

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: P556304

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-82-84-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: P556304  
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-LD4-1HI-40-UNV-82-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

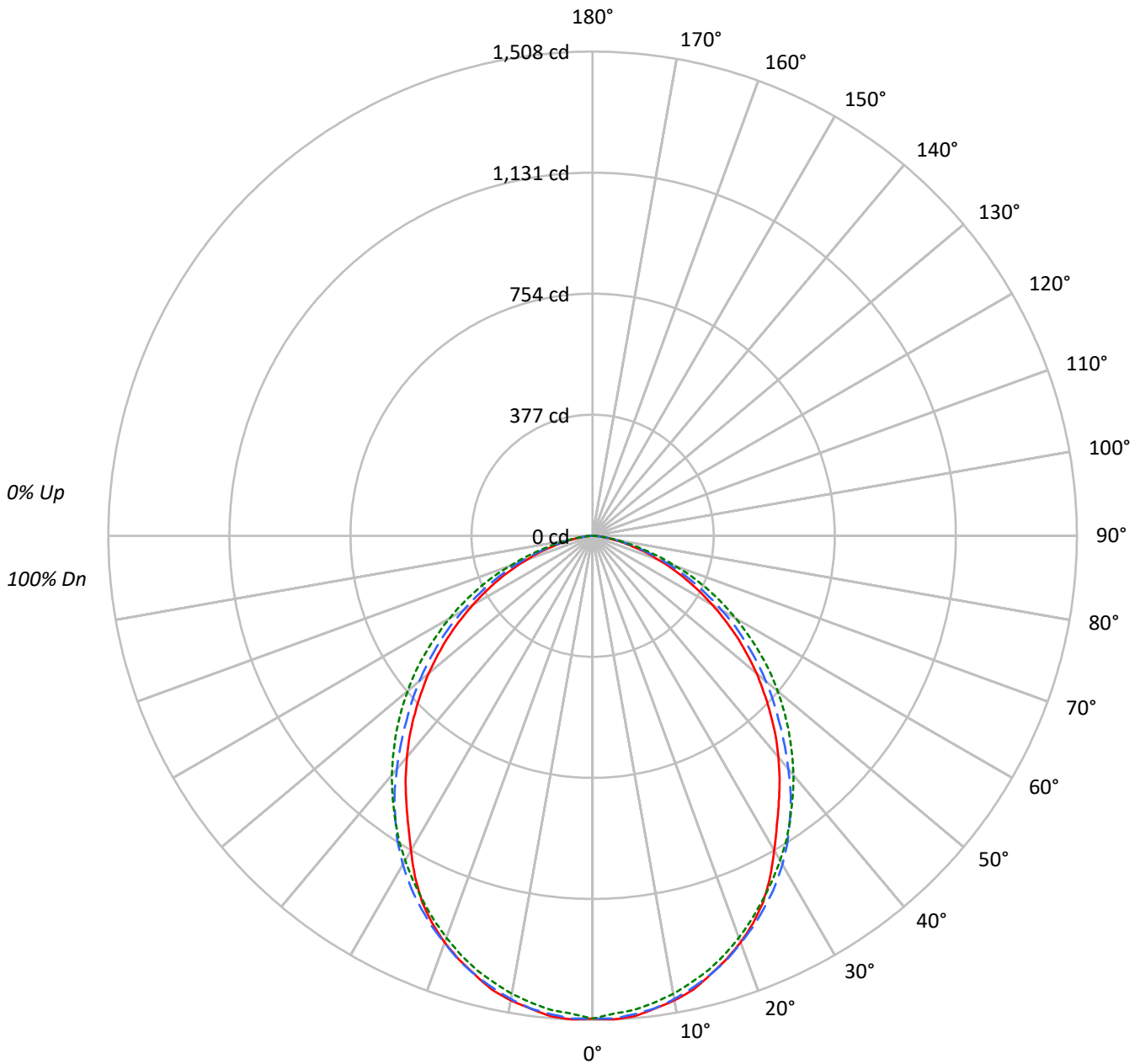
Lumens per Lamp: N/A  
Luminaire Lumens: 3477.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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: P556304

