

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: P556761

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-88-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: P556761  
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-82-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

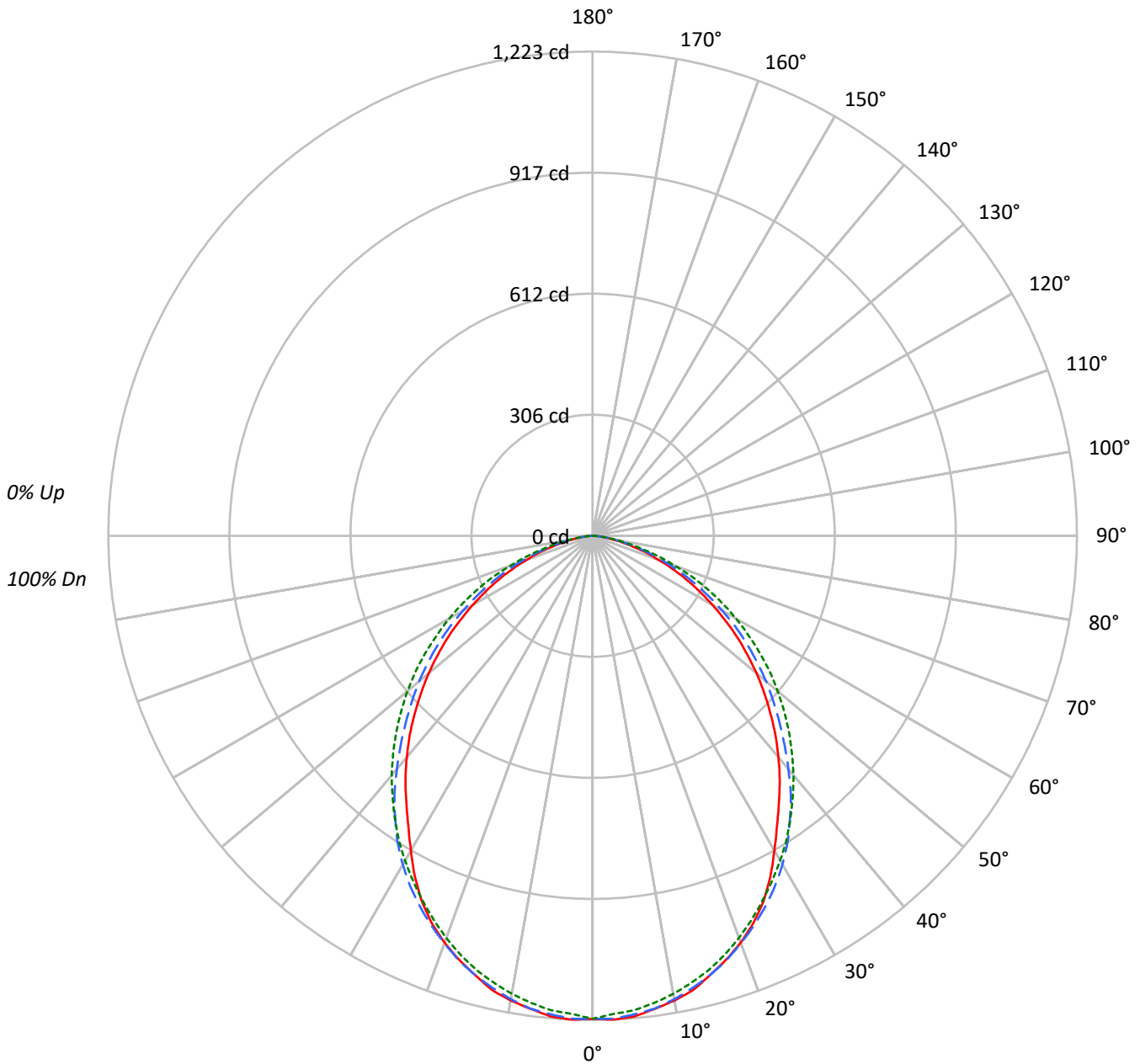
Lumens per Lamp: N/A  
Luminaire Lumens: 2821.0 lumens  
Efficiency: N/A  
Efficacy: 84.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (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°	3283	3283	3283
5°	3292	3278	3250
10°	3257	3248	3211
15°	3199	3199	3163
20°	3131	3135	3095
25°	3028	3066	3017
30°	2852	2980	2943
35°	2694	2856	2861
40°	2564	2702	2773
45°	2417	2538	2668
50°	2262	2392	2555
55°	2087	2225	2417
60°	1879	2031	2248
65°	1659	1806	2045
70°	1383	1537	1737
75°	1087	1228	1360
80°	778	865	959
85°	506	506	479



