

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: P558377

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-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: P558377  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

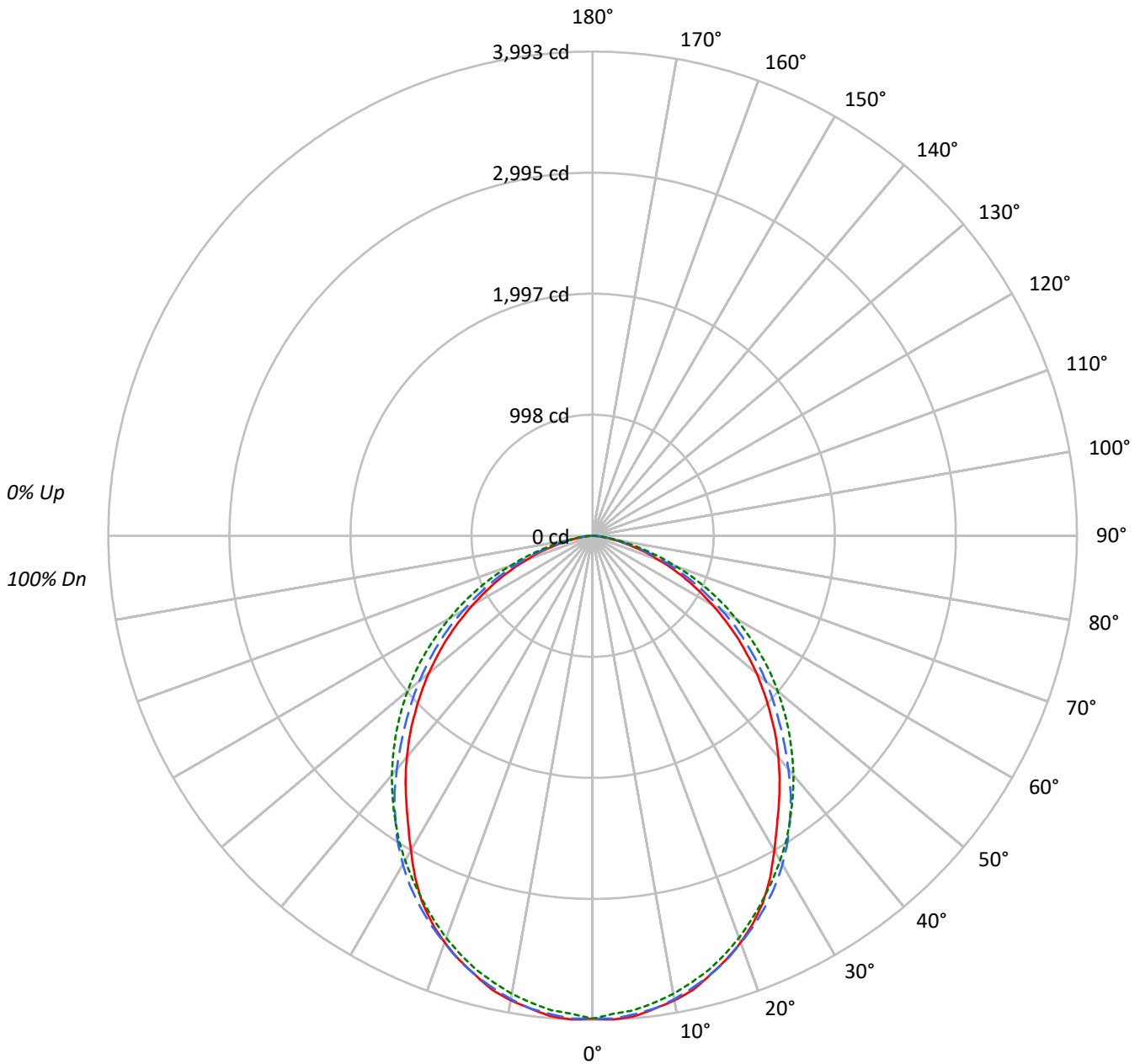
Lumens per Lamp: N/A  
Luminaire Lumens: 9208.0 lumens  
Efficiency: N/A  
Efficacy: 92.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (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°	10716	10716	10716
5°	10745	10699	10608
10°	10630	10601	10480
15°	10442	10442	10323
20°	10221	10234	10103
25°	9884	10007	9848
30°	9308	9726	9607
35°	8795	9323	9338
40°	8368	8819	9050
45°	7889	8285	8710
50°	7384	7807	8339
55°	6811	7264	7888
60°	6134	6628	7336
65°	5416	5894	6673
70°	4514	5020	5670
75°	3548	4008	4438
80°	2537	2822	3129
85°	1652	1652	1559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	374.9	4.1
10°-20°	1053.3	11.4
20°-30°	1539.2	16.7
30°-40°	1747.2	19.0
40°-50°	1686.6	18.3
50°-60°	1391.4	15.1
60°-70°	926.5	10.1
70°-80°	414.6	4.5
80°-90°	74.2	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°	2967.5	32.2
0°-40°	4714.7	51.2
0°-60°	7792.7	84.6
0°-90°	9208.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9208.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3982	3982	3982	3982	3982	
5°	3978	3976	3961	3939	3927	376
15°	3748	3757	3748	3731	3705	1057
25°	3329	3355	3370	3346	3317	1525
35°	2677	2714	2838	2853	2842	1677
45°	2073	2108	2177	2276	2289	1599
55°	1452	1476	1548	1634	1681	1296
65°	851	874	926	991	1048	843
