

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: P558204

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-80-96-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: P558204  
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-30-UNV-80-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

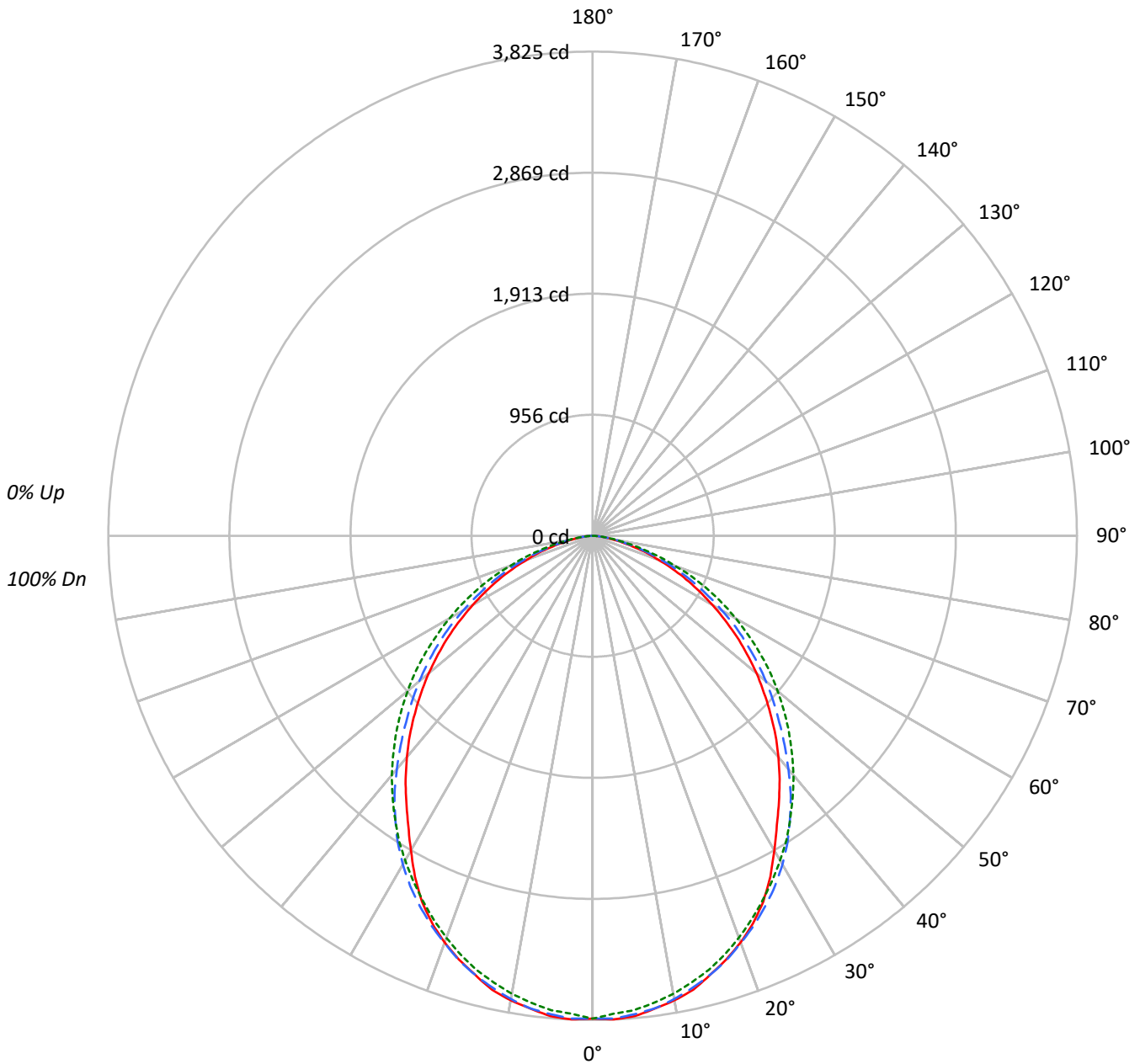
Lumens per Lamp: N/A  
Luminaire Lumens: 8820.0 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (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°	10264	10264	10264
5°	10292	10248	10161
10°	10183	10154	10038
15°	10002	10002	9888
20°	9790	9803	9677
25°	9468	9585	9433
30°	8915	9316	9203
35°	8424	8930	8944
40°	8015	8447	8669
45°	7556	7936	8343
50°	7073	7478	7987
55°	6525	6958	7556
60°	5875	6349	7027
65°	5188	5645	6392
70°	4323	4808	5430
75°	3398	3840	4250
80°	2430	2703	2997
85°	1584	1584	1494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	359.1	4.1
10°-20°	1008.9	11.4
20°-30°	1474.4	16.7
30°-40°	1673.6	19.0
40°-50°	1615.6	18.3
50°-60°	1332.7	15.1
60°-70°	887.5	10.1
70°-80°	397.1	4.5
80°-90°	71.1	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°	2842.4	32.2
0°-40°	4516.0	51.2
0°-60°	7464.3	84.6
0°-90°	8820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8820.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3814	3814	3814	3814	3814	
5°	3810	3809	3794	3773	3762	361
15°	3590	3599	3590	3574	3549	1012
25°	3189	3214	3228	3205	3177	1460
35°	2564	2600	2718	2733	2723	1607
45°	1986	2019	2085	2180	2192	1532
55°	1391	1414	1483	1565	1610	1241
