

**Performance & Weather Data February 21 - March 6**

***Southern exposure only with limited shading is an important factor. These tests are limited. In particular they do not include glazing on the west, north and east building faces. As such they may not accurately reflect building envelope performance under optimal control conditions.***

***Solar panels extending 36" from the building above the windows provide 0% shading during Feb.***

The weather information gathered is based on the U.S. Postal Code for the Chicago Center for Green Technology (60612) and sourced through the [WeatherUnderground website](#).

The room is approximately 47 feet wide from east to west. The windows being tested are at opposite ends, approximately 40 feet apart. They are double glazed, wood cased with no films applied or gasses present. The window wells are quite deep. At almost exactly 11" from the inside face of the glass to the face of the shades there is ample room for convection currents.

The ceilings are 128" high, there are four HVAC vents equally spaced across the ceiling. Both the vents and ducts are exposed. The thermostat dedicated to the room is on the opposite wall. Daily records of thermostat settings have not been available. It is safe to assume an average setting of 72°F.

High and Low temperatures originate from the graphs below. Temperatures were confirmed and averages were taken from the Onset data spreadsheets.

East Windows = Shades ***permanently deployed*** throughout test period.

West Windows = Shades ***permanently raised*** throughout test period.

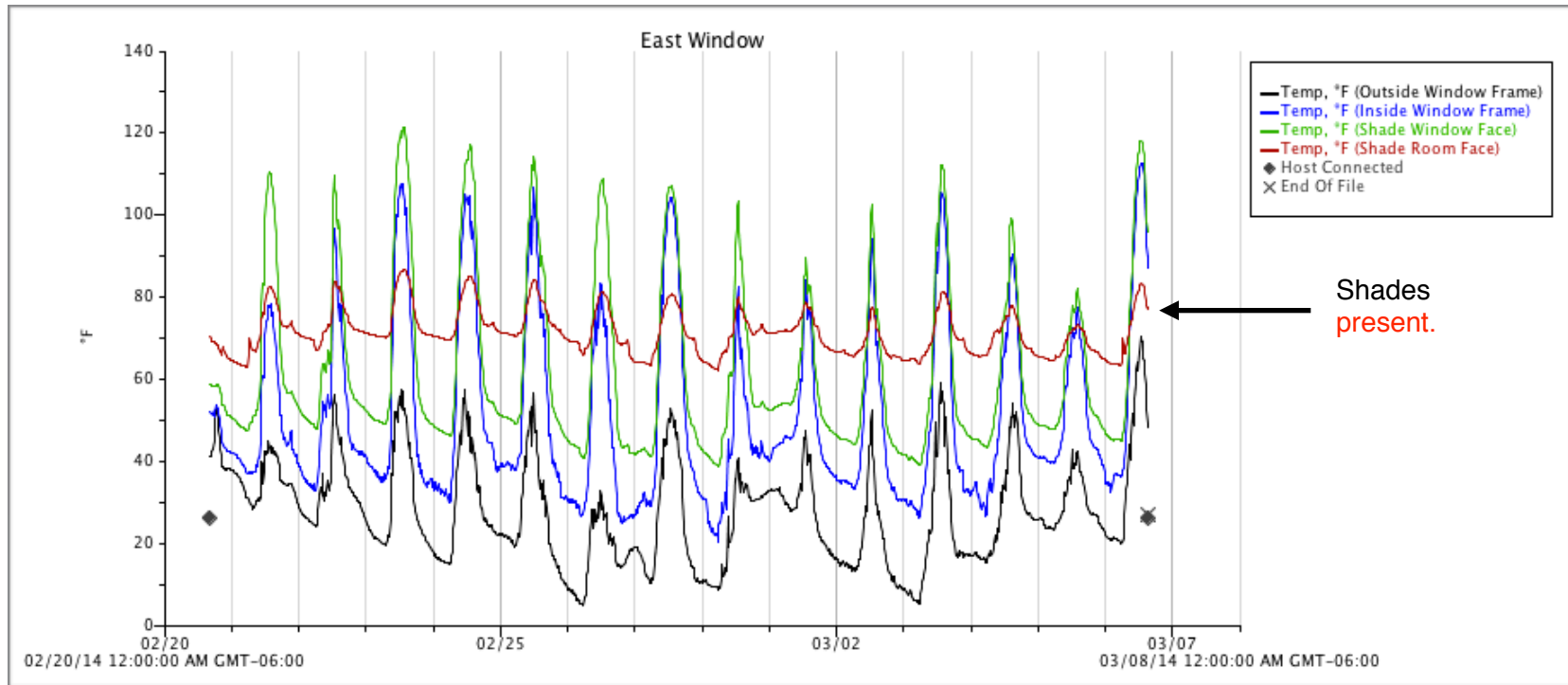
One [Onset](#) data logger and four sensors deployed per window assembly.

