

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: P556907

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-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: P556907  
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-50-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  
5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

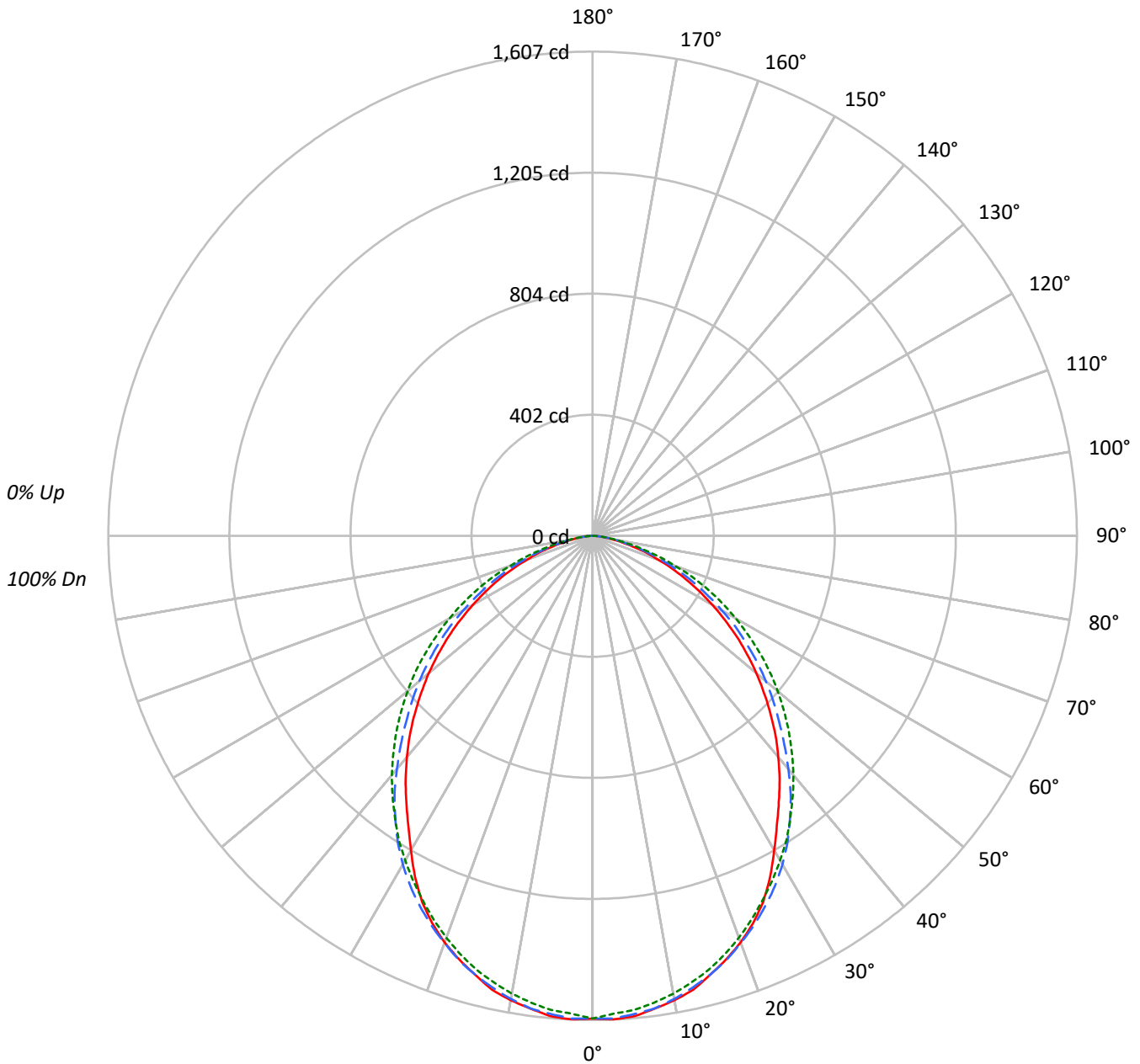
Lumens per Lamp: N/A  
Luminaire Lumens: 3705.0 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4312	4312	4312
5°	4323	4305	4269
10°	4277	4266	4217
15°	4201	4201	4154
20°	4113	4118	4065
25°	3977	4026	3962
30°	3745	3913	3866
35°	3539	3751	3757
40°	3367	3548	3641
45°	3174	3333	3505
50°	2971	3141	3355
55°	2741	2923	3174
60°	2468	2667	2952
65°	2180	2371	2685
70°	1816	2020	2281
75°	1428	1613	1785
80°	1021	1136	1260
85°	664	664	627



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.9	4.1
10°-20°	423.8	11.4
20°-30°	619.3	16.7
30°-40°	703.0	19.0
40°-50°	678.7	18.3
50°-60°	559.8	15.1
60°-70°	372.8	10.1
70°-80°	166.8	4.5
80°-90°	29.8	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°	1194.0	32.2
0°-40°	1897.0	51.2
0°-60°	3135.5	84.6
0°-90°	3705.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3705.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1602	1602	1602	1602	1602	
5°	1600	1600	1594	1585	1580	151
15°	1508	1512	1508	1501	1491	425
25°	1340	1350	1356	1346	1334	613
35°	1077	1092	1142	1148	1144	675
45°	834	848	876	916	921	644
55°	584	594	623	657	676	521
65°	342	352	372	399	422	339
75°	137	145	155	162	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°	1602.3	1602.3	1602.3	1602.3	1602.3
2.5°	1606.6	1607.2	1603.5	1593.7	1587.5
5°	1600.5	1599.9	1593.7	1585.1	1580.2
7.5°	1582.6	1583.8	1582.0	1569.7	1562.9
10°	1565.4	1566.0	1561.1	1551.2	1543.2
12.5°	1543.2	1542.6	1535.8	1530.9	1518.0
15°	1508.1	1511.8	1508.1	1501.4	1490.9
17.5°	1474.3	1474.3	1476.7	1465.0	1457.0
20°	1436.1	1438.0	1438.0	1428.7	1419.5
22.5°	1391.8	1397.3	1399.2	1389.3	1378.3
25°	1339.5	1349.9	1356.1	1346.2	1334.5
27.5°	1276.1	1292.1	1310.5	1303.2	1290.2
30°	1205.3	1228.7	1259.4	1253.3	1244.1
32.5°	1138.2	1161.6	1204.0	1201.6	1196.7
35°	1077.2	1092.0	1141.9	1148.0	1143.7
37.5°	1019.4	1032.9	1079.7	1093.9	1090.2
40°	958.4	973.2	1010.1	1035.4	1036.6
42.5°	898.1	912.3	942.4	978.7	978.7
45°	834.1	848.2	875.9	916.0	920.9
47.5°	771.3	786.1	813.2	853.2	861.2
50°	709.7	723.3	750.4	789.2	801.5
52.5°	645.7	660.5	687.0	722.7	740.5
55°	584.2	594.0	623.0	657.4	676.5
57.5°	520.2	529.4	562.0	591.6	611.3
60°	458.6	470.3	495.5	525.7	548.5
62.5°	399.5	411.8	433.4	459.8	485.7
65°	342.3	351.5	372.4	398.9	421.7
67.5°	286.9	294.9	315.8	334.3	358.3
70°	230.8	241.3	256.7	274.5	289.9
72.5°	185.9	190.2	203.1	216.1	232.1
75°	137.3	144.7	155.1	162.5	171.7
77.5°	98.5	102.8	109.0	115.1	123.7
80°	65.9	67.7	73.3	74.5	81.3
82.5°	40.0	41.2	42.5	43.1	45.6
85°	21.5	21.5	21.5	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)