

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

Project Number: 07497
Test Date: November 20, 2007

Fan:
 Make- *Better Air*
 Model- *MPF-2400C*
 Blade dia.- *24.5"*
 Orifice dia.- *24.8"*

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- *24.5" x 24.6"*
 Discharge- *25.3" dia.*
 Depth- *20.3"*

Shutter:
 Material-
 # Doors-
 # Columns-
 Door length-
 Location-

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

Discharge Cone:
 Depth- *19.5"*
 Minor dia.- *24.8" dia.*
 Major dia.- *29.5"*

Notes:

Test Conditions:

T(wb): 62 Barometric pressure, recorded 29.19
 T(db): 77 Barometric Pressure, corrected 29.06

# Open Nozzle	Noz. Dia. (inch)	Pressure		Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
		Drop (in.H2O)	Static (in.H2O)						
4	8	1.68	0.00	7309	1011	230.1	3.28	735	9.9
4	8	1.57	0.04	7075	1005	229.7	3.33	743	9.5
4	8	1.54	0.05	6996	1002	229.9	3.35	751	9.3
4	8	1.40	0.10	6681	993	230.0	3.42	759	8.8
4	8	1.28	0.15	6387	995	229.9	3.46	770	8.3
4	8	1.10	0.20	5920	975	230.1	3.52	786	7.5
4	8	0.98	0.25	5587	970	230.0	3.55	792	7.1
4	8	0.80	0.30	5046	968	230.0	3.55	790	6.4
shutter 2	8								
4	8	1.65	0.00	7254	1011	230.4	3.29	737	9.8