**Black** = outside window frame.

**Blue** = inside window frame.

**Green** = window side face of shade.

**Red** = room side face of shade.

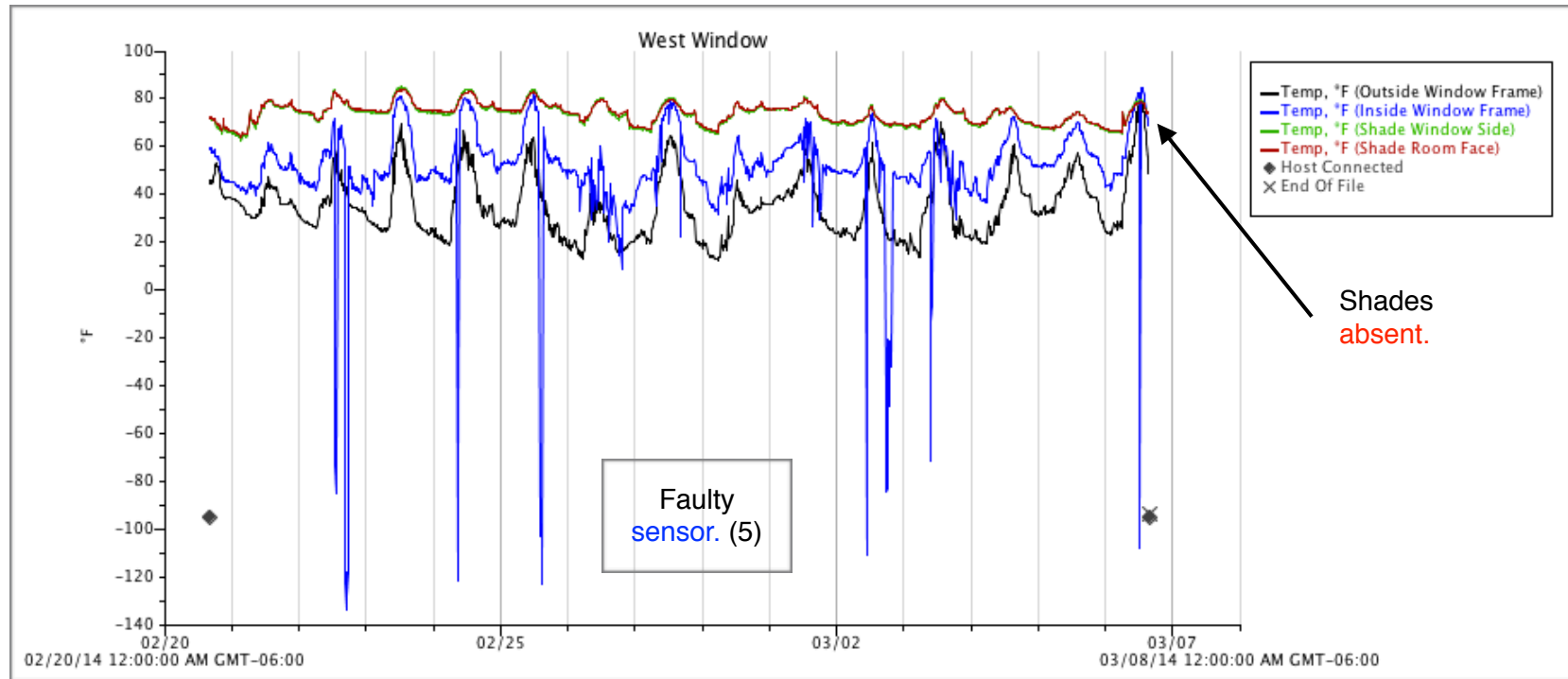


### East Windows

### Averages

### Temperature Comparisons

Outside Window Frame (1) (3) (2)	High Mar 3 59° Low Feb 26 4°	27.8°	03/03 02/26	20° High 1° Low 19° High 1° Low
Inside Window Frame (4)	High Feb 23 108° Low Feb 28 20°	50.7°	02/23 02/28	29° High 16° Low 32° High 6° Low
Window Side Face of Shades (4)	High Feb 23 121° Low Feb 28 40°	62.5°	02/23 02/28	29° High 16° Low 32° High 6° Low
Room Side Face of Shades (3)	High Feb 23 87° Low Feb 28 62°	71.36°	02/23 02/28	29° High 16° Low 32° High 6° Low



