TEAM E!!!!!!!!!!
(and “E” is for “EXCITED”!!!!!!!!!!)
TEAM MEMBERS

Ana “Santa” Maria Corzo
“Babbling” Brooke Harrington
Nathan “Famous” Patrick
“Tofu” Hofu Wu

The “Leaders”:
Heidi Spaly
Bruce Haglund
Regardless of orientation, the natural illumination of the offices on the third floor is within 10% of each other.
METHODOLOGY

1. Location
   - 3rd floor offices on perimeter of building
   - NE, NW, SE, and SW orientations

2. Distance between illuminance readings
   - 1 ft, 5 ft, and 9 ft from windows
METHODOLOGY

3. Time increments
   - Mid-morning (~9:45 am)
   - Early afternoon (~12:45 pm)

4. Measurements taken
   - Light levels in footcandles at 3 different locations in each office at about the same time
   - Actual natural daylight levels on roof in lux
EQUIPMENT

1. (4) Osram Sylvania light meters, model DS 2050
2. (4) 30-in. wooden dowel rods
3. (1) Li-Cor photometer, model LI-250 light meter with Li-Cor photometric PH-6342
Daylight Factors in Offices

- nw sw sw sw se se se se ne ne nw ne nw nw nw
- 301 302 303 304 305 306 307 elev
- lobby
- 308 309 311
- 9 feet
- 5 feet
- 1 foot
DATA & ANALYSIS

- Outdoor daylight levels around 790 fc
- Orange shade is DF > 5%
- Light gray shade is DF > 1%
- Dark gray shade is DF < 0.5 %
CONCLUSIONS

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<tr>
<th>Room</th>
<th>307</th>
<th>305</th>
<th>302</th>
<th>311</th>
<th>306</th>
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<tbody>
<tr>
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<td>54%</td>
<td>59%</td>
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</table>
CONCLUSIONS

- In daylight performance, orientation DOES matter, even under overcast sky conditions.
- Differences among rooms is WAY greater than 10%.
- On clear days, pull-down shades will reduce daylight performance (light shelves or horizontal shades should be considered).
LESSONS LEARNED

- Maximum difference between rooms was 65% (rooms 301 and 307, SW vs NE)
- The new building addition blocks much of the light to the north-facing rooms
- Dormers reduced amount of possible daylight penetrations into offices
- Instrument calibration is critical
- Teamwork is very important
LIFE APPLICATION LESSONS

- Bubbles are sticky...

- Plants in front of windows are bad...