

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: P556578

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-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: P556578  
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-93-85-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

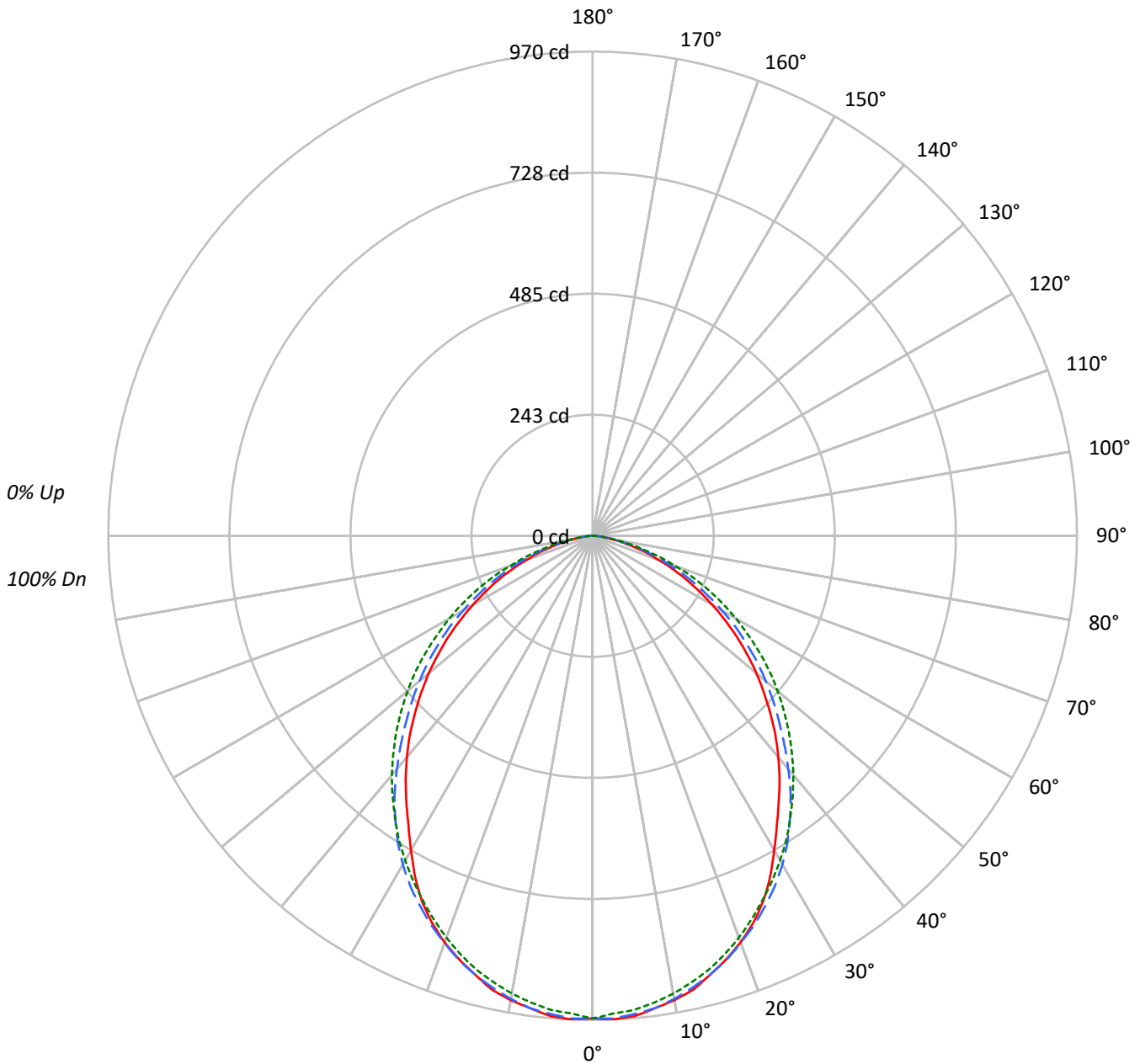
Lumens per Lamp: N/A  
Luminaire Lumens: 2236.0 lumens  
Efficiency: N/A  
Efficacy: 95.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	2602	2602	2602
5°	2609	2598	2576
10°	2581	2574	2545
15°	2536	2536	2507
20°	2482	2485	2453
25°	2400	2430	2391
30°	2260	2362	2333
35°	2136	2264	2267
40°	2032	2141	2198
45°	1916	2012	2115
50°	1793	1896	2025
55°	1654	1764	1916
60°	1490	1610	1781
65°	1316	1431	1621
70°	1096	1219	1377
75°	861	973	1077
80°	617	685	759
85°	401	401	380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.0	4.1
10°-20°	255.8	11.4
20°-30°	373.8	16.7
30°-40°	424.3	19.0
40°-50°	409.6	18.3
50°-60°	337.9	15.1
60°-70°	225.0	10.1
70°-80°	100.7	4.5
80°-90°	18.0	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°	720.6	32.2
0°-40°	1144.9	51.2
0°-60°	1892.3	84.6
0°-90°	2236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2236.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	967	967	967	967	967	
5°	966	966	962	957	954	91
15°	910	912	910	906	900	257
25°	808	815	818	812	805	370
35°	650	659	689	693	690	407
45°	503	512	529	553	556	388
55°	353	358	376	397	408	315
65°	207	212	225	241	254	205
75°	83	87	94	98	104	91
85°	13	13	13	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	967.0	967.0	967.0	967.0	967.0
2.5°	969.6	970.0	967.8	961.8	958.1
5°	965.9	965.5	961.8	956.6	953.6
7.5°	955.1	955.9	954.8	947.3	943.2
10°	944.7	945.1	942.1	936.2	931.3
12.5°	931.3	931.0	926.9	923.9	916.1
15°	910.2	912.4	910.2	906.1	899.8
17.5°	889.7	889.7	891.2	884.2	879.3
20°	866.7	867.8	867.8	862.2	856.7
22.5°	840.0	843.3	844.4	838.5	831.8
25°	808.4	814.7	818.4	812.5	805.4
27.5°	770.1	779.8	790.9	786.5	778.7
30°	727.4	741.5	760.1	756.4	750.8
32.5°	686.9	701.0	726.7	725.2	722.2
35°	650.1	659.0	689.1	692.8	690.2
37.5°	615.2	623.4	651.6	660.2	657.9
40°	578.4	587.3	609.6	624.9	625.6
42.5°	542.0	550.6	568.8	590.7	590.7
45°	503.4	511.9	528.6	552.8	555.8
47.5°	465.5	474.4	490.8	514.9	519.7
50°	428.3	436.5	452.9	476.3	483.7
52.5°	389.7	398.6	414.6	436.1	446.9
55°	352.6	358.5	376.0	396.8	408.3
57.5°	313.9	319.5	339.2	357.0	368.9
60°	276.8	283.8	299.1	317.3	331.0
62.5°	241.1	248.5	261.5	277.5	293.1
65°	206.6	212.1	224.8	240.7	254.5
67.5°	173.1	177.9	190.6	201.7	216.2
70°	139.3	145.6	154.9	165.7	175.0
72.5°	112.2	114.8	122.6	130.4	140.1
75°	82.8	87.3	93.6	98.1	103.6
77.5°	59.4	62.0	65.8	69.5	74.7
80°	39.8	40.9	44.2	45.0	49.0
82.5°	24.1	24.9	25.6	26.0	27.5
85°	13.0	13.0	13.0	12.3	12.3
87.5°	7.4	7.4	6.3	5.2	3.7
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)