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Hawthorn Building
Altoona, PA



Lighting Depth

Introduction

Four spaces of the Hawthorn Building will be analyzed in this lighting redesign. They are: the Main Corridor, the Pechter Family Music Room, the Lecture Hall classroom, and the Computer Classroom. Each space has its own function and feeling to it, and was addressed in the lighting redesign.

Problem Statement

The major challenge of the lighting redesign was to meet the multiple needs of each space. Since every room in the building is used for more than 1 activity, it was difficult finding solutions that were flexible to the multiple needs of the spaces. Another key consideration was making sure that all the spaces in the building meet ASHREA 90.1 electrical code.

Design Criteria

Besides meeting the ASHREA 90.1 electrical code, there were other criteria that needed to be taken into consideration when doing the lighting design for the Hawthorn Building. Glare (reflected and direct), lighting distributions, color temperature, color rendering, and luminaire appearance were also issues to consider. Design criteria for each space will be gone over in more detail in each space's section later in the report. All models were built in AutoCAD, and lighting calculations were performed in AGI32.