

TESTRAPPORT 53928/2

ENGLISH TRANSLATION

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

**Linus L.066V (vertical), mesh 2,3x2,3 and sill
and derived types :**
louvre 452V, mesh 2,3x2,3 en water gutter

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	53928A
Date	18/01/2010
Manufacturer	Renson
Louvre Model	L.066V vertical
Material	Aluminium
Painted	No
Blade Height	1000 mm
Blade Width	998 mm
Blade Depth	80 mm
Frame Depth	85 mm
No. of Blades	15
Blade Pitch	66 mm
Blade Angle	45 Degrees
No. of Banks	1
Guard Type	insect
Guard Spacing	5mm
Side Channels	No
Water Drip Tray	Yes
Blade Orientation	Vertical



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 53928/2

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 18 January to 4 February 2010

Date of issue 9 October 2018

Test engineer A Freeth

Quality approved Mark Roper
Principal Test Engineer

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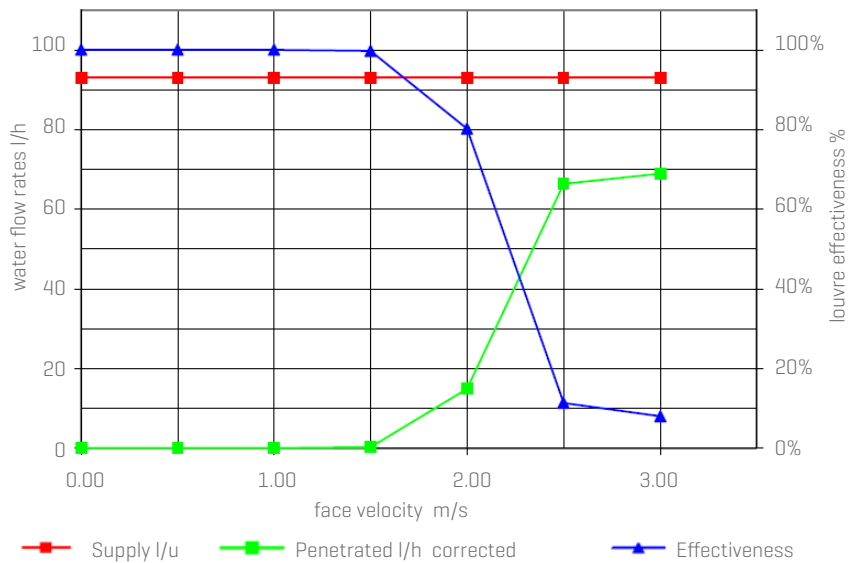
This summary report supersedes certificate 53928/2. This up-date was carried out under BSRIA contract reference 61223.

RAINWATER PENETRATION

MANUFACTURER	Renson	Date	18/01/2010
MODEL	L.066V vertical	Contract	53928A
Simulated rainfall	75 mm/hr	louvre height	1000 mm
Wind speed	13.0 m/s	louvre width	998 mm
		louvre area	0,998 m ²

VENTILATION RATE		WATER FLOW RATES		Effectiveness	Class
Volume m ³ /s	Velocity m/s	Supply l/u	Penetrated l/u		
0.00	0.00	93.0	0.0	100.0%	A
0.50	0.50	93.0	0.0	100.0%	A
1.00	1.00	93.0	0.0	100.0%	A
1.50	1.50	93.0	0.2	99.7%	A
2.00	2.00	93.0	14.8	80.2%	C
2.50	2.50	93.0	66.4	11.3%	D
3.00	3.00	93.0	68.9	7.9%	D

Effectiveness of Louvre with Simulated Wind and Rain



COEFFICIENT OF ENTRY

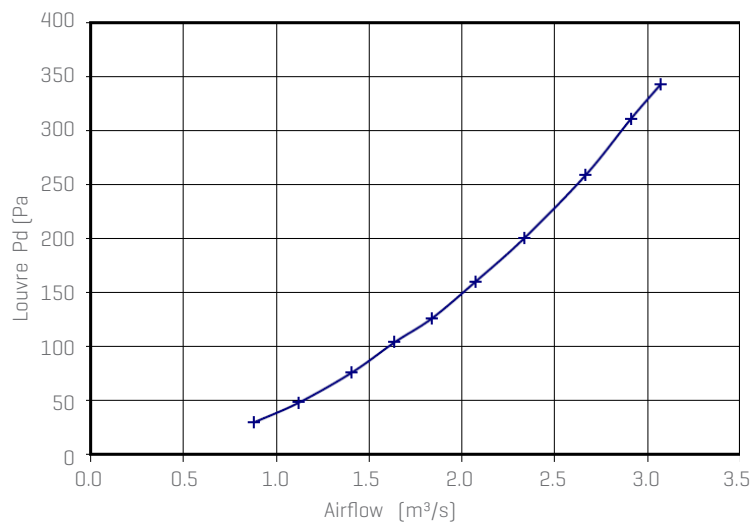
 MANUFACTURER Renson
 MODEL L.066V vertical

