

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: P556860

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-80-96-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: P556860  
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-80-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

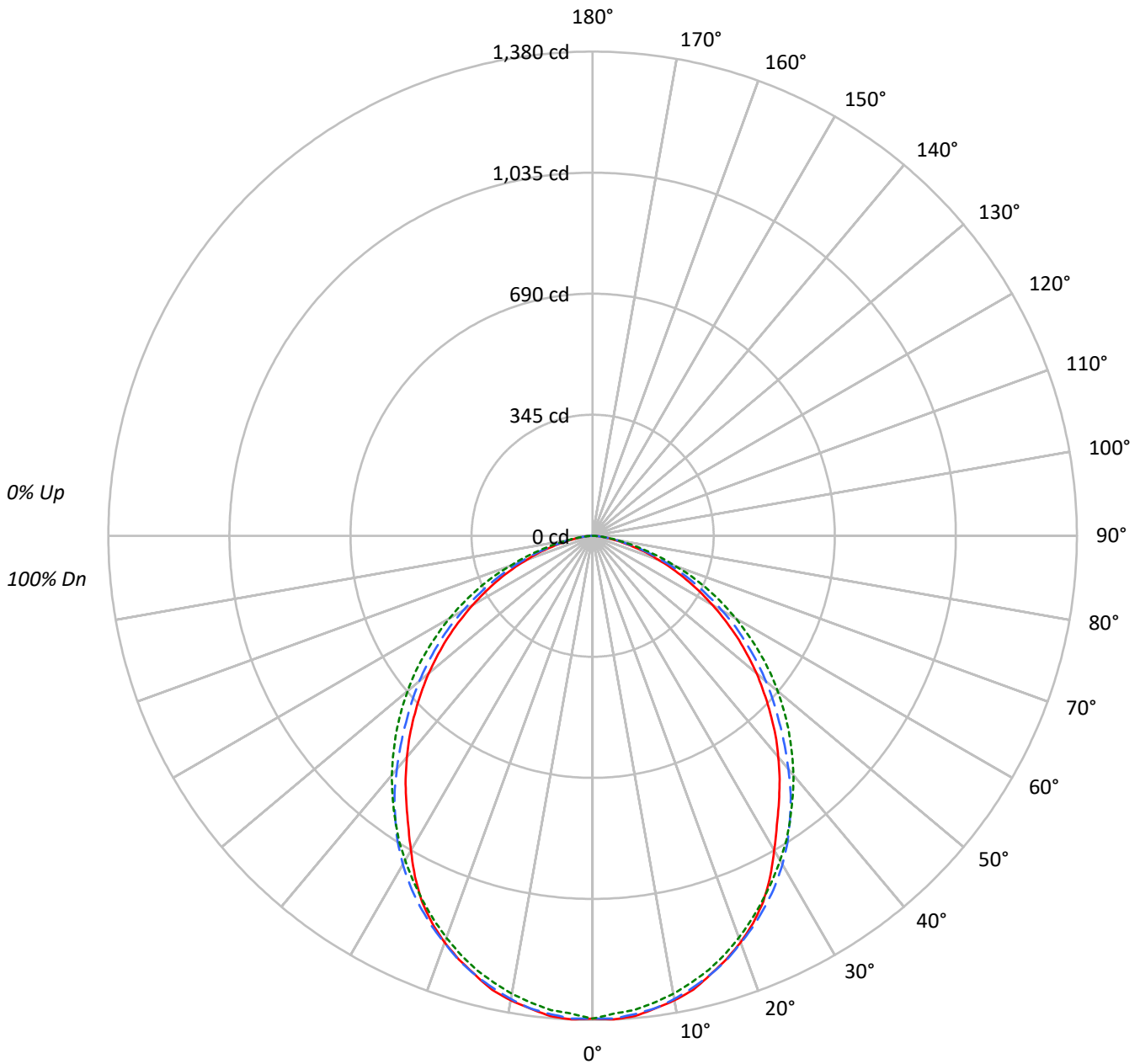
Lumens per Lamp: N/A  
Luminaire Lumens: 3182.0 lumens  
Efficiency: N/A  
Efficacy: 95.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P556860

