

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: P558398

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-80-97-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: P558398  
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-50-UNV-80-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND  
5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

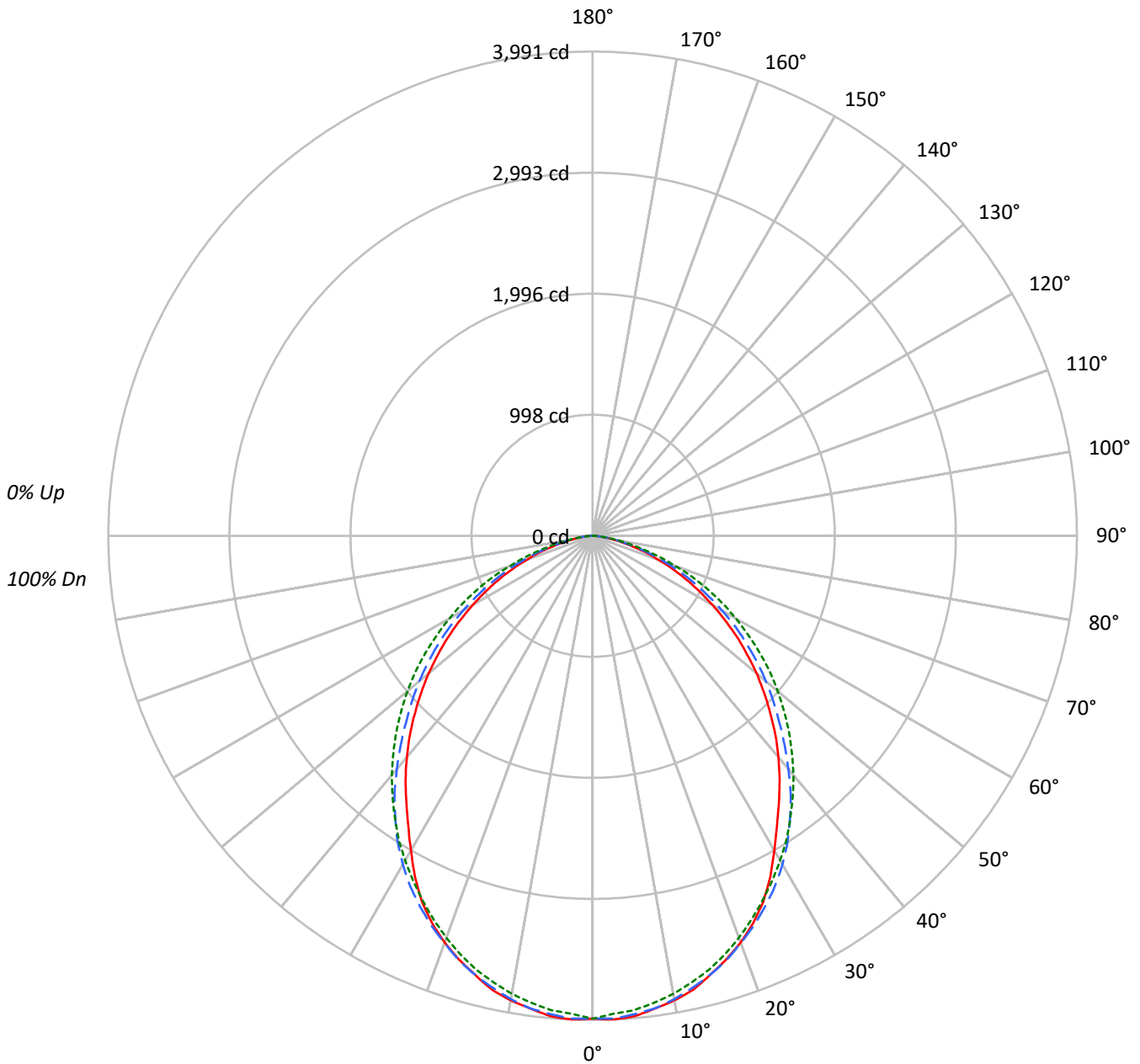
Lumens per Lamp: N/A  
Luminaire Lumens: 9203.0 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	10710	10710	10710
5°	10739	10693	10602
10°	10625	10596	10474
15°	10436	10436	10317
20°	10215	10228	10097
25°	9879	10001	9842
30°	9303	9721	9602
35°	8790	9317	9333
40°	8363	8814	9045
45°	7884	8280	8705
50°	7381	7803	8334
55°	6807	7260	7884
60°	6131	6625	7332
65°	5413	5890	6669
70°	4511	5017	5666
75°	3545	4006	4435
80°	2535	2820	3127
85°	1652	1652	1559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	374.7	4.1
10°-20°	1052.7	11.4
20°-30°	1538.4	16.7
30°-40°	1746.2	19.0
40°-50°	1685.7	18.3
50°-60°	1390.6	15.1
60°-70°	926.0	10.1
70°-80°	414.4	4.5
80°-90°	74.1	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°	2965.9	32.2
0°-40°	4712.1	51.2
0°-60°	7788.4	84.6
0°-90°	9203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9203.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3980	3980	3980	3980	3980	
5°	3976	3974	3959	3937	3925	376
15°	3746	3755	3746	3729	3703	1056
25°	3327	3353	3368	3344	3315	1524
35°	2676	2712	2836	2852	2841	1677
45°	2072	2107	2176	2275	2287	1599
55°	1451	1476	1547	1633	1680	1295
65°	850	873	925	991	1047	843
75°	341	359	385	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°	3980.1	<i>3980.1</i>	3980.1	3980.1	3980.1
