

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: P556427

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-81-94-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: P556427  
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-LD4-1LO-30-UNV-81-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

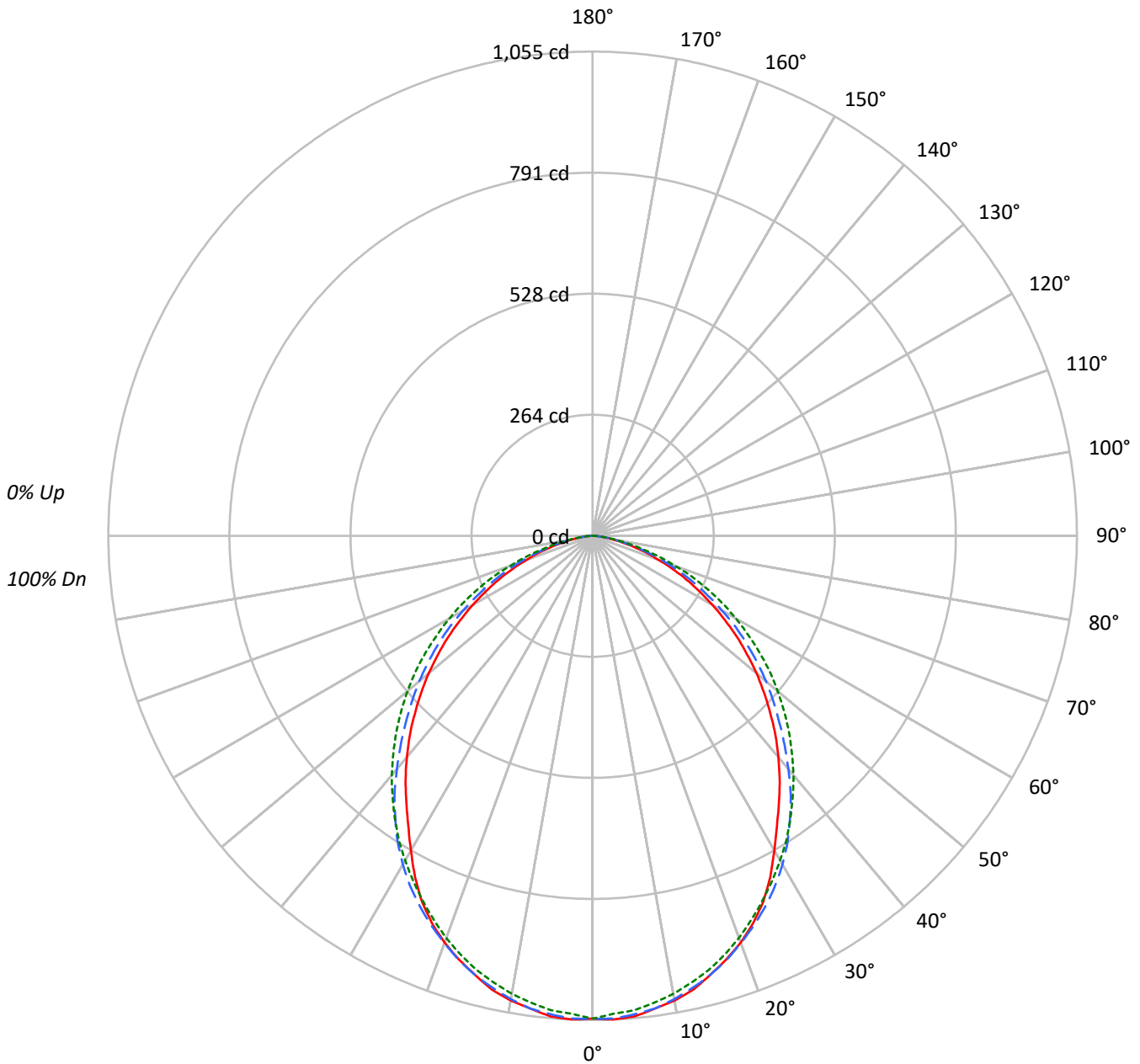
Lumens per Lamp: N/A  
Luminaire Lumens: 2433.0 lumens  
Efficiency: N/A  
Efficacy: 104.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	2831	2831	2831
5°	2839	2827	2803
10°	2809	2801	2769
15°	2759	2759	2727
20°	2701	2704	2670
25°	2612	2644	2602
30°	2459	2570	2538
35°	2324	2463	2467
40°	2211	2330	2391
45°	2084	2189	2301
50°	1951	2063	2203
55°	1800	1919	2084
60°	1621	1751	1939
65°	1431	1557	1763
70°	1193	1327	1498
75°	937	1059	1173
80°	671	745	828
85°	435	435	411



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.1	4.1
10°-20°	278.3	11.4
20°-30°	406.7	16.7
30°-40°	461.7	19.0
40°-50°	445.7	18.3
50°-60°	367.6	15.1
60°-70°	244.8	10.1
70°-80°	109.6	4.5
80°-90°	19.6	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°	784.1	32.2
0°-40°	1245.7	51.2
0°-60°	2059.0	84.6
0°-90°	2433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2433.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1051	1051	1047	1041	1038	99
15°	990	993	990	986	979	279
25°	880	886	890	884	876	403
35°	707	717	750	754	751	443
45°	548	557	575	602	605	423
55°	384	390	409	432	444	342
65°	225	231	245	262	277	223
75°	90	95	102	107	113	99
85°	14	14	14	13	13	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1052.2	1052.2	1052.2	1052.2	1052.2
2.5°	1055.0	1055.4	1053.0	1046.6	1042.5
5°	1051.0	1050.6	1046.6	1040.9	1037.7
7.5°	1039.3	1040.1	1038.9	1030.8	1026.3
10°	1028.0	1028.4	1025.1	1018.7	1013.4
12.5°	1013.4	1013.0	1008.6	1005.3	996.8
15°	990.4	992.8	990.4	985.9	979.0
17.5°	968.1	968.1	969.7	962.1	956.8
20°	943.1	944.3	944.3	938.2	932.2
22.5°	914.0	917.6	918.8	912.3	905.1
25°	879.6	886.5	890.5	884.1	876.4
27.5°	838.0	848.5	860.6	855.8	847.3
30°	791.5	806.8	827.1	823.0	816.9
32.5°	747.4	762.8	790.7	789.1	785.8
35°	707.4	717.1	749.8	753.9	751.1
37.5°	669.4	678.3	709.0	718.3	715.9
40°	629.4	639.1	663.3	679.9	680.7
42.5°	589.8	599.1	618.9	642.7	642.7
45°	547.7	557.0	575.2	601.5	604.7
47.5°	506.5	516.2	534.0	560.3	565.5
50°	466.1	475.0	492.8	518.2	526.3
52.5°	424.0	433.7	451.1	474.6	486.3
55°	383.6	390.1	409.1	431.7	444.2
57.5°	341.6	347.6	369.1	388.5	401.4
60°	301.2	308.8	325.4	345.2	360.2
62.5°	262.3	270.4	284.6	302.0	318.9
65°	224.8	230.8	244.6	261.9	276.9
67.5°	188.4	193.6	207.4	219.5	235.3
70°	151.6	158.5	168.6	180.3	190.4
72.5°	122.1	124.9	133.4	141.9	152.4
75°	90.1	95.0	101.9	106.7	112.8
77.5°	64.7	67.5	71.5	75.6	81.3
80°	43.3	44.5	48.1	48.9	53.4
82.5°	26.3	27.1	27.9	28.3	29.9
85°	14.1	14.1	14.1	13.3	13.3
87.5°	8.1	8.1	6.9	5.7	4.0
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)