

### Assignment 3 - How to determine light Levels for Interior Spaces



**Topic:** To allow students the understanding of how to determine the number of lumens needed for varying types of spaces. It will also give students an understanding of the amount of electric lighting needed for an entire project.

**Assignment:** Calculate the number of lumens needed for both the individual spaces within the Assigned Commercial Project, and the total lumens needed for the entire project.

1. Be sure to calculate the square footage for each individual space to the best of your ability.
2. Go to the Internet and look up IES Recommended foot candles for each individual space. This will help you to determine the number of lumens needed to adequately light the interior spaces.
3. Once you have determined the amount of foot Candles for each space and the square footage of each space then you will multiply the number of foot candles by square footage to arrive at the number of lumens needed to adequately light the desired space.
4. Example: Dining Area 5–20-foot candles x 600 sq. ft. = 6000 lumens for an average light level.
5. Students are to create a spreadsheet identifying the number of lumens necessary to adequately light each individual area
6. Students are also to determine the total number of electric generated lumens being provided for the entire project.
7. Use the site listed below to help determine the amount for foot candles needed per space to calculate Lumen count.

[https://www.lightingdesignlab.com/sites/default/files/pdf/Footcandle\\_Lighting\\_Guide\\_Rev.072013.pdf](https://www.lightingdesignlab.com/sites/default/files/pdf/Footcandle_Lighting_Guide_Rev.072013.pdf)

<https://www.archtoolbox.com/materials-systems/electrical/recommended-lighting-levels-in-buildings.html>

<https://www.ledlightingsupply.com/recommended-foot-candle-chart>