

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: P556762

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-94-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: P556762  
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-LD4-1STD-35-UNV-82-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

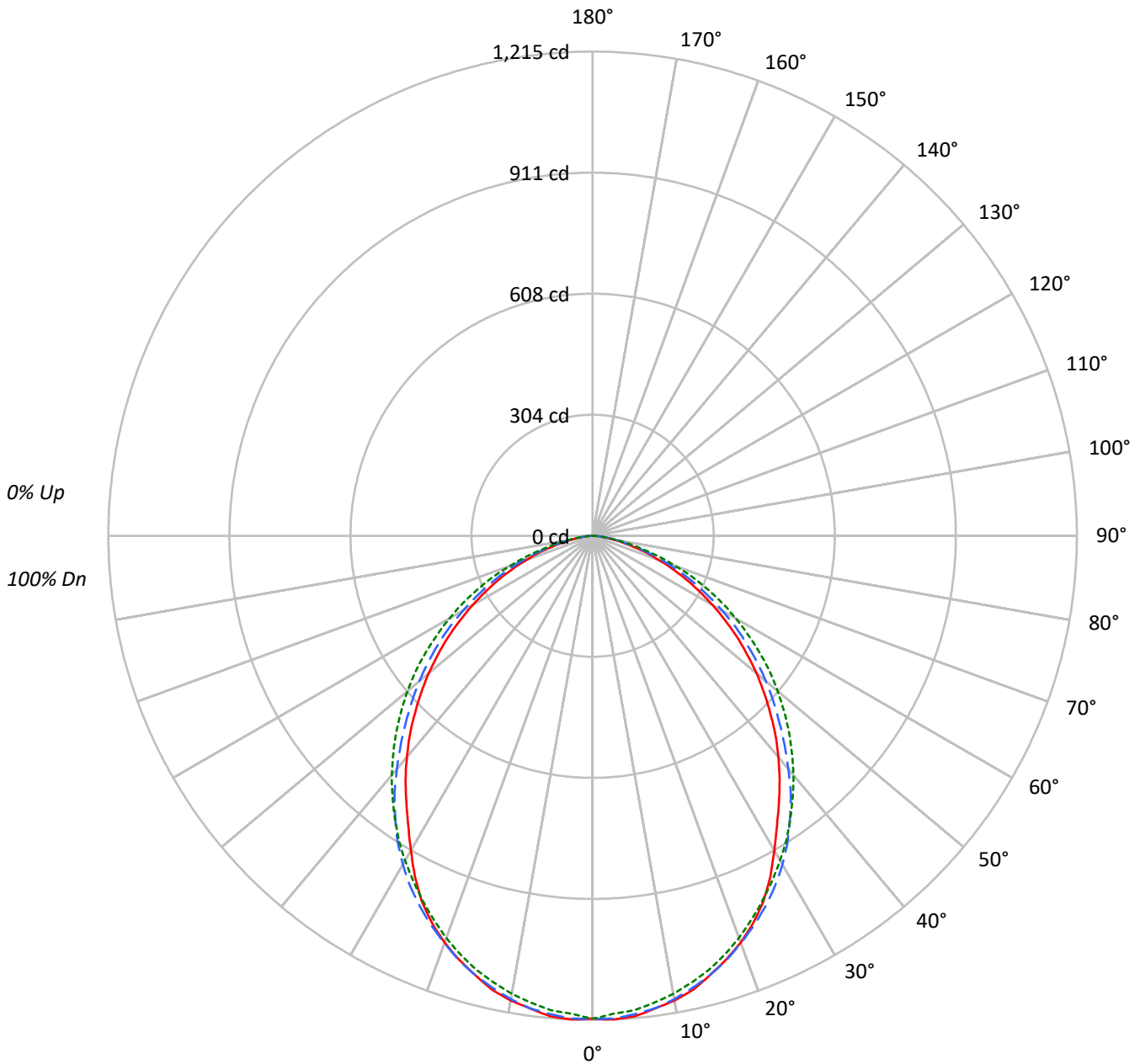
Lumens per Lamp: N/A  
Luminaire Lumens: 2802.0 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	3261	3261	3261
5°	3270	3256	3228
10°	3235	3226	3189
15°	3178	3178	3141
20°	3110	3114	3074
25°	3008	3045	2997
30°	2832	2960	2924
35°	2676	2837	2842
40°	2546	2683	2754
45°	2401	2521	2650
50°	2247	2376	2537
55°	2073	2210	2400
60°	1866	2017	2232
65°	1648	1793	2031
70°	1374	1527	1725
75°	1079	1220	1351
80°	772	859	953
85°	503	503	475



