

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: P558313

Luminaire Tested: **FUSL-12-4-LD4-3STD-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: P558313  
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-LD4-3STD-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**

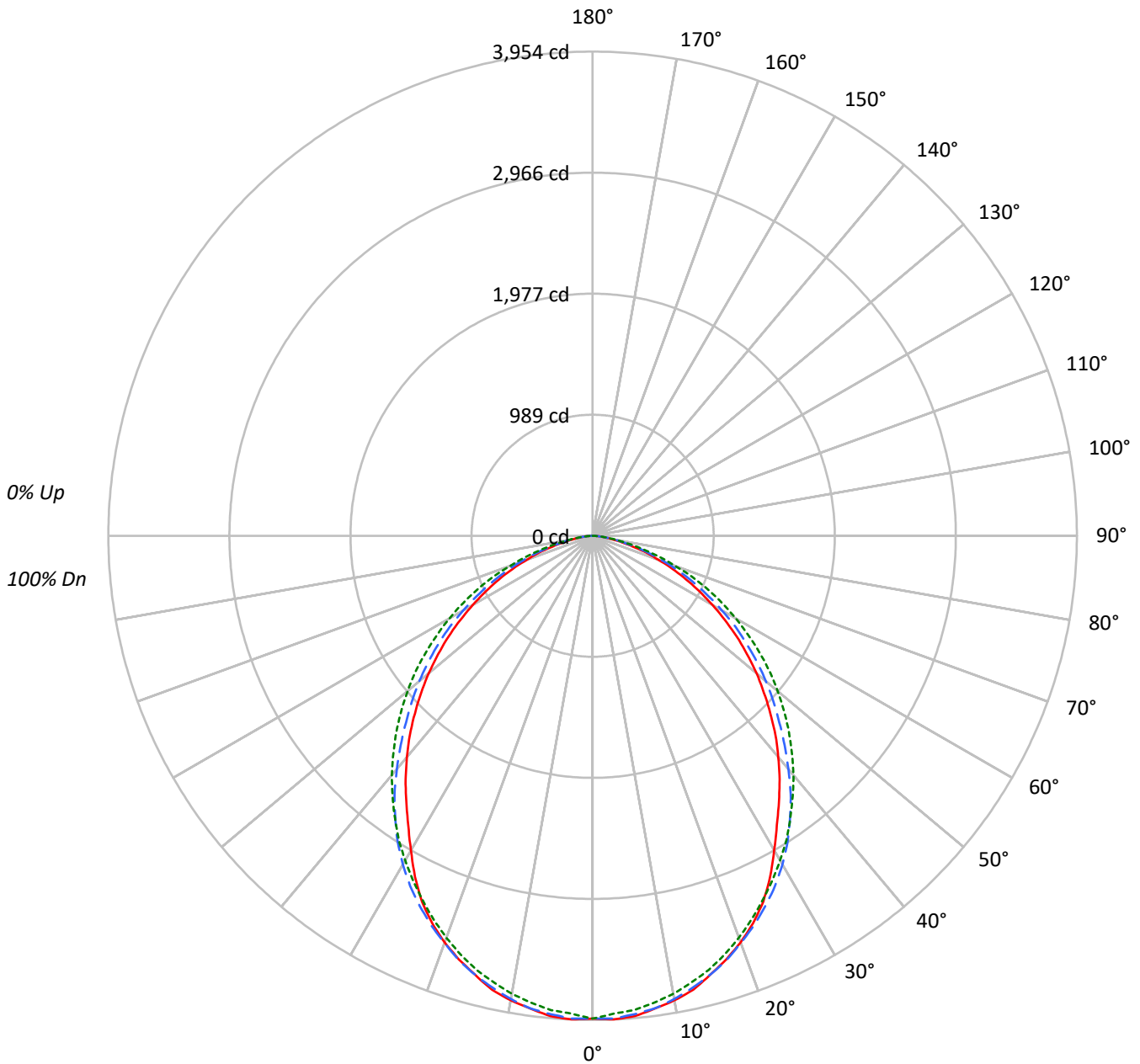
Lumens per Lamp: N/A  
Luminaire Lumens: 9117.0 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	10610	10610	10610
5°	10638	10594	10503
10°	10526	10497	10377
15°	10339	10339	10221
20°	10120	10133	10003
25°	9787	9908	9751
30°	9216	9630	9512
35°	8708	9230	9246
40°	8285	8732	8961
45°	7811	8203	8624
50°	7312	7730	8256
55°	6744	7192	7810
60°	6074	6563	7263
65°	5363	5835	6607
70°	4469	4969	5613
75°	3512	3969	4394
80°	2512	2794	3098
85°	1636	1636	1544