75°	341	360	386	404	427	373
85°	54	54	54	50	50	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3982.2	3982.2	3982.2	3982.2	3982.2
2.5°	3992.9	3994.5	3985.3	3960.8	3945.5
5°	3977.6	3976.1	3960.8	3939.4	3927.1
7.5°	3933.3	3936.3	3931.7	3901.1	3884.3
10°	3890.4	3892.0	3879.7	3855.2	3835.4
12.5°	3835.4	3833.8	3817.0	3804.8	3772.6
15°	3748.2	3757.3	3748.2	3731.3	3705.3
17.5°	3664.0	3664.0	3670.1	3641.1	3621.2
20°	3569.2	3573.7	3573.7	3550.8	3527.9
22.5°	3459.0	3472.8	3477.4	3452.9	3425.4
25°	3329.0	3355.0	3370.3	3345.8	3316.7
27.5°	3171.4	3211.2	3257.1	3238.7	3206.6
30°	2995.5	3053.6	3130.1	3114.8	3091.8
32.5°	2828.7	2886.8	2992.4	2986.3	2974.0
35°	2677.3	2714.0	2837.9	2853.2	2842.5
37.5°	2533.4	2567.1	2683.4	2718.6	2709.4
40°	2382.0	2418.7	2510.5	2573.2	2576.3
42.5°	2232.1	2267.3	2342.2	2432.5	2432.5
45°	2073.0	2108.1	2177.0	2276.4	2288.7
47.5°	1916.9	1953.6	2020.9	2120.4	2140.3
50°	1763.9	1797.6	1864.9	1961.3	1991.9
52.5°	1604.8	1641.5	1707.3	1796.1	1840.4
55°	1451.8	1476.3	1548.2	1633.9	1681.3
57.5°	1292.7	1315.7	1396.8	1470.2	1519.1
60°	1139.7	1168.8	1231.5	1306.5	1363.1
62.5°	992.9	1023.5	1077.0	1142.8	1207.1
65°	850.6	873.5	925.6	991.3	1048.0
67.5°	712.9	732.8	784.8	830.7	890.4
70°	573.7	599.7	638.0	682.3	720.6
72.5°	462.0	472.7	504.9	537.0	576.8
75°	341.2	359.5	385.5	403.9	426.8
77.5°	244.8	255.5	270.8	286.1	307.5
80°	163.7	168.3	182.1	185.1	201.9
82.5°	99.4	102.5	105.6	107.1	113.2
85°	53.5	53.5	53.5	50.5	50.5
87.5°	30.6	30.6	26.0	21.4	15.3
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)