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

Project Number: 10426
Test Date: September 15, 2010

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

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

Drive Sheaves:
Drive dia.- *3.0" o.d.*
Axle dia.- *9.3" o.d.*

Notes: *0*

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"*

Test Conditions:

T(wb):	64.5	Barometric pressure, recorded	29.44
T(db):	80	Barometric Pressure, corrected	29.30

Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.00	**30900**	551	229.8	4.56	1402	**22.0**
0.05	**29100**	550	230.0	4.64	1438	**20.3**
0.10	**27100**	549	229.5	4.73	1470	**18.4**
0.15	**25000**	549	229.4	4.79	1495	**16.8**
0.20	**22300**	549	230.4	4.79	1505	**14.8**
0.25	**18400**	549	229.6	4.72	1481	**12.4**
0.30	**10600**	548	230.6	4.77	1513	**7.0**