

Performance & Weather Data May 1 - May 14

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 90% shading during May.

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.

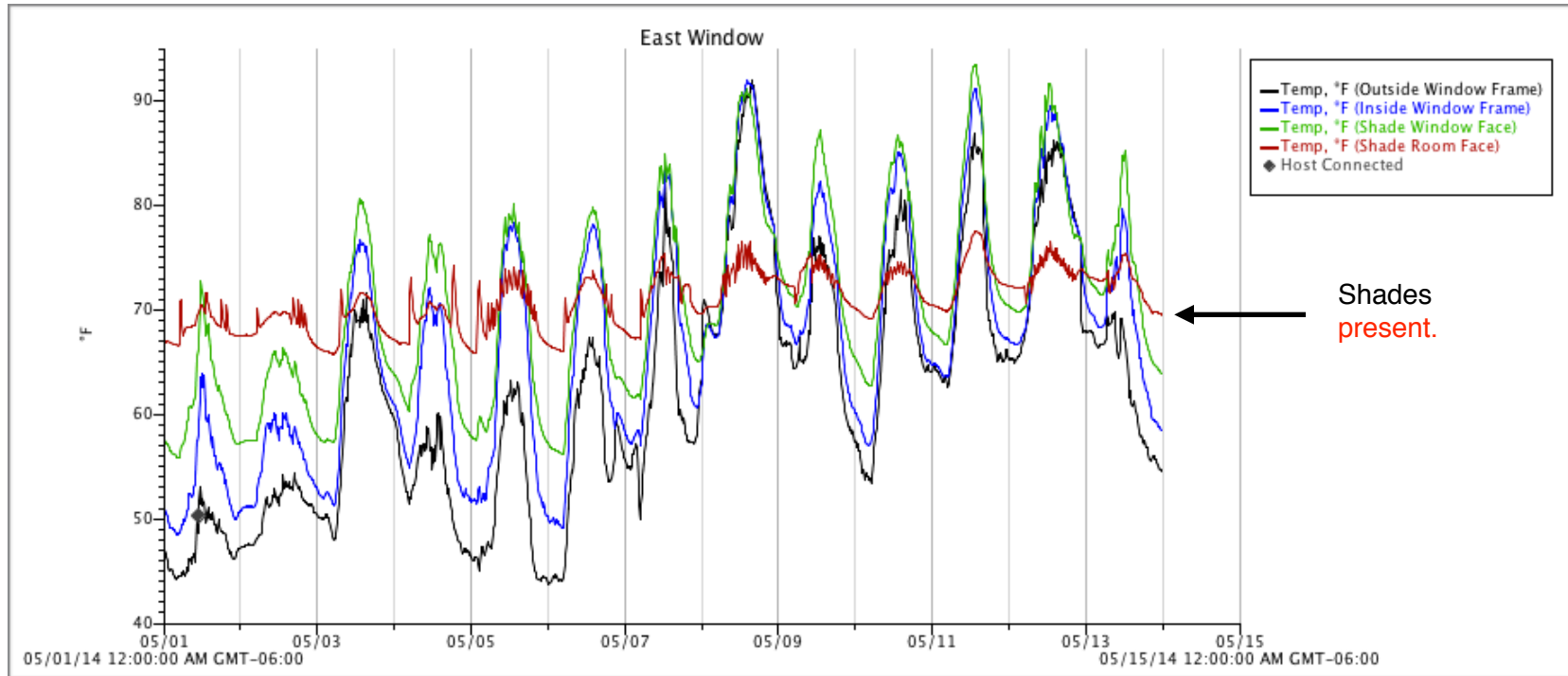
The ceilings are 128" high, there are four HVAC vents equally spaced across the ceiling. Both the vents and ducts are exposed. The thermostat dedicated to the room is on the opposite wall. Daily records of thermostat settings have not been available. It is safe to assume an average setting of 72°F.

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.

