

Certificate

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Certificate No: 54763/1 Edition 2

Issue No: 1

Date of issue: 27 May 2011

This certificate supersedes 54763/1, dated 4 May 2011. Details of the changes are shown on page 2

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 : 2001 and has determined the item met the detailed classification shown on pages 3,4 and 5 of this certificate. For further details of the test item see Page 2 of this certificate

Manufacturer/Agent N.V. RENSON PROJECTS

IZ 2 Vijverdam
Maalbeekstraat 6
B-8790 Waregem

Product L.050W

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

Date of test 14 to 28 April 2011

Expiry date 4 May 2014

Test engineer M Roper / A Freeth

Quality approved Phil Stonard
Laboratory Manager

TEST ITEM INFORMATION

Contract	54763
Date	April 2011
Manufacturer	N.V. Renson Projects
Louvre Model	L.050W
Material	Aluminium
Painted	No
Blade Height	965 mm
Blade Width	960 mm
Blade Depth	129 mm
Frame Depth	160 mm
No. of Blades	19
Blade Pitch	50 mm
Blade Angle	45 degrees
No. of Banks	1
Guard Type	Insect
Guard Spacing	0 mm
Side Channels	None
Water Drip Tray	Yes
Blade Orientation	Horizontal



Note: Certificate 54763/1 Edition 1 described the louvre as having 2 banks of blades. The louvre has a single bank of blades, with a profile which extends almost the full depth of the unit. The test item information above has been amended. No other changes have been made.

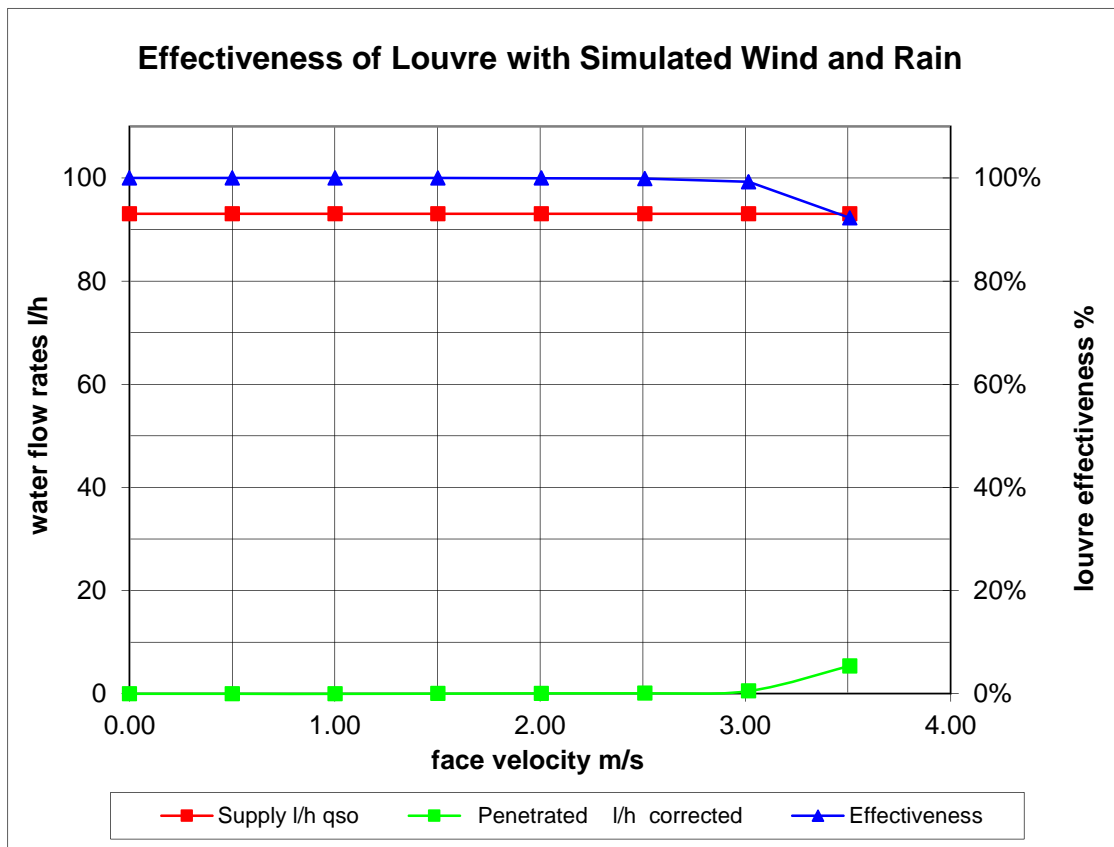
WATER PENETRATION

MANUFACTURER Renson
 MODEL L.050W

Date 14-28/04/2011
 Contract 54763

Simulated rainfall 75 mm/hr
 Wind speed 13.0 m/s
 louvre height 965 mm
 louvre width 960 mm
 louvre area 0.926 m²

