

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: P556662

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-80-87-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: P556662  
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-30-UNV-80-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

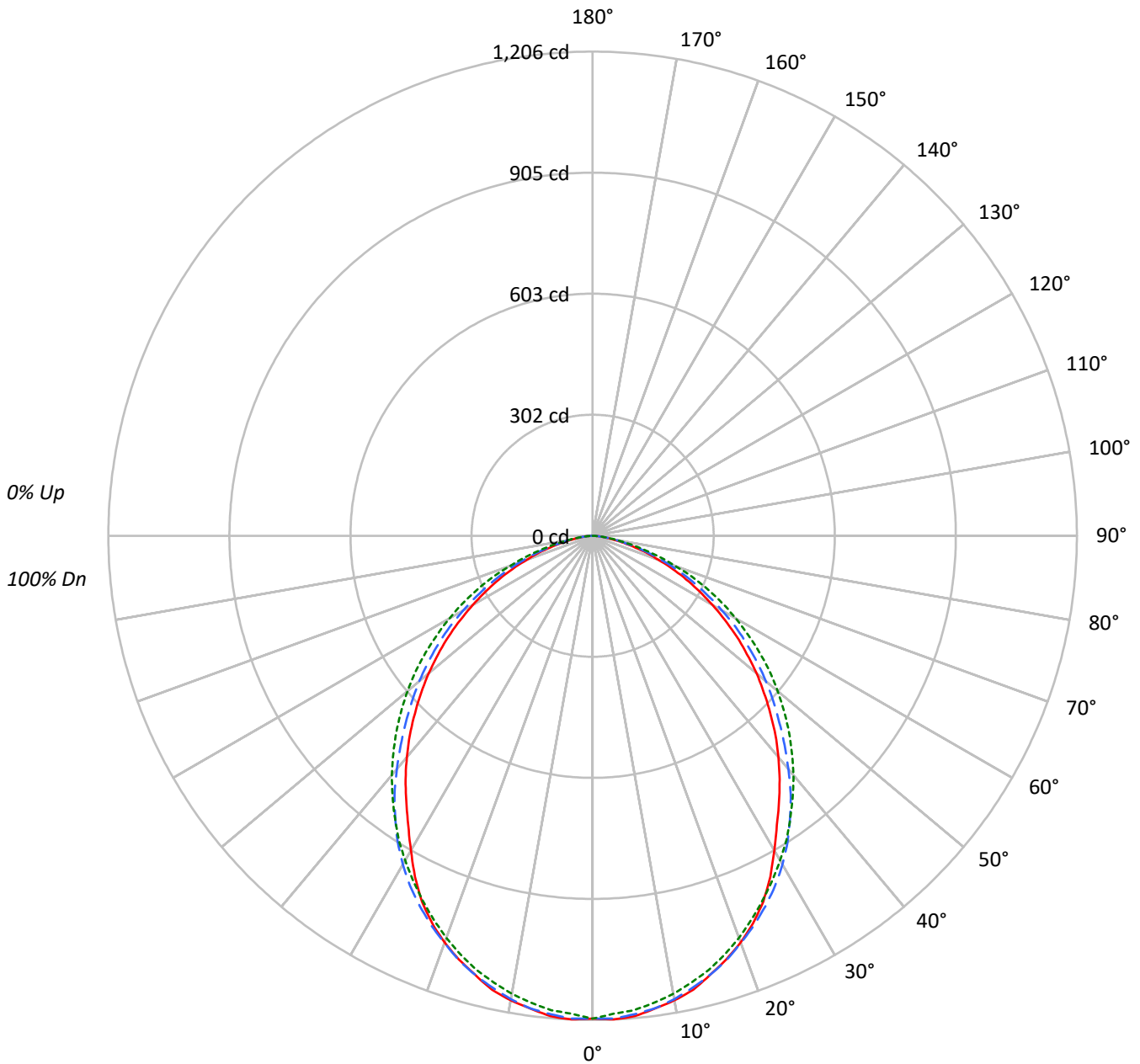
Lumens per Lamp: N/A  
Luminaire Lumens: 2781.0 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (Ain): 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°	3236	3236	3236
5°	3245	3231	3204
10°	3211	3202	3165
15°	3154	3154	3118
20°	3087	3091	3051
25°	2985	3022	2974
30°	2811	2938	2902
35°	2656	2816	2820
40°	2527	2663	2733
45°	2383	2502	2630
50°	2230	2358	2519
55°	2057	2194	2382
60°	1852	2002	2216
65°	1636	1780	2015
70°	1364	1516	1712
75°	1071	1210	1340
80°	766	852	945
85°	500	500	469



