	2142	2326
60°	1809	1954	2163
65°	1597	1738	1968
70°	1331	1480	1672
75°	1046	1182	1309
80°	748	832	922
85°	488	488	460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.6	4.1
10°-20°	310.6	11.4
20°-30°	453.8	16.7
30°-40°	515.2	19.0
40°-50°	497.3	18.3
50°-60°	410.2	15.1
60°-70°	273.2	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°	875.0	32.2
0°-40°	1390.1	51.2
0°-60°	2297.7	84.6
0°-90°	2715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2715.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1174	1174	1174	1174	1174	
5°	1173	1172	1168	1162	1158	111
15°	1105	1108	1105	1100	1092	312
25°	982	989	994	986	978	450
35°	789	800	837	841	838	495
45°	611	622	642	671	675	472
55°	428	435	456	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°	1174.2	1174.2	1174.2	1174.2	1174.2
2.5°	1177.3	1177.8	1175.1	1167.9	1163.3
5°	1172.8	1172.4	1167.9	1161.5	1157.9
7.5°	1159.7	1160.6	1159.3	1150.3	1145.3
10°	1147.1	1147.6	1143.9	1136.7	1130.9
12.5°	1130.9	1130.4	1125.5	1121.8	1112.4
15°	1105.2	1107.9	1105.2	1100.2	1092.5
17.5°	1080.3	1080.3	1082.1	1073.6	1067.7
20°	1052.4	1053.7	1053.7	1047.0	1040.2
22.5°	1019.9	1024.0	1025.3	1018.1	1010.0
25°	981.6	989.2	993.7	986.5	977.9
27.5°	935.1	946.8	960.4	954.9	945.5
30°	883.2	900.4	922.9	918.4	911.6
32.5°	834.1	851.2	882.3	880.5	876.9
35°	789.4	800.2	836.8	841.3	838.1
37.5°	747.0	756.9	791.2	801.6	798.9
40°	702.3	713.2	740.2	758.7	759.6
42.5°	658.1	668.5	690.6	717.2	717.2
45°	611.2	621.6	641.9	671.2	674.8
47.5°	565.2	576.0	595.9	625.2	631.1
50°	520.1	530.0	549.9	578.3	587.3
52.5°	473.2	484.0	503.4	529.6	542.7
55°	428.1	435.3	456.5	481.8	495.7
57.5°	381.2	387.9	411.8	433.5	447.9
60°	336.1	344.6	363.1	385.2	401.9
62.5°	292.8	301.8	317.6	337.0	355.9
65°	250.8	257.6	272.9	292.3	309.0
67.5°	210.2	216.1	231.4	244.9	262.5
70°	169.2	176.8	188.1	201.2	212.5
72.5°	136.2	139.4	148.9	158.3	170.1
75°	100.6	106.0	113.7	119.1	125.9
77.5°	72.2	75.3	79.8	84.4	90.7
80°	48.3	49.6	53.7	54.6	59.5
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)