

3 RESULTS

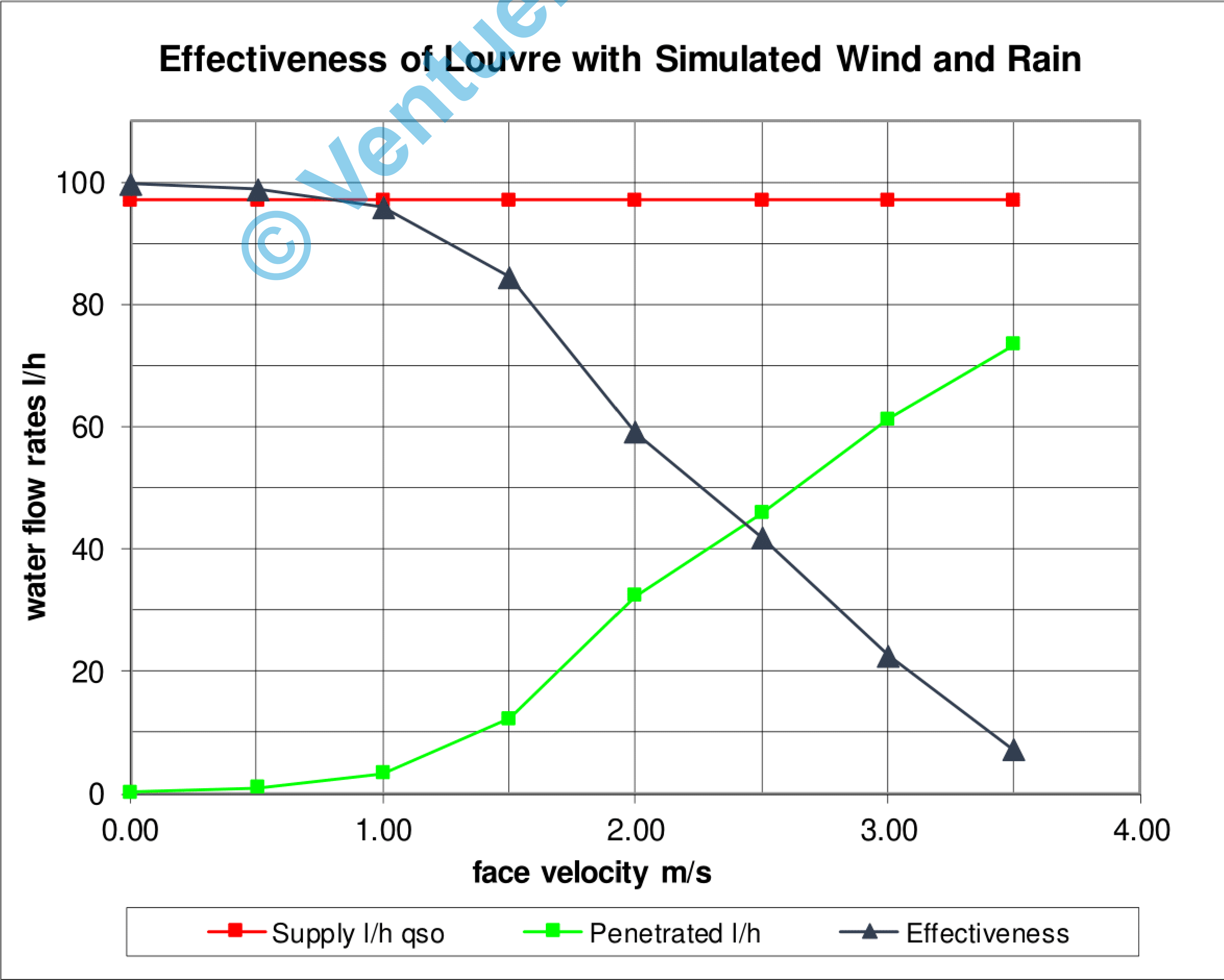
3.1 RAINWATER PENETRATION

Manufacturer Ventuer
Model AL-450W

Date 13/11/2024
Contract 105677

Simulated Rainfall	75 (+10% / -0%)	mm/hr	Core Area Height	995	mm
Wind Speed	13 (+/-10%)	m/s	Core Area Width	993	mm
			Core Area Area	0.988	m ²

Ventilation Rate		Water Flow Rates		Effectiveness %	Class
Volume m ³ /s	Velocity m/s	Supply l/h	Penetrated l/h		
0.00	0.00	97.2	0.2	99.8	A
0.50	0.50	97.2	0.9	98.9	B
0.99	1.00	97.2	3.3	95.9	B
1.48	1.50	97.2	12.3	84.5	C
1.98	2.00	97.2	32.4	59.2	D
2.47	2.50	97.2	45.8	42.0	D
2.97	3.00	97.2	61.4	22.6	D
3.46	3.50	97.2	73.5	7.2	D



