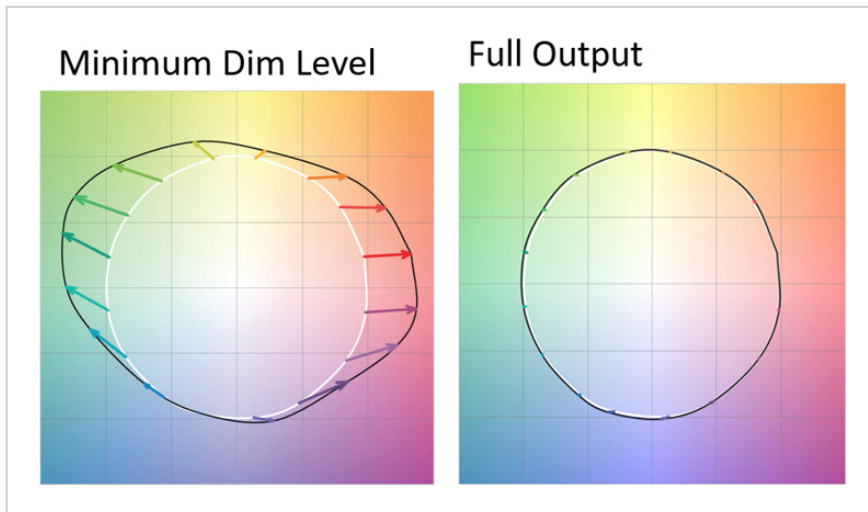


# Dim to Vivid Technology Enhances Color Brightness in Low Light

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PennState



Increased Gamut at Dim Light Levels

## Technology Summary

At low light levels, human sensitivity to color is reduced, making colors appear duller, less vibrant, and less vivid. This new technology is an engineering development that compensates for the loss of visual sensitivity by intensifying the colors of objects in low light levels, thereby enhancing vision. Specifically, the technology increases the color range of a multi-light-emitting device while the light levels are being dimmed. The technology independently drives each emitter so the total color gamut increases while total lumen output of the light-emitting device decreases.

## Application & Market Utility

Color perceptions and dimming are important considerations in lighting for residential uses, museums, and the hospitality market. This invention could be deployed as an LED replacement lamp (e.g., with a conventional base type, such as a medium screw base or pin base), an LED module (e.g., incorporated into luminaires), or a luminaire (inclusive of housing and optics).

## Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

4-7

### Seeking

Investment | Licensing | Research

### Keywords

- Color Enhancement
- Color Perception
- Light-emitting Device
- Hunt Effect

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