

# Certificate

**Certificate No: 52857/1**

**Issue No: 1**

**Date of issue: 18 May 2009**

This is to certify that

**BSRIA Limited**

Has tested a sample of the product described below in accordance with the test methods contained within EN 13030 : 2002 and have determined the item met the detailed classification shown on pages 3 and 4 of this certificate. For further details of the test item see Page 2 of this certificate

**Manufacturer/Agent** Alumet Systems (UK) Ltd

Senator House  
Bourne End Road  
Southam  
Warwickshire  
CV47 0NA

**Product** KW50Z

**Test location** BSRIA  
Old Bracknell West  
Bracknell  
Berkshire RG12 7AH

**Date of test** 11 May 2009

**Expiry date** 18 May 2012

**Test engineer** M Roper / M Evans

**Quality approved** Phil Stonard  
Principal Engineer  
MicroClimate & Test

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**TEST ITEM INFORMATION**

<b>Contract</b>	52857A	
<b>Date</b>	11/05/2009	
<b>Manufacturer</b>	Alumet	
<b>Louvre Model</b>	KW50Z	
<b>Material</b>	Aluminium	
<b>Painted</b>	No	
<b>Blade Height</b>	965	mm
<b>Blade Width</b>	965	mm
<b>Blade Depth</b>	64	mm
<b>Frame Depth</b>	240	mm
<b>No.of Blades</b>	20	
<b>Blade Pitch</b>	50	mm
<b>Blade Angle</b>	45	Degrees
<b>No.of Banks</b>	2	
<b>Guard Type</b>	Vermin + Bird	
<b>Guard Spacing</b>	20	
<b>Side Channels</b>	Yes	
<b>Water Drip Tray</b>	Yes	
<b>Blade Orientation</b>	Horizontal	



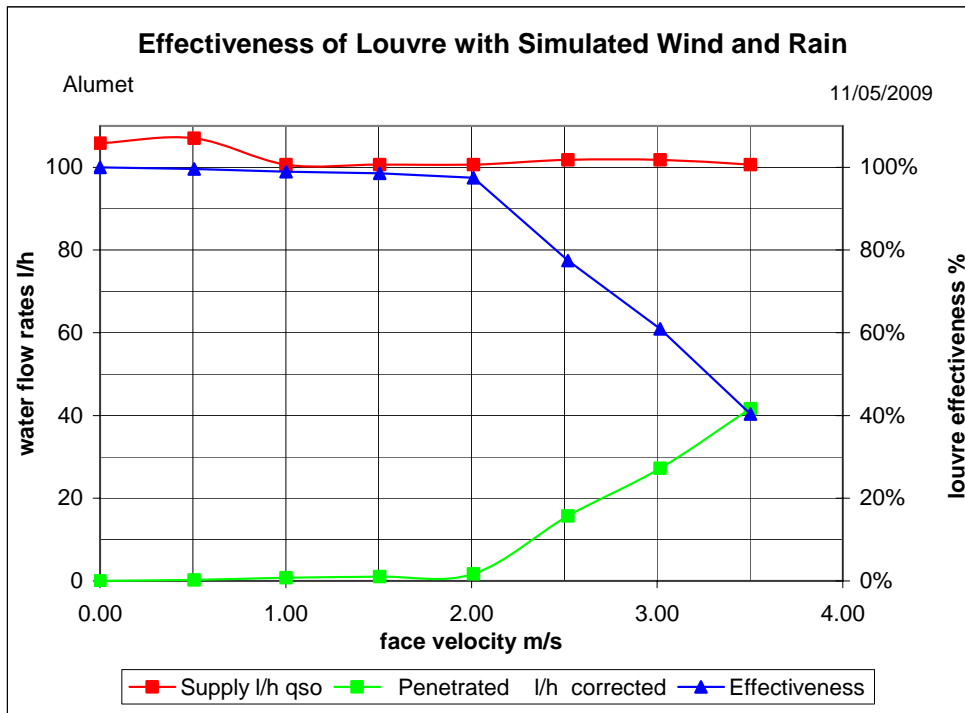
WATER PENETRATION test

MANUFACTURER Alumet  
MODEL KW50Z

Date 11/05/2009  
Contract 52857

Simulated rainfall 75 mm/hr  
Wind speed 13.0 m/s  
louvre height 965 mm  
louvre width 965 mm  
louvre area 0.931 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	105.9	0.0	100.0%	A
0.47	0.51	107.0	0.3	99.6%	A
0.93	1.00	100.6	0.8	98.9%	B
1.40	1.51	100.6	1.0	98.5%	B
1.87	2.01	100.6	1.8	97.5%	B
2.35	2.52	101.8	15.7	77.5%	D
2.81	3.02	101.8	27.3	61.0%	D
3.26	3.50	100.6	41.6	40.4%	D