3.2 COEFFICIENT OF ENTRY

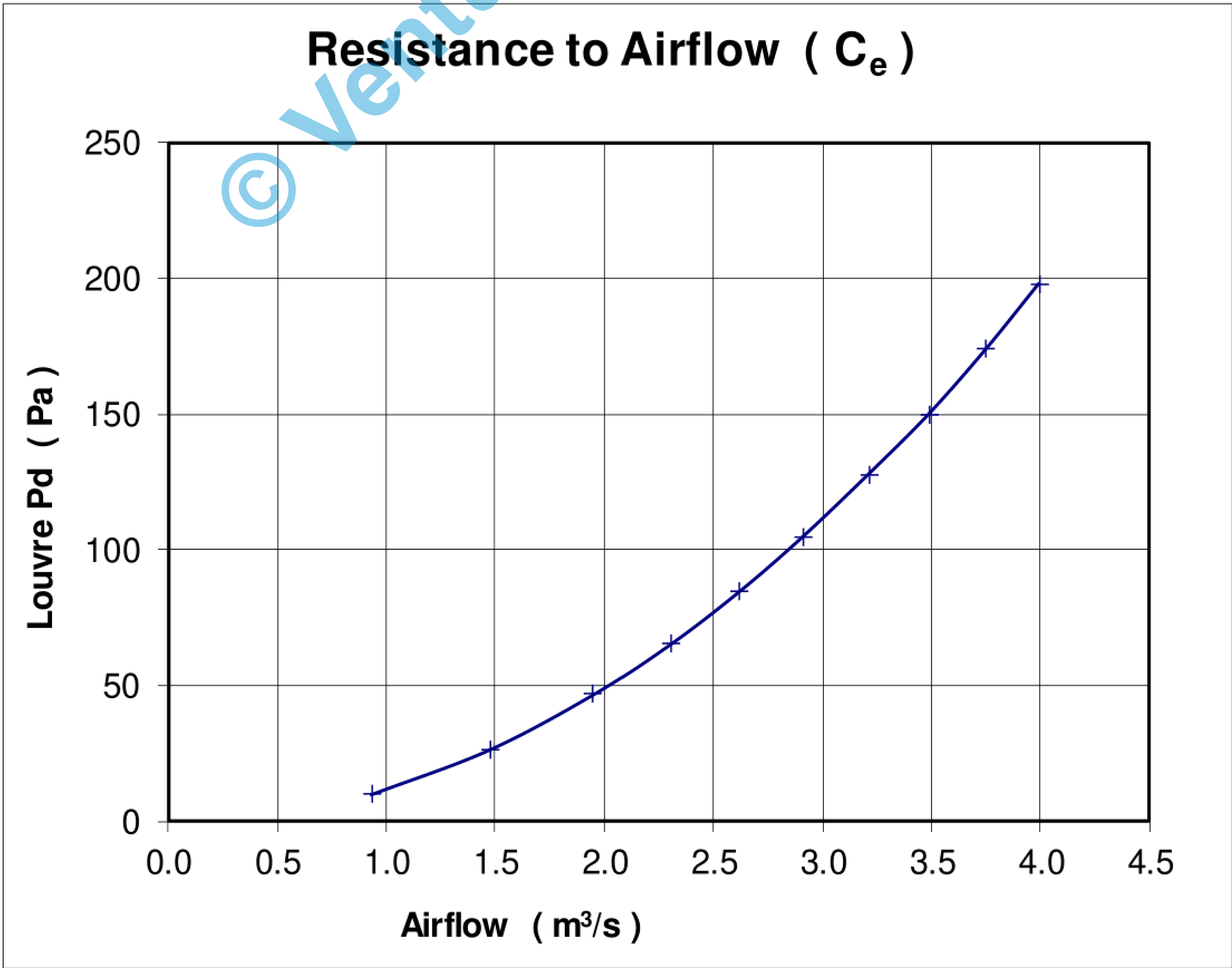
Manufacturer Ventuer
Model AL-450W

Date 15/11/2024
Contract 105677

Air Temperature 16.4 °C
Barometer 1019.5 mbar
Air Density 1.222 kg/m³

Core Area Height 995 mm
Core Area Width 993 mm
Core Area Area 0.988 m²

Louvre p.d. Pa	Louvre Face Velocity	Air Flow Rate		Coefficient C _e
	m/s	Test m³/s	Theoretical m³/s	
10.1	0.94	0.931	4.018	0.232
26.5	1.49	1.473	6.508	0.226
46.8	1.97	1.950	8.648	0.226
65.3	2.33	2.304	10.216	0.226
84.9	2.65	2.622	11.648	0.225
105.0	2.95	2.912	12.954	0.225
128.0	3.25	3.213	14.303	0.225
150.0	3.53	3.489	15.483	0.225
174.0	3.80	3.753	16.676	0.225
198.0	4.04	3.995	17.789	0.225
Mean C _e				0.226
Class				3



