

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: P556364

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-81-96-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: P556364  
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-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 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**

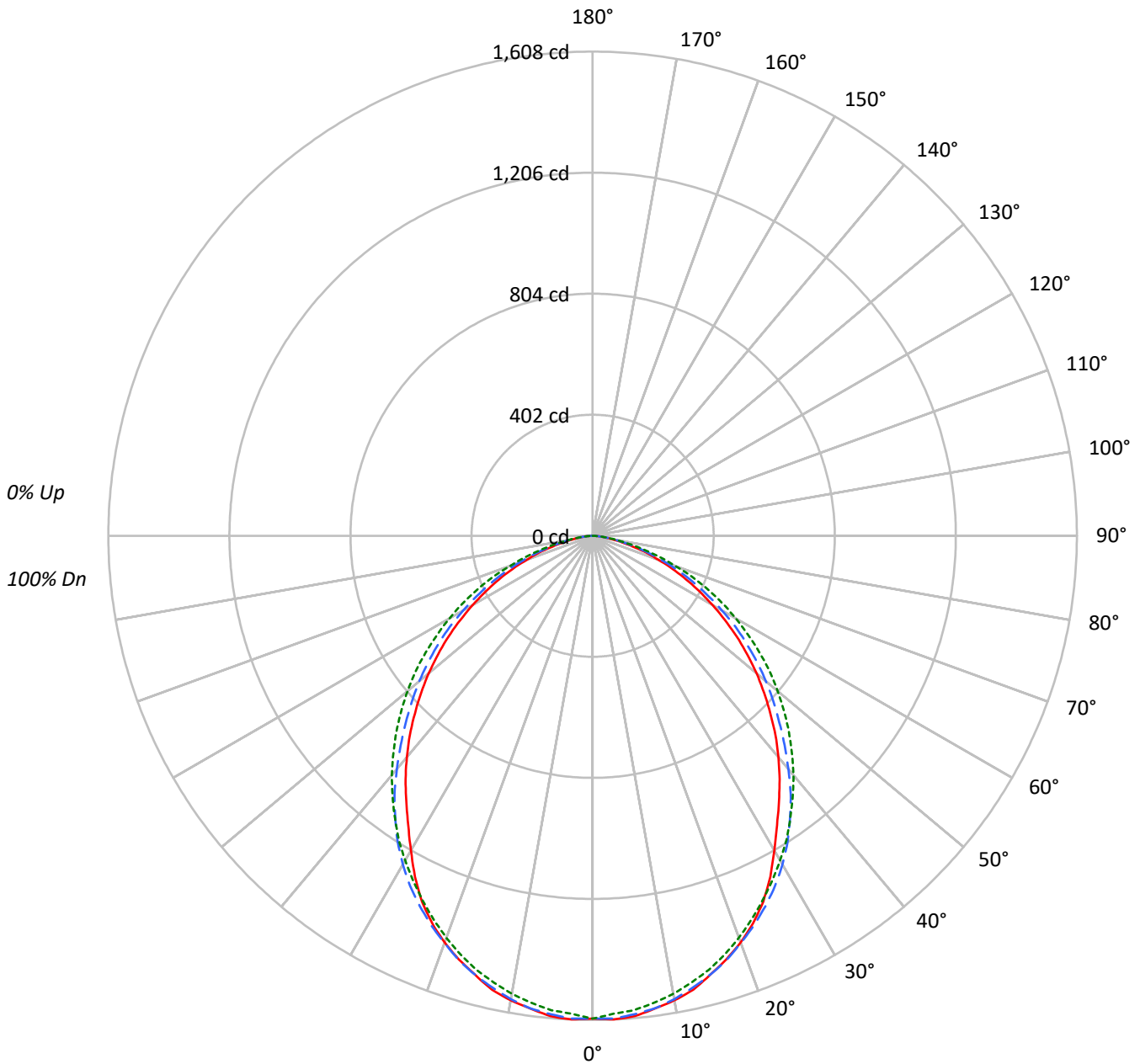
Lumens per Lamp: N/A  
Luminaire Lumens: 3708.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4315	4315	4315
5°	4327	4309	4272
10°	4281	4269	4220
15°	4205	4205	4157
20°	4116	4121	4068
25°	3980	4030	3966
30°	3748	3917	3869
35°	3542	3754	3760
40°	3370	3551	3645
45°	3177	3336	3507
50°	2974	3144	3358
55°	2743	2925	3177
60°	2470	2669	2954
65°	2181	2373	2687
70°	1817	2021	2283
75°	1429	1614	1787
80°	1021	1136	1260
85°	667	667	627



