

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: P556660

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-80-86-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: P556660  
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-80-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

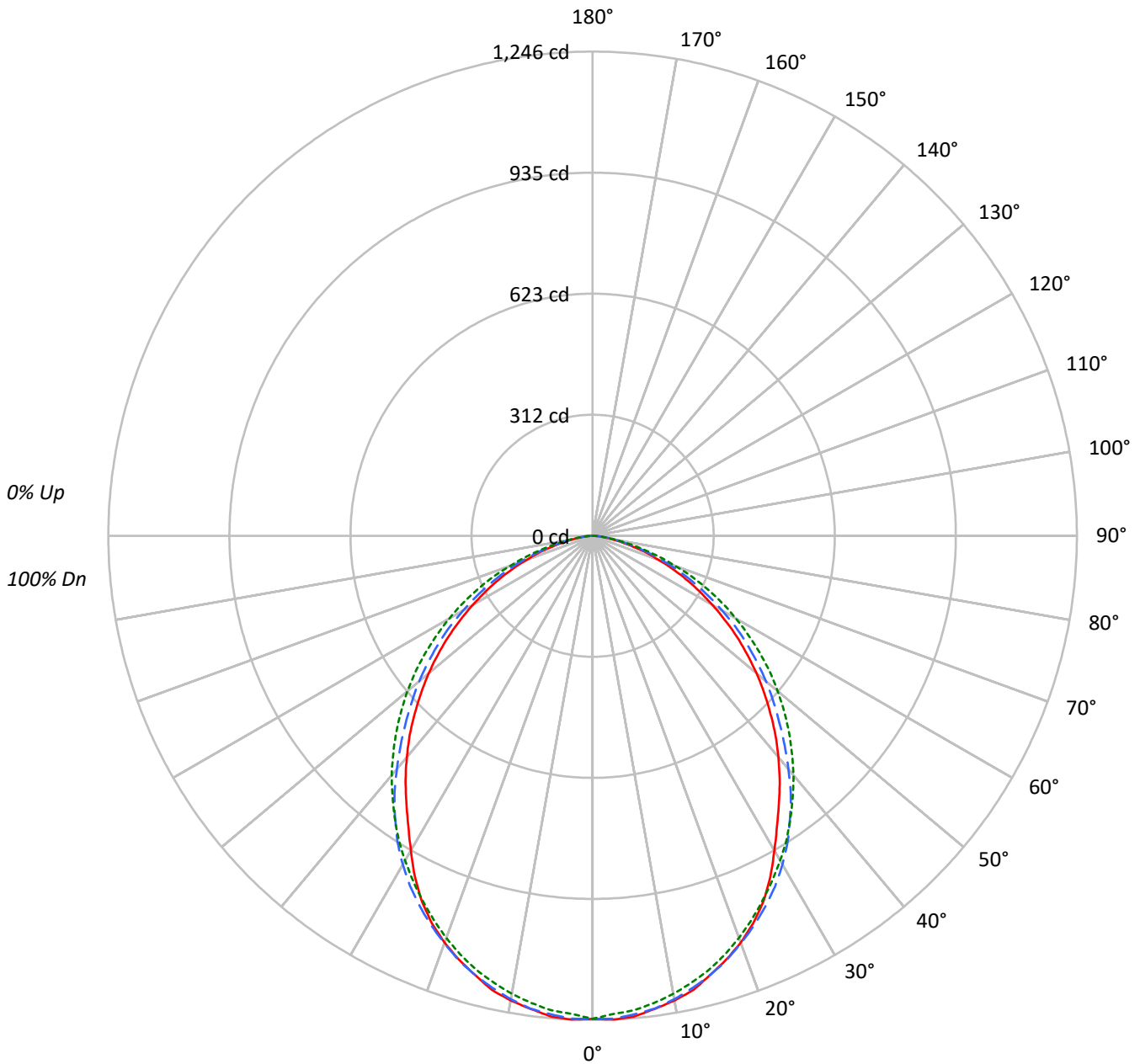
Lumens per Lamp: N/A  
Luminaire Lumens: 2874.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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: P556660

