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

Project Number: 10408
Test Date: September 14, 2010

Fan:
Make- *Schaefer*
Model- *573CF2G-1-HV*
Blade dia.- *57"*
Orifice dia.- *58"*

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

Drive Sheaves:
Drive dia.- *3.3" 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):	65	Barometric pressure, recorded	29.40
T(db):	80	Barometric Pressure, corrected	29.26

Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.00	**33300**	587	229.8	8.61	1757	**19.0**
0.05	**31500**	586	230.1	8.82	1809	**17.4**
0.10	**29600**	585	229.2	8.99	1844	**16.1**
0.15	**27500**	584	229.8	9.13	1879	**14.6**
0.19	**25500**	584	230.1	9.21	1902	**13.4**
0.25	**22600**	583	229.6	9.22	1902	**11.9**
0.28	**20100**	584	231.0	9.08	1875	**10.7**
0.30	**17300**	584	230.5	8.92	1838	**9.4**