

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

---

**Project Number:** 01242

**Test Date:** August 23, 2001

**Fan**

*Make:* American Coolair

*Model #:* MNCFB48L

*Manufacturer:* American Coolair

*Blade Size:* 49.2"

*Orifice Dia.:* 49.5"

**Blade**

*Number:* 6

*Shape:* propeller

*Material:* painted 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.* 3.8"  
AK39

*Axle Pulley Dia.:* 15.5" o.d.

**Housing**

*Material:* galvanized steel

*Intake Area:* 56" x 57"

*Discharge Area:* 54.5" x 55"

*Depth:* 30.3" top  
21.3" bottom

**Guards**

*Description:* wire

*Spacing:* 2" x 2"

*Location:* exhaust

# TEST RESULTS

## AMERICAN COOLAIR MNCFB48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01242	0.00	411	21,200	19.9
Fan description:	0.05	411	19,800	18.0
49" belt drive, 1 hp AO Smith 327P775	0.10	410	18,500	16.3
motor, galvanized steel slant housing,	0.15	409	16,800	14.6
plastic shutter and guard	0.20	408	14,800	12.5
	0.25	408	11,200	10.3
	0.30	407	8,300	7.4

---