

3 RESULTS

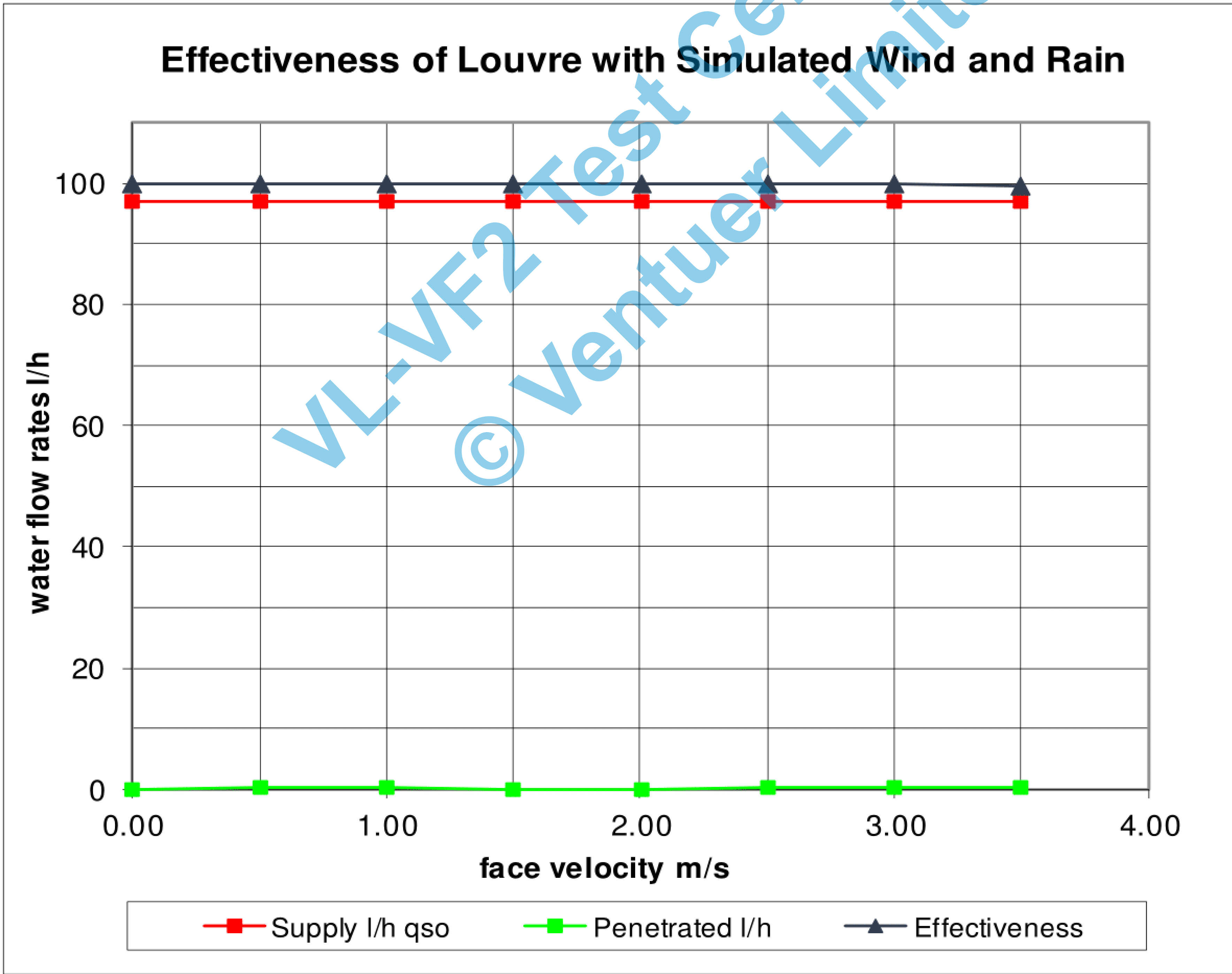
3.1 RAINWATER PENETRATION

Manufacturer Ventuer  
Model VL-VF2

Date 28/04/2022  
Contract 103725

|                    |                 |       |                  |       |                |
|--------------------|-----------------|-------|------------------|-------|----------------|
| Simulated Rainfall | 75 (+10% / -0%) | mm/hr | Core Area Height | 983   | mm             |
| Wind Speed         | 13 (+/-10%)     | m/s   | Core Area Width  | 963   | mm             |
|                    |                 |       | Core Area Area   | 0.947 | m <sup>2</sup> |

