Illuminated Prayers: Daylighting and Foreign Cultures
Purpose

• To analyze day lighting of a Mosque

• To bring to attention how cultural variations may require unique lighting requirements
Enculturation:

The process in which humans learn culture

- Values
- Beliefs
- Family Relationships
- Business Relationships
- Romantic Relationships
- Language (verbal and nonverbal)
How does culture affect structures?

Space- built form (without human occupation)

Place- the meanings (emotional, mental and spiritual) humans assign to space

- Affected by Culture
- Affects Culture
Examples

Apparent
- Crucifix
- Adhaan (call to prayer)

Ambiguous
- Jasmine Flowers
- Stained Glass
Daylight in a Spiritual Space

• Utilizing daylight for sensory stimulation
  – Ex. Rococo Cathedrals

• Utilizing daylight for function
  – Ex. Old Muslim Mosques
Case Study
(Performed at USC)
study model
There were different cases examined inside the prayer hall. The central dome was tested under three different openings. All the different cases were measured and compared to each other.”
“The central dome with no openings (as the original mosque) provided the praying hall with very low illumination level. Most of the light was coming from the side windows on the north-facing wall.”
Central Openings

“The central dome with only one opening in the center provided better illumination than the first case. However, the north wall was still dark compared to other walls. In the meantime, the opening in the center brings more direct sunlight to the space which increases the solar gain and glare.”
Side Openings

“The central dome, in the third case, has eight openings around its base. These are effective side openings. In this case, the light received at the work plane level was evenly distributed over the area beneath the dome. Good quality and quantity of light was maintained, as well. Most of the light coming to the floor surface is reflected from the curved surface of the dome.”
RP 5