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.0	4.1
10°-20°	424.2	11.4
20°-30°	619.8	16.7
30°-40°	703.6	19.0
40°-50°	679.2	18.3
50°-60°	560.3	15.1
60°-70°	373.1	10.1
70°-80°	167.0	4.5
80°-90°	29.9	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°	1195.0	32.2
0°-40°	1898.6	51.2
0°-60°	3138.1	84.6
0°-90°	3708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3708.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1602	1601	1595	1586	1581	152
15°	1509	1513	1509	1503	1492	426
25°	1341	1351	1357	1347	1336	614
35°	1078	1093	1143	1149	1145	675
45°	835	849	877	917	922	644
55°	585	594	624	658	677	522
65°	342	352	373	399	422	340
75°	137	145	155	163	172	150
85°	22	22	22	20	20	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1603.6	1603.6	1603.6	1603.6	1603.6
2.5°	1607.9	1608.5	1604.8	1595.0	1588.8
5°	1601.8	1601.1	1595.0	1586.4	1581.4
7.5°	1583.9	1585.1	1583.3	1571.0	1564.2
10°	1566.7	1567.3	1562.3	1552.5	1544.5
12.5°	1544.5	1543.9	1537.1	1532.2	1519.2
15°	1509.4	1513.1	1509.4	1502.6	1492.1
17.5°	1475.5	1475.5	1477.9	1466.2	1458.2
20°	1437.3	1439.1	1439.1	1429.9	1420.6
22.5°	1392.9	1398.5	1400.3	1390.5	1379.4
25°	1340.6	1351.0	1357.2	1347.3	1335.6
27.5°	1277.1	1293.1	1311.6	1304.2	1291.3
30°	1206.3	1229.7	1260.5	1254.3	1245.1
32.5°	1139.1	1162.5	1205.0	1202.6	1197.6
35°	1078.1	1092.9	1142.8	1149.0	1144.6
37.5°	1020.2	1033.8	1080.6	1094.7	1091.0
40°	959.2	974.0	1011.0	1036.2	1037.5
42.5°	898.8	913.0	943.2	979.5	979.5
45°	834.8	848.9	876.7	916.7	921.6
47.5°	771.9	786.7	813.8	853.9	861.9
50°	710.3	723.9	751.0	789.8	802.1
52.5°	646.3	661.0	687.5	723.3	741.1
55°	584.6	594.5	623.5	658.0	677.1
57.5°	520.6	529.8	562.5	592.0	611.8
60°	459.0	470.7	495.9	526.1	548.9
62.5°	399.8	412.1	433.7	460.2	486.1
65°	342.5	351.8	372.7	399.2	422.0
67.5°	287.1	295.1	316.0	334.5	358.5
70°	231.0	241.5	256.9	274.8	290.2
72.5°	186.1	190.4	203.3	216.2	232.3
75°	137.4	144.8	155.2	162.6	171.9
77.5°	98.6	102.9	109.0	115.2	123.8
80°	65.9	67.8	73.3	74.5	81.3
82.5°	40.0	41.3	42.5	43.1	45.6
85°	21.6	21.6	21.6	20.3	20.3
87.5°	12.3	12.3	10.5	8.6	6.2
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)