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

Project Number: 10410
Test Date: September 14, 2010

Fan:
Make- *Schaefer*
Model- *576CF2G-1-HV*
Blade dia.- *57"*
Orifice dia.- *58"*

Blade:
Number- *6*
Shape- *propeller*
Material- *galvanized steel*
Pitch- *-*
Clearance- *0.5*

Drive Sheaves:
Drive dia.- *2.5" o.d.*
Axle dia.- *9.3" o.d.*

Notes: *0*

Motor:
Make- *FHP*
Model- *A6T17NB85A*
Hp- *2*
RPM- *1725*
Volts- *230*
Amps- *9.5*
Hz- *60*
Phase- *1*
S. F.- *1.0*

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):	79	Barometric Pressure, corrected	29.31

Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.00	**32800**	434	229.9	8.53	1742	**18.8**
0.05	**31200**	432	229.7	8.74	1792	**17.4**
0.10	**29500**	430	229.2	8.91	1828	**16.1**
0.15	**27300**	429	229.2	9.04	1859	**14.7**
0.20	**24600**	428	229.9	9.14	1886	**13.0**
0.25	**20100**	430	230.0	8.93	1837	**10.9**
0.30	**13800**	429	230.2	8.98	1850	**7.4**