

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: P556239

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-81-97-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: P556239  
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-35-UNV-81-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

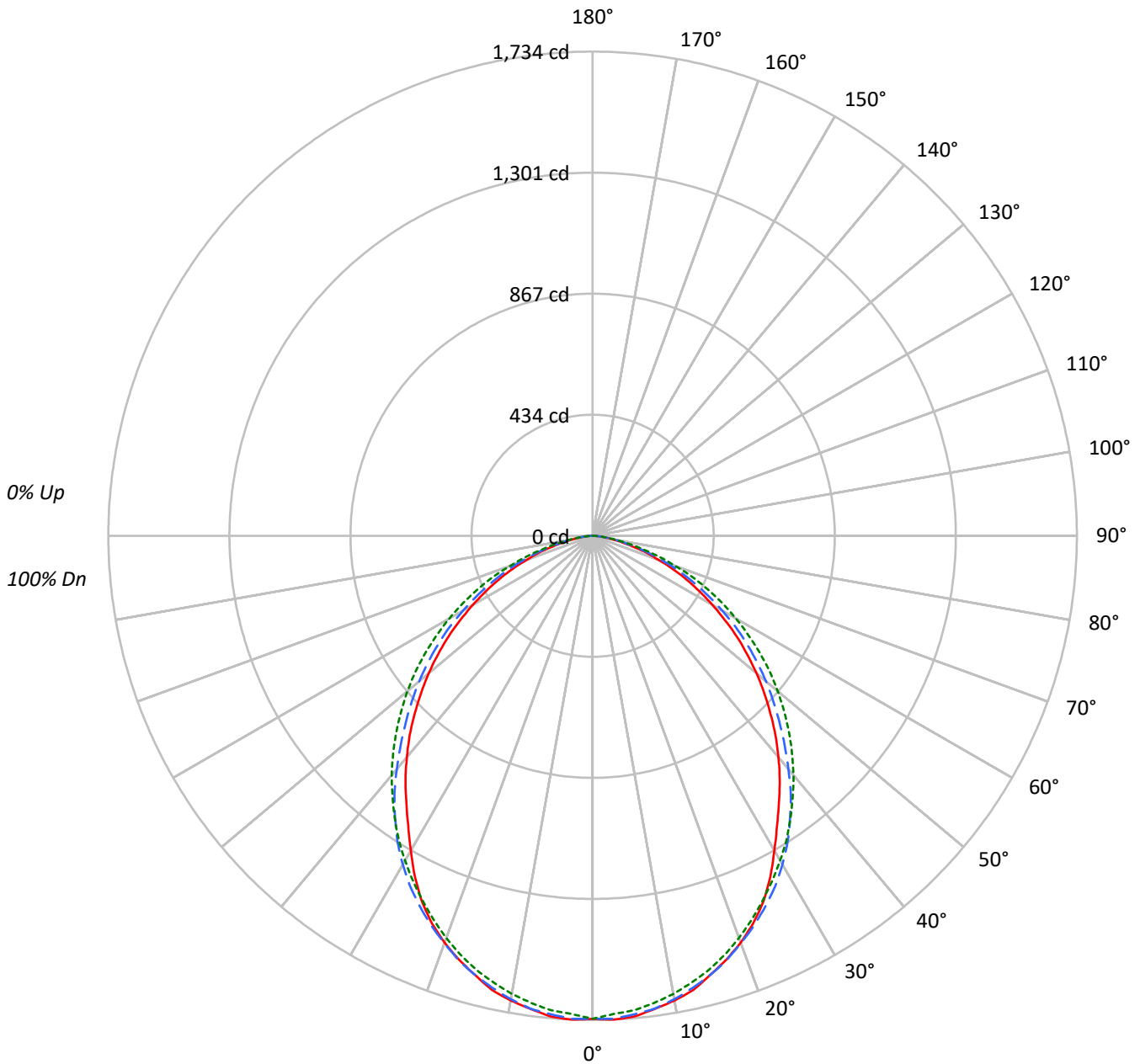
Lumens per Lamp: N/A  
Luminaire Lumens: 4000.0 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4655	4655	4655
5°	4668	4648	4608
10°	4618	4605	4553
15°	4536	4536	4484
20°	4440	4446	4389
25°	4294	4347	4278
30°	4043	4225	4173
35°	3821	4050	4056
40°	3635	3831	3931
45°	3427	3599	3784
50°	3208	3391	3623
55°	2959	3156	3427
60°	2665	2879	3187
65°	2353	2560	2898
70°	1961	2180	2463
75°	1541	1742	1928
80°	1102	1226	1359
85°	719	719	676



