

Performance & Weather Oct. 30 - Nov. 12

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 average 0% shading during November.

The weather and temperature 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.

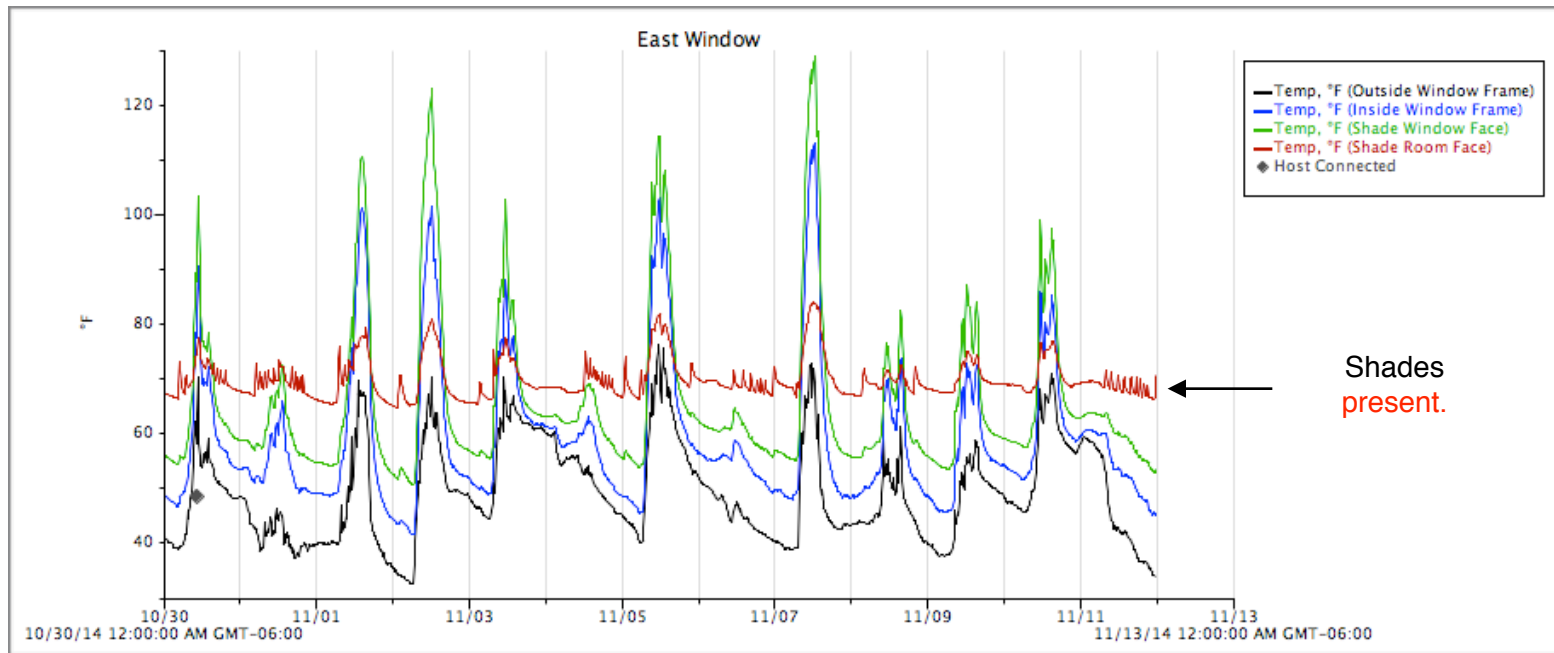
One [Onset](#) data logger and four sensors deployed per window assembly.

Black = outside window frame.

Blue = inside window frame.

Green = window side face of shade.

Red = room side face of shade.

