

## Assignment 5 – Heliodon Measurements

. The goals of this assignment are to build a physical model related to your course project and test it on a heliodon. Please analyze and document the results.

### Task 5.1: Plan your heliodon experiment (Group Assignment)

The first step is to meet with your team members to make a decision about the desired quality and character of the light in your project. Before beginning the model construction, discuss your design intentions. The following list provides example adjectives of how to describe the lighting in a space (taken from BAC):

1. Light to emphasize movement
2. Light to define rhythm
3. Light to dematerialize form
4. Light to convey a thermal sensation
5. Light for seasonal awareness
6. Light to emphasize materials
7. Light to emphasize structure
8. Light to emphasize texture
9. Light to provide orientation
10. Light to develop a hierarchy of space
11. Light to create contrast

### Task 5.2: Scale Model Building (Group Assignment)

Build a 1/2" to the foot model of your course project and prepare it for the experiments that you developed in Task 5.1. Maximum model dimensions are 20' x 30' with a maximum height of 20'. You may for example choose one specific element of the design for which your group would like to test various options. This could be exterior variants such as louvers or window sizes and locations, or interior variants such as light shelves, material properties or ceiling profiles. It is advisable to develop your design in sketch form before constructing the model. Please submit a few photos of your model(s). To build your models, you will need the following list of items:

- o Xacto or matte knife and blades
- o Straight edge for cutting
- o Architect's scale
- o Triangle(s)
- o Tracing Paper
- o Pens or pencils for sketching
- o FoamCor - Bring enough material to build the model at **1/2" scale** with enough extra so that you can remake parts of the project if you want to change your design, or if you make a mistake.
- o Glue and/or pins to hold model together
- o Tape (black if available) to prevent light leaks
- o Any other favorite model building tools and materials.

*Task 5.3: Heliodon Measurements (Group Assignment)*

Weather permitting; we will be starting the heliodon measurements next class session. Each group will need about 30 to 45 minutes to carry out their experiments.

Please compile your results and report your findings as text, pictures and animations to the course web site. Explain what you have learnt from the experiment and how this information will influence your design going forward.

Task 4: Reflections (individual)

Reflect on what you think the advantages and disadvantages of heliodon studies are compared to computer simulations in terms value created for the design process as well as investment of time and money (~250 words)?

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4.430 Daylighting  
Spring 2012

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