

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: P557659

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-82-94-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: P557659  
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-LD4-2STD-50-UNV-82-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC 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**

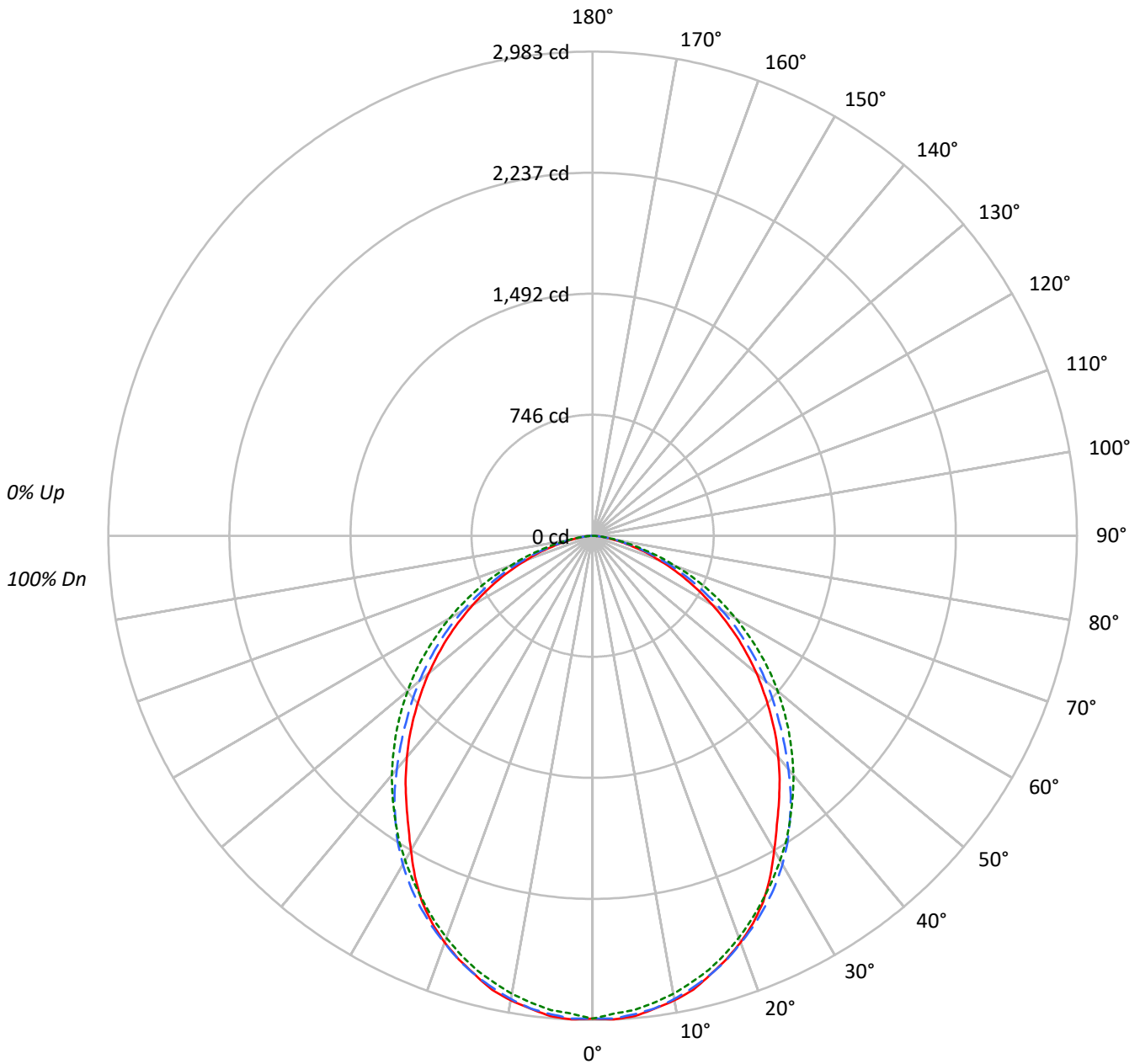
Lumens per Lamp: N/A  
Luminaire Lumens: 6878.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	8005	8005	8005
5°	8026	7992	7924
10°	7941	7919	7828
15°	7800	7800	7711
20°	7635	7644	7546
25°	7383	7475	7356
30°	6953	7265	7176
35°	6569	6964	6975
40°	6250	6587	6760
45°	5893	6188	6506
50°	5516	5832	6229
55°	5088	5426	5892
60°	4582	4951	5480
65°	4046	4402	4984
70°	3371	3749	4235
75°	2649	2994	3315
80°	1895	2108	2337
85°	1235	1235	1164