A ‘trendline’ for the above graph would follow $y = 11.887x^{2.035}$

3.3 COEFFICIENT OF DISCHARGE

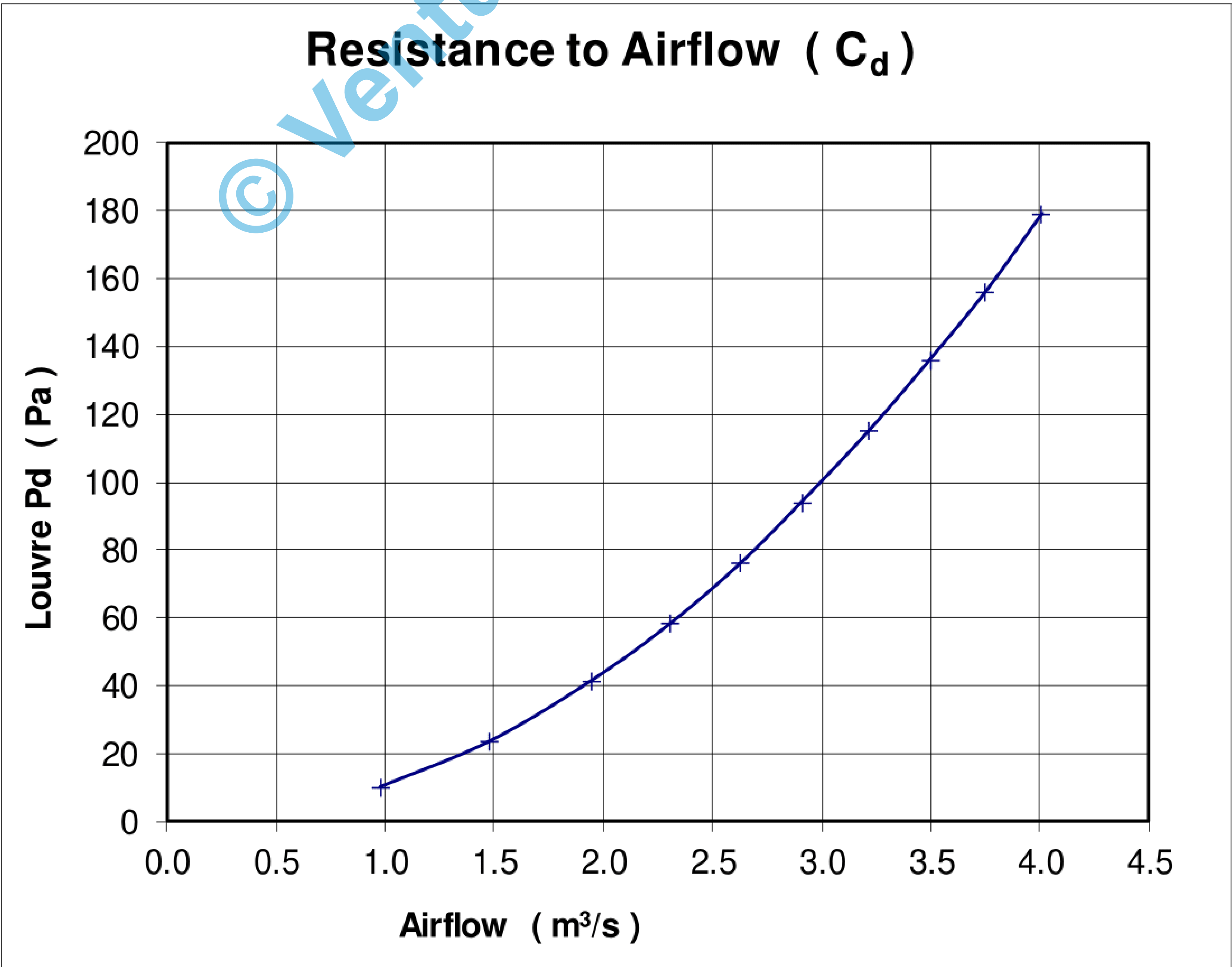
Manufacturer Ventuer
Model AL-450W

Date 15/11/2024
Contract 105677

Air Temperature 17.0 °C
Barometer 1019.3 mbar
Air Density 1.219 kg/m³

Core Area Height 995 mm
Core Area Width 993 mm
Core Area Area 0.988 m²

Louvre p.d. Pa	Louvre Face Velocity	Air Flow Rate		Coefficient C _d
	m/s	Test m ³ /s	Theoretical m ³ /s	
10.1	0.99	0.979	4.022	0.244
23.5	1.50	1.479	6.135	0.241
41.3	1.97	1.944	8.133	0.239
58.2	2.33	2.306	9.655	0.239
75.8	2.66	2.625	11.019	0.238
94.1	2.95	2.910	12.277	0.237
115.0	3.26	3.217	13.572	0.237
136.0	3.54	3.497	14.759	0.237
156.0	3.80	3.753	15.807	0.237
179.0	4.06	4.011	16.933	0.237
Mean C _d				0.239
Class				3



x
A 'trendline' for the above graph would follow $y = 10.583x^{2.0394}$