VENTILATION RATE		WATER FLOW RATES		Effectiveness	Class
Volume m ³ /s	Velocity m/s	Supply l/h	Penetrated l/h		
0.00	0.00	93.0	0.0	100.0%	A
0.46	0.50	93.0	0.0	100.0%	A
0.93	1.00	93.0	0.0	100.0%	A
1.39	1.50	93.0	0.0	100.0%	A
1.86	2.01	93.0	0.0	99.9%	A
2.33	2.51	93.0	0.1	99.9%	A
2.79	3.02	93.0	0.5	99.2%	A
3.25	3.51	93.0	5.4	92.2%	C



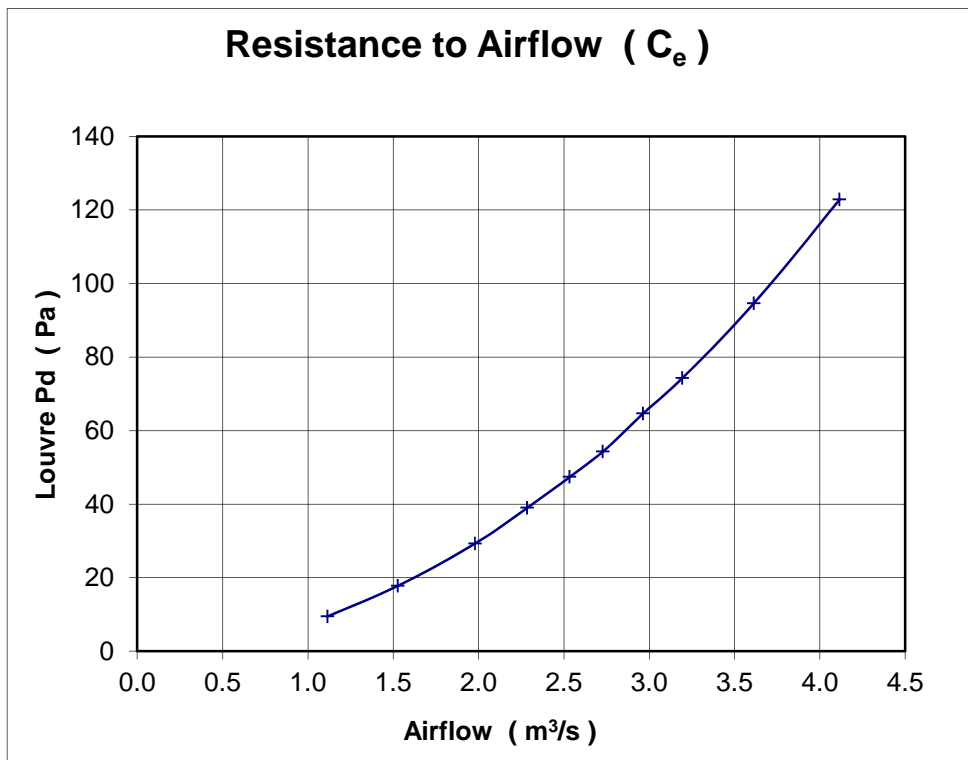
COEFFICIENT OF ENTRY

MANUFACTURER Renson
 MODEL L.050W

Date 26/04/2011
 Contract 54763

air temperature	17 °C	louvre height	965 mm
barometer	1016 mbar	louvre width	960 mm
air density	1.215 kg/m ³	louvre area	0.926 m ²

louvre pd Pascals	louvre face velocity	air flow rate		coefficient C _e
	m/s	test m ³ /s	theoretical m ³ /s	
9.5	1.20	1.12	3.66	0.304
17.8	1.65	1.53	5.01	0.305
29.3	2.14	1.98	6.43	0.308
39.0	2.47	2.29	7.42	0.308
47.4	2.74	2.53	8.18	0.310
54.3	2.95	2.73	8.76	0.312
64.6	3.20	2.96	9.55	0.310
74.3	3.45	3.19	10.25	0.312
94.6	3.90	3.61	11.56	0.313
122.8	4.44	4.11	13.17	0.312
mean C _e				0.309
Class				2