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-80-96-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556860

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-80-96-EDD-90

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				
RC	80				70				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°	3703	3703	3703
5°	3713	3697	3666
10°	3674	3663	3622
15°	3608	3608	3567
20°	3532	3537	3491
25°	3416	3458	3403
30°	3216	3361	3320
35°	3039	3222	3227
40°	2891	3048	3127
45°	2726	2863	3010
50°	2552	2698	2882
55°	2354	2510	2726
60°	2120	2291	2535
65°	1871	2036	2306
70°	1560	1735	1959
75°	1226	1385	1534
80°	877	975	1082
85°	571	571	537



TEST NUMBER: P556860

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-80-96-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.6	4.1
10°-20°	364.0	11.4
20°-30°	531.9	16.7
30°-40°	603.8	19.0
40°-50°	582.9	18.3
50°-60°	480.8	15.1
60°-70°	320.2	10.1
70°-80°	143.3	4.5
80°-90°	25.6	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°	1025.5	32.2
0°-40°	1629.2	51.2
0°-60°	2692.9	84.6
0°-90°	3182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3182.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1376	1376	1376	1376	1376	
5°	1374	1374	1369	1361	1357	130
15°	1295	1298	1295	1289	1280	365
25°	1150	1159	1165	1156	1146	527
35°	925	938	981	986	982	580
45°	716	728	752	787	791	553
55°	502	510	535	565	581	448
65°	294	302	320	343	362	291
75°	118	124	133	140	148	129
85°	18	18	18	17	17	25
90°	0	0	0	0	0	



TEST NUMBER: P556860

CATALOG NUMBER: FUSL-12-4-LD4-1STD-50-UNV-80-96-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1376.1	1376.1	1376.1	1376.1	1376.1
2.5°	1379.8	1380.4	1377.2	1368.7	1363.4
5°	1374.5	1374.0	1368.7	1361.3	1357.1
7.5°	1359.2	1360.3	1358.7	1348.1	1342.3
10°	1344.4	1344.9	1340.7	1332.3	1325.4
12.5°	1325.4	1324.9	1319.0	1314.8	1303.7
15°	1295.2	1298.4	1295.2	1289.4	1280.4
17.5°	1266.2	1266.2	1268.3	1258.2	1251.4
20°	1233.4	1235.0	1235.0	1227.0	1219.1
22.5°	1195.3	1200.1	1201.7	1193.2	1183.7
25°	1150.4	1159.4	1164.7	1156.2	1146.2
27.5°	1095.9	1109.7	1125.5	1119.2	1108.1
30°	1035.1	1055.2	1081.7	1076.4	1068.4
32.5°	977.5	997.6	1034.1	1032.0	1027.7
35°	925.2	937.9	980.7	986.0	982.3
37.5°	875.5	887.1	927.3	939.4	936.3
40°	823.1	835.8	867.6	889.2	890.3
42.5°	771.3	783.5	809.4	840.6	840.6
45°	716.4	728.5	752.3	786.7	790.9
47.5°	662.4	675.1	698.4	732.7	739.6
50°	609.6	621.2	644.5	677.8	688.3
52.5°	554.6	567.3	590.0	620.7	636.0
55°	501.7	510.2	535.0	564.6	581.0
57.5°	446.7	454.7	482.7	508.1	525.0
60°	393.9	403.9	425.6	451.5	471.0
62.5°	343.1	353.7	372.2	394.9	417.1
65°	293.9	301.9	319.8	342.6	362.1
67.5°	246.4	253.2	271.2	287.1	307.7
70°	198.3	207.2	220.5	235.8	249.0
72.5°	159.7	163.4	174.5	185.6	199.3
75°	117.9	124.2	133.2	139.6	147.5
77.5°	84.6	88.3	93.6	98.9	106.3
80°	56.6	58.2	62.9	64.0	69.8
82.5°	34.4	35.4	36.5	37.0	39.1
85°	18.5	18.5	18.5	17.4	17.4
87.5°	10.6	10.6	9.0	7.4	5.3
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)