

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: P556888

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-82-88-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: P556888  
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-50-UNV-82-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

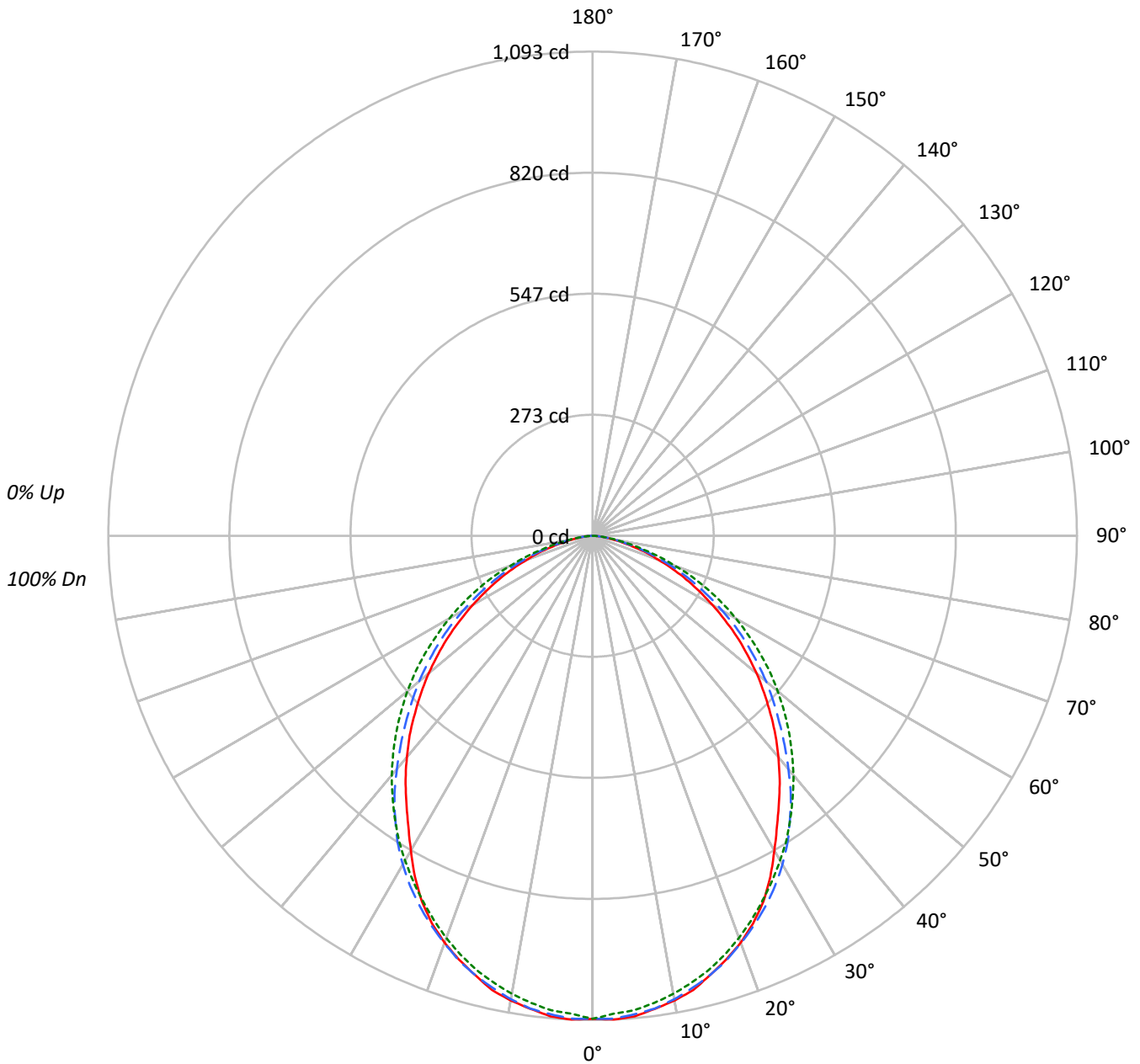
Lumens per Lamp: N/A  
Luminaire Lumens: 2521.0 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2934	2934	2934
5°	2942	2929	2904
10°	2910	2902	2869
15°	2859	2859	2826
20°	2798	2802	2766
25°	2706	2740	2696
30°	2548	2663	2630
35°	2408	2553	2556
40°	2291	2414	2478
45°	2160	2268	2385
50°	2022	2138	2283
55°	1865	1989	2160
60°	1679	1815	2009
65°	1483	1613	1827
70°	1236	1375	1552
75°	971	1098	1215
80°	694	772	857
85°	454	454	426



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.7	4.1
10°-20°	288.4	11.4
20°-30°	421.4	16.7
30°-40°	478.4	19.0
40°-50°	461.8	18.3
50°-60°	380.9	15.1
60°-70°	253.7	10.1
70°-80°	113.5	4.5
80°-90°	20.3	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°	812.4	32.2
0°-40°	1290.8	51.2
0°-60°	2133.5	84.6
0°-90°	2521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2521.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1090	1090	1090	1090	1090	
5°	1089	1089	1084	1078	1075	103
15°	1026	1029	1026	1022	1014	289
25°	911	918	923	916	908	417
35°	733	743	777	781	778	459
45°	568	577	596	623	627	438
55°	398	404	424	447	460	355
65°	233	239	253	271	287	231
75°	93	98	106	111	117	102
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1090.3	1090.3	1090.3	1090.3	1090.3
2.5°	1093.2	1093.6	1091.1	1084.4	1080.2
5°	1089.0	1088.6	1084.4	1078.5	1075.2
7.5°	1076.9	1077.7	1076.4	1068.1	1063.5
10°	1065.1	1065.6	1062.2	1055.5	1050.1
12.5°	1050.1	1049.6	1045.0	1041.7	1032.9
15°	1026.2	1028.7	1026.2	1021.6	1014.5
17.5°	1003.1	1003.1	1004.8	996.9	991.4
20°	977.2	978.4	978.4	972.2	965.9
22.5°	947.0	950.8	952.0	945.3	937.8
25°	911.4	918.5	922.7	916.0	908.1
27.5°	868.3	879.2	891.7	886.7	877.9
30°	820.1	836.0	857.0	852.8	846.5
32.5°	774.5	790.4	819.3	817.6	814.2
35°	733.0	743.0	777.0	781.2	778.2
37.5°	693.6	702.8	734.7	744.3	741.8
40°	652.1	662.2	687.3	704.5	705.3
42.5°	611.1	620.7	641.3	666.0	666.0
45°	567.5	577.2	596.0	623.2	626.6
47.5°	524.8	534.9	553.3	580.5	586.0
50°	482.9	492.1	510.6	537.0	545.3
52.5°	439.4	449.4	467.4	491.7	503.9
55°	397.5	404.2	423.9	447.3	460.3
57.5°	353.9	360.2	382.4	402.5	415.9
60°	312.0	320.0	337.2	357.7	373.2
62.5°	271.8	280.2	294.9	312.9	330.5
65°	232.9	239.2	253.4	271.4	286.9
67.5°	195.2	200.6	214.9	227.4	243.8
70°	157.1	164.2	174.7	186.8	197.3
72.5°	126.5	129.4	138.2	147.0	157.9
75°	93.4	98.4	105.6	110.6	116.9
77.5°	67.0	69.9	74.1	78.3	84.2
80°	44.8	46.1	49.8	50.7	55.3
82.5°	27.2	28.1	28.9	29.3	31.0
85°	14.7	14.7	14.7	13.8	13.8
87.5°	8.4	8.4	7.1	5.9	4.2
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)