

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

Project Number: 99165

Fan

Make: American Coolair

Model #: MNBRE48L

Manufacturer: American Coolair

Blade Size: 49.3" dia.

Orifice Dia.: 49.8"

Blade

Number: 4

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.3"

Shutter

Material: aluminum

of Doors: 17 per column

of Columns: 2

Door Length: 25.3"

Location: intake

Other Attachments:

Test Date: September 22, 1999

Motor

Make: Emerson

Model #: T63ZZBBA-800

H.P.: 1.0

Amps: 11.0/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia. 2.8" o.d.

Axle Pulley Dia.: 9.5" o.d.

Housing

Material: galvanized steel

Intake Area: 51.5" x 52.5"

Discharge Area: 54.5" x 54.5"

Depth: 30.4" top
21.5" bottom

Guards

Description: wire

Spacing: 1"x2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBRE48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99165	0.00	484	20,200	21.1
Fan description:	0.05	481	19,000	19.5
49" belt drive, 1 hp Emerson T63ZZBBA-800	0.10	479	17,700	17.8
motor, galv. steel slant housing, aluminum	0.15	478	16,300	16.0
Shutter and guard	0.20	475	14,700	14.2
	0.25	473	10,800	10.2
	0.30	469	7,800	7.3