### West Windows

### Averages

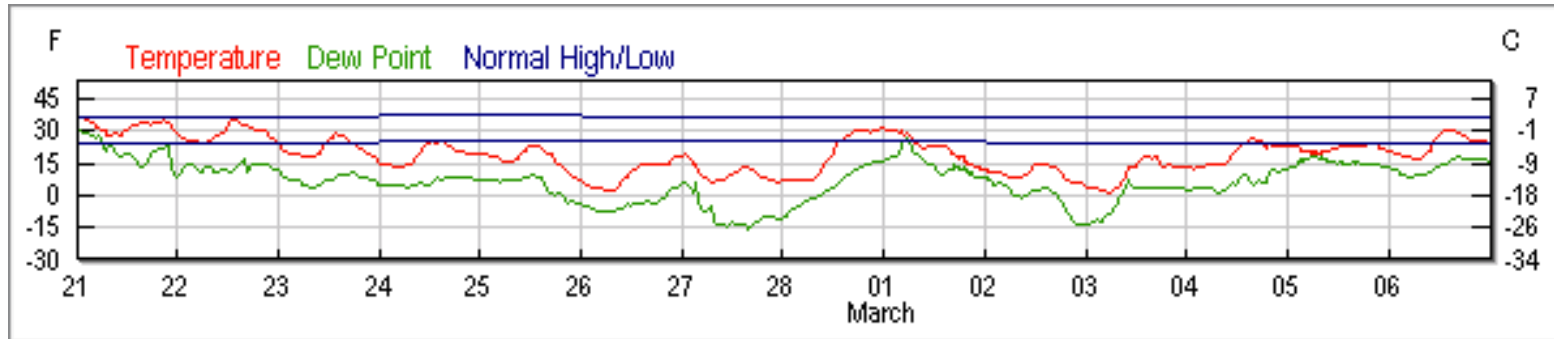
### Temperature Comparisons

Outside Window Frame	High Mar 3 67° Low Feb 28 13°	34.99°	03/03 02/28	20° High 32° High	1° Low 6° Low
Inside Window Frame (5)	High Feb 25 81° Low Feb 26 8°	53.4°	02/25 02/26	24° High 19° High	7° Low 1° Low
Window Side Face (4.5" inset from wall face)	High Feb 23 84° Low Feb 21 62°	73.5°	02/23 02/21	29° High 37° High	16° Low 28° Low
Room Side Face (4" inset from wall face)	High Feb 23 84° Low Feb 21 62°	73.92°	02/23 02/21	29° High 37° High	16° Low 28° Low