| Ventilation Rate         |              | Water Flow Rates |                | Effectiveness % | Class |
|--------------------------|--------------|------------------|----------------|-----------------|-------|
| Volume m <sup>3</sup> /s | Velocity m/s | Supply l/h       | Penetrated l/h |                 |       |
| 0.00                     | 0.00         | 97.2             | 0.1            | 99.9            | A     |
| 0.47                     | 0.50         | 97.2             | 0.1            | 99.8            | A     |
| 0.95                     | 1.00         | 97.2             | 0.1            | 99.8            | A     |
| 1.42                     | 1.50         | 97.2             | 0.1            | 99.9            | A     |
| 1.89                     | 2.00         | 97.2             | 0.1            | 99.9            | A     |
| 2.37                     | 2.50         | 97.2             | 0.1            | 99.8            | A     |
| 2.84                     | 3.00         | 97.2             | 0.1            | 99.8            | A     |
| 3.31                     | 3.50         | 97.2             | 0.3            | 99.7            | A     |



3.2 COEFFICIENT OF ENTRY

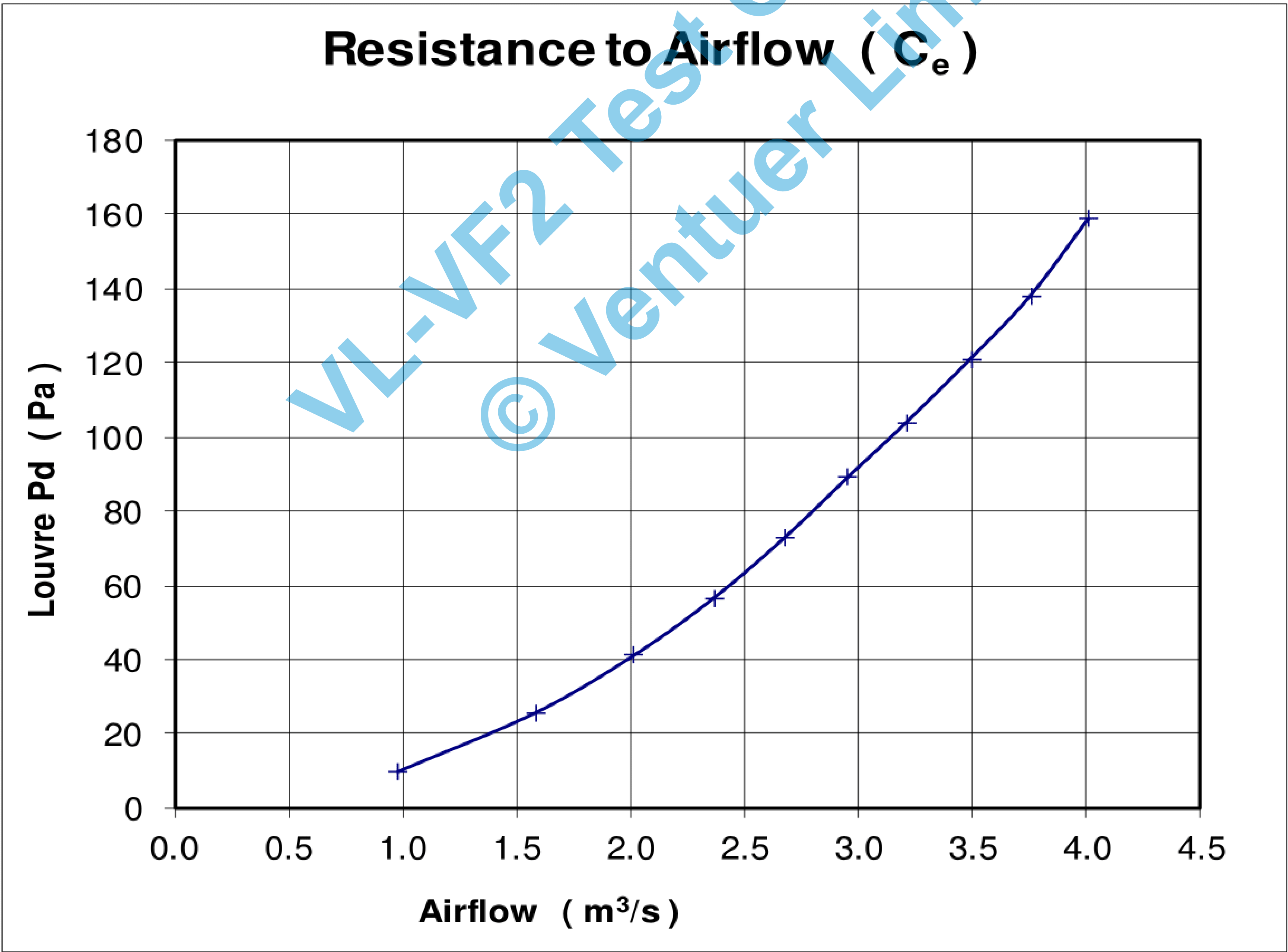
Manufacturer Ventuer  
Model VL-VF2

Date 25/04/2022  
Contract 103725

Air Temperature 15.0 °C  
Barometer 1013.1 mbar  
Air Density 1.220 kg/m<sup>3</sup>

Core Area Height 983 mm  
Core Area Width 963 mm  
Core Area Area 0.947 m<sup>2</sup>

| Louvre p.d.<br>Pa   | Louvre Face Velocity | Air Flow Rate             |                                  | Coefficient<br>C <sub>e</sub> |
|---------------------|----------------------|---------------------------|----------------------------------|-------------------------------|
|                     | m/s                  | Test<br>m <sup>3</sup> /s | Theoretical<br>m <sup>3</sup> /s |                               |
| 10.0                | 1.04                 | 0.984                     | 3.833                            | 0.257                         |
| 25.7                | 1.67                 | 1.583                     | 6.145                            | 0.258                         |
| 41.1                | 2.13                 | 2.015                     | 7.770                            | 0.259                         |
| 56.5                | 2.50                 | 2.366                     | 9.111                            | 0.260                         |
| 73.1                | 2.84                 | 2.684                     | 10.363                           | 0.259                         |
| 89.1                | 3.12                 | 2.957                     | 11.441                           | 0.258                         |
| 104.0               | 3.40                 | 3.216                     | 12.361                           | 0.260                         |
| 121.0               | 3.69                 | 3.496                     | 13.333                           | 0.262                         |
| 138.0               | 3.97                 | 3.760                     | 14.239                           | 0.264                         |
| 159.0               | 4.24                 | 4.018                     | 15.284                           | 0.263                         |
| Mean C <sub>e</sub> |                      |                           |                                  | 0.260                         |
| Class               |                      |                           |                                  | 3                             |



