

EXECUTIVE SUMMARY

The attached report summarizes the existing lighting systems employed in the design of the Gordon Fieldhouse and Activities Center, located on the RIT campus in Rochester, NY. The objective of the technical report is to assess the current lighting design and compare it with design criteria as listed in resources such as the IESNA Lighting Handbook as well as compliance to ASHRAE standards for power consumption, referenced in ASHRAE 90.1. This analysis was produced by an intense assessment of the final construction set of drawings prepared by Cannon Design, the architects and engineers of the project.

Four spaces were targeted to ascertain the illuminance levels and overall performance of the lighting design in the Fieldhouse. The entrance lobby, fitness center, concession area and decorative tower were chosen and assessed by incorporating original fixture choice and position, controlling elements, light loss factors, daylight contributions where applicable, surface and material characteristics, power density calculations, and design criteria. AGI32 was also utilized to make graphic representations of the lighting systems and evaluate their performance visually. Where appropriate, the resulting images are included below.

The resulting analysis of the 4 spaces as a test of the overall efficiency and suitability of the lighting design of the Gordon Fieldhouse yielded a general compliance with typical lighting design methods. In all cases ASHRAE 90.1 was adhered to, but conventional maximum to minimum footcandle ratios were given considerable leniency in many of the spaces. Additionally, a different interpretation of appropriate design criteria may have been administered in some of the spaces. However, the lighting levels in all areas are no doubt safe and minimally fitting for the needs of the buildings.