

**Performance & Weather Data March 21 - April 03**

**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 face above the windows provide 2 % shading during March.**

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.

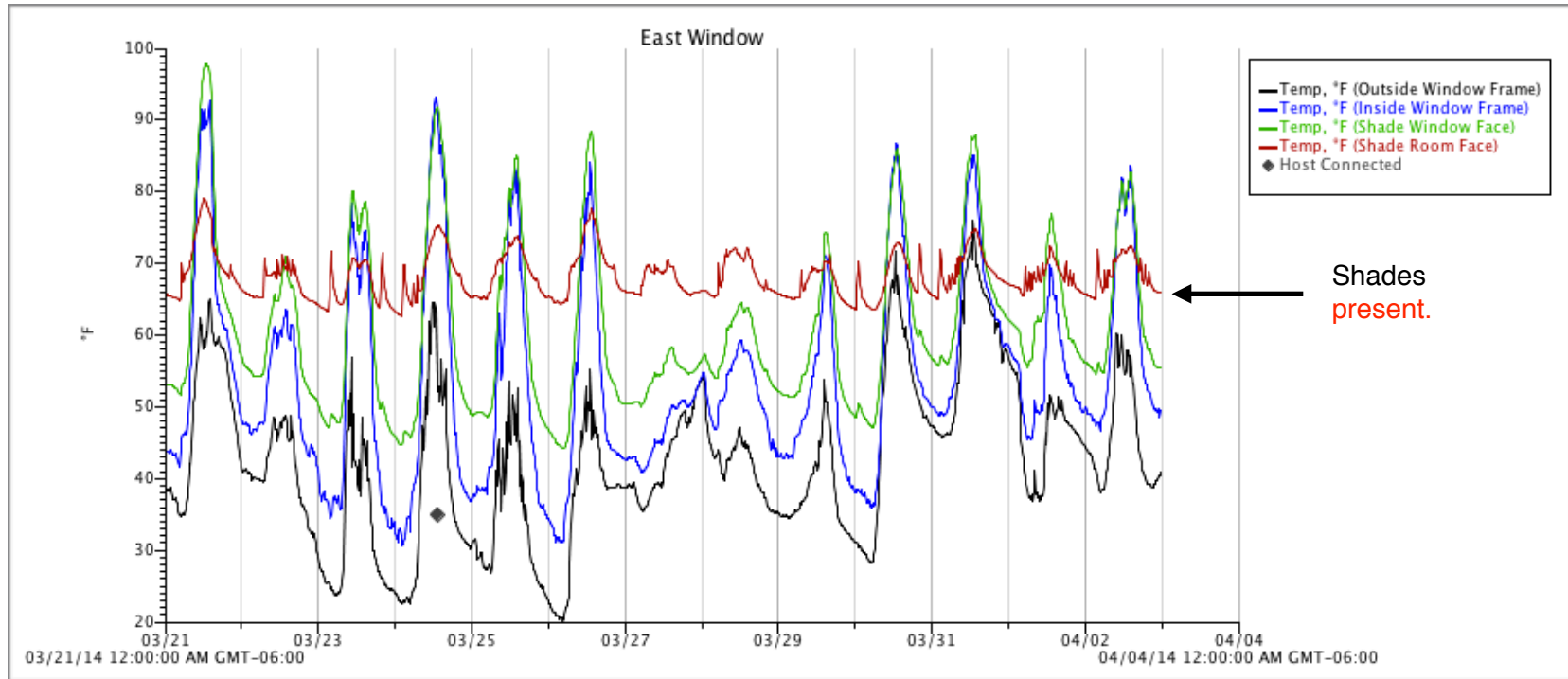
One [Onset](#) data logger and four sensors deployed per window assembly.

