

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

Project Number: 99182

Test Date: September 23, 1999

Fan

Make: American Coolair

Motor

Make: Emerson

Model #: MNCFAC48L

Model #: T63ZZBBA-800

Manufacturer: American Coolair

H.P.: 1.0

Blade Size: 48.2" dia.

Amps: 11.0/5.5

Orifice Dia.: 48.6"

Volts: 115/208-230

Blade

Number: 6

RPM: 1725

S.F.: 1.3

Shape: propeller

Drive

Material: painted steel

Drive Pulley Dia. 3.8" o.d.
AK39

Pitch: -

Axle Pulley Dia.: 16" o.d.

Clearance: 0.2"

Housing

Material: galvanized steel

Shutter

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
21.5" bottom

Door Length: 25.3"

Guards

Location: intake

Description: wire

Spacing: 2" concentric

Other Attachments:

Discharge cone 28.5" deep, 48.6" i.d., 61" o.d.

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNCFAC48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99182	0.00	411	22,700	21.4
Fan description:	0.05	410	21,700	20.0
48" belt drive, 1 hp Emerson T63ZZBBA-800	0.10	409	20,300	18.4
motor, galv. steel slant housing, aluminum	0.15	409	18,300	16.1
Shutter, guard and discharge cone	0.20	408	16,000	13.6
	0.25	407	13,000	10.9
	0.30	-	8,100	7.2