

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

Project Number: 99168

Test Date: September 22, 1999

Fan

Make: American Coolair

Motor

Make: Emerson

Model #: MNBR48M1P

Model #: T63ZZCDZ-1257

Manufacturer: American Coolair

H.P.: 1.5

Blade Size: 49.3" dia.

Amps: 13.2/6.7 - 15.5/7.8

Orifice Dia.: 49.8"

Volts: 115/230

Blade

Number: 4

RPM: 1725/1425

Shape: propeller

S.F.: 1.3

Material: galvanized steel

Drive

Drive Pulley Dia. 3.5" o.d.

Pitch: -

AK34

Axle Pulley Dia.: 9.5" o.d.

Clearance: 0.3"

Housing

Shutter

Material: galvanized steel

Material: aluminum

Intake Area: 51.5" x 52.5"

of Doors: 17 per column

Discharge Area: 54.5" x 54.5"

of Columns: 2

Depth: 30.4" top

Door Length: 25.3"

21.5" bottom

Location: intake

Guards

Description: wire

Other Attachments:

Spacing: 1"x2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBR48M1P

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99168	0.00	594	24,400	15.2
Fan description:	0.05	592	23,500	14.3
49" belt drive, 1 hp Emerson T63ZZCDZ-1257	0.10	589	22,600	13.5
motor, galv. steel slant housing, aluminum	0.15	589	21,600	12.7
Shutter and guard	0.20	587	20,400	11.9
	0.25	585	19,300	11.0
	0.30	583	17,700	10.0
