

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: P556521

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-93-88-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: P556521  
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-35-UNV-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

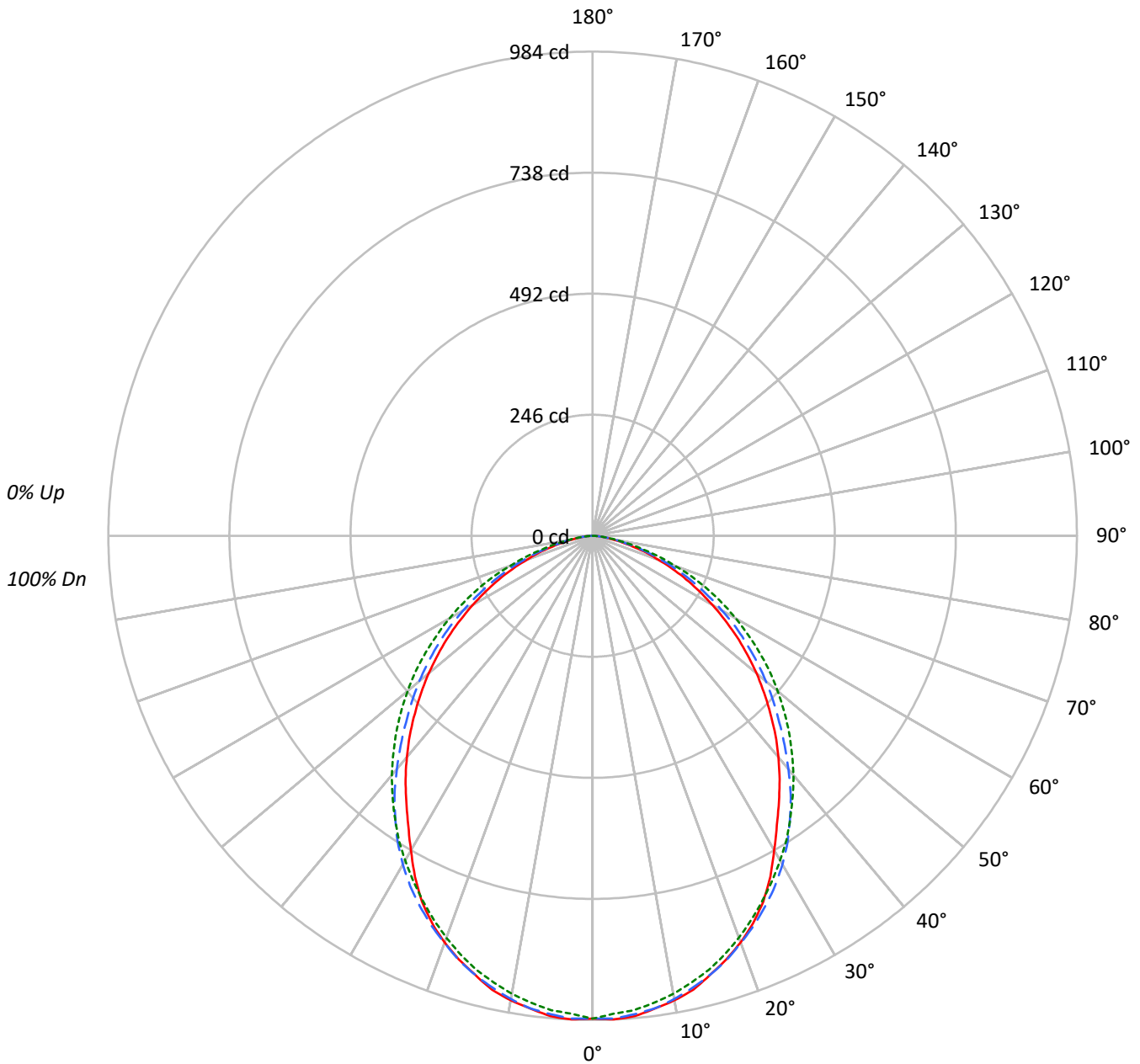
Lumens per Lamp: N/A  
Luminaire Lumens: 2269.0 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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									
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°	2641	2641	2641
5°	2648	2636	2614
10°	2620	2612	2582
15°	2573	2573	2544
20°	2519	2522	2489
25°	2436	2466	2427
30°	2293	2397	2367
35°	2167	2297	2301
40°	2062	2173	2230
45°	1944	2041	2146
50°	1820	1924	2055
55°	1679	1790	1944
60°	1512	1633	1808
65°	1335	1452	1644
70°	1113	1237	1397
75°	874	988	1094
80°	625	696	772
85°	408	408	383



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.4	4.1
10°-20°	259.6	11.4
20°-30°	379.3	16.7
30°-40°	430.5	19.0
40°-50°	415.6	18.3
50°-60°	342.9	15.1
60°-70°	228.3	10.1
70°-80°	102.2	4.5
80°-90°	18.3	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°	731.2	32.2
0°-40°	1161.8	51.2
0°-60°	1920.3	84.6
0°-90°	2269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2269.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	980	976	971	968	93
15°	924	926	924	920	913	260
25°	820	827	830	824	817	376
35°	660	669	699	703	700	413
45°	511	520	536	561	564	394
55°	358	364	382	403	414	319
65°	210	215	228	244	258	208
75°	84	89	95	100	105	92
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°	981.3	981.3	981.3	981.3	981.3
2.5°	983.9	984.3	982.0	976.0	972.2
5°	980.2	979.8	976.0	970.7	967.7
7.5°	969.2	970.0	968.8	961.3	957.2
10°	958.7	959.0	956.0	950.0	945.1
12.5°	945.1	944.7	940.6	937.6	929.6
15°	923.6	925.9	923.6	919.5	913.1
17.5°	902.9	902.9	904.4	897.2	892.3
20°	879.5	880.6	880.6	875.0	869.3
22.5°	852.4	855.7	856.9	850.8	844.1
25°	820.3	826.7	830.5	824.5	817.3
27.5°	781.5	791.3	802.6	798.1	790.2
30°	738.1	752.5	771.3	767.5	761.9
32.5°	697.0	711.4	737.4	735.9	732.9
35°	659.7	668.8	699.3	703.1	700.4
37.5°	624.3	632.6	661.2	669.9	667.6
40°	587.0	596.0	618.6	634.1	634.8
42.5°	550.0	558.7	577.2	599.4	599.4
45°	510.8	519.5	536.4	560.9	564.0
47.5°	472.4	481.4	498.0	522.5	527.4
50°	434.7	443.0	459.5	483.3	490.8
52.5°	395.5	404.5	420.7	442.6	453.5
55°	357.8	363.8	381.5	402.6	414.3
57.5°	318.5	324.2	344.2	362.3	374.3
60°	280.9	288.0	303.5	321.9	335.9
62.5°	244.7	252.2	265.4	281.6	297.4
65°	209.6	215.3	228.1	244.3	258.2
67.5°	175.7	180.6	193.4	204.7	219.4
70°	141.4	147.8	157.2	168.1	177.6
72.5°	113.8	116.5	124.4	132.3	142.1
75°	84.1	88.6	95.0	99.5	105.2
77.5°	60.3	63.0	66.7	70.5	75.8
80°	40.3	41.5	44.9	45.6	49.8
82.5°	24.5	25.3	26.0	26.4	27.9
85°	13.2	13.2	13.2	12.4	12.4
87.5°	7.5	7.5	6.4	5.3	3.8
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)