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.9	4.1
10°-20°	457.6	11.4
20°-30°	668.6	16.7
30°-40°	759.0	19.0
40°-50°	732.7	18.3
50°-60°	604.4	15.1
60°-70°	402.5	10.1
70°-80°	180.1	4.5
80°-90°	32.2	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°	1289.1	32.2
0°-40°	2048.1	51.2
0°-60°	3385.2	84.6
0°-90°	4000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4000.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1728	1727	1721	1711	1706	164
15°	1628	1632	1628	1621	1610	459
25°	1446	1457	1464	1453	1441	662
35°	1163	1179	1233	1239	1235	729
45°	900	916	946	989	994	695
55°	631	641	673	710	730	563
65°	370	380	402	431	455	366
75°	148	156	168	175	185	162
85°	23	23	23	22	22	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1729.9	1729.9	1729.9	1729.9	1729.9
2.5°	1734.5	1735.2	1731.2	1720.6	1713.9
5°	1727.9	1727.2	1720.6	1711.3	1706.0
7.5°	1708.6	1710.0	1708.0	1694.7	1687.4
10°	1690.0	1690.7	1685.4	1674.7	1666.1
12.5°	1666.1	1665.4	1658.1	1652.8	1638.8
15°	1628.2	1632.2	1628.2	1620.9	1609.6
17.5°	1591.7	1591.7	1594.3	1581.7	1573.1
20°	1550.5	1552.5	1552.5	1542.5	1532.5
22.5°	1502.6	1508.6	1510.6	1500.0	1488.0
25°	1446.1	1457.4	1464.1	1453.4	1440.8
27.5°	1377.7	1394.9	1414.9	1406.9	1393.0
30°	1301.2	1326.5	1359.7	1353.1	1343.1
32.5°	1228.8	1254.1	1299.9	1297.3	1291.9
35°	1163.0	1179.0	1232.8	1239.4	1234.8
37.5°	1100.5	1115.2	1165.7	1181.0	1177.0
40°	1034.7	1050.7	1090.6	1117.8	1119.1
42.5°	969.6	984.9	1017.5	1056.7	1056.7
45°	900.5	915.8	945.7	988.9	994.2
47.5°	832.7	848.7	877.9	921.1	929.7
50°	766.3	780.9	810.1	852.0	865.3
52.5°	697.1	713.1	741.7	780.2	799.5
55°	630.7	641.3	672.6	709.8	730.4
57.5°	561.6	571.5	606.8	638.7	659.9
60°	495.1	507.7	535.0	567.5	592.1
62.5°	431.3	444.6	467.9	496.4	524.4
65°	369.5	379.5	402.1	430.6	455.2
67.5°	309.7	318.3	340.9	360.9	386.8
70°	249.2	260.5	277.1	296.4	313.0
72.5°	200.7	205.4	219.3	233.3	250.5
75°	148.2	156.2	167.5	175.4	185.4
77.5°	106.3	111.0	117.6	124.3	133.6
80°	71.1	73.1	79.1	80.4	87.7
82.5°	43.2	44.5	45.9	46.5	49.2
85°	23.3	23.3	23.3	21.9	21.9
87.5°	13.3	13.3	11.3	9.3	6.6
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)