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

Project Number: 10447
Test Date: September 16, 2010

Fan:
Make- *Schaefer*
Model- *573CF112G-3-HE*
Blade dia.- *57"*
Orifice dia.- *58"*

Blade:
Number- *3*
Shape- *propeller*
Material- *galvanized steel*
Pitch- *-*
Clearance- *0.5"*

Drive Sheaves:
Drive dia.- *2.6" o.d.*
Axle dia.- *8.9" o.d, "B" section*

Motor:
Make- *Leeson*
Cat. #: *117513.00*
Hp- *1.5*
RPM- *1750*
Volts- *208-230/460*
Amps- *4.6-4.8/2.4*
Hz- *60*
Phase- *3*
S. F.- *1.25*

Housing:
Material- *fiberglass*
Intake area- *58.5" x 59"*
Discharge- *58" dia.*
Depth- *28.5"*
0

Shutter:
Material- *aluminum*
Doors- *15 per column*
Columns- *2*
Door length *29.6"*
Location- *intake*

Guards:
Description- *wire*
Spacing- *1.5" concentric*
Location- *exhaust*

Discharge Cone:
Depth- *25.5"*
Minor dia.- *58"*
Major dia.- *66.5"*

Notes: *"A" belt seats ~ 8.5" o.d.*

Test Conditions:

T(wb):	65	Barometric pressure, recorded	29.25
T(db):	79	Barometric Pressure, corrected	29.12

Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.00	**28200**	506	229.2	3.81	1086	**26.0**
0.05	**26200**	506	229.5	3.89	1121	**23.4**
0.10	**24000**	505	229.6	3.94	1147	**20.9**
0.15	**21500**	505	229.4	3.97	1160	**18.6**
0.20	**17800**	505	230.3	3.95	1149	**15.5**
0.25	**9400**	505	231.1	3.98	1169	**8.1**
0.30	**3100**	503	231.1	4.09	1215	**2.5**