

**University of Illinois Department of
Agricultural Engineering
BEES Lab**

Project Number: 01191

Test Date: August 21, 2001

Fan

Make: American Coolair

Model #: MNBR52L

Manufacturer: American Coolair

Blade Size: 53"

Orifice Dia.: 53.4"

Blade

Number: 4

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.2"

Shutter w/ bell mouth inlet

Material: plastic

of Doors: 16

of Columns: 3

Door Length: 17.1"

Location: intake

Other Attachments:

Belt tensioner

Motor

Make: AO Smith

Model #: 327P775

H.P.: 1

Amps: 11.0/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia. 2.6"
MA26

Axle Pulley Dia.: 9.5"

Housing

Material: galvanized steel

Intake Area: 56" x 57"

Discharge Area: 53.4" dia.

Depth: 30.3" top
21.3" bottom

Guards

Description: wire

Spacing: 2" x 2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBR52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01191	0.00	466	24,200	21.4
Fan description:	0.05	464	22,600	19.2
52" belt drive, 1 hp AO Smith 327P775	0.10	462	21,100	17.3
motor, galvanized steel slant housing,,	0.15	460	19,100	15.3
plastic shutter and guard	0.20	458	16,900	13.1
	0.25	455	13,500	10.2
	0.30	455	10,000	7.3
