

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: P556380

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-82-96-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: P556380  
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-50-UNV-82-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

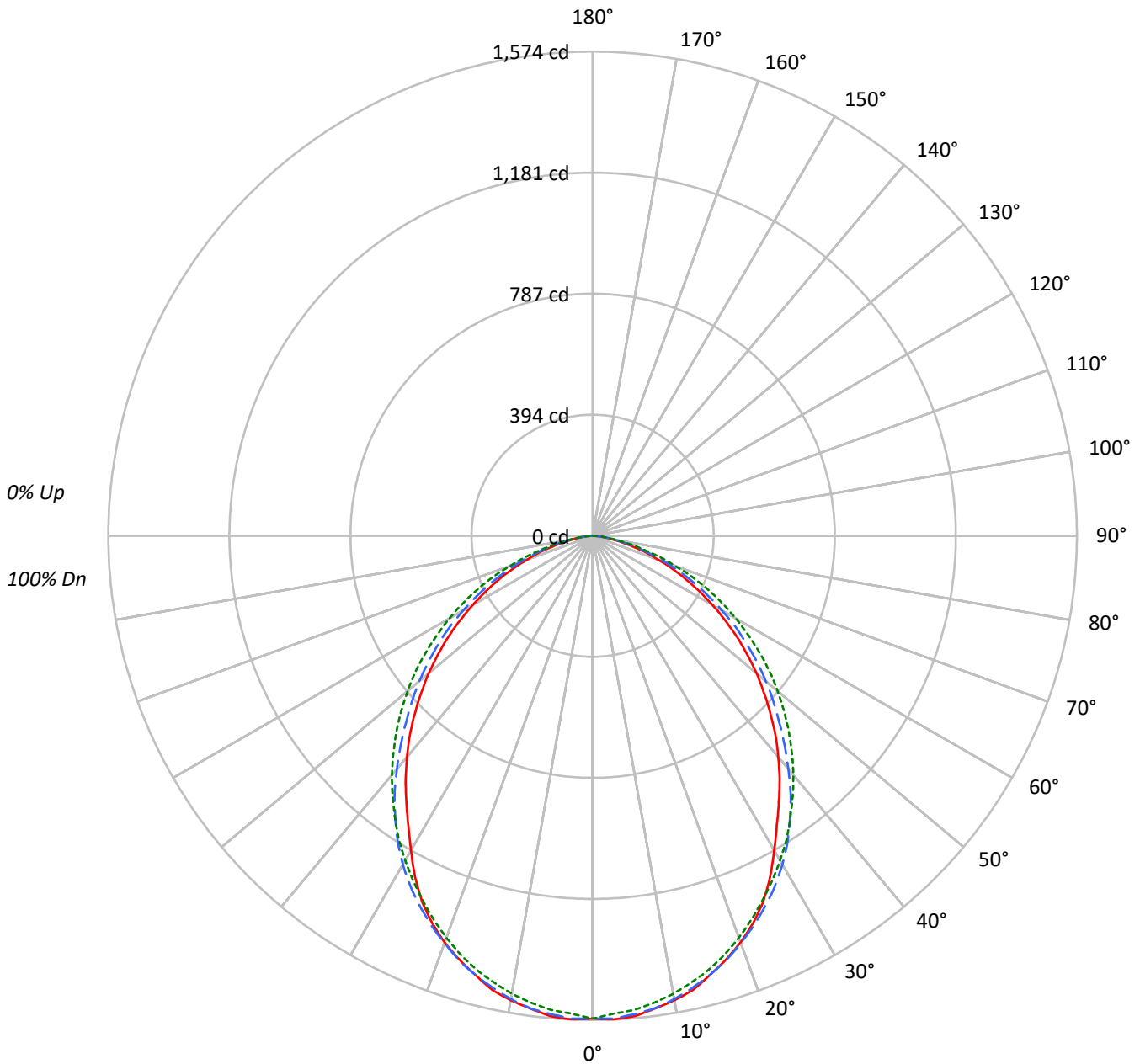
Lumens per Lamp: N/A  
Luminaire Lumens: 3629.0 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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

