

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: P556753

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-84-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: P556753  
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-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

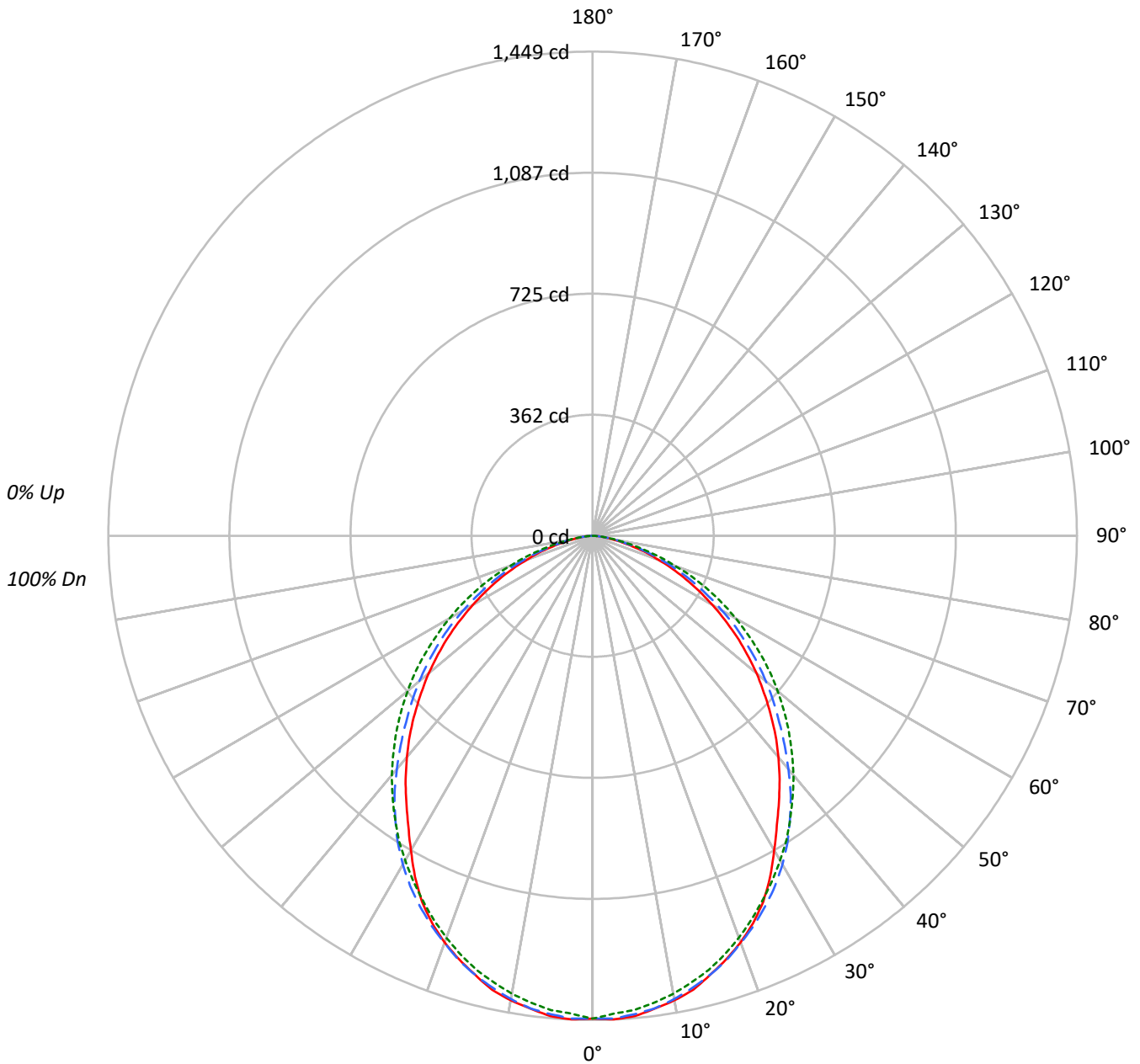
Lumens per Lamp: N/A  
Luminaire Lumens: 3341.0 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (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

