Photometric Walkthrough Mobile Application

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Project Background

Sponsored by Optic Arts (OA), an LED-lighting distributor based in Monterey Park, the Photometric Walkthrough Mobile Application (PWMA) is an application for Android that allows users to create a virtual room in order to place within it specialized lighting.

PWMA will incorporate IES files into the device’s database for placement into the room. These IES files contain data on the lights used by OA agents when designing lighting plans for their various projects. Also implemented in PWMA is the computation of Calculation Points. These points are a numerical representation of the light intensity on a given area with respect to all neighboring sources of light.

OA agents will use PWMA to place lights in their virtual room and generate a summary of all IES files used within the project alongside an image of all Calculation Points.

Objectives

- To allow the user to navigate the virtual room freely
- To allow the user to select the lights they wish to place in the room
- To allow the user to visualize calculation points
- To allow the user to export room details to a PDF saved in the device’s storage

Data Flow Diagram

Conclusions

- PWMA was an invaluable learning experience that taught the team many useful and professional concepts
- Learned to adapt to an ever-shifting work structure
- Became familiar with an entirely new language, platform, group dynamic
- Gained work experience with a small company that had little engineers to seek help from

Deliverables

- Photometric Walkthrough Mobile Application for Optic Arts agents
- PWMA User Manual