

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

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**Project Number:** 01246

**Test Date:** August 23, 2001

**Fan**

*Make:* American Coolair

*Model #:* MNCFB48K

*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 #:* 92GC868

*H.P.:* 3/4

*Amps:* 6.8/3.4

*Volts:* 115/208-230

*RPM:* 1725

*S.F.:* 1.3

**Drive**

*Drive Pulley Dia.* 3.2"  
AK32

*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 MNCFB48K

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01246	0.00	353	17,900	25.3
Fan description:	0.05	351	16,400	22.4
49" belt drive, 3/4 hp AO Smith 92GC868	0.10	350	14,500	19.1
motor, galvanized steel slant housing,	0.15	350	11,800	15.0
plastic shutter and guard	0.20	349	8,000	10.0
	0.25	348	4,600	5.6

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