

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: P557192

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-81-88-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: P557192  
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-LD4-2LO-30-UNV-81-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

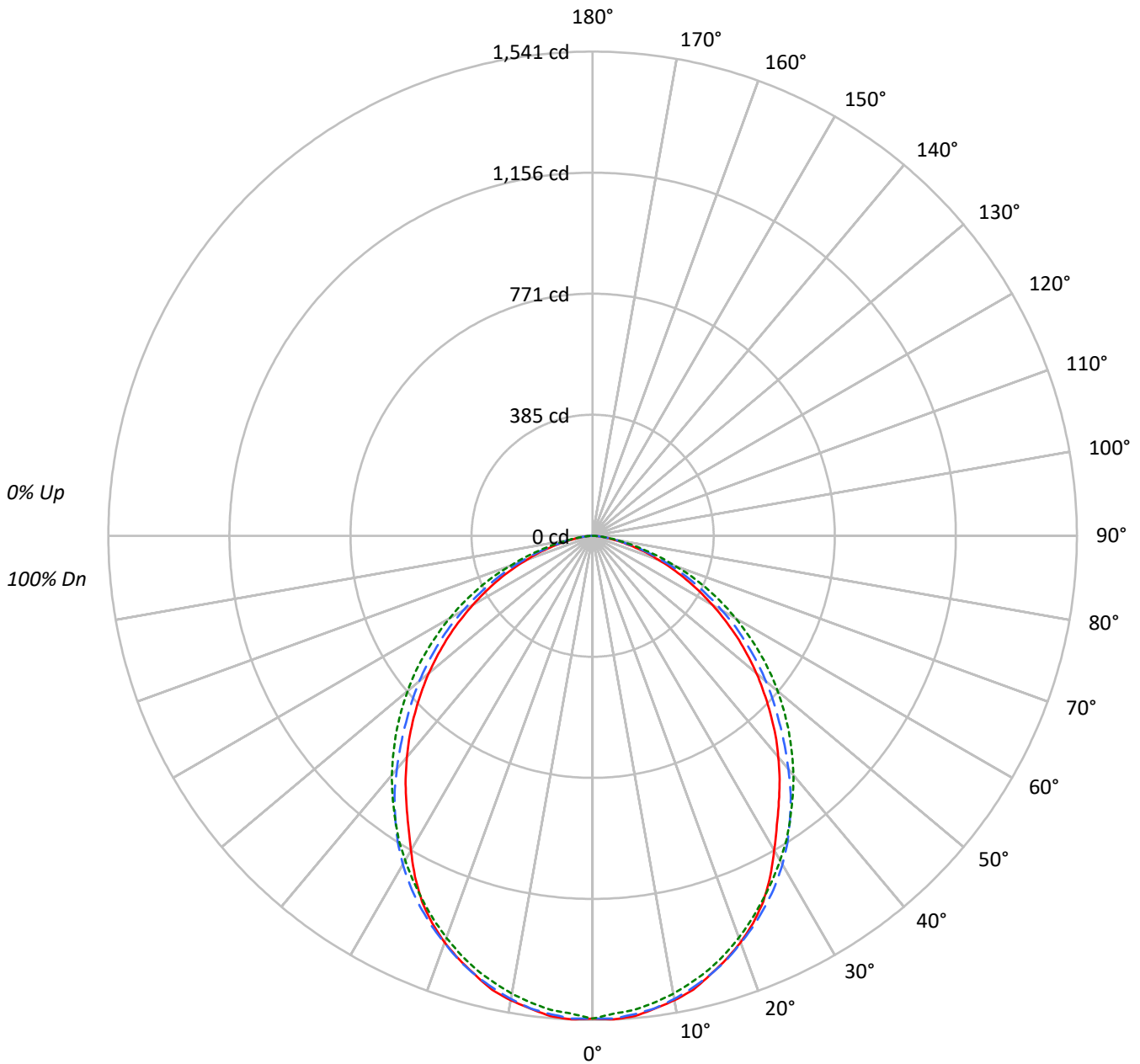
Lumens per Lamp: N/A  
Luminaire Lumens: 3553.0 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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

