

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: P558370

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-93-85-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: P558370  
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-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

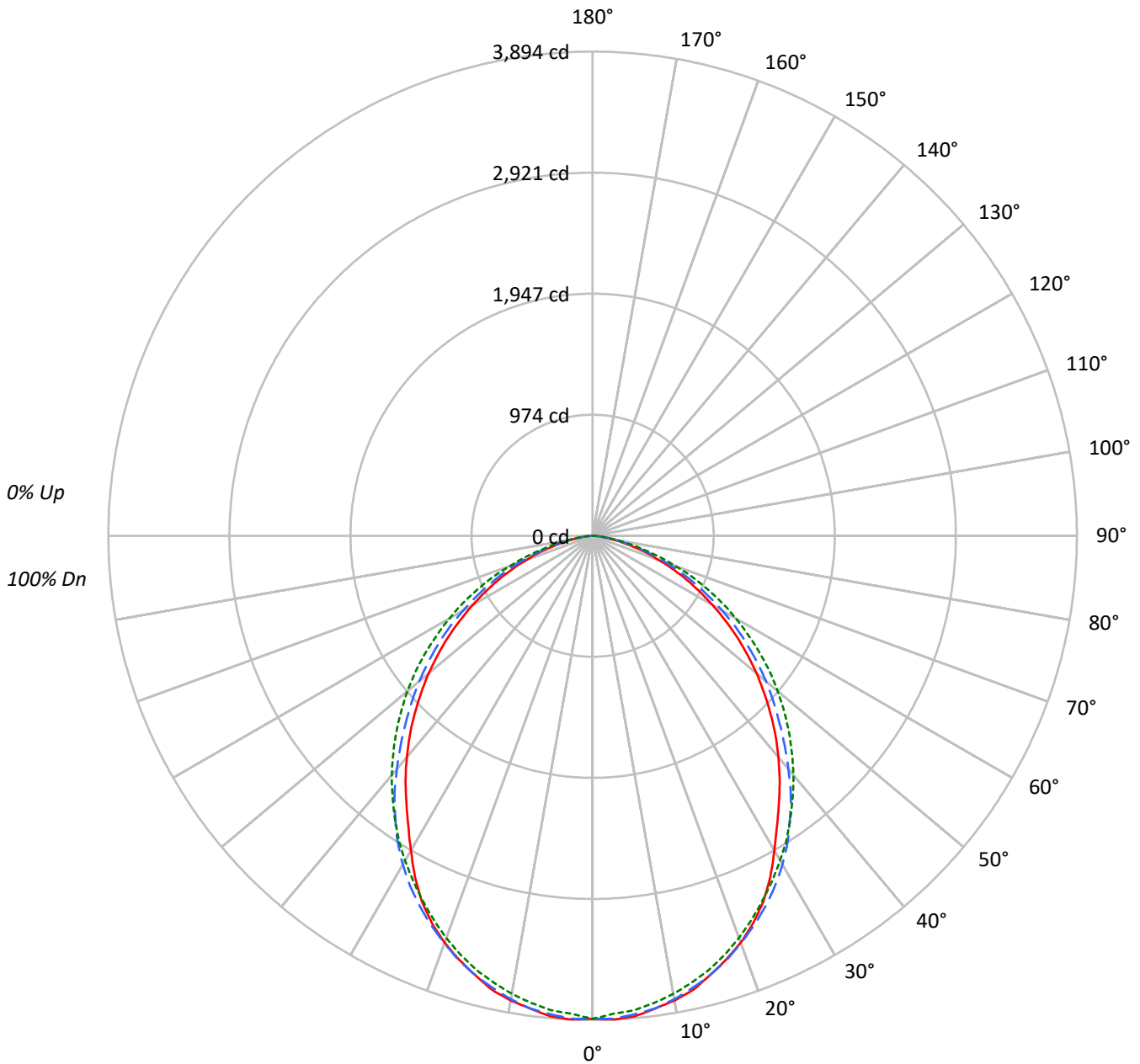
Lumens per Lamp: N/A  
Luminaire Lumens: 8981.0 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	10452	10452	10452
5°	10480	10435	10347
10°	10368	10340	10222
15°	10185	10185	10068
20°	9969	9982	9854
25°	9641	9760	9605
30°	9078	9486	9370
35°	8578	9093	9108
40°	8161	8601	8827
45°	7695	8080	8495
50°	7202	7615	8133
55°	6643	7084	7694
60°	5983	6465	7155
65°	5282	5748	6508
70°	4403	4895	5530
75°	3459	3909	4328
80°	2475	2752	3053
85°	1612	1612	1519



