

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

Project Number: 99186

Fan

Make: American Coolair

Model #: MNBF48L

Manufacturer: American Coolair

Blade Size: 49.0" dia.

Orifice Dia.: 49.4"

Blade

Number: 6

Shape: propeller

Material: painted steel

Pitch: -

Clearance: 0.2"

Shutter

Material: aluminum

of Doors: 17 per column

of Columns: 2

Door Length: 25.3"

Location: intake

Other Attachments:

Test Date: September 24, 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. 3.3" o.d.

AK34

Axle Pulley Dia.: 16" 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" x 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBF48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99186	0.00	376	20,000	21.7
Fan description:	0.05	376	18,600	19.8
49" belt drive, 1 hp Emerson T63ZZBBA-800	0.10	376	17,200	17.9
motor, galv. Steel slant housing, aluminum	0.15	376	15,100	15.7
Shutter and guard	0.20	376	10,400	10.7
	0.25	375	7,000	7.0
	0.30	374	3,700	3.5
