

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: P557208

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-82-88-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: P557208  
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-82-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 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**

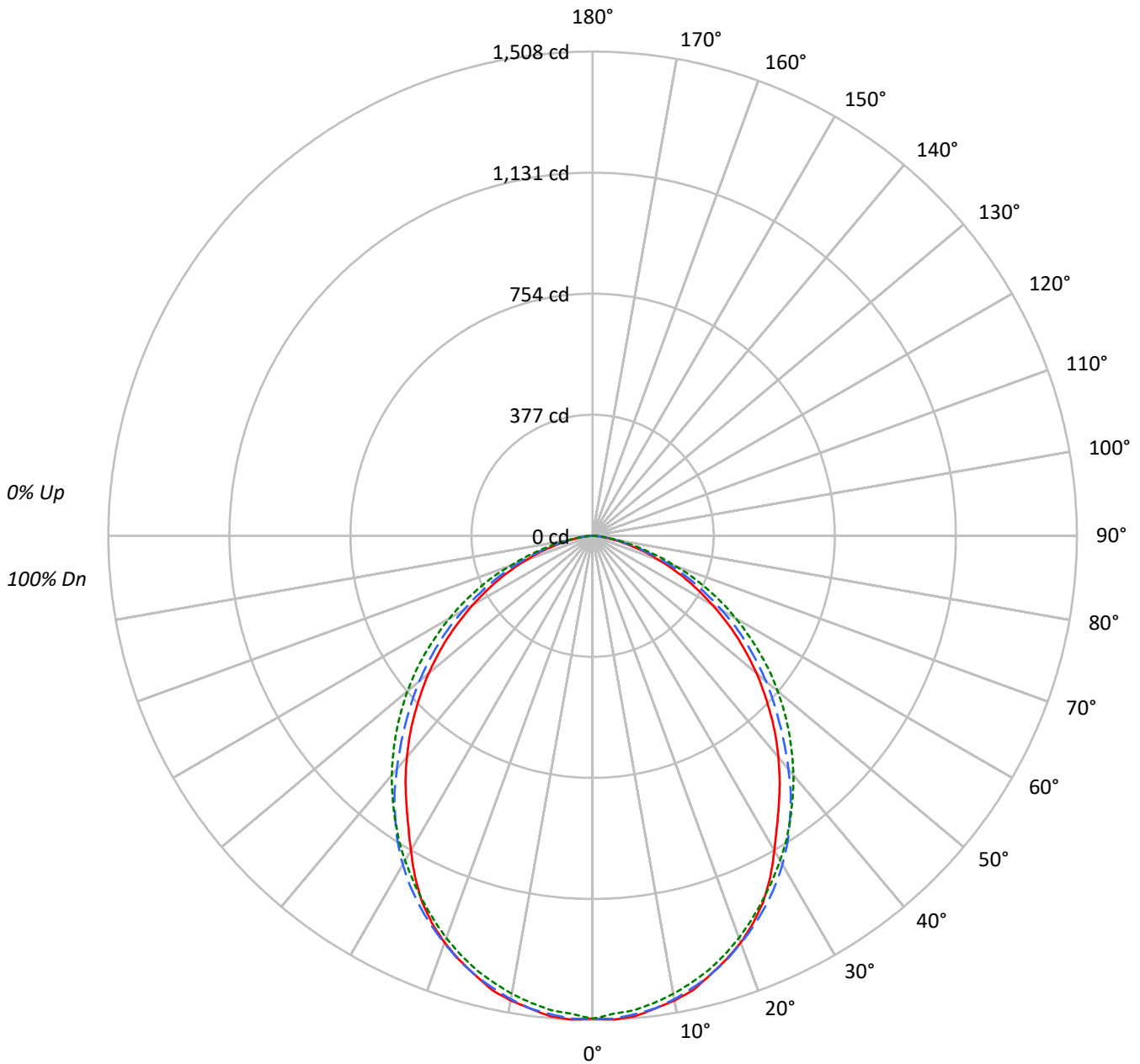
Lumens per Lamp: N/A  
Luminaire Lumens: 3478.0 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4048	4048	4048
5°	4058	4041	4007
10°	4015	4004	3959
15°	3944	3944	3899
20°	3861	3866	3816
25°	3733	3780	3720
30°	3516	3674	3629
35°	3322	3521	3527
40°	3160	3331	3418
45°	2980	3129	3290
50°	2789	2949	3150
55°	2573	2744	2980
60°	2317	2504	2771
65°	2046	2226	2520
70°	1705	1896	2142
75°	1340	1514	1676
80°	958	1066	1182
85°	624	624	590



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.6	4.1
10°-20°	397.9	11.4
20°-30°	581.4	16.7
30°-40°	659.9	19.0
40°-50°	637.1	18.3
50°-60°	525.5	15.1
60°-70°	350.0	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°	1120.9	32.2
0°-40°	1780.8	51.2
0°-60°	2943.4	84.6
0°-90°	3478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3478.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1502	1502	1496	1488	1483	142
15°	1416	1419	1416	1409	1400	399
25°	1257	1267	1273	1264	1253	576
35°	1011	1025	1072	1078	1074	634
45°	783	796	822	860	864	604
55°	548	558	585	617	635	489
65°	321	330	350	374	396	319
75°	129	136	146	153	161	141
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1504.1	1504.1	1504.1	1504.1	1504.1
2.5°	1508.2	1508.8	1505.3	1496.1	1490.3
5°	1502.4	1501.8	1496.1	1488.0	1483.3
7.5°	1485.7	1486.8	1485.1	1473.5	1467.2
10°	1469.5	1470.1	1465.4	1456.2	1448.7
12.5°	1448.7	1448.1	1441.7	1437.1	1425.0
15°	1415.7	1419.2	1415.7	1409.4	1399.6
17.5°	1384.0	1384.0	1386.3	1375.3	1367.8
20°	1348.1	1349.9	1349.9	1341.2	1332.5
22.5°	1306.5	1311.7	1313.5	1304.2	1293.8
25°	1257.4	1267.2	1273.0	1263.8	1252.8
27.5°	1197.9	1212.9	1230.2	1223.3	1211.2
30°	1131.4	1153.4	1182.3	1176.5	1167.8
32.5°	1068.4	1090.4	1130.3	1128.0	1123.3
35°	1011.2	1025.1	1071.9	1077.7	1073.6
37.5°	956.9	969.6	1013.5	1026.8	1023.4
40°	899.7	913.6	948.3	971.9	973.1
42.5°	843.1	856.4	884.7	918.8	918.8
45°	783.0	796.3	822.3	859.8	864.5
47.5°	724.0	737.9	763.3	800.9	808.4
50°	666.3	679.0	704.4	740.8	752.4
52.5°	606.2	620.0	644.9	678.4	695.2
55°	548.4	557.6	584.8	617.1	635.1
57.5°	488.3	497.0	527.6	555.3	573.8
60°	430.5	441.5	465.2	493.5	514.9
62.5°	375.0	386.6	406.8	431.7	455.9
65°	321.3	330.0	349.6	374.4	395.8
67.5°	269.3	276.8	296.4	313.8	336.3
70°	216.7	226.5	241.0	257.7	272.2
72.5°	174.5	178.6	190.7	202.8	217.8
75°	128.9	135.8	145.6	152.6	161.2
77.5°	92.5	96.5	102.3	108.1	116.1
80°	61.8	63.6	68.8	69.9	76.3
82.5°	37.6	38.7	39.9	40.4	42.8
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)