2.5°	<i>3990.8</i>	<i>3992.3</i>	<i>3983.1</i>	<i>3958.7</i>	<i>3943.4</i>
5°	3975.5	<i>3973.9</i>	3958.7	3937.2	3925.0
7.5°	3931.1	<i>3934.2</i>	3929.6	3899.0	3882.2
10°	3888.3	<i>3889.8</i>	3877.6	3853.2	3833.3
12.5°	3833.3	<i>3831.7</i>	3814.9	3802.7	3770.6
15°	3746.1	<i>3755.3</i>	3746.1	3729.3	3703.3
17.5°	3662.0	<i>3662.0</i>	3668.1	3639.1	3619.2
20°	3567.2	<i>3571.8</i>	3571.8	3548.9	3525.9
22.5°	3457.1	<i>3470.9</i>	3475.5	3451.0	3423.5
25°	3327.2	<i>3353.2</i>	3368.4	3344.0	3314.9
27.5°	3169.7	<i>3209.4</i>	3255.3	3237.0	3204.8
30°	2993.8	<i>3051.9</i>	3128.4	3113.1	3090.2
32.5°	2827.2	<i>2885.3</i>	2990.8	2984.7	2972.4
35°	2675.8	<i>2712.5</i>	2836.3	2851.6	2840.9
37.5°	2532.1	<i>2565.7</i>	2681.9	2717.1	2707.9
40°	2380.7	<i>2417.4</i>	2509.1	2571.8	2574.9
42.5°	2230.9	<i>2266.0</i>	2340.9	2431.2	2431.2
45°	2071.8	<i>2107.0</i>	2175.8	2275.2	2287.4
47.5°	1915.9	<i>1952.6</i>	2019.8	2119.2	2139.1
50°	1763.0	<i>1796.6</i>	1863.9	1960.2	1990.8
52.5°	1604.0	<i>1640.6</i>	1706.4	1795.1	1839.4
55°	1451.0	<i>1475.5</i>	1547.4	1633.0	1680.4
57.5°	1292.0	<i>1315.0</i>	1396.0	1469.4	1518.3
60°	1139.1	<i>1168.2</i>	1230.9	1305.8	1362.4
62.5°	992.3	<i>1022.9</i>	1076.4	1142.2	1206.4
65°	850.1	<i>873.1</i>	925.1	990.8	1047.4
67.5°	712.5	<i>732.4</i>	784.4	830.3	889.9
70°	573.4	<i>599.4</i>	637.6	681.9	720.2
72.5°	461.8	<i>472.5</i>	504.6	536.7	576.4
75°	341.0	<i>359.3</i>	385.3	403.7	426.6
77.5°	244.6	<i>255.3</i>	270.6	285.9	307.3
80°	163.6	<i>168.2</i>	182.0	185.0	201.8
82.5°	99.4	<i>102.4</i>	105.5	107.0	113.1
85°	53.5	<i>53.5</i>	53.5	50.5	50.5
87.5°	30.6	<i>30.6</i>	26.0	21.4	15.3
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)