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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°	4135	4135	4135
5°	4146	4128	4093
10°	4102	4091	4044
15°	4029	4029	3983
20°	3944	3949	3898
25°	3814	3861	3800
30°	3591	3753	3707
35°	3393	3597	3603
40°	3229	3403	3492
45°	3044	3197	3361
50°	2849	3013	3218
55°	2628	2803	3044
60°	2367	2558	2831
65°	2090	2274	2575
70°	1742	1937	2187
75°	1368	1547	1712
80°	979	1088	1207
85°	639	639	602



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.7	4.1
10°-20°	406.4	11.4
20°-30°	593.9	16.7
30°-40°	674.2	19.0
40°-50°	650.8	18.3
50°-60°	536.9	15.1
60°-70°	357.5	10.1
70°-80°	160.0	4.5
80°-90°	28.6	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°	1145.0	32.2
0°-40°	1819.2	51.2
0°-60°	3006.9	84.6
0°-90°	3553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3553.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1537	1537	1537	1537	1537	
5°	1535	1534	1528	1520	1515	145
15°	1446	1450	1446	1440	1430	408
25°	1284	1295	1300	1291	1280	588
35°	1033	1047	1095	1101	1097	647
45°	800	813	840	878	883	617
55°	560	570	597	630	649	500
65°	328	337	357	382	404	325
75°	132	139	149	156	165	144
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1536.6	1536.6	1536.6	1536.6	1536.6
2.5°	1540.7	1541.3	1537.8	1528.3	1522.4
5°	1534.8	1534.2	1528.3	1520.1	1515.3
7.5°	1517.7	1518.9	1517.1	1505.3	1498.8
10°	1501.2	1501.8	1497.0	1487.6	1479.9
12.5°	1479.9	1479.3	1472.8	1468.1	1455.7
15°	1446.3	1449.8	1446.3	1439.8	1429.7
17.5°	1413.8	1413.8	1416.2	1404.9	1397.3
20°	1377.2	1379.0	1379.0	1370.1	1361.3
22.5°	1334.7	1340.0	1341.8	1332.3	1321.7
25°	1284.5	1294.6	1300.5	1291.0	1279.8
27.5°	1223.7	1239.1	1256.8	1249.7	1237.3
30°	1155.8	1178.3	1207.8	1201.9	1193.0
32.5°	1091.5	1113.9	1154.6	1152.3	1147.6
35°	1033.0	1047.2	1095.0	1100.9	1096.8
37.5°	977.6	990.5	1035.4	1049.0	1045.4
40°	919.1	933.3	968.7	992.9	994.1
42.5°	861.3	874.8	903.8	938.6	938.6
45°	799.9	813.4	840.0	878.4	883.1
47.5°	739.7	753.8	779.8	818.2	825.8
50°	680.6	693.6	719.6	756.8	768.6
52.5°	619.2	633.4	658.8	693.0	710.1
55°	560.2	569.7	597.4	630.5	648.8
57.5°	498.8	507.7	539.0	567.3	586.2
60°	439.8	451.0	475.2	504.1	526.0
62.5°	383.1	394.9	415.6	441.0	465.8
65°	328.2	337.1	357.1	382.5	404.4
67.5°	275.1	282.8	302.8	320.5	343.6
70°	221.4	231.4	246.2	263.3	278.0
72.5°	178.3	182.4	194.8	207.2	222.5
75°	131.6	138.7	148.8	155.8	164.7
77.5°	94.4	98.6	104.5	110.4	118.7
80°	63.2	64.9	70.2	71.4	77.9
82.5°	38.4	39.6	40.7	41.3	43.7
85°	20.7	20.7	20.7	19.5	19.5
87.5°	11.8	11.8	10.0	8.3	5.9
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)