65°	815	837	887	950	1004	808
75°	327	344	369	387	409	357
85°	51	51	51	48	48	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3814.4	3814.4	3814.4	3814.4	3814.4
2.5°	3824.7	3826.1	3817.4	3793.9	3779.3
5°	3810.0	3808.6	3793.9	3773.4	3761.7
7.5°	3767.5	3770.5	3766.1	3736.8	3720.6
10°	3726.5	3728.0	3716.2	3692.8	3673.7
12.5°	3673.7	3672.3	3656.2	3644.4	3613.7
15°	3590.2	3599.0	3590.2	3574.1	3549.2
17.5°	3509.6	3509.6	3515.5	3487.6	3468.6
20°	3418.8	3423.2	3423.2	3401.2	3379.2
22.5°	3313.3	3326.4	3330.8	3307.4	3281.0
25°	3188.7	3213.6	3228.3	3204.8	3177.0
27.5°	3037.8	3075.9	3119.8	3102.2	3071.5
30°	2869.2	2924.9	2998.2	2983.5	2961.6
32.5°	2709.5	2765.2	2866.3	2860.5	2848.7
35°	2564.4	2599.6	2718.3	2733.0	2722.7
37.5°	2426.7	2458.9	2570.3	2604.0	2595.2
40°	2281.6	2316.8	2404.7	2464.8	2467.7
42.5°	2138.0	2171.7	2243.5	2330.0	2330.0
45°	1985.6	2019.3	2085.3	2180.5	2192.2
47.5°	1836.1	1871.3	1935.8	2031.0	2050.1
50°	1689.6	1721.8	1786.3	1878.6	1907.9
52.5°	1537.2	1572.4	1635.4	1720.4	1762.9
55°	1390.7	1414.1	1483.0	1565.0	1610.5
57.5°	1238.3	1260.2	1337.9	1408.2	1455.1
60°	1091.7	1119.6	1179.6	1251.4	1305.7
62.5°	951.0	980.3	1031.6	1094.6	1156.2
65°	814.8	836.7	886.6	949.6	1003.8
67.5°	682.9	701.9	751.7	795.7	852.9
70°	549.5	574.4	611.1	653.6	690.2
72.5°	442.5	452.8	483.6	514.4	552.5
75°	326.8	344.4	369.3	386.9	408.8
77.5°	234.5	244.7	259.4	274.0	294.5
80°	156.8	161.2	174.4	177.3	193.4
82.5°	95.3	98.2	101.1	102.6	108.4
85°	51.3	51.3	51.3	48.4	48.4
87.5°	29.3	29.3	24.9	20.5	14.7
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)