 Date 18/01/2010
 Contract 53928A

 air temperature 14,9°C
 barometer 1026 mbar
 air density 1.236 kg/m³

 louvre height 1000 mm
 louvre width 998 mm
 louvre area 0,998 m²

louvre pd Pascal	louvre face velocity	air flow rate		Coeffiçient Ce
	m/s	Test m ³ /s	theoretical m ³ /s	
29.5	0.88	0.880	6.895	0.128
47.9	1.12	1.122	8.787	0.128
75.8	1.41	1.408	11.053	0.127
103.7	1.64	1.637	12.928	0.127
126.0	1.84	1.839	14.251	0.129
160.2	2.08	2.075	16.069	0.129
200.1	2.34	2.335	17.959	0.130
258.7	2.67	2.667	20.420	0.131
310.8	2.92	2.910	22.382	0.130
343.2	3.08	3.073	23.519	0.131
			mean Ce	0.129
			Class	4

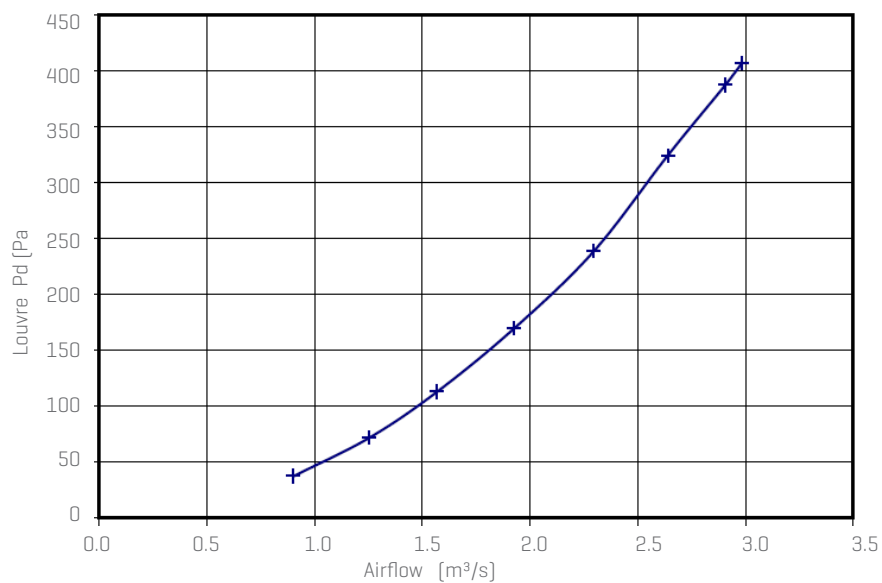
Resistance to Airflow [C_e]


COEFFICIENT OF DISCHARGE

MANUFACTURER	Renson	Date	04/02/2010
MODEL	L.066V vertical	Contract	53928A
air temperature	18 °C	louvre height	1000 mm
barometer	999,4 mbar	louvre width	998 mm
air density	1.191 kg/m ³	louvre area	0,998 m ²

Louvre pd Pascal	louvre face velocity	air flow rate		coefficient C _e
	m/s	Test m ³ /s	theoretical m ³ /s	
37.4	0.90	0.902	7.909	0.114
71.9	1.26	1.255	10.966	0.114
112.9	1.57	1.568	13.741	0.114
169.4	1.93	1.926	16.832	0.114
238.1	2.30	2.294	19.955	0.115
324.0	2.64	2.639	23.279	0.113
386.6	2.91	2.905	25.428	0.114
406.3	2.99	2.983	26.068	0.114
			mean Cd	0.114
			Class	4

Resistance to Airflow [C_e]



Summary Report

www.bsria.co.uk

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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	18 January to 4 February 2010
Date of issue	9 October 2018
Test engineer	A Freeth
Quality approved	Mark Roper Principal Test Engineer

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Blade Width	998 mm
Blade Depth	80 mm
Frame Depth	85 mm
No.of Blades	15
Blade Pitch	66 mm
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No.of Banks	1
Guard Type	Insect
Guard Spacing	5
Side Channels	No
Water Drip Tray	Yes
Blade Orientation	Vertical

