

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

Project Number: 97268

Test Date: October 27, 1997

Fan

Make: Canarm

Model #: PLF48M

Manufacturer: Canarm

Blade Size: 48"

Orifice Dia.: 49.8"

Blade Lau

Number: 3

Shape: propeller

Material: stainless steel

Pitch: -

Clearance: .9"

Shutter

Material: plastic

of Doors: 13

of Columns: 2

Door Length: 24.4"

Location: intake

Other Attachments:

Discharge Cone 57" o.d., 26" deep

Motor

Make: Dayton

Model #: 4M644

H.P.: 1

Amps: 5.2

Volts: 230

RPM: 850

S.F.: 1.25

Drive

Drive Pulley Dia.: direct

Axle Pulley Dia.: drive.

Housing

Material: plastic

Intake Area: 51.2" x 51.2"

Discharge Area: 49.8" o.d.

Depth: 31" top
27" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

CANARM PLF48-M

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 97268	0.00	832	22300	21.4
Fan description:	0.05	823	20900	18.8
48" direct drive, 1 hp Dayton 4M644 motor,	0.10	810	19400	16.1
plastic housing, plastic shutter, guard	0.15	795	17700	13.7
and discharge cone	0.20	766	15000	10.6
	0.25	714	10900	7.0