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.1	4.1
10°-20°	320.5	11.4
20°-30°	468.4	16.7
30°-40°	531.7	19.0
40°-50°	513.2	18.3
50°-60°	423.4	15.1
60°-70°	281.9	10.1
70°-80°	126.2	4.5
80°-90°	22.6	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°	903.0	32.2
0°-40°	1434.7	51.2
0°-60°	2371.3	84.6
0°-90°	2802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2802.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1212	1212	1212	1212	1212	
5°	1210	1210	1205	1199	1195	115
15°	1141	1143	1141	1135	1128	322
25°	1013	1021	1026	1018	1009	464
35°	815	826	864	868	865	510
45°	631	642	662	693	696	487
55°	442	449	471	497	512	394
65°	259	266	282	302	319	257
75°	104	109	117	123	130	114
85°	16	16	16	15	15	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1211.8	<i>1211.8</i>	1211.8	1211.8	1211.8
2.5°	<i>1215.1</i>	<i>1215.5</i>	<i>1212.7</i>	<i>1205.3</i>	<i>1200.6</i>
5°	1210.4	<i>1209.9</i>	1205.3	1198.8	1195.0
7.5°	1196.9	<i>1197.8</i>	1196.4	1187.1	1182.0
10°	1183.9	<i>1184.3</i>	1180.6	1173.2	1167.1
12.5°	1167.1	<i>1166.6</i>	1161.5	1157.8	1148.0
15°	1140.6	<i>1143.4</i>	1140.6	1135.4	1127.5
17.5°	1115.0	<i>1115.0</i>	1116.8	1108.0	1101.9
20°	1086.1	<i>1087.5</i>	1087.5	1080.5	1073.5
22.5°	1052.6	<i>1056.8</i>	1058.2	1050.7	1042.3
25°	1013.0	<i>1020.9</i>	1025.6	1018.1	1009.3
27.5°	965.1	<i>977.2</i>	991.1	985.5	975.8
30°	911.5	<i>929.2</i>	952.5	947.8	940.9
32.5°	860.8	<i>878.5</i>	910.6	908.7	905.0
35°	814.7	<i>825.9</i>	863.6	868.2	865.0
37.5°	770.9	<i>781.2</i>	816.6	827.3	824.5
40°	724.8	<i>736.0</i>	763.9	783.0	784.0
42.5°	679.2	<i>689.9</i>	712.7	740.2	740.2
45°	630.8	<i>641.5</i>	662.5	692.7	696.4
47.5°	583.3	<i>594.5</i>	615.0	645.2	651.3
50°	536.8	<i>547.0</i>	567.5	596.8	606.1
52.5°	488.3	<i>499.5</i>	519.5	546.5	560.0
55°	441.8	<i>449.2</i>	471.1	497.2	511.6
57.5°	393.4	<i>400.4</i>	425.0	447.4	462.3
60°	346.8	<i>355.7</i>	374.8	397.6	414.8
62.5°	302.1	<i>311.4</i>	327.7	347.8	367.3
65°	258.8	<i>265.8</i>	281.6	301.7	318.9
67.5°	216.9	<i>223.0</i>	238.8	252.8	270.9
70°	174.6	<i>182.5</i>	194.1	207.6	219.3
72.5°	140.6	<i>143.9</i>	153.6	163.4	175.5
75°	103.8	<i>109.4</i>	117.3	122.9	129.9
77.5°	74.5	<i>77.7</i>	82.4	87.1	93.6
80°	49.8	<i>51.2</i>	55.4	56.3	61.5
82.5°	30.3	<i>31.2</i>	32.1	32.6	34.4
85°	16.3	<i>16.3</i>	16.3	15.4	15.4
87.5°	9.3	<i>9.3</i>	7.9	6.5	4.7
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)