

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: P556431

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-81-97-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: P556431  
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-30-UNV-81-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

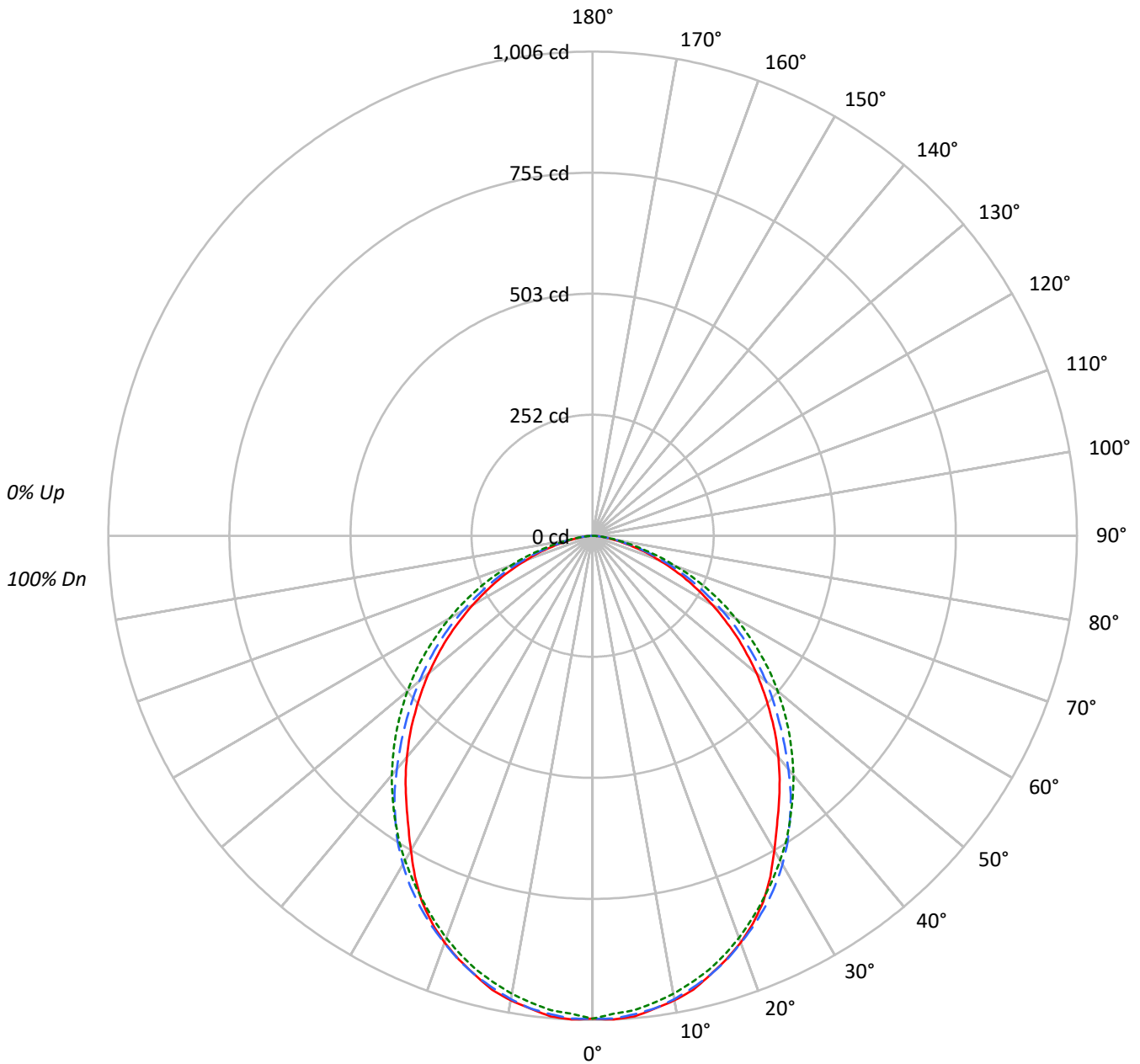
Lumens per Lamp: N/A  
Luminaire Lumens: 2320.0 lumens  
Efficiency: N/A  
Efficacy: 99.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (Ain): 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°	2700	2700	2700
5°	2707	2696	2673
10°	2678	2671	2640
15°	2631	2631	2601
20°	2575	2578	2546
25°	2491	2521	2481
30°	2345	2450	2421
35°	2216	2349	2353
40°	2108	2222	2280
45°	1988	2087	2194
50°	1860	1967	2101
55°	1716	1830	1987
60°	1546	1670	1848
65°	1365	1485	1681
70°	1137	1264	1428
75°	894	1010	1118
80°	638	711	789
85°	417	417	392



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.5	4.1
10°-20°	265.4	11.4
20°-30°	387.8	16.7
30°-40°	440.2	19.0
40°-50°	425.0	18.3
50°-60°	350.6	15.1
60°-70°	233.4	10.1
70°-80°	104.5	4.5
80°-90°	18.7	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°	747.7	32.2
0°-40°	1187.9	51.2
0°-60°	1963.4	84.6
0°-90°	2320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2320.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1003	1003	1003	1003	1003	
5°	1002	1002	998	992	990	95
15°	944	947	944	940	934	266
25°	839	845	849	843	836	384
35°	674	684	715	719	716	423
45°	522	531	548	574	577	403
55°	366	372	390	412	424	326
65°	214	220	233	250	264	213
75°	86	91	97	102	108	94
85°	14	14	14	13	13	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1003.3	1003.3	1003.3	1003.3	1003.3
2.5°	1006.0	1006.4	1004.1	997.9	994.1
5°	1002.2	1001.8	997.9	992.5	989.5
7.5°	991.0	991.8	990.6	982.9	978.7
10°	980.2	980.6	977.5	971.3	966.3
12.5°	966.3	966.0	961.7	958.6	950.5
15°	944.4	946.7	944.4	940.1	933.6
17.5°	923.2	923.2	924.7	917.4	912.4
20°	899.3	900.4	900.4	894.6	888.9
22.5°	871.5	875.0	876.1	870.0	863.0
25°	838.8	845.3	849.2	843.0	835.7
27.5°	799.0	809.1	820.6	816.0	807.9
30°	754.7	769.4	788.6	784.8	779.0
32.5°	712.7	727.4	754.0	752.4	749.3
35°	674.5	683.8	715.0	718.9	716.2
37.5°	638.3	646.8	676.1	685.0	682.6
40°	600.2	609.4	632.5	648.3	649.1
42.5°	562.4	571.2	590.1	612.9	612.9
45°	522.3	531.2	548.5	573.6	576.6
47.5°	483.0	492.2	509.2	534.2	539.3
50°	444.4	452.9	469.9	494.2	501.9
52.5°	404.3	413.6	430.2	452.5	463.7
55°	365.8	372.0	390.1	411.7	423.6
57.5°	325.7	331.5	351.9	370.4	382.8
60°	287.2	294.5	310.3	329.2	343.4
62.5°	250.2	257.9	271.4	287.9	304.1
65°	214.3	220.1	233.2	249.8	264.0
67.5°	179.6	184.6	197.7	209.3	224.3
70°	144.5	151.1	160.7	171.9	181.5
72.5°	116.4	119.1	127.2	135.3	145.3
75°	86.0	90.6	97.1	101.8	107.5
77.5°	61.7	64.4	68.2	72.1	77.5
80°	41.2	42.4	45.9	46.6	50.9
82.5°	25.1	25.8	26.6	27.0	28.5
85°	13.5	13.5	13.5	12.7	12.7
87.5°	7.7	7.7	6.6	5.4	3.9
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)