LED BINNING PROCESS

COLOR MATCHING



ENSURE PROJECT COLOR CONSISTENCY

Variations in color can be identified by the human eye with incredible precision (see full chromaticity diagram on page 2). There are standard variations within any color temperature ordered from LED manufactures. To control the color variation in LED lighting components, a binning process is performed by the LED chip manufacture; a physical sorting of LEDs of similar brightness and color. Although the binning process is performed, one batch of LEDs may vary by +/- 165K in color temperature. As a result, each batch of 3000K LEDs could contain LEDs spanning 6 unique bins ranging from 2870K-3200K.

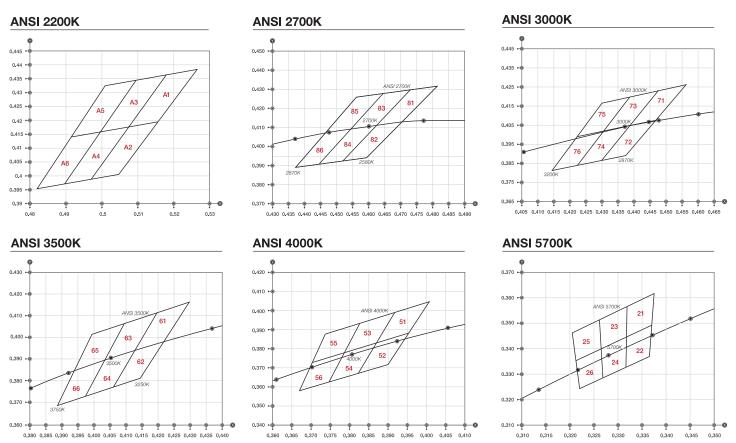
PureEdge Lighting performs a second binning process once the LEDs are received from the chip manufacturer. Bins are meticulously sorted in an additional in-house binning process. PureEdge takes these special measures to reduce color variation in LEDs for each order.

Please be sure you notify PureEdge Lighting when multiple product orders will be used in the same space. It is critical to do so to ensure the color temperature of your LED products match throughout your space. Below is a list of common scenarios where this may occur.

Common Scenarios:

Replacement products, extension on existing projects, and to match a sample product

Red letters and numbers within the graphic represent bin numbers



The diagrams above show a close up view of the 6 bins that an LED within a particular color temperature could fall into, even after going through the initial binning process by the LED chip manufacturer (see full chromaticity diagram on page 2).

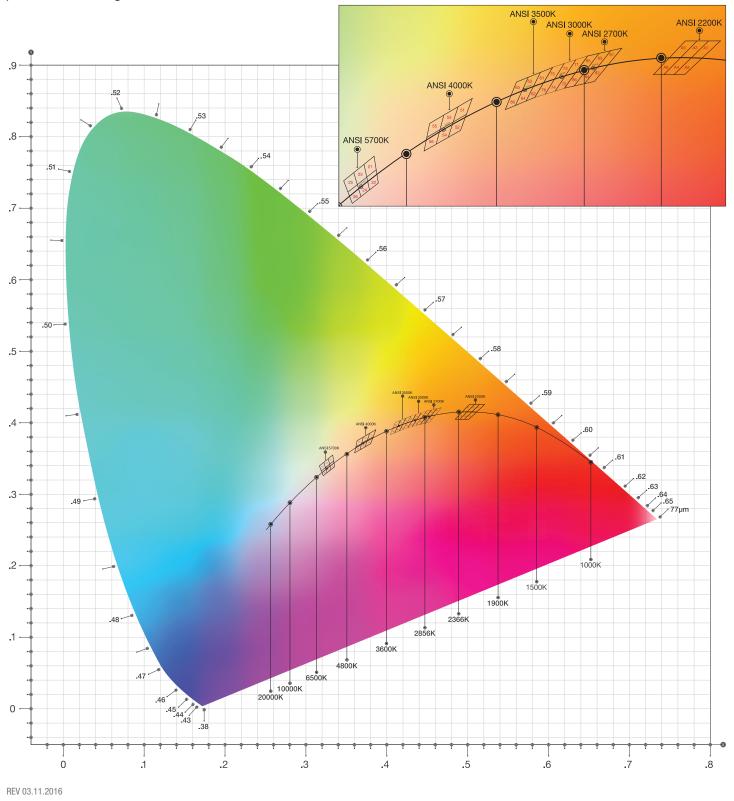
REV 03.11.2016



COLOR MATCHING

CHROMATICITY DIAGRAM

The eye can detect between tristimulus values of 0.4200, 0.4400 and 0.4203, 0.4403 on the CIE 1931 chromaticity diagram (below). People's inherent sensitivity to variations of color is recognized by manufactures of fabrics and paints as well as light sources.



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