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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°	4223	4223	4223
5°	4234	4217	4181
10°	4190	4178	4130
15°	4115	4115	4068
20°	4028	4033	3982
25°	3896	3944	3881
30°	3668	3833	3786
35°	3466	3674	3680
40°	3298	3476	3567
45°	3109	3265	3433
50°	2910	3077	3286
55°	2685	2863	3109
60°	2418	2612	2891
65°	2134	2323	2630
70°	1779	1978	2234
75°	1398	1579	1749
80°	1000	1111	1234
85°	651	651	614



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.8	4.1
10°-20°	415.1	11.4
20°-30°	606.6	16.7
30°-40°	688.6	19.0
40°-50°	664.7	18.3
50°-60°	548.4	15.1
60°-70°	365.2	10.1
70°-80°	163.4	4.5
80°-90°	29.2	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°	1169.5	32.2
0°-40°	1858.1	51.2
0°-60°	3071.2	84.6
0°-90°	3629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1569	1569	1569	1569	1569	
5°	1568	1567	1561	1553	1548	148
15°	1477	1481	1477	1471	1460	416
25°	1312	1322	1328	1319	1307	601
35°	1055	1070	1118	1124	1120	661
45°	817	831	858	897	902	630
55°	572	582	610	644	663	511
65°	335	344	365	391	413	332
75°	134	142	152	159	168	147
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°	1569.4	1569.4	1569.4	1569.4	1569.4
2.5°	1573.7	1574.3	1570.7	1561.0	1555.0
5°	1567.6	1567.0	1561.0	1552.6	1547.7
7.5°	1550.2	1551.4	1549.6	1537.5	1530.9
10°	1533.3	1533.9	1529.1	1519.4	1511.6
12.5°	1511.6	1511.0	1504.3	1499.5	1486.8
15°	1477.2	1480.8	1477.2	1470.6	1460.3
17.5°	1444.0	1444.0	1446.4	1435.0	1427.2
20°	1406.7	1408.5	1408.5	1399.4	1390.4
22.5°	1363.2	1368.7	1370.5	1360.8	1350.0
25°	1312.0	1322.2	1328.3	1318.6	1307.2
27.5°	1249.9	1265.6	1283.7	1276.4	1263.8
30°	1180.6	1203.5	1233.6	1227.6	1218.5
32.5°	1114.8	1137.7	1179.3	1176.9	1172.1
35°	1055.1	1069.6	1118.5	1124.5	1120.3
37.5°	998.5	1011.7	1057.6	1071.4	1067.8
40°	938.8	953.2	989.4	1014.1	1015.3
42.5°	879.7	893.6	923.1	958.7	958.7
45°	817.0	830.8	858.0	897.2	902.0
47.5°	755.5	770.0	796.5	835.7	843.5
50°	695.2	708.5	735.0	773.0	785.0
52.5°	632.5	647.0	672.9	707.8	725.3
55°	572.2	581.8	610.2	643.9	662.6
57.5°	509.5	518.5	550.5	579.4	598.7
60°	449.2	460.6	485.4	514.9	537.2
62.5°	391.3	403.4	424.5	450.4	475.7
65°	335.2	344.3	364.8	390.7	413.0
67.5°	281.0	288.8	309.3	327.4	350.9
70°	226.1	236.4	251.4	268.9	284.0
72.5°	182.1	186.3	199.0	211.6	227.3
75°	134.5	141.7	151.9	159.2	168.2
77.5°	96.5	100.7	106.7	112.7	121.2
80°	64.5	66.3	71.7	73.0	79.6
82.5°	39.2	40.4	41.6	42.2	44.6
85°	21.1	21.1	21.1	19.9	19.9
87.5°	12.1	12.1	10.2	8.4	6.0
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)