

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: P556779

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-93-94-EDD**

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: P556779  
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-LD4-1STD-35-UNV-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

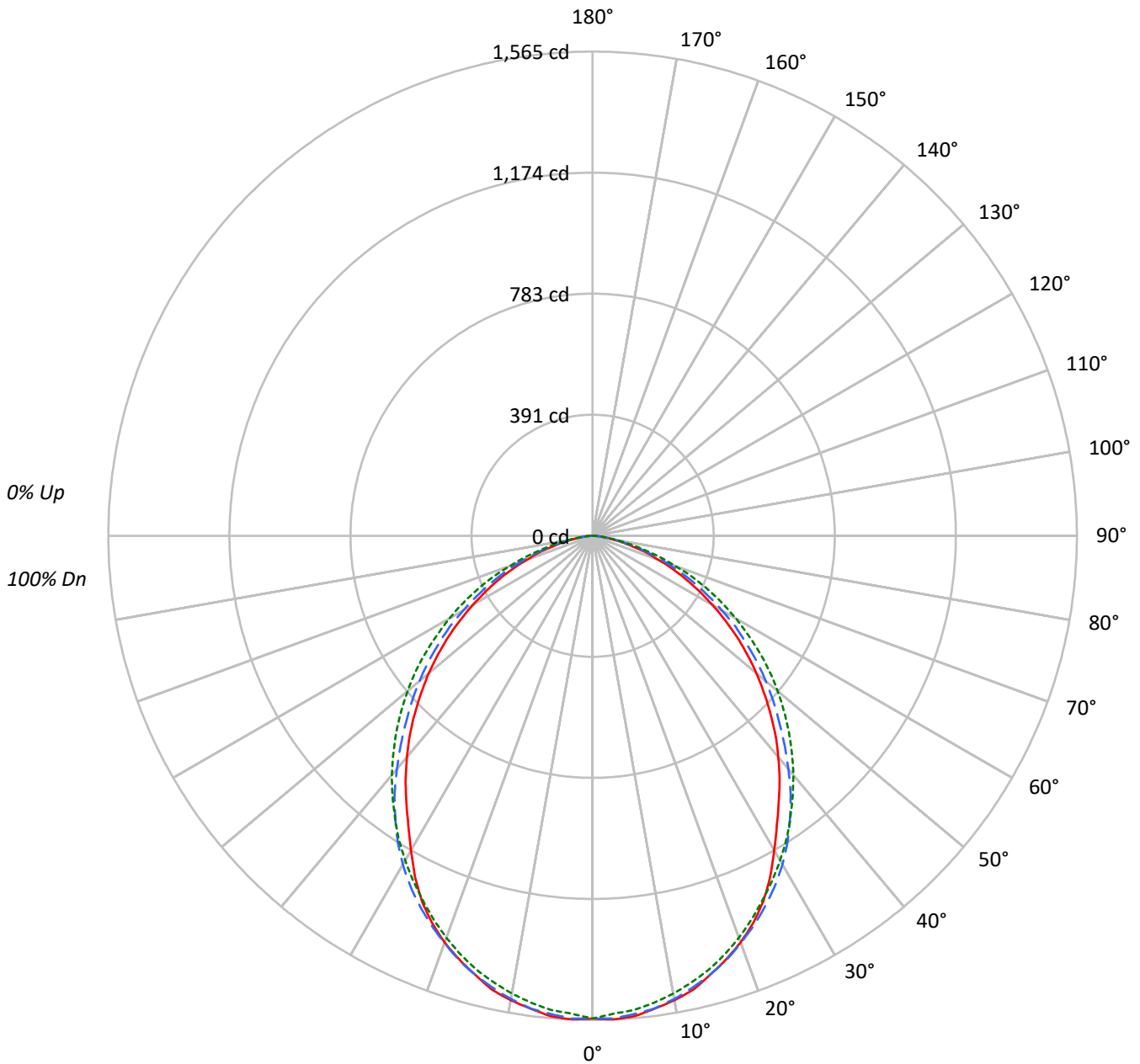
Lumens per Lamp: N/A  
Luminaire Lumens: 3608.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	4199	4199	4199
5°	4210	4192	4157
10°	4165	4154	4106
15°	4092	4092	4045
20°	4005	4010	3958
25°	3873	3921	3859
30°	3647	3811	3764
35°	3446	3653	3659
40°	3279	3456	3546
45°	3091	3246	3413
50°	2894	3059	3268
55°	2669	2846	3091
60°	2404	2597	2875
65°	2122	2309	2614
70°	1769	1967	2221
75°	1390	1571	1738
80°	993	1105	1226
85°	648	648	611



