

TESTRAPPORT 53355/1

ENGLISH TRANSLATION

According to EN 13030: 2001: "Ventilation of buildings - Grilles - Performance testing of air grilles subjected to simulated rain"

**Linius L.066V, mesh 6x6
and derived types :
Rooster 452, mech 6x6**

carried out by : BSRIA Ltd
Old Bracknell West, Bracknell
Berkshire RG12 7AH [Engeland]

commissioned by : nv RENSON Sunprotection-Projects sa
Maalbeekstraat 10
8790 Waregem [België]

Date of issue : 9 oktober 2018

TEST INFORMATION

Contract	53355A
Date	25/08/2009
Manufacturer	Renson
Louvre Model	L.006V
Material	Aluminium
Painted	No
Blade Height	1010 mm
Blade Width	1000 mm
Blade Depth	65 mm
Frame Depth	85 mm
No. of Blades	15
Blade Pitch	66 mm
Blade Angle	45 Degrees
No. of Banks	1
Guard Type	Bird
Guard Spacing	8mm
Side Channels	No
Water Drip Tray	Yes (13mm Deep)
Blade Orientation	Horizontal



CLASSIFICATION OF WEATHER LOUVRES

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

- **Penetration Classification**

Table 1 shows the different classifications based on the maximum simulated rain penetration per square metre of louvre. The classification is determined in accordance with section 8.2 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 ms⁻¹ simulated wind velocity and a simulated rain fall at the nominal rate.

Table 1 Penetration classification

classe	Effectiveness	Maximum allowed penetration of simulated rain l.h-1.m-2
A	1,00 - 0,99	0,75
B	0,989 - 0,95	3,75
C	0,949 - 0,80	15,0
D	< 0,80	> 15,0

These classifications apply to various core velocities.

- **Discharge and Entry Loss Coefficient**

The discharge and entry loss coefficient given in Table 2, shall be determined in accordance with section 8.3 of test standard EN13030:2001.

Classe	Discharge and Entry Loss Coefficient
1	> 0,4
2	0,3 - 0,399
3	0,2 - 0,299
4	< 0,199

Summary Report 53355/2

Issue No: 1

Date of issue: 10 October 2018

This Summary Report confirms that BSRIA Ltd has tested a sample of the product described below in accordance with the test methods contained within EN 13030:2001 and have determined the item met the detailed classification shown on pages 3 to 5. For further details of the test item see Page 2 of this Summary Report.

Manufacturer/Agent	N.V. Renson Projects IZ 2 Vijverdam Maalbeekstraat 6 B-8790 Waregem
Product	L.066V
Test location	BSRIA Old Bracknell West Bracknell Berkshire RG12 7AH
Date of test	25 August to 17 September 2009
Date of issue	9 October 2018
Test engineer	A Freeth
Quality approved	Mark Roper Principal Test Engineer

This Summary Report must not be reproduced except in full without the written approval of an executive director of BSRIA. It is only intended to be used within the context described in the text.

This summary report supersedes certificate 53355/2. This up-date was carried out under BSRIA contract reference 61223.