CATALOG NUMBER: FUSL-12-4-LD4-1HI-40-UNV-82-84-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556304

CATALOG NUMBER: FUSL-12-4-LD4-1HI-40-UNV-82-84-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°	4046	4046	4046
5°	4057	4040	4006
10°	4014	4003	3957
15°	3943	3943	3898
20°	3859	3865	3815
25°	3732	3779	3719
30°	3515	3672	3628
35°	3321	3520	3526
40°	3160	3330	3417
45°	2979	3128	3289
50°	2789	2948	3149
55°	2572	2743	2979
60°	2316	2503	2770
65°	2045	2225	2520
70°	1704	1895	2141
75°	1339	1514	1676
80°	958	1065	1182
85°	624	624	590



TEST NUMBER: P556304

CATALOG NUMBER: FUSL-12-4-LD4-1HI-40-UNV-82-84-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.6	4.1
10°-20°	397.7	11.4
20°-30°	581.2	16.7
30°-40°	659.8	19.0
40°-50°	636.9	18.3
50°-60°	525.4	15.1
60°-70°	349.9	10.1
70°-80°	156.6	4.5
80°-90°	28.0	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°	1120.5	32.2
0°-40°	1780.3	51.2
0°-60°	2942.6	84.6
0°-90°	3477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3477.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1502	1501	1496	1488	1483	142
15°	1415	1419	1415	1409	1399	399
25°	1257	1267	1273	1263	1252	576
35°	1011	1025	1072	1077	1073	633
45°	783	796	822	860	864	604
55°	548	558	585	617	635	489
65°	321	330	350	374	396	318
75°	129	136	146	152	161	141
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



TEST NUMBER: P556304

CATALOG NUMBER: FUSL-12-4-LD4-1HI-40-UNV-82-84-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1503.7	1503.7	1503.7	1503.7	1503.7
2.5°	1507.8	1508.3	1504.9	1495.6	1489.8
5°	1502.0	1501.4	1495.6	1487.5	1482.9
7.5°	1485.2	1486.4	1484.6	1473.1	1466.7
10°	1469.1	1469.6	1465.0	1455.8	1448.3
12.5°	1448.3	1447.7	1441.3	1436.7	1424.6
15°	1415.3	1418.8	1415.3	1409.0	1399.2
17.5°	1383.6	1383.6	1385.9	1374.9	1367.4
20°	1347.7	1349.5	1349.5	1340.8	1332.1
22.5°	1306.1	1311.3	1313.1	1303.8	1293.4
25°	1257.0	1266.9	1272.6	1263.4	1252.4
27.5°	1197.5	1212.6	1229.9	1223.0	1210.8
30°	1131.1	1153.1	1181.9	1176.2	1167.5
32.5°	1068.1	1090.1	1130.0	1127.6	1123.0
35°	1010.9	1024.8	1071.6	1077.4	1073.3
37.5°	956.6	969.4	1013.3	1026.5	1023.1
40°	899.5	913.3	948.0	971.7	972.8
42.5°	842.8	856.1	884.4	918.5	918.5
45°	782.8	796.0	822.0	859.6	864.2
47.5°	723.8	737.7	763.1	800.7	808.2
50°	666.1	678.8	704.2	740.6	752.1
52.5°	606.0	619.9	644.7	678.2	695.0
55°	548.2	557.5	584.6	617.0	634.9
57.5°	488.1	496.8	527.4	555.2	573.6
60°	430.4	441.4	465.0	493.3	514.7
62.5°	374.9	386.5	406.7	431.5	455.8
65°	321.2	329.9	349.5	374.3	395.7
67.5°	269.2	276.7	296.4	313.7	336.2
70°	216.6	226.5	240.9	257.6	272.1
72.5°	174.5	178.5	190.6	202.8	217.8
75°	128.8	135.8	145.6	152.5	161.2
77.5°	92.4	96.5	102.3	108.0	116.1
80°	61.8	63.5	68.7	69.9	76.3
82.5°	37.5	38.7	39.9	40.4	42.7
85°	20.2	20.2	20.2	19.1	19.1
87.5°	11.6	11.6	9.8	8.1	5.8
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)