**Black** = outside window frame.

**Blue** = inside window frame.

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

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

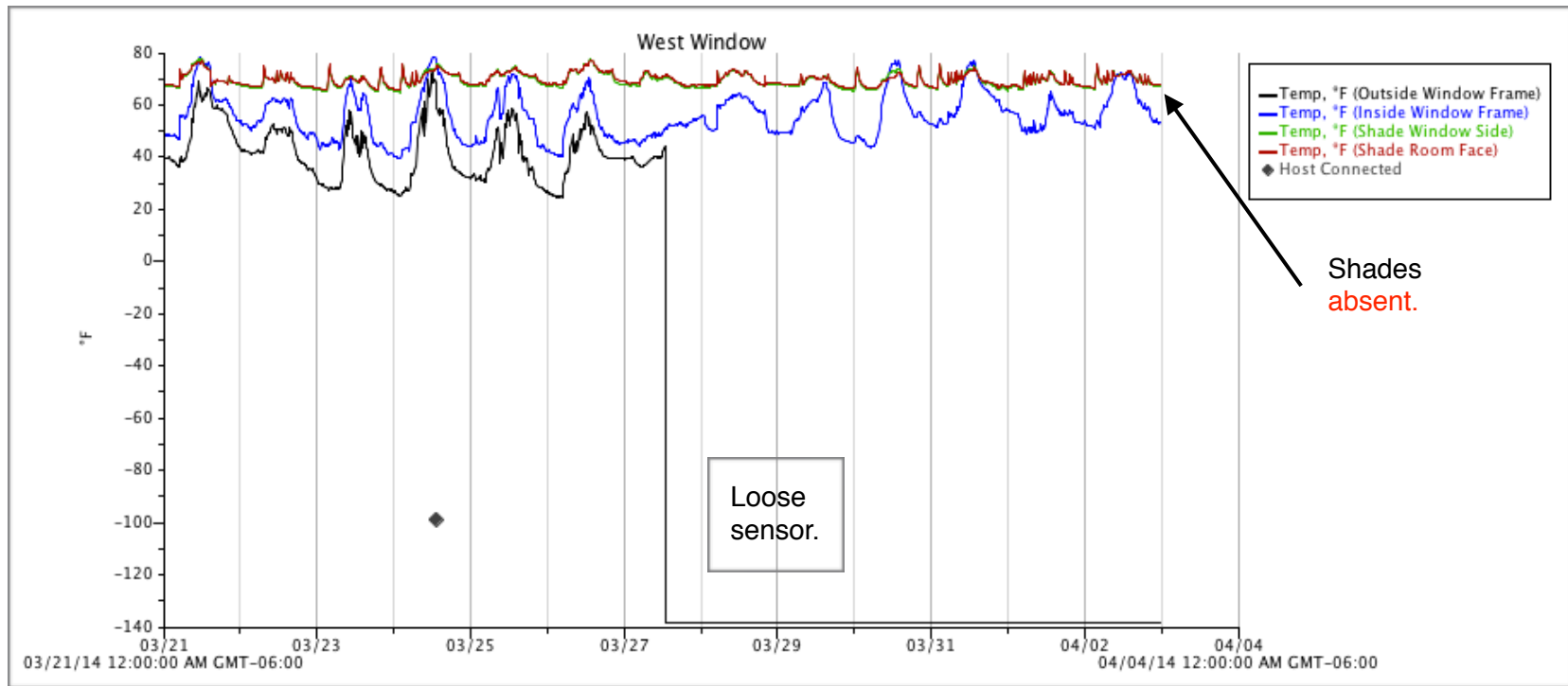


### East Windows

### Averages

### Temperature Comparisons

Outside Window Frame (1) (3)	Mar 31	High 76°	42.49°	03/31	68° High	44° Low
	(2)	Mar 26		Low 20°	03/26	46° High
Inside Window Frame (4)	Mar 21	High 93°	53.78°	03/21	58° High	33° Low
	Mar 24	Low 31°		03/24	37° High	20° Low
Window Side Face (4)	Mar 21	High 98°	61.00°	03/21	58° High	33° Low
	Mar 26	Low 44°		03/26	46° High	20° Low
Room Side Face (3)	Mar 21	High 79°	68.21°	03/21	58° High	33° Low
	Mar 30	Low 64°		03/30	57° High	25° Low