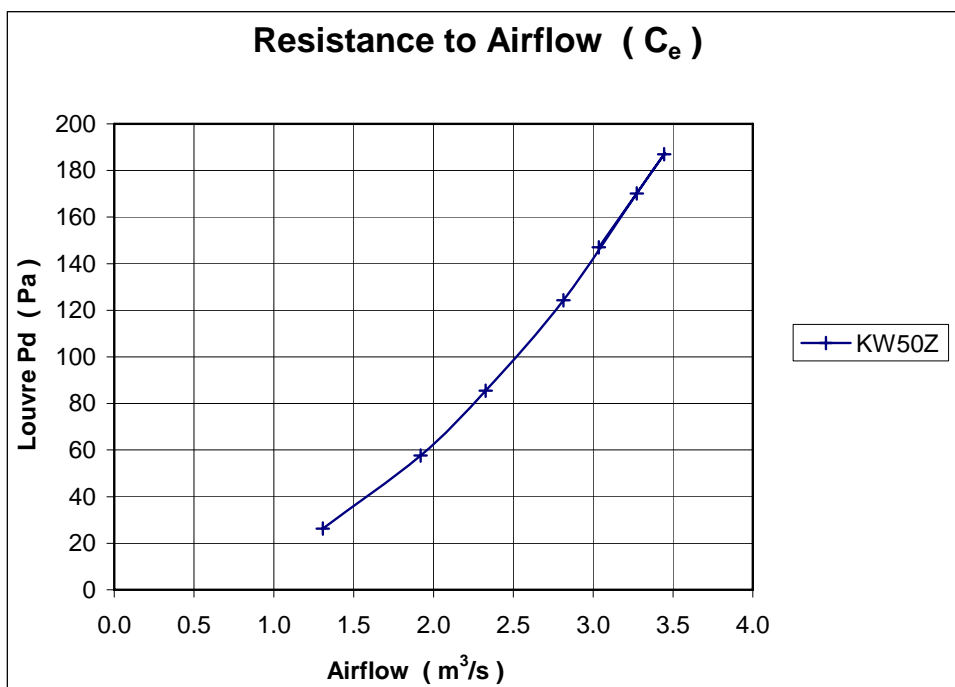
ENTRY LOSS COEFFICIENT test

MANUFACTURER Alumet  
MODEL KW50Z

Date 11/05/2009  
Contract 52857

air temperature 19.6 °C      louvre height 965 mm  
barometer 1012 mbar      louvre width 965 mm  
air density 1.199 kg/m<sup>3</sup>      louvre area 0.931 m<sup>2</sup>

louvre pd Pascals	louvre face velocity	air flow rate		coefficient C <sub>e</sub>
	m/s	test m <sup>3</sup> /s	theoretical m <sup>3</sup> /s	
26.3	1.40	1.307	6.167	0.212
57.6	2.06	1.918	9.127	0.210
85.5	2.50	2.327	11.119	0.209
124.3	3.02	2.813	13.407	0.210
170.2	3.51	3.272	15.688	0.209
187.0	3.70	3.445	16.444	0.209
147.0	3.26	3.035	14.580	0.208
mean C <sub>e</sub>				0.210
Class				3



## CLASSIFICATION OF WEATHER LOUVRES

Weather louvres shall be classified by their ability to reject simulated rain.

### Penetration Classification

Table 1 shows difference classifications based on the maximum simulated rain penetration per square metre of louvre. The effectiveness is determined in accordance with section 8 of EN 13030:2001.

Water penetration rating at a given louvre face velocity is determined by the water penetration while the louvre is subjected to a  $13 \text{ ms}^{-1}$  simulated wind velocity and a simulated rain fall at the nominal rate.

**Table 1 Penetration classification**

Class	Effectiveness	Maximum allowed penetration of simulated rain $\text{l.h}^{-1}.\text{m}^{-2}$
A	1 TO 0,99	0,75
B	0,989 TO 0,95	3,75
C	0,949 TO 0,80	15,0
D	Below 0,8	Greater than 15,0

These classifications apply to various core velocities.

### Discharge Loss Coefficient

The discharge loss coefficient given in Table 2, shall be determined in accordance with section 6.2.4.

**Table 2 Discharge loss coefficient classification**

Class	Discharge Loss Coefficient
1	0,4 and above
2	0,3 to 0,399
3	0,2 to 0,299
4	0,199 and below

(Note: The above also applies to entry loss coefficient)