RAINWATER PENETRATION

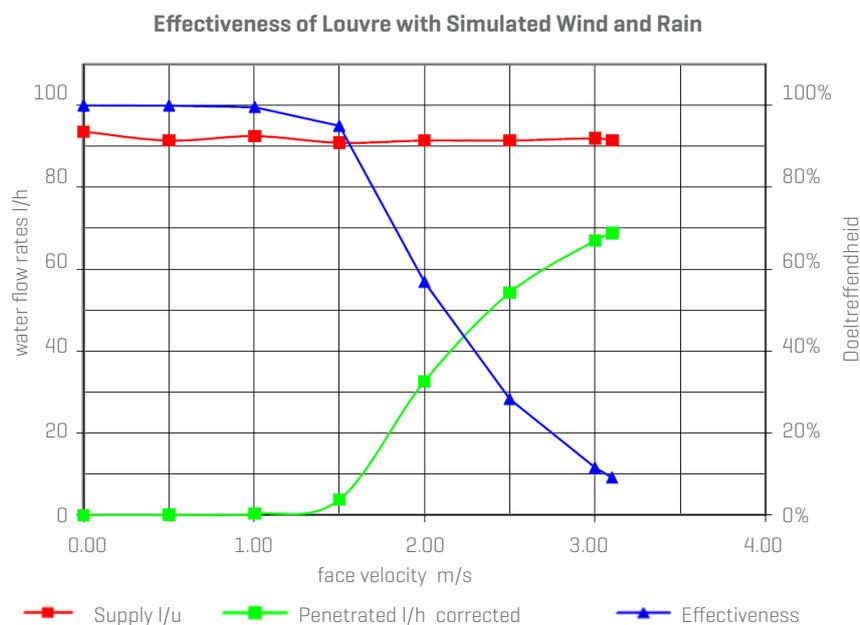
MANUFACTURER Renson
MODEL L.066V

Date 14/08/2009
Contract 53355A

Simulated rainfall 75 mm/hr
Wind speed 13.0 m/s

louvre height 1010 mm
louvre width 1000 mm
louvre area 1.010 m²

VENTILATION RATE		WATER FLOW RATES		Effectiveness	Class
Volume m ³ /s	Velocity m/s	Supply l/u	Penetrated l/u		
0.00	0.00	93.6	0.0	100.0%	A
0.51	0.50	91.4	0.0	99.9%	A
1.01	1.00	92.5	0.3	99.6%	A
1.52	1.50	90.9	3.8	95.0%	B
2.02	2.00	91.4	32.7	56.9%	D
2.53	2.50	91.4	54.3	28.3%	D
3.03	3.00	92.0	67.0	11.6%	D
3.13	3.10	91.4	68.8	9.1%	D

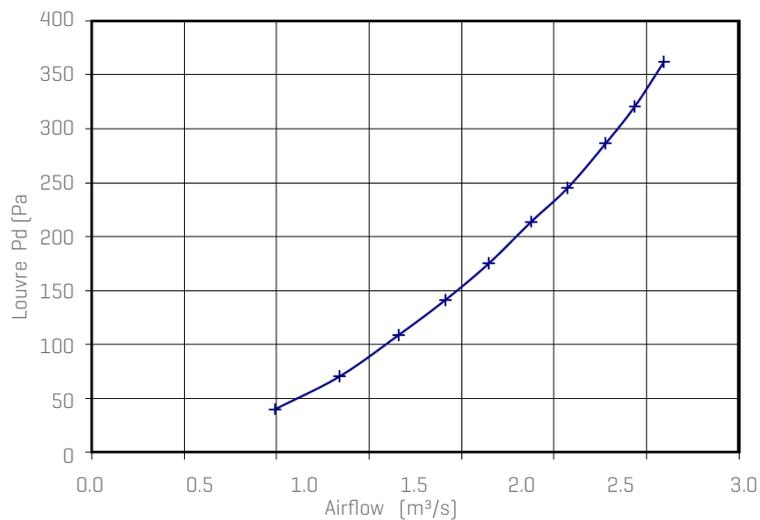


COEFFICIENT OF ENTRY

MANUFACTURER	Renson	Date	26/08/2009
MODEL	L.066V	Contract	53355A
air temperature	19.8 °C	louvre height	1010 mm
barometer	1002 mbar	louvre width	1000 mm
air density	1.187 kg/m ³	louvre area	1.010 m ²

louvre pd Pascal	louvre face velocity	air flow rate		Coefficient Ce
	m/s	Test m ³ /s	theoretical m ³ /s	
39.9	0.98	0.990	8.282	0.120
70.3	1.33	1.339	10.993	0.122
108.8	1.64	1.660	13.676	0.121
141.4	1.89	1.913	15.591	0.123
175.2	2.13	2.148	17.355	0.124
213.7	2.35	2.376	19.167	0.124
245.1	2.55	2.574	20.527	0.125
286.3	2.75	2.779	22.185	0.125
320.8	2.91	2.938	23.484	0.125
362.1	3.06	3.095	24.950	0.124
			mean Ce	0.123
			Class	4

Resistance to Airflow [C_e]



COEFFICIENT OF DISCHARGE

MANUFACTURER	Renson	Date	14/08/2009
MODEL	L.066V	Contract	53355A
air temperature	18.9 °C	louvre height	1010 mm
barometer	1014 mbar	louvre width	1000 mm
air density	1.205 kg/m ³	louvre area	1.010 m ²

Louvre pd Pascal	louvre face velocity	air flow rate		coefficient C _e
	m/s	Test m ³ /s	theoretical m ³ /s	
49.5	1.01	1.025	9.156	0.112
86.3	1.35	1.361	12.089	0.113
114.0	1.55	1.561	13.895	0.112
161.0	1.84	1.854	16.512	0.112
204.0	2.06	2.079	18.587	0.112
264.0	2.35	2.373	21.144	0.112
342.0	2.67	2.697	24.066	0.112
430.0	3.00	3.034	26.985	0.112
546.0	2.72	2.719	30.323	0.090
			mean Cd	0.112
			Class	4



Summary Report

www.bsria.co.uk

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Blade Width	1000 mm
Blade Depth	65 mm
Frame Depth	85 mm
No.of Blades	15
Blade Pitch	66 mm
Blade Angle	45 Degrees
No.of Banks	1
Guard Type	Bird
Guard Spacing	8
Side Channels	No
Water Drip Tray	Yes (13 mm Deep)
Blade Orientation	Horizontal