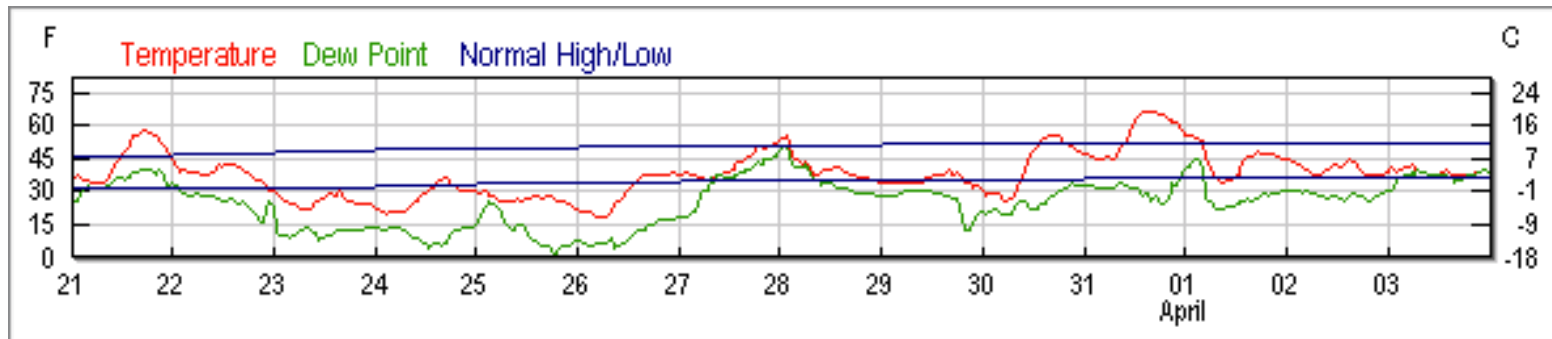


West Windows		Averages	Temperature Comparisons		
Outside Window Frame (5)	Mar 24 High	41.71°	03/24	37° High	20° Low
	Mar 26 Low		03/26	39° High	17° Low
Inside Window Frame	Mar 24 High	55.98°	03/24	37° High	20° Low
	Mar 26 Low		03/26	39° High	17° Low
Window Side Face (4.5" inset from wall face)	Mar 21 High	69.40°	03/21	58° High	33° Low
	Mar 29 Low		03/29	41° High	28° Low
Room Side Face (4" inset from wall face)	Mar 21 High	69.71°	03/21	58° High	33° Low
	Mar 29 Low		03/29	41° High	28° Low