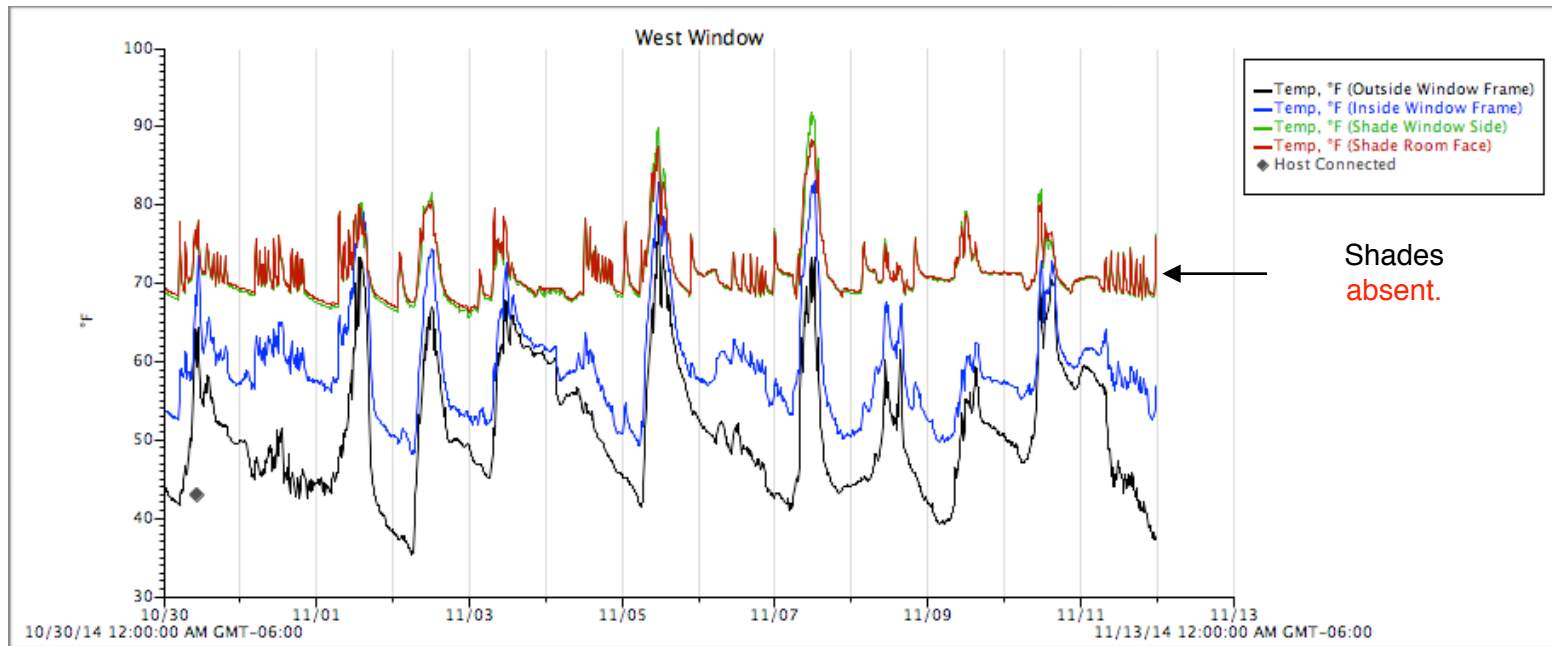


East Windows

Averages

Temperature Comparisons

Outside Window Frame (1) (3)	Nov 05	High 76°	49.16°	11/05	63° High	39° Low
(2)	Nov 02	Low 33°		11/02	53° High	29° Low
Inside Window Frame (4)	Nov 07	High 112°	59.03°	11/07	45° High	37° Low
	Nov 02	Low 41°		11/02	53° High	29° Low
Window Side Face (4)	Nov 07	High 126°	65.95°	11/07	45° High	37° Low
	Nov 02	Low 51°		11/02	53° High	29° Low
Room Side Face (3)	Nov 07	High 84°	69.93°	11/07	45° High	37° Low
	Nov 02	Low 65°		11/02	53° High	29° Low



West Windows

Averages

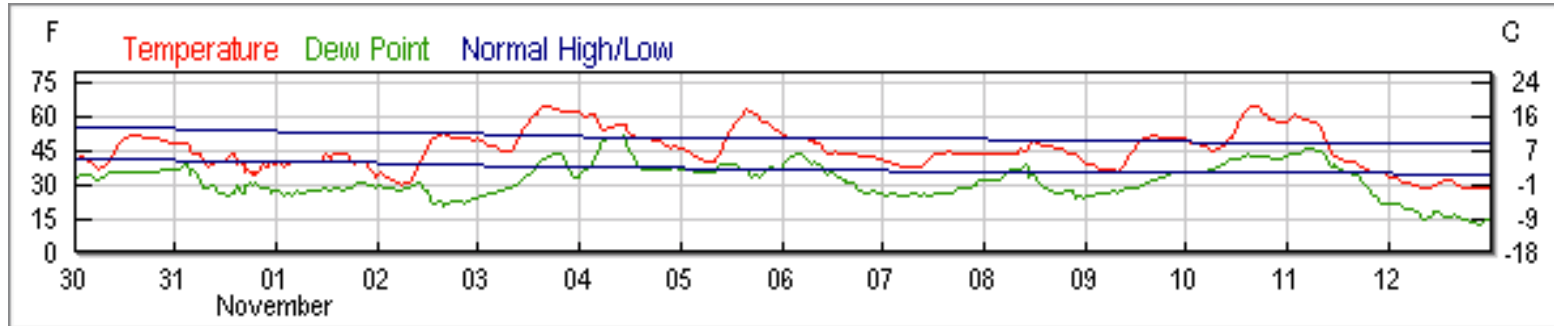
Temperature Comparisons

Outside Window Frame	Nov 05 High 79°	50.95°	11/05	63° High	39° Low
	Nov 02 Low 35°		11/02	53° High	29° Low
Inside Window Frame	Nov 07 High 83°	59.31°	11/07	45° High	37° Low
	Nov 02 Low 48°		11/02	53° High	29° Low
Window Side Face (4" inset from wall face)	Nov 07 High 92°	71.23°	11/07	45° High	37° Low
	Nov 03 Low 66°		11/03	64° High	45° Low
Room Side Face (4.5" inset from wall face)	Nov 07 High 88°	71.40°	11/07	45° High	37° Low
	Nov 03 Low 66°		11/03	64° High	45° Low