Front view of louvre

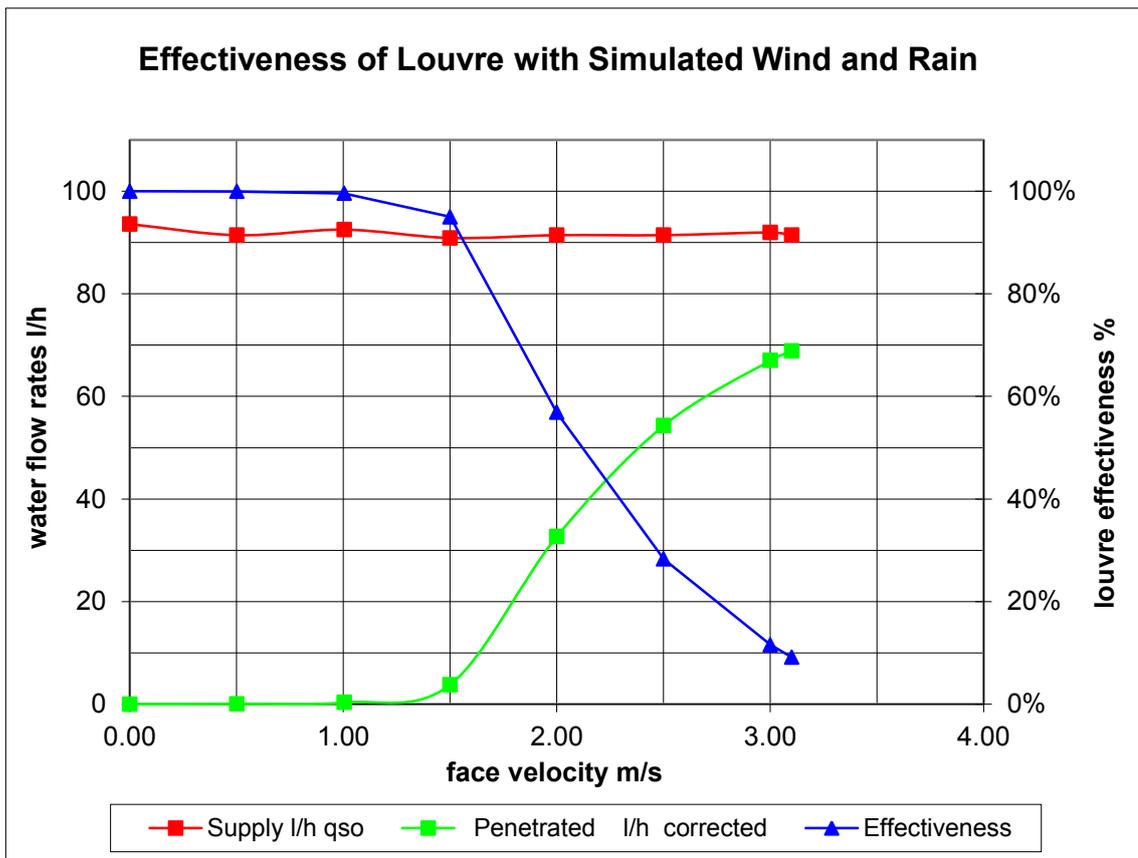
RAINWATER PENETRATION

MANUFACTURER Renson
 MODEL L.066V

Date 14/08/2009
 Contract 53355A

Simulated rainfall 75 mm/hr
 Wind speed 13.0 m/s
 louvre height 1010 mm
 louvre width 1000 mm
 louvre area 1.010 m²