Front view of louvre

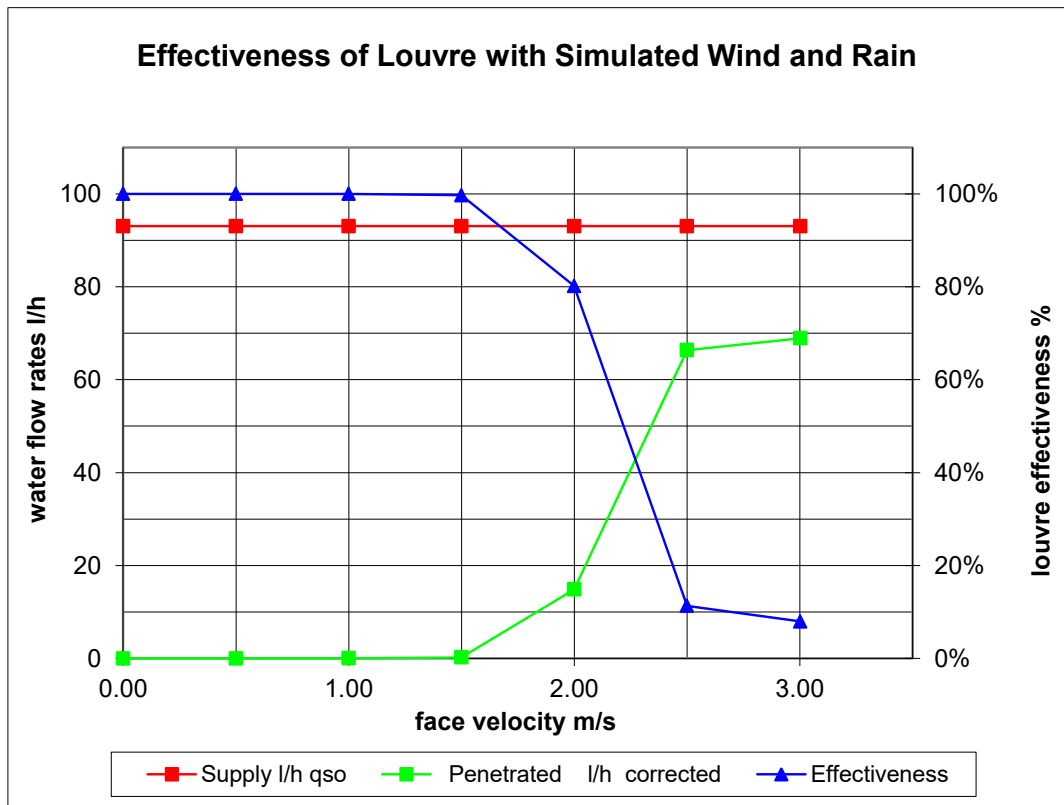
RAINWATER PENETRATION

MANUFACTURER Renson
 MODEL L.066V vertical

Date 18/01/2010
 Contract 53928A

Simulated rainfall 75 mm/hr
 Wind speed 13.0 m/s
 louvre height 1000 mm
 louvre width 998 mm
 louvre area 0.998 m²