**Weather Data** Mar 21 - Apr 03 <http://bit.ly/1zwRCJX>

High Mar 31 68°

Low Mar 23 14°



**Daily Data** Mar 21 - 27

03/21 <http://bit.ly/1oKBqyp>

03/22 <http://bit.ly/1irHoBR>

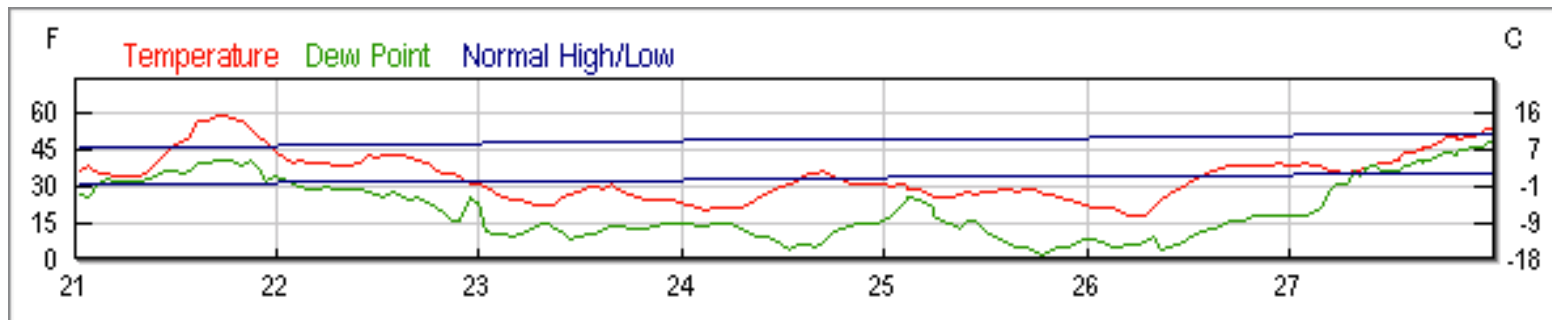
03/23 <http://bit.ly/1dnkDjl>

03/24 <http://bit.ly/1eKPogQ>

03/25 <http://bit.ly/1gD6aR8>

03/26 <http://bit.ly/1hDu8Xw>

03/27 <http://bit.ly/1jelxh7>



**Daily Data** Mar 28 - Apr 03

03/28 <http://bit.ly/1pCWkhv>

03/29 <http://bit.ly/Pbsgyb>

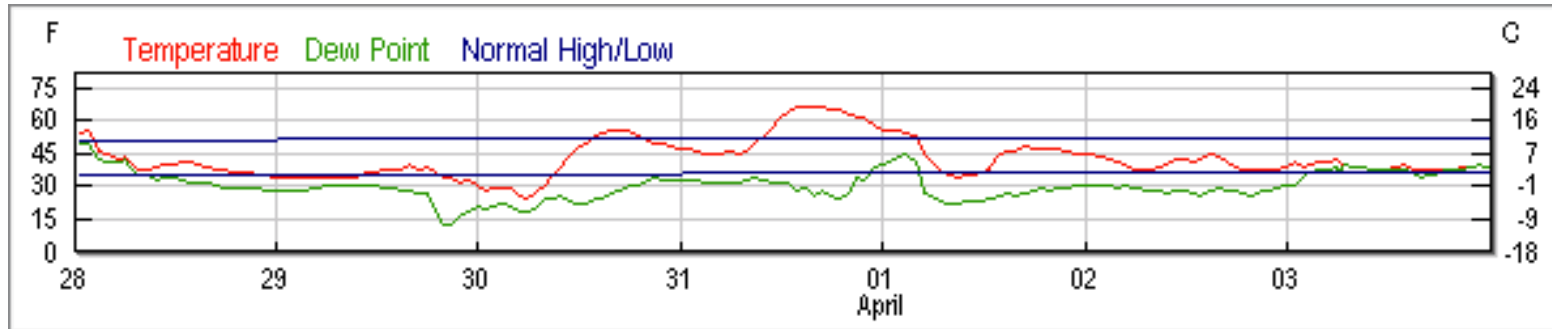
03/30 <http://bit.ly/1pztVuM>

03/31 <http://bit.ly/1mlaP6O>

04/01 <http://bit.ly/1mz4qbc>

04/02 <http://bit.ly/1pVc2oq>

04/03 <http://bit.ly/1jasssk>



**Notes.**

- (1) The **March 31 exterior High of 76° vs. Low of 46° = 30° difference.** By comparison the **March 31 face of shade High of 75° vs Low of 65° = 10° difference.**
- (2) The **March 26 exterior Low of 20° vs. High of 55° = 35° difference.** By comparison the **March 26 face of shade Low of 64° vs. High of 77° = 13° difference.**
- (3) The **exterior High of 76° vs. Low of 20° = 56° swing.** The **face of shade High of 79° vs. Low of 64° = 15° swing.** The **exterior average of 42.49° vs. face of shade average of 68.21° = 25.72° difference.**
- (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.
- (5) Sensor contact with logger lost March 27. Averages listed deleted as of that date.