

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

Project Number: 07496
Test Date: November 20, 2007

Fan:
 Make- *Better Air*
 Model- *MPF-2400*
 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- *none*
 Minor dia.- *-*
 Major dia.- *-*

Notes:

Test Conditions:

T(wb): 62 Barometric pressure, recorded 29.19
 T(db): 78 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	1.42	0.00	6735	996	230.2	3.41	762	8.8
4	8	1.34	0.04	6542	992	230.1	3.43	767	8.5
4	8	1.31	0.05	6468	988	229.8	3.45	772	8.4
4	8	1.21	0.10	6215	983	230.0	3.49	777	8.0
4	8	1.08	0.15	5871	976	229.5	3.51	785	7.5
4	8	0.98	0.20	5592	977	230.1	3.52	784	7.1
4	8	0.81	0.25	5082	976	229.6	3.52	786	6.5
4	8	0.66	0.30	4585	978	230.0	3.48	776	5.9