**University of Illinois Department of Agricultural Engineering**
**BESS Lab**

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**Project Number**: 01111

**Test Date**: May 22, 2001

**Fan**
- *Make*: American Coolair
- *Model #*: MNCFBC48K
- *Manufacturer*: American Coolair
- *Blade Size*: 48.8" dia.
- *Orifice Dia.*: 49.3"

**Blade**
- *Number*: 6
- *Shape*: propeller
- *Material*: steel
- *Pitch*: -
- *Clearance*: 0.3"

**Shutter**
- *Material*: Plastic
- *# of Doors*: 16 per column
- *# of Columns*: 3
- *Door Length*: 17.1"
- *Location*: intake

**Other Attachments**:
discharge cone 29.3" deep, 49.3" i.d., 60" o.d.
belt tensioner

**Motor**
- *Make*: AO Smith
- *Model #*: 92GC868
- *H.P.*: 3/4
- *Amps*: 6.8/3.4
- *Volts*: 115/208-230
- *RPM*: 1725
- *S.F.*: 1.3

**Drive**
- *Drive Pulley Dia.* 3.3" o.d. Browning AK32
- *Axle Pulley Dia.*: 15.6" o.d.

**Housing**
- *Material*: galvanized steel
- *Intake Area*: 57" x 56.3"
- *Discharge Area*: 49.3" dia.
- *Depth*: 34.3" top, 25" bottom

**Guards**
- *Description*: wire
- *Spacing*: 2" concentric
- *Location*: exhaust

## TEST RESULTS

**AMERICAN COOLAIR MNCFBC48K**

Test: 01111

Fan description:
49" belt drive, 3/4 hp AO Smith 92GC868 motor, galvanized steel slant housing,, plastic shutter, guard and discharge cone

| Static Pressure in. water | Speed rpm | Airflow cfm | Efficiency cfm/Watt |
|---|---|---|---|
| 0.00 | 356 | 20,600 | 28.7 |
| 0.05 | 355 | 18,800 | 24.6 |
| 0.10 | 354 | 16,500 | 20.6 |
| 0.15 | 353 | 13,100 | 15.7 |
| 0.20 | 353 | 8,200 | 10.1 |
| 0.25 | 351 | 4,900 | 5.7 |