

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: P556714

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-94-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: P556714  
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-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

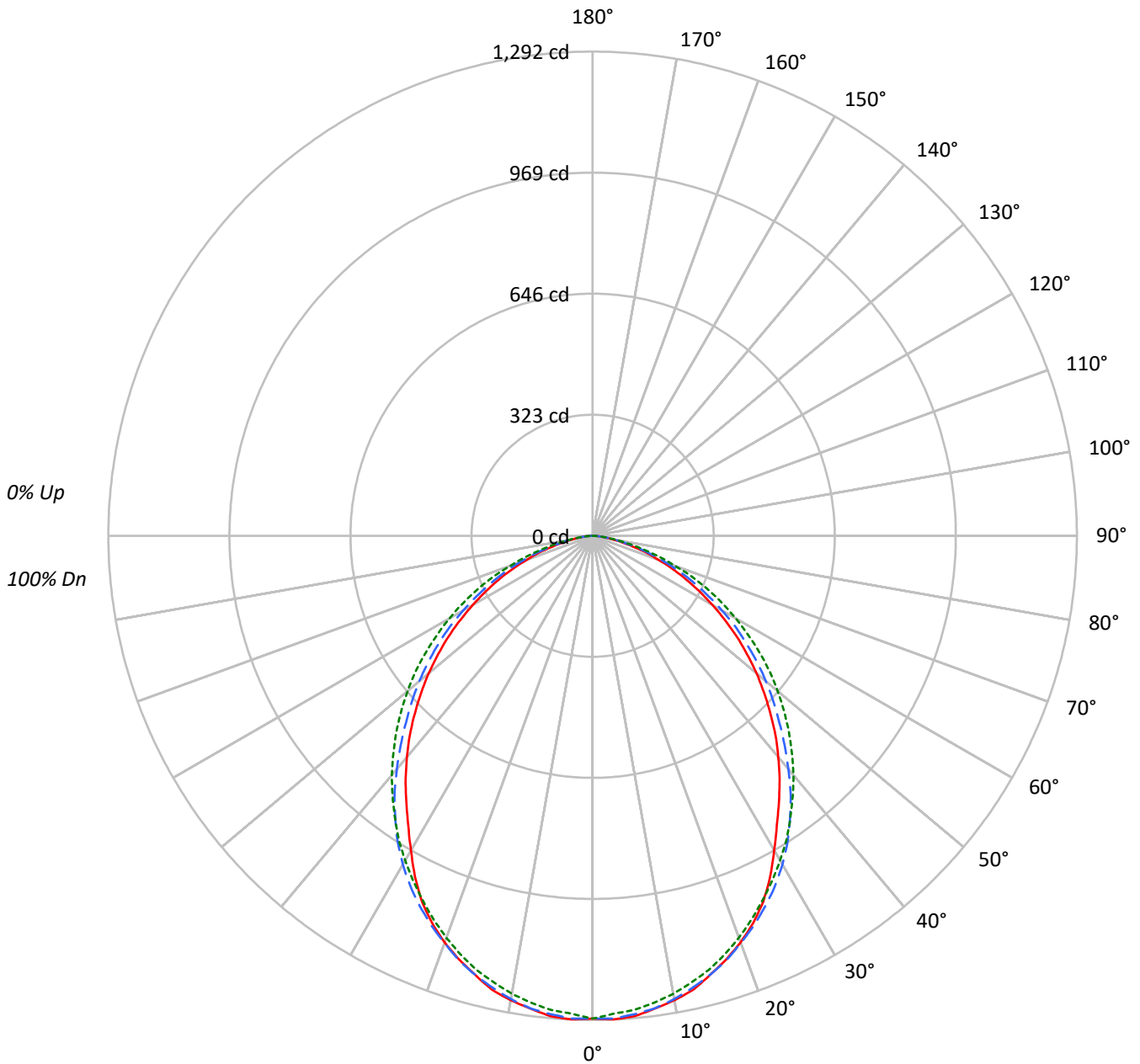
Lumens per Lamp: N/A  
Luminaire Lumens: 2979.0 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3467	3467	3467
5°	3476	3461	3432
10°	3439	3430	3390
15°	3378	3378	3340
20°	3307	3311	3268
25°	3198	3238	3186
30°	3011	3147	3108
35°	2846	3016	3021
40°	2707	2853	2928
45°	2552	2680	2818
50°	2389	2526	2698
55°	2204	2350	2552
60°	1984	2144	2373
65°	1752	1906	2159
70°	1460	1624	1834
75°	1148	1297	1436
80°	821	913	1012
85°	534	534	503



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.3	4.1
10°-20°	340.8	11.4
20°-30°	498.0	16.7
30°-40°	565.3	19.0
40°-50°	545.7	18.3
50°-60°	450.1	15.1
60°-70°	299.7	10.1
70°-80°	134.1	4.5
80°-90°	24.0	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°	960.0	32.2
0°-40°	1525.3	51.2
0°-60°	2521.1	84.6
0°-90°	2979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2979.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1287	1286	1281	1274	1270	122
15°	1213	1216	1213	1207	1199	342
25°	1077	1085	1090	1082	1073	493
35°	866	878	918	923	920	543
45°	671	682	704	736	740	517
55°	470	478	501	529	544	419
65°	275	283	299	321	339	273
75°	110	116	125	131	138	121
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1288.3	1288.3	1288.3	1288.3	1288.3
2.5°	1291.8	1292.3	1289.3	1281.4	1276.5
5°	1286.9	1286.4	1281.4	1274.5	1270.5
7.5°	1272.5	1273.5	1272.0	1262.1	1256.7
10°	1258.6	1259.1	1255.2	1247.3	1240.8
12.5°	1240.8	1240.3	1234.9	1230.9	1220.5
15°	1212.6	1215.6	1212.6	1207.2	1198.8
17.5°	1185.4	1185.4	1187.4	1178.0	1171.5
20°	1154.7	1156.2	1156.2	1148.8	1141.3
22.5°	1119.1	1123.5	1125.0	1117.1	1108.2
25°	1077.0	1085.4	1090.4	1082.4	1073.0
27.5°	1026.0	1038.9	1053.7	1047.8	1037.4
30°	969.1	987.9	1012.7	1007.7	1000.3
32.5°	915.2	934.0	968.1	966.1	962.2
35°	866.2	878.0	918.1	923.1	919.6
37.5°	819.6	830.5	868.1	879.5	876.5
40°	770.6	782.5	812.2	832.5	833.5
42.5°	722.1	733.5	757.8	787.0	787.0
45°	670.6	682.0	704.3	736.5	740.4
47.5°	620.2	632.0	653.8	686.0	692.4
50°	570.7	581.6	603.3	634.5	644.4
52.5°	519.2	531.1	552.4	581.1	595.4
55°	469.7	477.6	500.9	528.6	543.9
57.5°	418.2	425.7	451.9	475.6	491.5
60°	368.7	378.1	398.4	422.7	441.0
62.5°	321.2	331.1	348.4	369.7	390.5
65°	275.2	282.6	299.4	320.7	339.0
67.5°	230.6	237.1	253.9	268.8	288.1
70°	185.6	194.0	206.4	220.7	233.1
72.5°	149.5	152.9	163.3	173.7	186.6
75°	110.4	116.3	124.7	130.7	138.1
77.5°	79.2	82.7	87.6	92.6	99.5
80°	53.0	54.4	58.9	59.9	65.3
82.5°	32.2	33.2	34.2	34.6	36.6
85°	17.3	17.3	17.3	16.3	16.3
87.5°	9.9	9.9	8.4	6.9	4.9
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)