A 'trendline' for the above graph would follow  $y = 10.397x^{1.9653}$

3.3 COEFFICIENT OF DISCHARGE

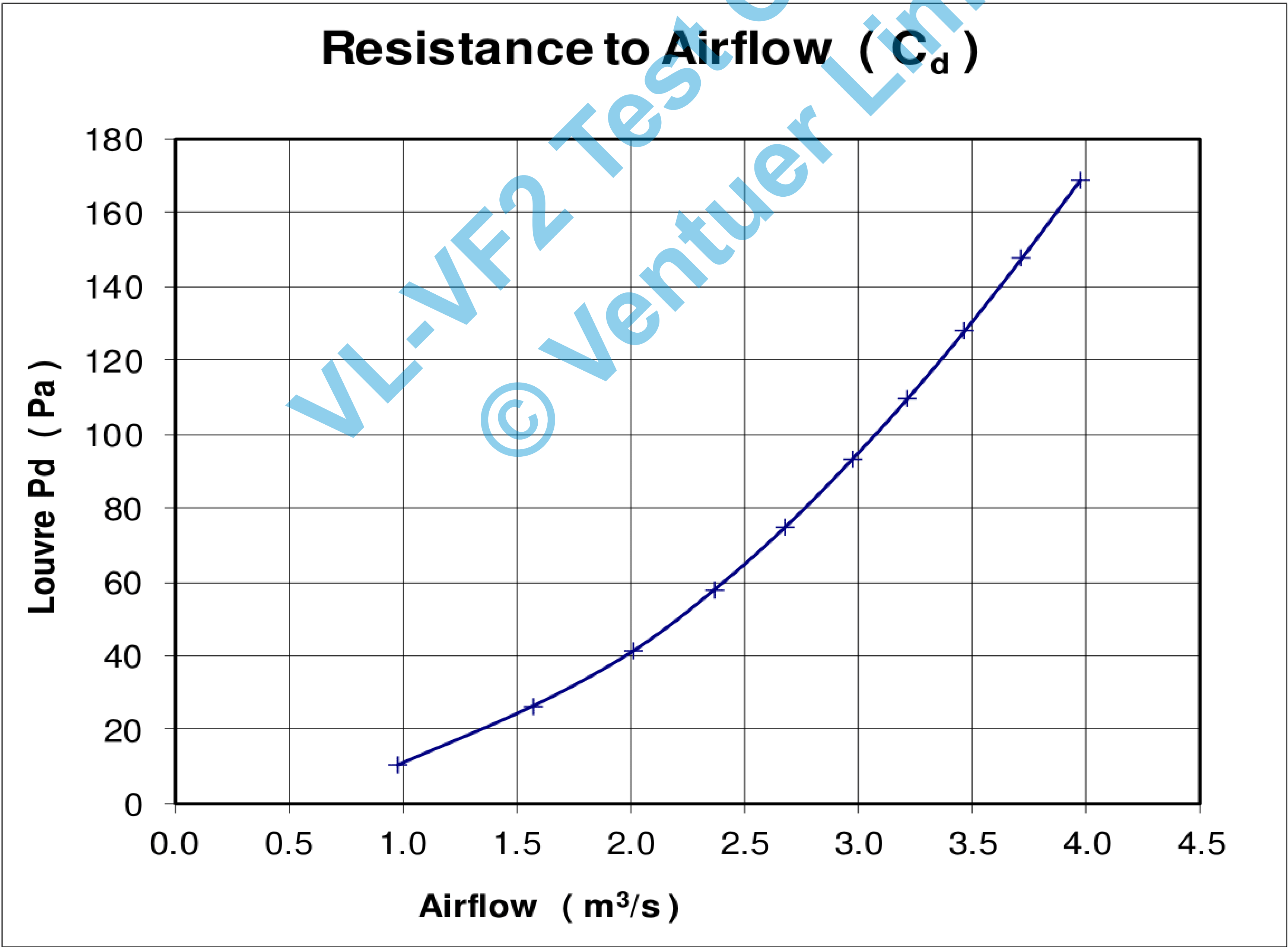
Manufacturer Ventuer  
Model VL-VF2

Date 25/04/2022  
Contract 103725

Air Temperature 15.9 °C  
Barometer 1013.1 mbar  
Air Density 1.216 kg/m<sup>3</sup>

Core Area Height 983 mm  
Core Area Width 963 mm  
Core Area Area 0.947 m<sup>2</sup>

| Louvre p.d.<br>Pa   | Louvre Face Velocity | Air Flow Rate             |                                  | Coefficient<br>C <sub>d</sub> |
|---------------------|----------------------|---------------------------|----------------------------------|-------------------------------|
|                     | m/s                  | Test<br>m <sup>3</sup> /s | Theoretical<br>m <sup>3</sup> /s |                               |
| 10.1                | 1.04                 | 0.981                     | 3.858                            | 0.254                         |
| 26.3                | 1.67                 | 1.579                     | 6.226                            | 0.254                         |
| 41.3                | 2.13                 | 2.018                     | 7.801                            | 0.259                         |
| 57.8                | 2.50                 | 2.370                     | 9.229                            | 0.257                         |
| 74.9                | 2.83                 | 2.682                     | 10.506                           | 0.255                         |
| 93.1                | 3.14                 | 2.972                     | 11.713                           | 0.254                         |
| 110.0               | 3.40                 | 3.221                     | 12.732                           | 0.253                         |
| 128.0               | 3.66                 | 3.465                     | 13.734                           | 0.252                         |
| 148.0               | 3.93                 | 3.719                     | 14.768                           | 0.252                         |
| 169.0               | 4.20                 | 3.973                     | 15.781                           | 0.252                         |
| Mean C <sub>d</sub> |                      |                           |                                  | 0.254                         |
| Class               |                      |                           |                                  | 3                             |



A ‘trendline’ for the above graph would follow  $y = 10.339x^{2.0177}$