University of Illinois Department of Agricultural and Biological Engineering
Bioenvironmental and Structural Systems Lab
Final Report

Project Number: 07484
Test Date: November 20, 2007

Fan:
Make- *Better Air*
Model- *MPF-2401C*
Blade dia.- *25"*
Orifice dia.- *25.3"*

Blade:
Number- *5*
Shape- *propeller*
Material- *plastic*
Pitch- *-*
Clearance- *0.2"*

Drive Sheaves:
Drive dia.- *direct*
Axle dia.- *drive*

Motor:
Make- *Vostermans*
Model- *6E63*
Hp- *0.7 kW*
RPM- *1000*
Volts- *240*
Amps- *3.1*
Hz- *60*
Phase- *1*
S. F.- *-*

Housing:
Material- *plastic*
Intake area- *29.2" x 29.4"*
Discharge- *25.3" dia.*
Depth- *20.3"*

Shutter:
Material- *plastic*
Doors- *9 per column*
Columns- *2*
Door length- *14.8"*
Location- *intake*

Guards:
Description- *wire*
Spacing- *2" concentric*
Location- *exhaust*

Discharge Cone:
Depth- *19"*
Minor dia.- *25.3"*
Major dia.- *30.7"*

Notes:

Test Conditions:

T(wb):	64	Barometric pressure, recorded	29.23
T(db):	80	Barometric Pressure, corrected	29.09

# Open Nozzle	Noz. Dia. (inch)	Pressure Drop (in.H2O)	Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
4	8	1.94	0.00	7885	1037	230.1	3.30	738	10.7
4	8	1.80	0.05	7595	1025	230.2	3.38	761	10.0
4	8	1.64	0.10	7238	1014	230.2	3.48	779	9.3
4	8	1.49	0.15	6898	1001	230.1	3.57	789	8.7
4	8	1.32	0.20	6503	990	230.0	3.63	806	8.1
4	8	1.13	0.25	6015	981	230.2	3.71	813	7.4
4	8	0.98	0.30	5600	975	230.0	3.73	821	6.8