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	371.2	4.1
10°-20°	1042.9	11.4
20°-30°	1524.0	16.7
30°-40°	1729.9	19.0
40°-50°	1670.0	18.3
50°-60°	1377.6	15.1
60°-70°	917.4	10.1
70°-80°	410.5	4.5
80°-90°	73.4	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°	2938.1	32.2
0°-40°	4668.1	51.2
0°-60°	7715.7	84.6
0°-90°	9117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9117.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3943	3943	3943	3943	3943	
5°	3938	3937	3922	3900	3888	373
15°	3711	3720	3711	3694	3669	1046
25°	3296	3322	3337	3313	3284	1509
35°	2651	2687	2810	2825	2814	1661
45°	2052	2087	2156	2254	2266	1584
55°	1438	1462	1533	1618	1665	1283
65°	842	865	916	982	1038	835
75°	338	356	382	400	423	369
85°	53	53	53	50	50	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3942.9	3942.9	3942.9	3942.9	3942.9
2.5°	3953.5	3955.0	3945.9	3921.7	3906.5
5°	3938.3	3936.8	3921.7	3900.5	3888.3
7.5°	3894.4	3897.4	3892.9	3862.6	3845.9
10°	3852.0	3853.5	3841.4	3817.1	3797.5
12.5°	3797.5	3795.9	3779.3	3767.2	3735.3
15°	3711.1	3720.2	3711.1	3694.4	3668.7
17.5°	3627.8	3627.8	3633.9	3605.1	3585.4
20°	3533.9	3538.4	3538.4	3515.7	3493.0
22.5°	3424.8	3438.5	3443.0	3418.8	3391.5
25°	3296.1	3321.8	3337.0	3312.7	3284.0
27.5°	3140.1	3179.4	3224.9	3206.7	3174.9
30°	2965.9	3023.4	3099.2	3084.0	3061.3
32.5°	2800.8	2858.3	2962.8	2956.8	2944.7
35°	2650.8	2687.1	2809.8	2825.0	2814.4
37.5°	2508.4	2541.7	2656.9	2691.7	2682.6
40°	2358.4	2394.8	2485.7	2547.8	2550.8
42.5°	2210.0	2244.8	2319.1	2408.4	2408.4
45°	2052.5	2087.3	2155.5	2253.9	2266.1
47.5°	1898.0	1934.3	2001.0	2099.4	2119.1
50°	1746.5	1779.8	1846.5	1941.9	1972.2
52.5°	1589.0	1625.3	1690.4	1778.3	1822.2
55°	1437.5	1461.7	1532.9	1617.7	1664.7
57.5°	1280.0	1302.7	1383.0	1455.7	1504.1
60°	1128.5	1157.3	1219.4	1293.6	1349.6
62.5°	983.1	1013.4	1066.4	1131.5	1195.1
65°	842.2	864.9	916.4	981.6	1037.6
67.5°	705.9	725.6	777.1	822.5	881.6
70°	568.0	593.8	631.6	675.6	713.4
72.5°	457.5	468.1	499.9	531.7	571.1
75°	337.8	356.0	381.7	399.9	422.6
77.5°	242.4	253.0	268.1	283.3	304.5
80°	162.1	166.6	180.3	183.3	199.9
82.5°	98.5	101.5	104.5	106.0	112.1
85°	53.0	53.0	53.0	50.0	50.0
87.5°	30.3	30.3	25.8	21.2	15.1
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)