ENVISION CONFERENCE

Low Vision Lighting: It's Important But How Important?

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Learning Objectives

1. Understand what current research says about task lighting for low vision
2. Learn the factors that are crucial for lighting and tint assessment
3. Learn the characteristics of light that are important for near vision tasks, and how to assess them using a new tool (LuxIQ) and how to translate measurements into recommendations of lamps, bulbs and filters

Outline and Summary

While obvious, it is helpful to remember that light is essential for vision. For individuals with low vision, good task lighting is essential. But the benefit of more or less light is highly individual, and depends on diagnosis (i.e. age-related macular degeneration vs. glaucoma). An overview of current research on lighting and low vision will be provided as an introduction to the presentation.

Current practice for low vision task lighting assessment (if performed) often relies upon showing the client a variety of lamps and asking them which seems to optimize their vision for near tasks. Little attention may be paid to the distance between each lamp and the target, which is important since the amount of light at the work surface strongly depends upon this distance. Other factors, such as the brightness of bulbs in each lamp and whether or not any one lamp actually optimizes lighting for the client are usually overlooked. Of course, lighting assessments may include glasses with tinted lenses to, for example, improve outdoor function. But again, current practice is often simply showing various tints of differing wavelengths and density. In short, for low vision lighting assessment trial and error is the norm.

In this presentation I will discuss different characteristics of light (and define them) for near vision tasks including: brightness, color temperature, distance, and color. I will use a recently completed study of "optimum lighting" in both normally sighted and low vision participants.

The presentation will introduce a new device, the LuxIQ™, the first system to offer vision specialists the ability to determine optimum brightness and color temperature for an individual. Coupled with the LuxIQ is a web app (LightChooser™) that translates these measurements into recommendations for specific lamps, bulbs, and tints, as well as the distance from the light to the work surface that matches the values determined as optimum for individual.