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.1	4.1
10°-20°	786.8	11.4
20°-30°	1149.7	16.7
30°-40°	1305.1	19.0
40°-50°	1259.9	18.3
50°-60°	1039.3	15.1
60°-70°	692.1	10.1
70°-80°	309.7	4.5
80°-90°	55.4	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°	2216.6	32.2
0°-40°	3521.7	51.2
0°-60°	5820.8	84.6
0°-90°	6878.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6878.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2975	2975	2975	2975	2975	
5°	2971	2970	2959	2943	2933	281
15°	2800	2807	2800	2787	2768	789
25°	2487	2506	2518	2499	2478	1139
35°	2000	2027	2120	2131	2123	1253
45°	1548	1575	1626	1700	1710	1195
55°	1084	1103	1156	1220	1256	968
65°	635	652	691	740	783	630
75°	255	268	288	302	319	279
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2974.6	2974.6	2974.6	2974.6	2974.6
2.5°	2982.6	2983.7	2976.8	2958.6	2947.1
5°	2971.1	2970.0	2958.6	2942.6	2933.4
7.5°	2938.0	2940.3	2936.8	2914.0	2901.4
10°	2906.0	2907.1	2898.0	2879.7	2864.9
12.5°	2864.9	2863.7	2851.1	2842.0	2818.0
15°	2799.7	2806.6	2799.7	2787.1	2767.7
17.5°	2736.9	2736.9	2741.4	2719.7	2704.9
20°	2666.0	2669.4	2669.4	2652.3	2635.2
22.5°	2583.7	2594.0	2597.5	2579.2	2558.6
25°	2486.6	2506.0	2517.5	2499.2	2477.5
27.5°	2368.9	2398.6	2432.9	2419.2	2395.2
30°	2237.5	2280.9	2338.1	2326.6	2309.5
32.5°	2112.9	2156.4	2235.2	2230.6	2221.5
35°	1999.8	2027.2	2119.8	2131.2	2123.2
37.5°	1892.4	1917.5	2004.4	2030.7	2023.8
40°	1779.2	1806.7	1875.2	1922.1	1924.4
42.5°	1667.3	1693.5	1749.5	1817.0	1817.0
45°	1548.4	1574.7	1626.1	1700.4	1709.5
47.5°	1431.9	1459.3	1509.6	1583.8	1598.7
50°	1317.6	1342.7	1393.0	1465.0	1487.9
52.5°	1198.7	1226.2	1275.3	1341.6	1374.7
55°	1084.5	1102.7	1156.5	1220.4	1255.9
57.5°	965.6	982.8	1043.3	1098.2	1134.7
60°	851.3	873.1	919.9	975.9	1018.2
62.5°	741.6	764.5	804.5	853.6	901.6
65°	635.4	652.5	691.4	740.5	782.8
67.5°	532.5	547.4	586.2	620.5	665.1
70°	428.5	448.0	476.5	509.7	538.2
72.5°	345.1	353.1	377.1	401.1	430.8
75°	254.8	268.5	288.0	301.7	318.8
77.5°	182.8	190.8	202.3	213.7	229.7
80°	122.3	125.7	136.0	138.3	150.8
82.5°	74.3	76.6	78.8	80.0	84.6
85°	40.0	40.0	40.0	37.7	37.7
87.5°	22.9	22.9	19.4	16.0	11.4
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)