

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: P557547

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-93-94-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: P557547  
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-LD4-2STD-35-UNV-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

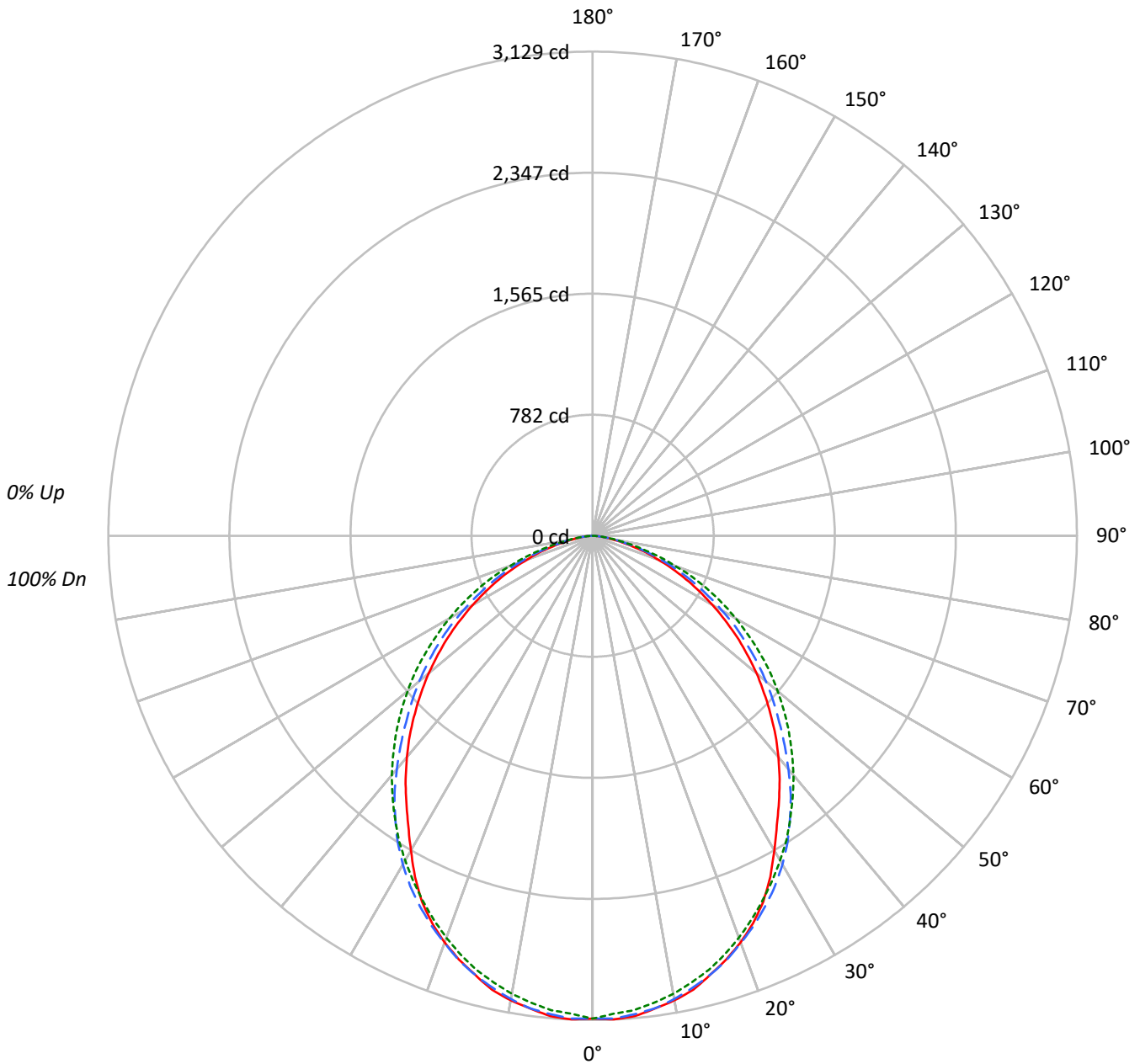
Lumens per Lamp: N/A  
Luminaire Lumens: 7215.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	8397	8397	8397
5°	8419	8383	8312
10°	8330	8307	8212
15°	8182	8182	8088
20°	8009	8019	7916
25°	7745	7841	7717
30°	7293	7621	7528
35°	6891	7305	7317
40°	6556	6910	7091
45°	6181	6492	6825
50°	5786	6118	6534
55°	5337	5691	6181
60°	4807	5194	5748
65°	4244	4618	5228
70°	3537	3933	4442
75°	2779	3141	3477
80°	1988	2210	2452
85°	1297	1297	1223



