Blower Door Test

The blower door test results must be in Air Changes Per Hour. To figure ACH, you will need to know the buildings volume in addition to the air flow readings:

$$ACH_{50} = \frac{Q_{50} * 60}{V_{Building}}$$

ACH_{50}= Air changes per hour at 50 Pascal (hr^{-1})
Q_{50}= Airflow at 50 Pascal (ft^3/minute)
$V_{Building}$= Building volume (ft^3)

IECC 402.4.2.1 Testing option. *Building envelope tightness and insulation installation shall be considered acceptable when tested air leakage is less than seven air changes per hour (ACH)* when tested with a blower door at a pressure of 33.5 psf (50 Pa). Testing shall occur after rough in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation and combustion appliances.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed;

2. Dampers shall be closed, but not sealed, including exhaust, intake, makeup air, backdraft and flue dampers;

3. Interior doors shall be open;

4. Exterior openings for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;

5. Heating and cooling system(s) shall be turned off;

6. HVAC ducts shall not be sealed; and

7. Supply and return registers shall not be sealed.