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.9	4.1
10°-20°	322.7	11.4
20°-30°	471.6	16.7
30°-40°	535.3	19.0
40°-50°	516.7	18.3
50°-60°	426.3	15.1
60°-70°	283.9	10.1
70°-80°	127.0	4.5
80°-90°	22.7	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°	909.1	32.2
0°-40°	1444.4	51.2
0°-60°	2387.4	84.6
0°-90°	2821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2821.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1220	1220	1220	1220	1220	
5°	1219	1218	1213	1207	1203	115
15°	1148	1151	1148	1143	1135	324
25°	1020	1028	1032	1025	1016	467
35°	820	832	869	874	871	514
45°	635	646	667	697	701	490
55°	445	452	474	501	515	397
65°	261	268	284	304	321	258
75°	104	110	118	124	131	114
85°	16	16	16	16	16	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1220.0	1220.0	1220.0	1220.0	1220.0
2.5°	1223.3	1223.8	1220.9	1213.4	1208.8
5°	1218.6	1218.1	1213.4	1206.9	1203.1
7.5°	1205.0	1205.9	1204.5	1195.2	1190.0
10°	1191.9	1192.4	1188.6	1181.1	1175.0
12.5°	1175.0	1174.5	1169.4	1165.6	1155.8
15°	1148.3	1151.1	1148.3	1143.1	1135.2
17.5°	1122.5	1122.5	1124.4	1115.5	1109.4
20°	1093.5	1094.9	1094.9	1087.8	1080.8
22.5°	1059.7	1063.9	1065.3	1057.8	1049.4
25°	1019.9	1027.8	1032.5	1025.0	1016.1
27.5°	971.6	983.8	997.8	992.2	982.4
30°	917.7	935.5	958.9	954.3	947.2
32.5°	866.6	884.4	916.8	914.9	911.1
35°	820.2	831.5	869.4	874.1	870.8
37.5°	776.2	786.5	822.1	832.9	830.1
40°	729.8	741.0	769.1	788.3	789.3
42.5°	683.8	694.6	717.6	745.2	745.2
45°	635.1	645.9	667.0	697.4	701.2
47.5°	587.3	598.5	619.1	649.6	655.7
50°	540.4	550.7	571.3	600.9	610.2
52.5°	491.7	502.9	523.1	550.2	563.8
55°	444.8	452.3	474.3	500.6	515.1
57.5°	396.0	403.1	427.9	450.4	465.4
60°	349.2	358.1	377.3	400.3	417.6
62.5°	304.2	313.6	330.0	350.1	369.8
65°	260.6	267.6	283.6	303.7	321.1
67.5°	218.4	224.5	240.4	254.5	272.8
70°	175.8	183.7	195.4	209.0	220.8
72.5°	141.5	144.8	154.7	164.5	176.7
75°	104.5	110.1	118.1	123.7	130.8
77.5°	75.0	78.3	83.0	87.6	94.2
80°	50.2	51.6	55.8	56.7	61.9
82.5°	30.5	31.4	32.3	32.8	34.7
85°	16.4	16.4	16.4	15.5	15.5
87.5°	9.4	9.4	8.0	6.6	4.7
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)