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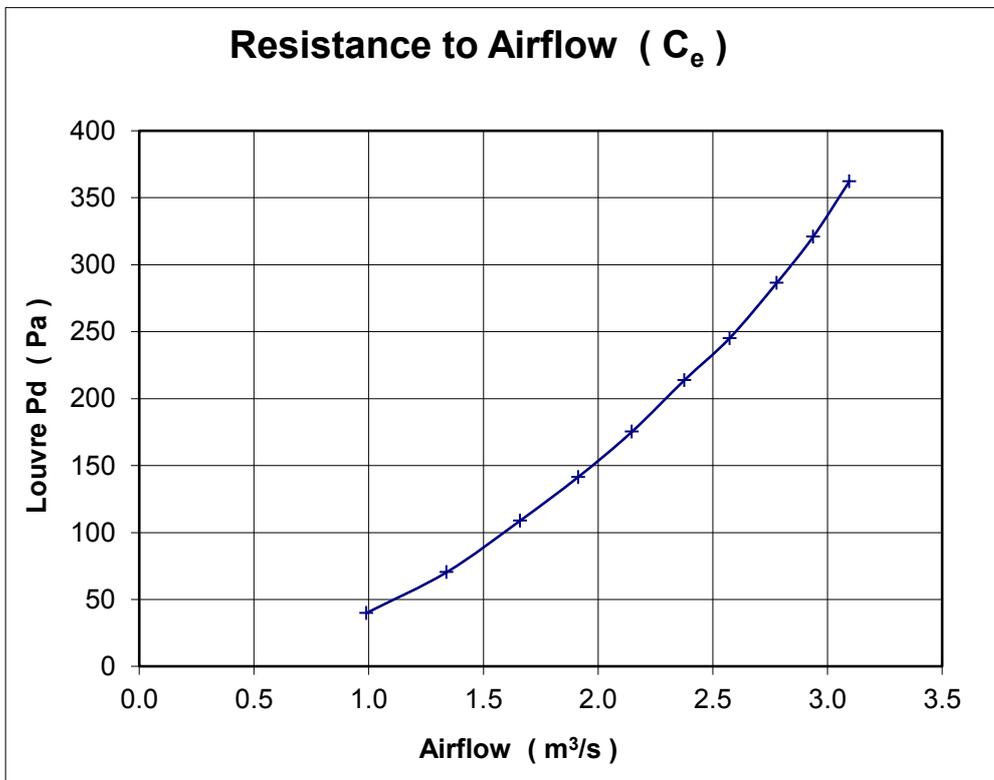
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 MODEL L.066V

Date 26/08/2009
 Contract 53355A

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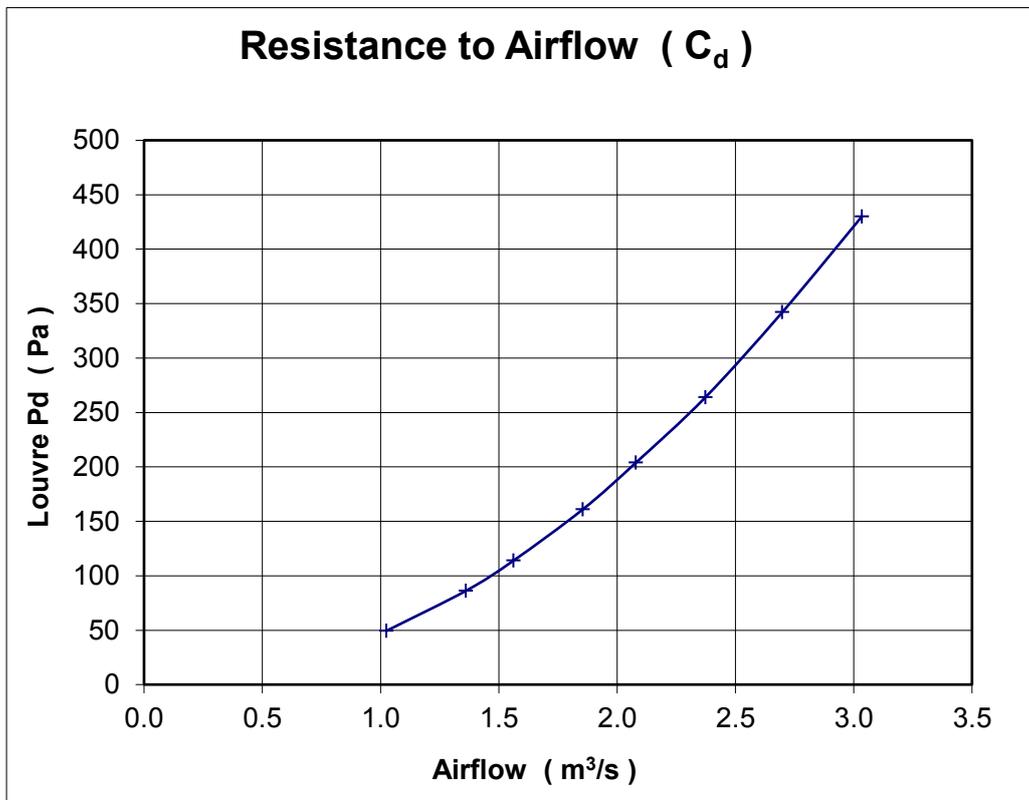
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air temperature 18.9 °C louvre height 1010 mm
 barometer 1014 mbar louvre width 1000 mm
 air density 1.205 kg/m³ louvre area 1.010 m²

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These classifications apply to various core velocities.

Discharge and Entry Loss Coefficient

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Table 2 Discharge and Entry loss coefficient classification

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