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.9	4.1
10°-20°	412.7	11.4
20°-30°	603.1	16.7
30°-40°	684.6	19.0
40°-50°	660.9	18.3
50°-60°	545.2	15.1
60°-70°	363.0	10.1
70°-80°	162.5	4.5
80°-90°	29.1	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°	1162.8	32.2
0°-40°	1847.4	51.2
0°-60°	3053.4	84.6
0°-90°	3608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3608.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1560	1560	1560	1560	1560	
5°	1559	1558	1552	1544	1539	148
15°	1469	1472	1469	1462	1452	414
25°	1304	1315	1321	1311	1300	597
35°	1049	1063	1112	1118	1114	657
45°	812	826	853	892	897	627
55°	569	578	607	640	659	508
65°	333	342	363	388	411	330
75°	134	141	151	158	167	146
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°	1560.4	1560.4	1560.4	1560.4	1560.4
2.5°	1564.6	1565.2	1561.6	1552.0	1546.0
5°	1558.6	1558.0	1552.0	1543.6	1538.8
7.5°	1541.2	1542.4	1540.6	1528.6	1522.0
10°	1524.4	1525.0	1520.2	1510.6	1502.8
12.5°	1502.8	1502.2	1495.6	1490.8	1478.2
15°	1468.7	1472.2	1468.7	1462.1	1451.9
17.5°	1435.7	1435.7	1438.1	1426.7	1418.9
20°	1398.5	1400.3	1400.3	1391.3	1382.3
22.5°	1355.4	1360.8	1362.5	1353.0	1342.2
25°	1304.4	1314.6	1320.6	1311.0	1299.6
27.5°	1242.7	1258.2	1276.2	1269.0	1256.4
30°	1173.7	1196.5	1226.5	1220.5	1211.5
32.5°	1108.4	1131.2	1172.5	1170.1	1165.3
35°	1049.0	1063.4	1112.0	1118.0	1113.8
37.5°	992.7	1005.9	1051.4	1065.2	1061.6
40°	933.3	947.7	983.7	1008.3	1009.5
42.5°	874.6	888.4	917.8	953.1	953.1
45°	812.3	826.0	853.0	892.0	896.8
47.5°	751.1	765.5	791.9	830.8	838.6
50°	691.2	704.4	730.7	768.5	780.5
52.5°	628.8	643.2	669.0	703.8	721.1
55°	568.9	578.5	606.6	640.2	658.8
57.5°	506.5	515.5	547.3	576.1	595.3
60°	446.6	458.0	482.6	511.9	534.1
62.5°	389.0	401.0	422.0	447.8	473.0
65°	333.3	342.3	362.7	388.4	410.6
67.5°	279.3	287.1	307.5	325.5	348.9
70°	224.8	235.0	250.0	267.4	282.3
72.5°	181.0	185.2	197.8	210.4	226.0
75°	133.7	140.9	151.1	158.3	167.2
77.5°	95.9	100.1	106.1	112.1	120.5
80°	64.1	65.9	71.3	72.5	79.1
82.5°	39.0	40.2	41.4	42.0	44.4
85°	21.0	21.0	21.0	19.8	19.8
87.5°	12.0	12.0	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)