CATALOG NUMBER: FUSL-12-4-LD4-1STD-30-UNV-80-86-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556660

CATALOG NUMBER: FUSL-12-4-LD4-1STD-30-UNV-80-86-EDD-90

**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°	3345	3345	3345
5°	3354	3339	3311
10°	3318	3309	3271
15°	3259	3259	3222
20°	3190	3194	3153
25°	3085	3123	3074
30°	2905	3036	2999
35°	2745	2910	2915
40°	2612	2753	2825
45°	2462	2586	2718
50°	2305	2437	2603
55°	2126	2267	2462
60°	1914	2069	2290
65°	1691	1840	2083
70°	1409	1566	1769
75°	1107	1251	1385
80°	792	880	976
85°	516	516	488



TEST NUMBER: P556660

CATALOG NUMBER: FUSL-12-4-LD4-1STD-30-UNV-80-86-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.0	4.1
10°-20°	328.8	11.4
20°-30°	480.4	16.7
30°-40°	545.3	19.0
40°-50°	526.4	18.3
50°-60°	434.3	15.1
60°-70°	289.2	10.1
70°-80°	129.4	4.5
80°-90°	23.1	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°	926.2	32.2
0°-40°	1471.5	51.2
0°-60°	2432.3	84.6
0°-90°	2874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2874.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1242	1241	1236	1230	1226	118
15°	1170	1173	1170	1165	1156	330
25°	1039	1047	1052	1044	1035	476
35°	836	847	886	890	887	524
45°	647	658	680	710	714	499
55°	453	461	483	510	525	404
65°	266	273	289	309	327	263
75°	106	112	120	126	133	116
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



TEST NUMBER: P556660

CATALOG NUMBER: FUSL-12-4-LD4-1STD-30-UNV-80-86-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1242.9	1242.9	1242.9	1242.9	1242.9
2.5°	1246.3	1246.8	1243.9	1236.2	1231.5
5°	1241.5	1241.0	1236.2	1229.6	1225.7
7.5°	1227.7	1228.6	1227.2	1217.6	1212.4
10°	1214.3	1214.8	1210.9	1203.3	1197.1
12.5°	1197.1	1196.6	1191.4	1187.5	1177.5
15°	1169.9	1172.7	1169.9	1164.6	1156.5
17.5°	1143.6	1143.6	1145.5	1136.4	1130.2
20°	1114.0	1115.4	1115.4	1108.3	1101.1
22.5°	1079.6	1083.9	1085.4	1077.7	1069.1
25°	1039.0	1047.2	1051.9	1044.3	1035.2
27.5°	989.9	1002.3	1016.6	1010.9	1000.8
30°	934.9	953.1	977.0	972.2	965.0
32.5°	882.9	901.0	934.0	932.1	928.3
35°	835.6	847.1	885.8	890.5	887.2
37.5°	790.7	801.2	837.5	848.5	845.7
40°	743.5	754.9	783.6	803.2	804.1
42.5°	696.7	707.7	731.1	759.2	759.2
45°	647.0	658.0	679.5	710.5	714.3
47.5°	598.3	609.8	630.8	661.8	668.0
50°	550.6	561.1	582.1	612.2	621.7
52.5°	500.9	512.4	532.9	560.6	574.4
55°	453.1	460.8	483.2	510.0	524.8
57.5°	403.5	410.6	436.0	458.9	474.2
60°	355.7	364.8	384.4	407.8	425.5
62.5°	309.9	319.4	336.2	356.7	376.7
65°	265.5	272.7	288.9	309.4	327.1
67.5°	222.5	228.7	245.0	259.3	277.9
70°	179.1	187.2	199.1	213.0	224.9
72.5°	144.2	147.5	157.6	167.6	180.0
75°	106.5	112.2	120.3	126.1	133.2
77.5°	76.4	79.7	84.5	89.3	96.0
80°	51.1	52.5	56.8	57.8	63.0
82.5°	31.0	32.0	32.9	33.4	35.3
85°	16.7	16.7	16.7	15.8	15.8
87.5°	9.5	9.5	8.1	6.7	4.8
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)