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	365.7	4.1
10°-20°	1027.3	11.4
20°-30°	1501.3	16.7
30°-40°	1704.1	19.0
40°-50°	1645.1	18.3
50°-60°	1357.1	15.1
60°-70°	903.7	10.1
70°-80°	404.4	4.5
80°-90°	72.3	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°	2894.3	32.2
0°-40°	4598.4	51.2
0°-60°	7600.6	84.6
0°-90°	8981.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8981.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3884	3884	3884	3884	3884	
5°	3880	3878	3863	3842	3830	367
15°	3656	3665	3656	3639	3614	1031
25°	3247	3272	3287	3263	3235	1487
35°	2611	2647	2768	2783	2772	1636
45°	2022	2056	2123	2220	2232	1560
55°	1416	1440	1510	1594	1640	1264
65°	830	852	903	967	1022	823
75°	333	351	376	394	416	364
85°	52	52	52	49	49	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3884.1	<i>3884.1</i>	3884.1	3884.1	3884.1
2.5°	<i>3894.5</i>	<i>3896.0</i>	<i>3887.0</i>	<i>3863.2</i>	<i>3848.2</i>
5°	3879.6	<i>3878.1</i>	3863.2	3842.3	3830.3
7.5°	3836.3	<i>3839.3</i>	3834.8	3805.0	3788.6
10°	3794.5	<i>3796.0</i>	3784.1	3760.2	3740.8
12.5°	3740.8	<i>3739.3</i>	3722.9	3711.0	3679.6
15°	3655.8	<i>3664.7</i>	3655.8	3639.3	3614.0
17.5°	3573.7	<i>3573.7</i>	3579.7	3551.3	3531.9
20°	3481.2	<i>3485.6</i>	3485.6	3463.3	3440.9
22.5°	3373.7	<i>3387.2</i>	3391.6	3367.8	3340.9
25°	3246.9	<i>3272.3</i>	3287.2	3263.3	3235.0
27.5°	3093.2	<i>3132.0</i>	3176.8	3158.9	3127.5
30°	2921.6	<i>2978.3</i>	3052.9	3038.0	3015.6
32.5°	2759.0	<i>2815.7</i>	2918.6	2912.7	2900.7
35°	2611.3	<i>2647.1</i>	2767.9	2782.8	2772.4
37.5°	2471.0	<i>2503.8</i>	2617.2	2651.5	2642.6
40°	2323.3	<i>2359.1</i>	2448.6	2509.8	2512.8
42.5°	2177.0	<i>2211.4</i>	2284.5	2372.5	2372.5
45°	2021.9	<i>2056.2</i>	2123.3	2220.3	2232.2
47.5°	1869.7	<i>1905.5</i>	1971.1	2068.1	2087.5
50°	1720.4	<i>1753.3</i>	1818.9	1912.9	1942.8
52.5°	1565.3	<i>1601.1</i>	1665.2	1751.8	1795.0
55°	1416.0	<i>1439.9</i>	1510.0	1593.6	1639.9
57.5°	1260.9	<i>1283.2</i>	1362.3	1434.0	1481.7
60°	1111.6	<i>1140.0</i>	1201.2	1274.3	1329.5
62.5°	968.4	<i>998.2</i>	1050.5	1114.6	1177.3
65°	829.6	<i>852.0</i>	902.7	966.9	1022.1
67.5°	695.3	<i>714.7</i>	765.5	810.2	868.4
70°	559.6	<i>584.9</i>	622.2	665.5	702.8
72.5°	450.6	<i>461.1</i>	492.4	523.7	562.5
75°	332.7	<i>350.7</i>	376.0	393.9	416.3
77.5°	238.7	<i>249.2</i>	264.1	279.0	299.9
80°	159.7	<i>164.1</i>	177.6	180.5	197.0
82.5°	97.0	<i>100.0</i>	103.0	104.5	110.4
85°	52.2	<i>52.2</i>	52.2	49.2	49.2
87.5°	29.8	<i>29.8</i>	25.4	20.9	14.9
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)