TEST NUMBER: P556753

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P556753

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-84-EDD

**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°	3888	3888	3888
5°	3898	3882	3849
10°	3857	3847	3803
15°	3789	3789	3745
20°	3708	3713	3666
25°	3586	3631	3573
30°	3377	3529	3486
35°	3191	3383	3388
40°	3036	3200	3284
45°	2862	3006	3160
50°	2679	2833	3026
55°	2472	2635	2862
60°	2225	2405	2662
65°	1965	2138	2421
70°	1638	1821	2057
75°	1287	1455	1611
80°	921	1024	1136
85°	599	599	565



TEST NUMBER: P556753

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.0	4.1
10°-20°	382.2	11.4
20°-30°	558.5	16.7
30°-40°	633.9	19.0
40°-50°	612.0	18.3
50°-60°	504.8	15.1
60°-70°	336.2	10.1
70°-80°	150.4	4.5
80°-90°	26.9	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°	1076.7	32.2
0°-40°	1710.7	51.2
0°-60°	2827.5	84.6
0°-90°	3341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3341.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1445	1445	1445	1445	1445	
5°	1443	1443	1437	1429	1425	137
15°	1360	1363	1360	1354	1344	383
25°	1208	1217	1223	1214	1203	553
35°	971	985	1030	1035	1031	609
45°	752	765	790	826	830	580
55°	527	536	562	593	610	470
65°	309	317	336	360	380	306
75°	124	130	140	146	155	135
85°	19	19	19	18	18	26
90°	0	0	0	0	0	



TEST NUMBER: P556753

CATALOG NUMBER: FUSL-12-4-LD4-1STD-35-UNV-82-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1444.9	1444.9	1444.9	1444.9	1444.9
2.5°	1448.8	1449.3	1446.0	1437.1	1431.6
5°	1443.2	1442.7	1437.1	1429.4	1424.9
7.5°	1427.1	1428.2	1426.6	1415.5	1409.4
10°	1411.6	1412.1	1407.7	1398.8	1391.6
12.5°	1391.6	1391.1	1384.9	1380.5	1368.8
15°	1360.0	1363.3	1360.0	1353.9	1344.4
17.5°	1329.4	1329.4	1331.7	1321.1	1313.9
20°	1295.0	1296.7	1296.7	1288.4	1280.0
22.5°	1255.1	1260.1	1261.7	1252.8	1242.8
25°	1207.9	1217.3	1222.9	1214.0	1203.4
27.5°	1150.7	1165.1	1181.8	1175.1	1163.5
30°	1086.9	1108.0	1135.7	1130.2	1121.8
32.5°	1026.4	1047.5	1085.8	1083.5	1079.1
35°	971.4	984.7	1029.7	1035.2	1031.4
37.5°	919.2	931.4	973.6	986.4	983.1
40°	864.3	877.6	910.9	933.7	934.8
42.5°	809.9	822.6	849.8	882.6	882.6
45°	752.1	764.9	789.9	826.0	830.4
47.5°	695.5	708.8	733.3	769.4	776.6
50°	640.0	652.2	676.7	711.6	722.7
52.5°	582.3	595.6	619.5	651.7	667.8
55°	526.8	535.7	561.7	592.8	610.0
57.5°	469.1	477.4	506.8	533.4	551.2
60°	413.5	424.1	446.8	474.0	494.6
62.5°	360.3	371.4	390.8	414.7	438.0
65°	308.6	317.0	335.8	359.7	380.2
67.5°	258.7	265.9	284.8	301.4	323.1
70°	208.2	217.6	231.5	247.6	261.4
72.5°	167.6	171.5	183.2	194.8	209.3
75°	123.8	130.4	139.9	146.5	154.9
77.5°	88.8	92.7	98.3	103.8	111.6
80°	59.4	61.1	66.1	67.2	73.3
82.5°	36.1	37.2	38.3	38.9	41.1
85°	19.4	19.4	19.4	18.3	18.3
87.5°	11.1	11.1	9.4	7.8	5.6
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)