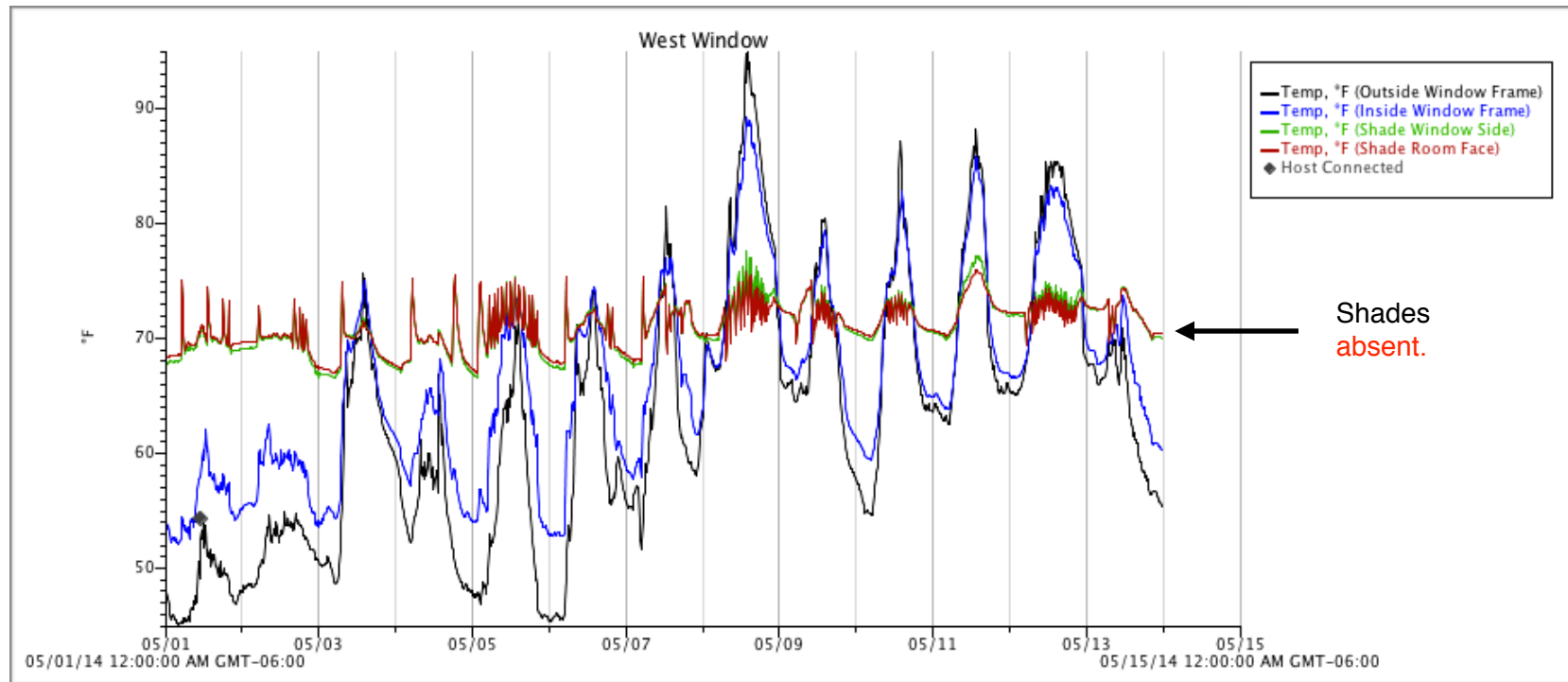


East Windows

Averages

Temperature Comparisons

Outside Window Frame (1) (3)	May 8 High 92°	62.01°	05/08	93° High	68° Low
	May 6 Low 44°		05/06	63° High	45° Low
Inside Window Frame (4)	May 8 High 92°	66.80°	05/08	93° High	68° Low
	May 1 Low 44°		05/01	50° High	43° Low
Window Side Face (4)	May 11 High 93°	70.63°	05/11	85° High	63° Low
	May 1 Low 56°		05/01	00° High	00° Low
Room Side Face (3)	May 11 High 77°	70.94°	05/11	85° High	63° Low
	May 3 Low 66°		05/03	68° High	49° Low



West Windows

Averages

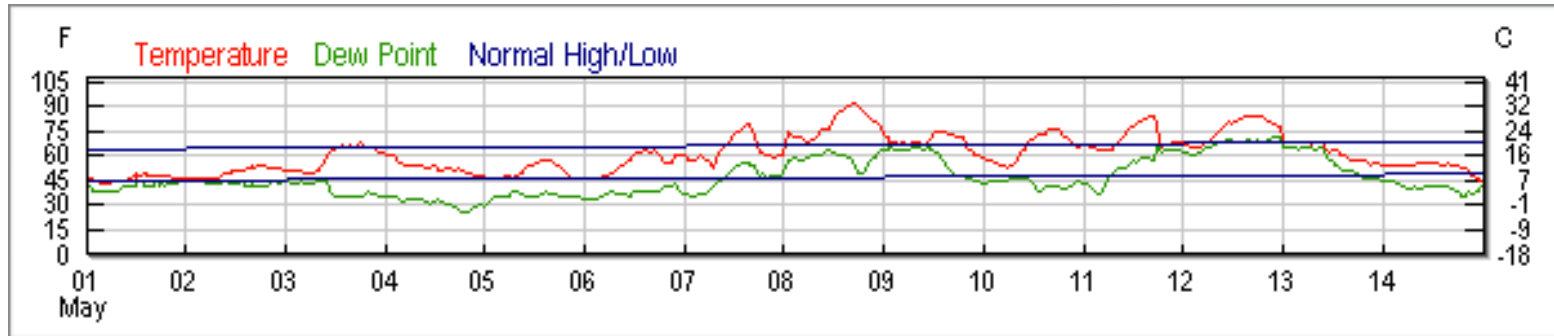
Temperature Comparisons

Outside Window Frame	May 8 High 95° May 1 Low 45°	63.03°	05/08 93° High 05/01 50° High	68° Low 43° Low
Inside Window Frame	May 8 High 89° May 1 Low 52°	66.26°	05/08 93° High 05/01 50° High	68° Low 43° Low
Window Side Face (4.5" inset from wall face)	May 8 High 78° May 3 Low 66°	71.03°	05/08 93° High 05/03 68° High	68° Low 49° Low
Room Side Face (4" inset from wall face)	May 11 High 76° May 3 Low 67°	71.06°	05/11 85° High 05/03 68° High	63° Low 49° Low