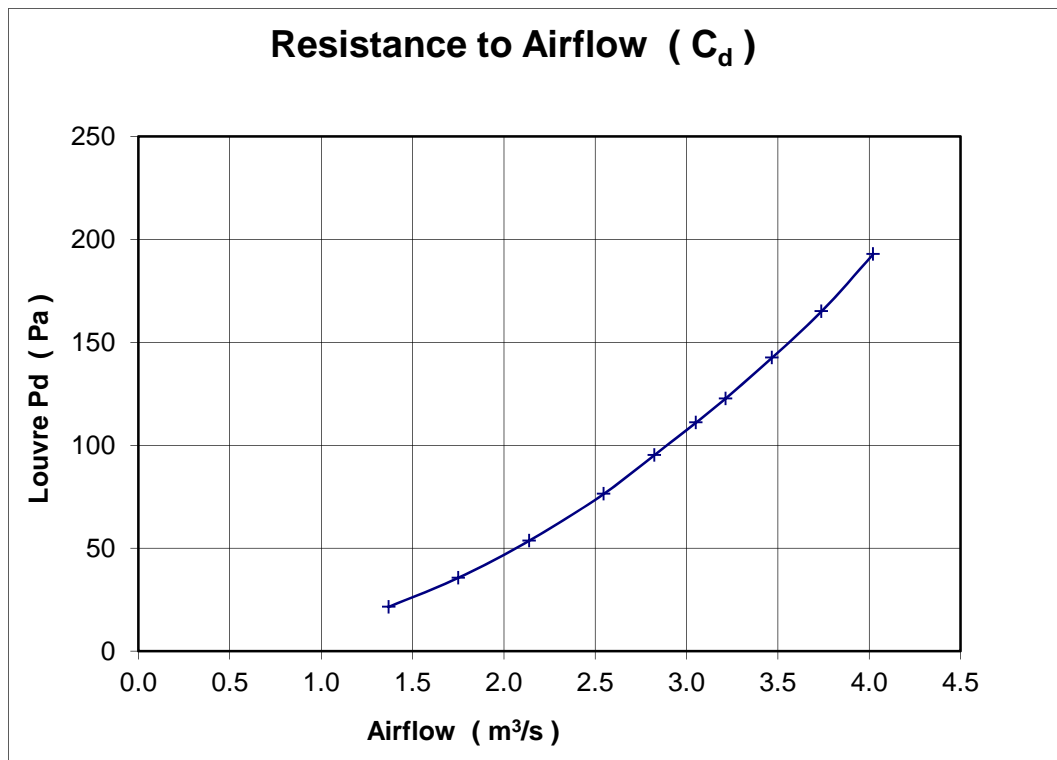
COEFFICIENT OF DISCHARGE

MANUFACTURER Renson
 MODEL L.050W

Date 27/04/2011
 Contract 54763

air temperature	16.8 °C	louvre height	965 mm
barometer	1021 mbar	louvre width	960 mm
air density	1.222 kg/m ³	louvre area	0.926 m ²

louvre pd Pascals	louvre face velocity	air flow rate		coefficient Cd
	m/s	test m ³ /s	theoretical m ³ /s	
21.6	1.48	1.370	5.509	0.249
35.7	1.89	1.752	7.082	0.247
53.7	2.31	2.139	8.686	0.246
76.4	2.75	2.547	10.360	0.246
95.3	3.05	2.824	11.571	0.244
111.0	3.29	3.051	12.487	0.244
122.7	3.47	3.213	13.129	0.245
142.5	3.74	3.467	14.149	0.245
165.0	4.04	3.739	15.225	0.246
192.8	4.34	4.022	16.457	0.244
mean Cd				0.246
Class				3



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

Class	Effectiveness	Maximum allowed penetration of simulated rain $\text{l.h}^{-1}.\text{m}^{-2}$
A	1,00 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 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