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.2	4.1
10°-20°	318.1	11.4
20°-30°	464.9	16.7
30°-40°	527.7	19.0
40°-50°	509.4	18.3
50°-60°	420.2	15.1
60°-70°	279.8	10.1
70°-80°	125.2	4.5
80°-90°	22.4	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°	896.2	32.2
0°-40°	1423.9	51.2
0°-60°	2353.5	84.6
0°-90°	2781.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2781.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1203	1203	1203	1203	1203	
5°	1201	1201	1196	1190	1186	114
15°	1132	1135	1132	1127	1119	319
25°	1005	1013	1018	1010	1002	460
35°	809	820	857	862	858	507
45°	626	637	658	688	691	483
55°	438	446	468	494	508	391
65°	257	264	280	299	316	255
75°	103	109	116	122	129	113
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°	1202.7	1202.7	1202.7	1202.7	1202.7
2.5°	1205.9	1206.4	1203.6	1196.2	1191.6
5°	1201.3	1200.9	1196.2	1189.8	1186.1
7.5°	1187.9	1188.8	1187.5	1178.2	1173.1
10°	1175.0	1175.4	1171.8	1164.4	1158.4
12.5°	1158.4	1157.9	1152.8	1149.1	1139.4
15°	1132.0	1134.8	1132.0	1126.9	1119.1
17.5°	1106.6	1106.6	1108.5	1099.7	1093.7
20°	1078.0	1079.3	1079.3	1072.4	1065.5
22.5°	1044.7	1048.8	1050.2	1042.8	1034.5
25°	1005.4	1013.3	1017.9	1010.5	1001.7
27.5°	957.8	969.8	983.7	978.2	968.5
30°	904.7	922.2	945.4	940.7	933.8
32.5°	854.3	871.9	903.8	901.9	898.2
35°	808.6	819.7	857.1	861.7	858.5
37.5°	765.2	775.3	810.4	821.1	818.3
40°	719.4	730.5	758.2	777.2	778.1
42.5°	674.1	684.8	707.4	734.7	734.7
45°	626.1	636.7	657.5	687.5	691.2
47.5°	578.9	590.0	610.4	640.4	646.4
50°	532.7	542.9	563.2	592.3	601.6
52.5°	484.7	495.8	515.6	542.4	555.8
55°	438.5	445.9	467.6	493.5	507.8
57.5°	390.4	397.4	421.8	444.0	458.8
60°	344.2	353.0	371.9	394.6	411.7
62.5°	299.9	309.1	325.3	345.1	364.6
65°	256.9	263.8	279.5	299.4	316.5
67.5°	215.3	221.3	237.0	250.9	268.9
70°	173.3	181.1	192.7	206.1	217.6
72.5°	139.5	142.8	152.5	162.2	174.2
75°	103.0	108.6	116.4	122.0	128.9
77.5°	73.9	77.2	81.8	86.4	92.9
80°	49.4	50.8	55.0	55.9	61.0
82.5°	30.0	31.0	31.9	32.3	34.2
85°	16.2	16.2	16.2	15.2	15.2
87.5°	9.2	9.2	7.9	6.5	4.6
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)