Weather Data May 01 - 14 <http://bit.ly/1ysmolN>

High May 8 93°

Low May 1 43°



Daily Data May 01 - 07

05/01 <http://bit.ly/1o9YHcv>

05/02 <http://bit.ly/1od4fTH>

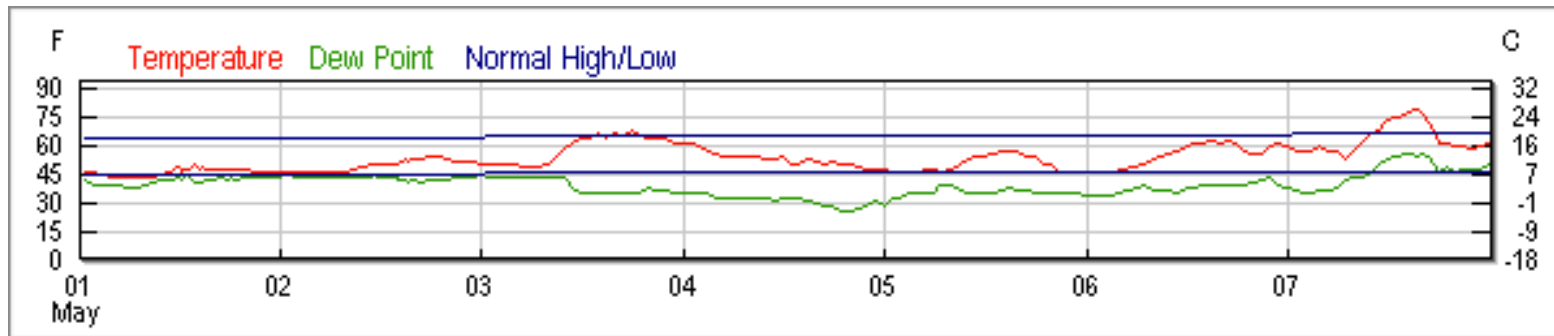
05/03 <http://bit.ly/Q3scAL>

05/04 <http://bit.ly/1hs1Vne>

05/05 <http://bit.ly/RkcNNS>

05/06 <http://bit.ly/1s2UYht>

05/07 <http://bit.ly/1nldXGp>



Daily Data May 08 - 14

05/08 <http://bit.ly/1oxJdPX>

05/09 <http://bit.ly/1ogNkTa>

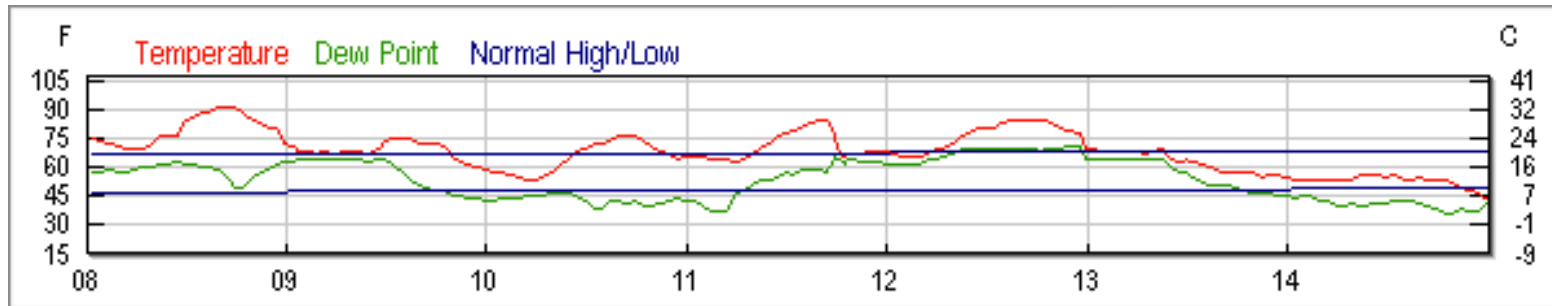
05/10 <http://bit.ly/1iFWCEE>

05/11 <http://bit.ly/1gvl9YS>

05/12 <http://bit.ly/RCgazq>

05/13 <http://bit.ly/1iSZCOe>

05/14 <http://bit.ly/1sRGaEA>



Notes.

- (1) The **May 8 exterior High of 92° vs. Low of 63° = 29° difference.** By comparison the **May 8 face of shade High of 76° vs Low of 76° = 0° difference.**
- (2) The **May 6 exterior Low of 44° vs. High of 67° = 23° difference.** By comparison the **May 6 face of shade Low of 67° vs. High of 73° = 6° difference.**
- (3) The **exterior High of 92° to Low of 44° = 48° swing.** The **face of shade High of 77° to Low of 66° = 11° swing.** The **exterior average of 62.01° vs. face of shade average of 70.94° = 8.93° 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 somewhat.