

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

Project Number: 99183

Test Date: September 23, 1999

Fan

Make: American Coolair

Motor

Make: Emerson

Model #: MNCFAEC48L

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

Shape: propeller

S.F.: 1.3

Material: painted steel

Drive

Drive Pulley Dia. 3.3" o.d.
AK34

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

Description: wire

Location: intake

Spacing: 2" concentric

Other Attachments:

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

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNCFAEC48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99183	0.00	378	21,200	24.8
Fan description:	0.05	378	20,000	22.5
48" belt drive, 1 hp Emerson T63ZZBBZ-800	0.10	378	18,100	19.9
motor, galv. steel slant housing, aluminum	0.15	378	15,800	16.8
Shutter, guard and discharge cone	0.20	378	12,700	13.3
	0.25	378	8,000	8.8
	0.30	376	4,800	4.8
