

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: P556706

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-85-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: P556706  
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-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

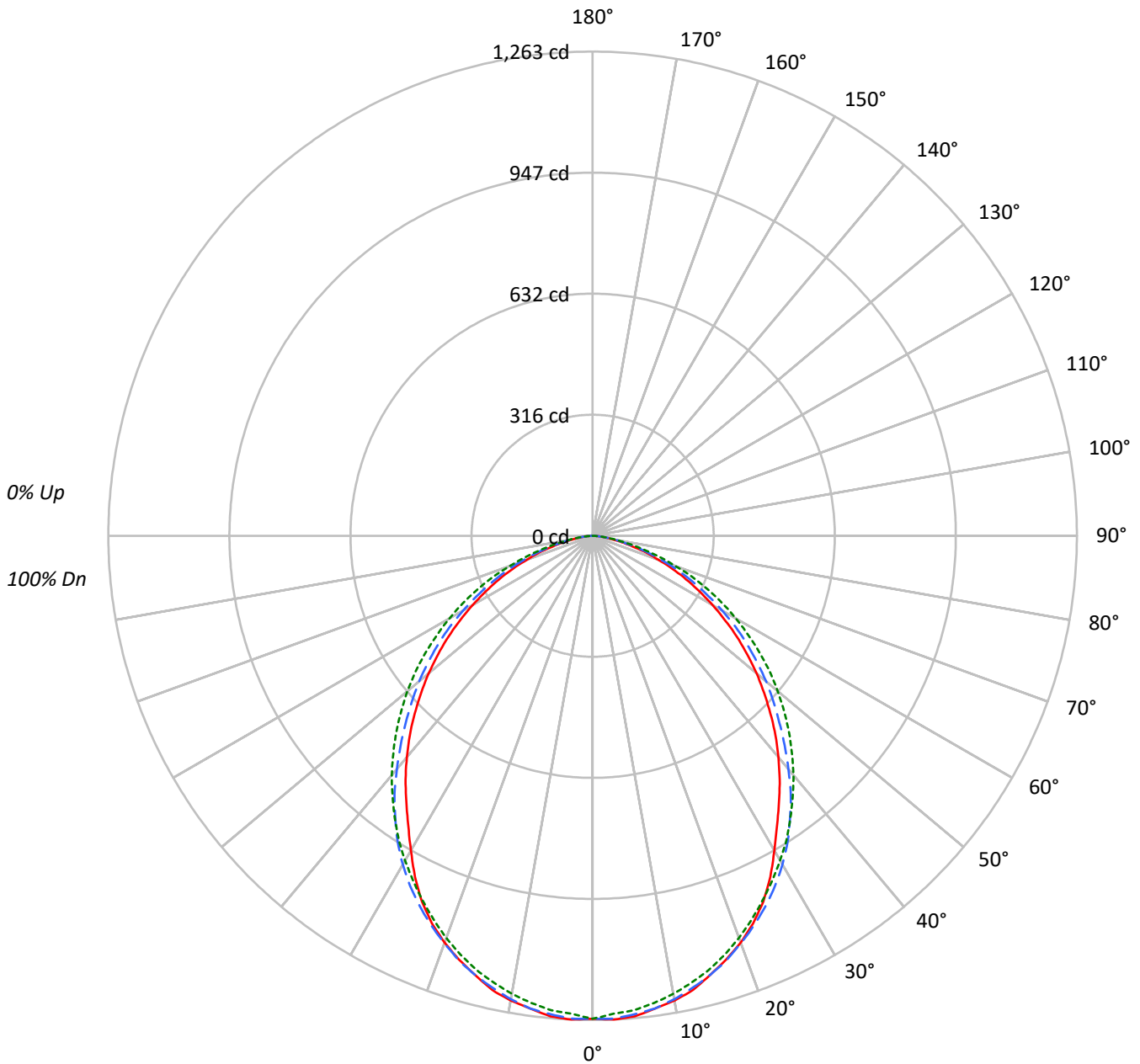
Lumens per Lamp: N/A  
Luminaire Lumens: 2913.0 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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					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								
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°	3390	3390	3390
5°	3399	3385	3356
10°	3363	3354	3315
15°	3303	3303	3266
20°	3233	3238	3196
25°	3127	3166	3116
30°	2944	3077	3039
35°	2782	2949	2954
40°	2647	2790	2863
45°	2496	2621	2755
50°	2336	2470	2638
55°	2155	2298	2495
60°	1941	2097	2321
65°	1713	1864	2111
70°	1428	1588	1794
75°	1122	1268	1404
80°	803	893	990
85°	522	522	494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.6	4.1
10°-20°	333.2	11.4
20°-30°	486.9	16.7
30°-40°	552.7	19.0
40°-50°	533.6	18.3
50°-60°	440.2	15.1
60°-70°	293.1	10.1
70°-80°	131.2	4.5
80°-90°	23.5	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°	938.8	32.2
0°-40°	1491.5	51.2
0°-60°	2465.3	84.6
0°-90°	2913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2913.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1258	1258	1253	1246	1242	119
15°	1186	1189	1186	1180	1172	334
25°	1053	1061	1066	1058	1049	482
35°	847	859	898	903	899	531
45°	656	667	689	720	724	506
55°	459	467	490	517	532	410
65°	269	276	293	314	332	267
75°	108	114	122	128	135	118
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°	1259.8	1259.8	1259.8	1259.8	1259.8
2.5°	1263.2	1263.7	1260.8	1253.0	1248.2
5°	1258.3	1257.9	1253.0	1246.2	1242.4
7.5°	1244.3	1245.3	1243.8	1234.1	1228.8
10°	1230.8	1231.2	1227.4	1219.6	1213.3
12.5°	1213.3	1212.9	1207.5	1203.7	1193.5
15°	1185.7	1188.7	1185.7	1180.4	1172.2
17.5°	1159.1	1159.1	1161.1	1151.9	1145.6
20°	1129.1	1130.6	1130.6	1123.3	1116.1
22.5°	1094.3	1098.6	1100.1	1092.3	1083.6
25°	1053.1	1061.4	1066.2	1058.5	1049.3
27.5°	1003.3	1015.9	1030.4	1024.6	1014.4
30°	947.6	966.0	990.2	985.4	978.1
32.5°	894.9	913.3	946.7	944.7	940.9
35°	847.0	858.6	897.8	902.6	899.2
37.5°	801.5	812.1	848.9	860.0	857.1
40°	753.6	765.2	794.2	814.1	815.0
42.5°	706.1	717.3	741.0	769.5	769.5
45°	655.8	666.9	688.7	720.2	724.0
47.5°	606.4	618.0	639.3	670.8	677.1
50°	558.0	568.7	590.0	620.5	630.1
52.5°	507.7	519.3	540.1	568.2	582.2
55°	459.3	467.0	489.8	516.9	531.9
57.5°	409.0	416.2	441.9	465.1	480.6
60°	360.6	369.8	389.6	413.3	431.2
62.5°	314.1	323.8	340.7	361.5	381.9
65°	269.1	276.4	292.8	313.6	331.5
67.5°	225.5	231.8	248.3	262.8	281.7
70°	181.5	189.7	201.8	215.9	228.0
72.5°	146.2	149.5	159.7	169.9	182.5
75°	107.9	113.7	122.0	127.8	135.0
77.5°	77.4	80.8	85.7	90.5	97.3
80°	51.8	53.2	57.6	58.6	63.9
82.5°	31.5	32.4	33.4	33.9	35.8
85°	16.9	16.9	16.9	16.0	16.0
87.5°	9.7	9.7	8.2	6.8	4.8
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)