

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

Project Number: 97323

Test Date: November 25, 1997

Fan

Make: Raydot

Model #: PMC-4821BD

Manufacturer: Raydot

Blade Size: 48"

Orifice Dia.: 48.8"

Blade Lau 203504

Number: 3

Shape: propeller

Material: stainless steel

Pitch: -

Clearance: 0.4"

Shutter

Material: plastic

of Doors: 17 per column

of Columns: 3

Door Length: 17.5"

Location: intake

Other Attachments:

Discharge cone 48.8" i.d., 65" o.d., 37" deep

Motor

Make: Magnetek

Model #: 8-182505

H.P.: 1

Amps: 4.3/8.6

Volts: 230/115

RPM: 1725

S.F.: 1.4

Drive

Drive Pulley Dia.: 3.8" o.d.

Axle Pulley Dia.: 11" o.d.

Housing

Material: fiberglass

Intake Area: 54.8" x 55"

Discharge Area: 48.8" dia.

Depth: 26.5" top
22" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

RAYDOT PMC-4821BD

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 97323	0.00	591	24600	25.1
Fan description:	0.05	589	23100	22.4
48" belt drive, 1 hp Magnetek 8-182505	0.10	587	21300	19.5
motor, fiberglass housing, plastic shutter,	0.15	586	19500	17.4
guard and discharge cone	0.20	586	16900	14.6
	0.25	584	12200	10.3
	0.30	582	6100	4.9
