

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

Project Number: 97326

Test Date: November 25, 1997

Fan

Make: Raydot

Model #: PMC-4823BD

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:

Extended orifice 9" 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 PMC4823BD

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 97326	0.00	586	21200	19.7
Fan description:	0.05	587	19800	17.7
48" belt drive, 1 hp Magnetek 8-182505	0.10	585	18200	16.0
motor, fiberglass housing w/extended orifice,	0.15	584	16200	14.0
plastic shutter and guard	0.20	585	13600	11.9
	0.25	584	8500	7.3
	0.30	581	5700	4.6