Weather Data Oct 30 - Nov 12 <http://bit.ly/1vVUwZY>

High Nov 10 65°

Low Nov 12 27°



Daily Data Oct 30 - Nov 05

10/30 <http://bit.ly/1rHnmol>

10/31 <http://bit.ly/1GfpbDX>

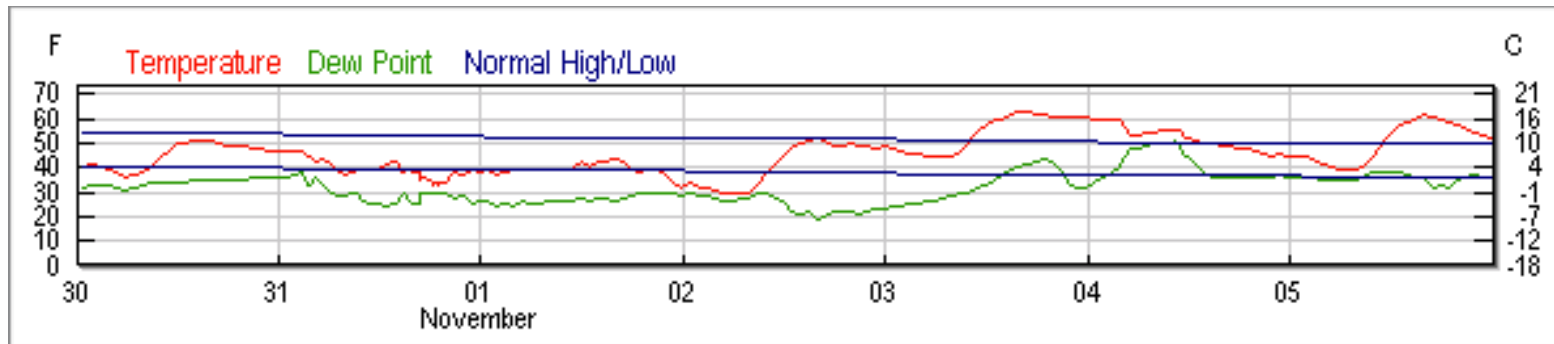
11/01 <http://bit.ly/1x1xi1F>

11/02 <http://bit.ly/1wYBy2S>

11/03 <http://bit.ly/10S3NV7>

11/04 <http://bit.ly/1Arb2Df>

11/05 <http://bit.ly/1zCBet2>



Daily Data Nov 06 - Nov 12

11/06 <http://bit.ly/10DjXkj>

11/07 <http://bit.ly/1Er9Yhd>

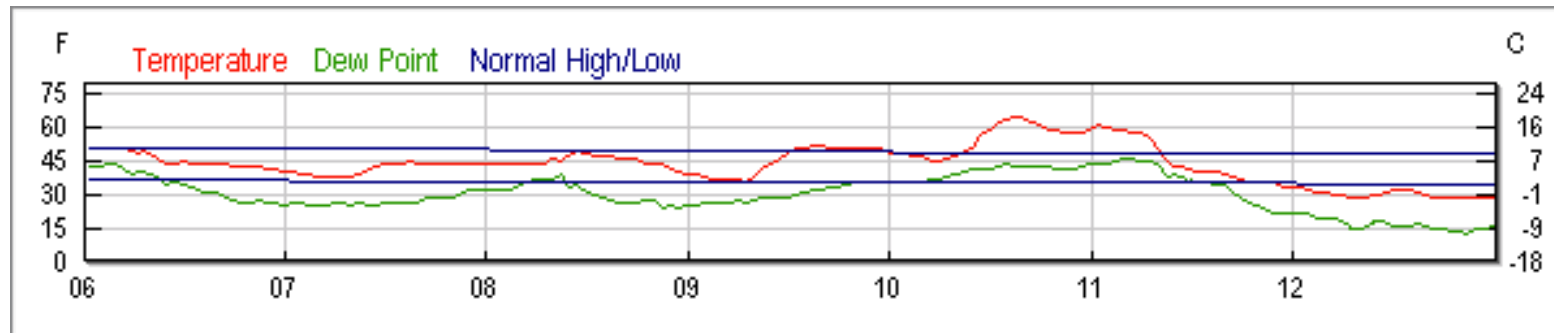
11/08 <http://bit.ly/1EsUDg0>

11/09 <http://bit.ly/1oCwXCa>

11/10 <http://bit.ly/1oHCabT>

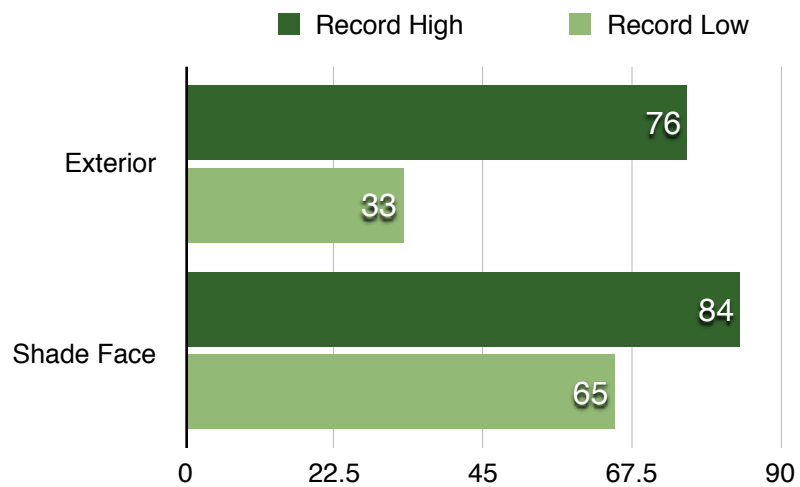
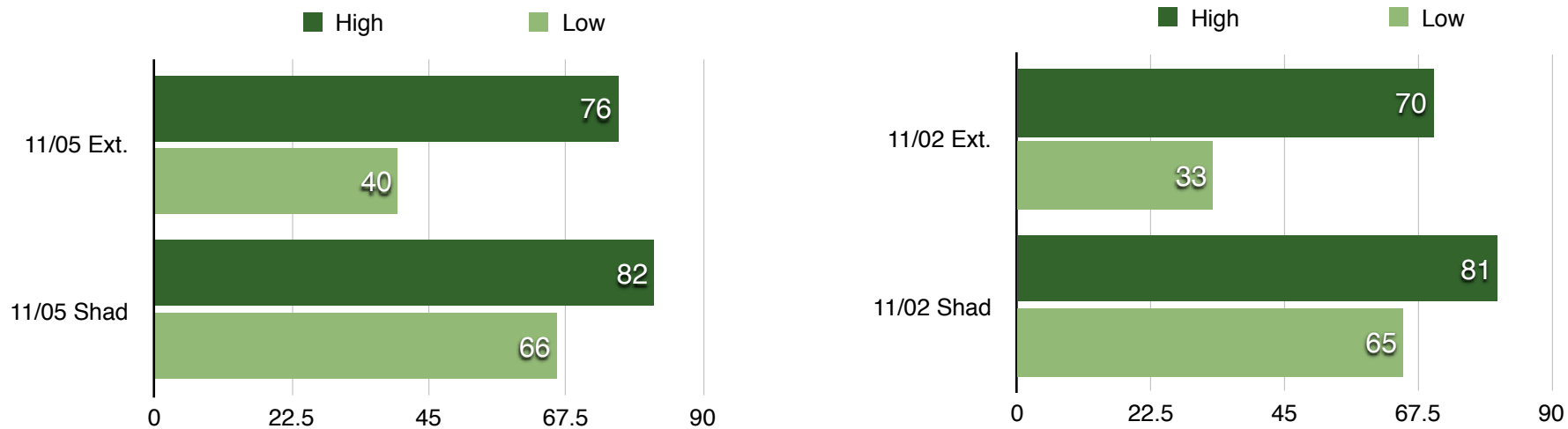
11/11 <http://bit.ly/1v3pKOp>

11/12 <http://bit.ly/1xw4XAC>



Notes.

- (1) The Nov 05 exterior **High of 76°** vs. **Low of 40° = 36° difference**. By comparison the Nov 05 face of shade **High of 82°** vs. **Low of 66° = 16° difference**.
- (2) The Nov 02 exterior **Low of 33°** vs. **High of 70° = 37° difference**. By comparison the Nov 02 face of shade **Low of 65°** vs. **High of 81° = 10° difference**.
- (3) The exterior **High of 76°** to **Low of 33° = 43° swing**. The face of shade **High of 84°** to **Low of 65° = 19° 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.



The energy savings and increased comfort due to the temperature moderating and stabilizing effect of **HeatSaver® Thermal Shades** is evident.