VENTILATION RATE		WATER FLOW RATES		Effectiveness	Class
Volume m ³ /s	Velocity m/s	Supply l/h	Penetrated l/h		
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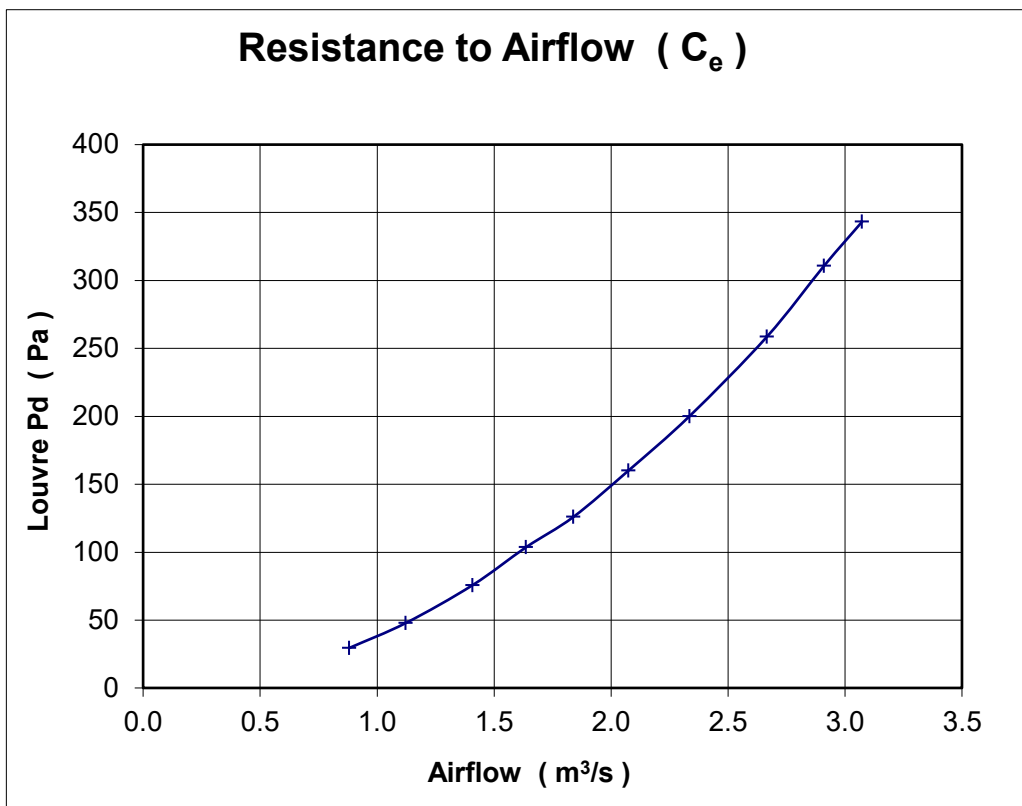
COEFFICIENT OF ENTRY

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louvre pd Pascals	louvre face velocity	air flow rate		coefficient C _e
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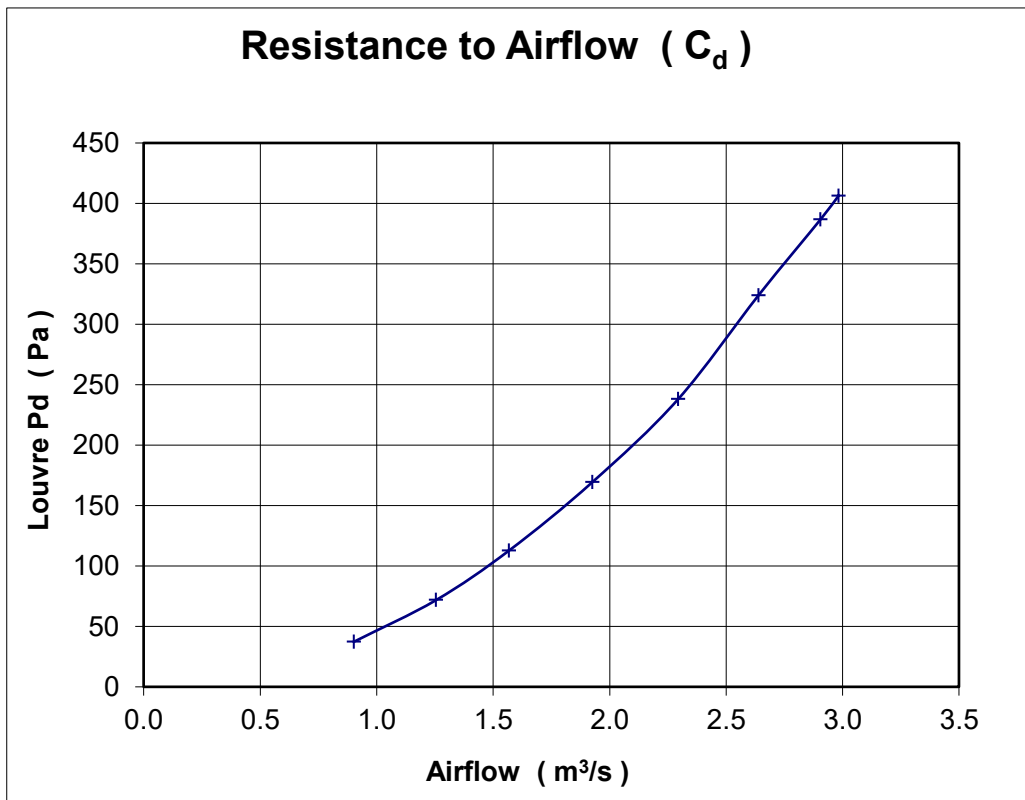
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Date 04/02/2010
 Contract 53928A

air temperature 18 °C louvre height 1000 mm
 barometer 999.4 mbar louvre width 998 mm
 air density 1.191 kg/m³ louvre area 0.998 m²

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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.

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