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.8	4.1
10°-20°	825.3	11.4
20°-30°	1206.1	16.7
30°-40°	1369.0	19.0
40°-50°	1321.6	18.3
50°-60°	1090.2	15.1
60°-70°	726.0	10.1
70°-80°	324.9	4.5
80°-90°	58.1	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°	2325.2	32.2
0°-40°	3694.2	51.2
0°-60°	6106.0	84.6
0°-90°	7215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7215.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3120	3120	3120	3120	3120	
5°	3117	3116	3104	3087	3077	295
15°	2937	2944	2937	2924	2903	828
25°	2608	2629	2641	2622	2599	1195
35°	2098	2127	2224	2236	2227	1314
45°	1624	1652	1706	1784	1793	1253
55°	1138	1157	1213	1280	1317	1015
65°	666	684	725	777	821	661
75°	267	282	302	316	334	292
85°	42	42	42	40	40	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3120.3	<i>3120.3</i>	3120.3	3120.3	3120.3
2.5°	<i>3128.7</i>	<i>3129.9</i>	<i>3122.7</i>	<i>3103.5</i>	<i>3091.5</i>
5°	3116.7	<i>3115.5</i>	3103.5	3086.7	3077.1
7.5°	3081.9	<i>3084.3</i>	3080.7	3056.8	3043.6
10°	3048.4	<i>3049.6</i>	3040.0	3020.8	3005.2
12.5°	3005.2	<i>3004.0</i>	2990.8	2981.2	2956.1
15°	2936.9	<i>2944.1</i>	2936.9	2923.7	2903.3
17.5°	2871.0	<i>2871.0</i>	2875.8	2853.0	2837.4
20°	2796.6	<i>2800.2</i>	2800.2	2782.3	2764.3
22.5°	2710.3	<i>2721.1</i>	2724.7	2705.5	2684.0
25°	2608.4	<i>2628.8</i>	2640.8	2621.6	2598.9
27.5°	2485.0	<i>2516.1</i>	2552.1	2537.7	2512.5
30°	2347.1	<i>2392.7</i>	2452.6	2440.6	2422.6
32.5°	2216.5	<i>2262.0</i>	2344.7	2339.9	2330.3
35°	2097.8	<i>2126.6</i>	2223.6	2235.6	2227.2
37.5°	1985.1	<i>2011.5</i>	2102.6	2130.1	2123.0
40°	1866.4	<i>1895.2</i>	1967.1	2016.3	2018.7
42.5°	1749.0	<i>1776.5</i>	1835.3	1906.0	1906.0
45°	1624.3	<i>1651.9</i>	1705.8	1783.7	1793.3
47.5°	1502.0	<i>1530.8</i>	1583.5	1661.4	1677.0
50°	1382.1	<i>1408.5</i>	1461.3	1536.8	1560.7
52.5°	1257.5	<i>1286.2</i>	1337.8	1407.3	1442.1
55°	1137.6	<i>1156.8</i>	1213.1	1280.2	1317.4
57.5°	1012.9	<i>1030.9</i>	1094.4	1152.0	1190.3
60°	893.1	<i>915.8</i>	965.0	1023.7	1068.1
62.5°	778.0	<i>802.0</i>	843.9	895.5	945.8
65°	666.5	<i>684.5</i>	725.2	776.8	821.1
67.5°	558.6	<i>574.2</i>	614.9	650.9	697.7
70°	449.5	<i>469.9</i>	499.9	534.6	564.6
72.5°	362.0	<i>370.4</i>	395.6	420.8	451.9
75°	267.3	<i>281.7</i>	302.1	316.5	334.4
77.5°	191.8	<i>200.2</i>	212.2	224.2	240.9
80°	128.3	<i>131.9</i>	142.6	145.0	158.2
82.5°	77.9	<i>80.3</i>	82.7	83.9	88.7
85°	42.0	<i>42.0</i>	42.0	39.6	39.6
87.5°	24.0	<i>24.0</i>	20.4	16.8	12.0
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)