**Weather Data** Feb. 21 - Mar 06 <http://bit.ly/1qEza9s>

High Feb. 21 37°

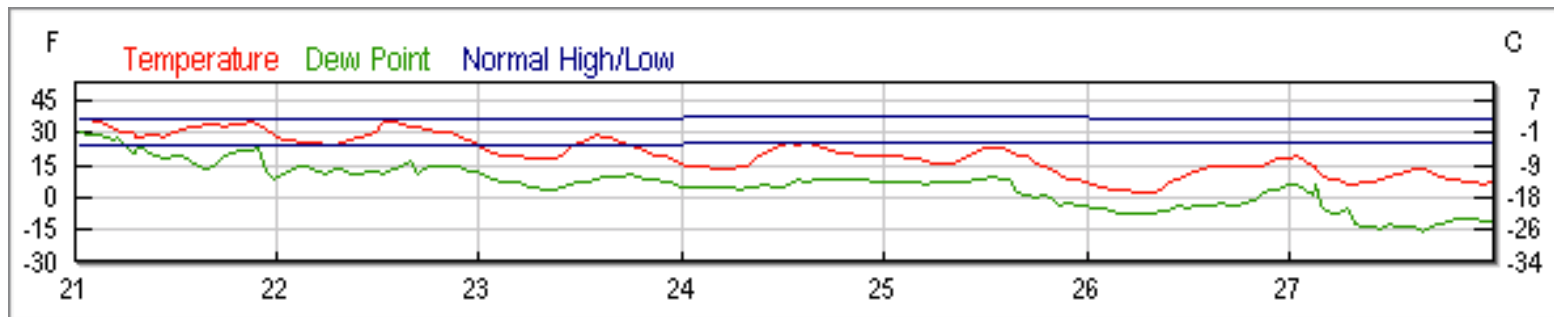
Low Feb. 26 1°



**Weekly Data** Feb. 21 - Feb 27 <http://bit.ly/1n201uU>

High Feb. 21 37°

Low Feb. 26 1°

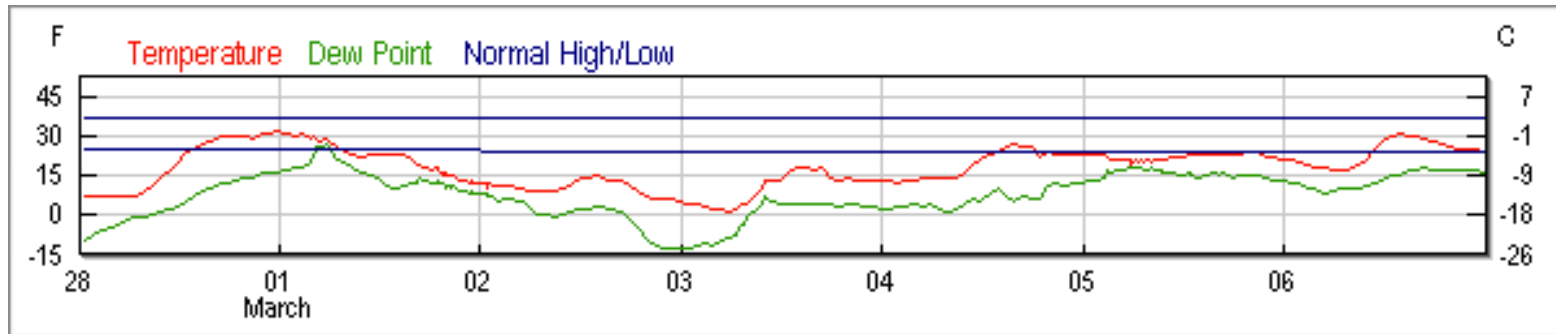


### Daily Data

02/21 <http://bit.ly/MNP4DI> 02/22 <http://bit.ly/1k1f4cE> 02/23 <http://bit.ly/1hcB7tV>  
02/24 <http://bit.ly/1mFXj4x> 02/25 <http://bit.ly/1ekNOCs> 02/26 <http://bit.ly/1jDqXCT>  
02/27 <http://bit.ly/MBnhFr>

### Weekly Data Feb. 28 - Mar 6 <http://bit.ly/1n201uU>

High Feb. 21 37° Low Feb. 26 1°



### Daily Data

02/28 <http://bit.ly/1fylMon> 03/01 <http://bit.ly/NjJTLC> 03/02 <http://bit.ly/1pUQ6g8>  
03/03 <http://bit.ly/1hJ0jrr> 03/04 <http://bit.ly/1hMxQkB> 03/05 <http://bit.ly/1g2TXDA>  
03/06 <http://bit.ly/1g6KvPp>

## Notes.

- (1) The **Mar. 3 exterior High of 59° vs. Low of 5° = 54° difference.** By comparison the **Mar. 3 face of shade High of 81° vs. Low of 64° = 17° difference.**
- (2) The **Feb. 26 exterior Low of 4° vs. High of 81° = 77° difference.** By comparison the **Feb. 26 face of shade Low of 64° vs. High of 81° = 17° difference.**
- (3) The exterior **High of 59° to Low of 4° = 55° swing.** The face of shade **High of 87° to Low of 62° = 25° swing.**
- (4) The East Window High temperatures recorded on the inside of the window frame and window side face of the shades is not indicative of a typical installation where the shades would normally be raised during the day to allow for passive gains. Similarly some of this heat penetration to the inside face of the shade is likely to raise those temperatures somewhat.
- (5) The faulty sensor readings have been excluded from all data collected and reported. In the related Onset spreadsheet the temperature spikes are obvious, contained and did not effect the adjacent cells.