TECHNOLOGY

VP3 NATURAL WHITE™

SIMPLY PERFECT WHITES

Violet light resides at the tail of the visible spectrum, and most of the time we do not think too much about it. After all, we were all taught that red, green, and blue makes white light. So we hardly noticed when blue-based LEDs killed violet.

But color scientists have long known that violet light plays an all-important role in our perception of another color – white. White in all its shades is ubiquitous in our environment. Whites convey the emotional meaning of clarity, brightness, and space. Manufacturers and marketers strive to create ever whiter whites. And the color of light that allows us to see true whites is violet.

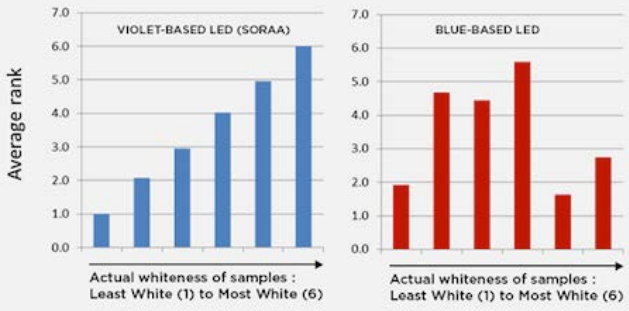
Soraa offers a solution that is radical in its simplicity. Simply Perfect Whites. VP3 NATURAL WHITE.

THE SCIENCE OF WHITES

Our perception of whiteness is strongly influenced by the presence of fluorescent whitening agents in both natural objects (like teeth), and manufactured objects (like clothing and paints). These whitening agents are excited by the violet content in visible light, which our historical light sources – daylight, incandescents, and halogens - have contained. Thus, we live in a world with infinite shades of whiteness, determined by the level of fluorescence in each object.

Increasing adoption of blue-based LEDs now threatens this nuanced world. With their complete lack of violet content, peer-reviewed academic research shows that blue-based LEDs wash out the differences between whites. Bright or creamy, all whites look the same, yellowish and dull, and we lose the ability to tell one from the other.

The same research shows that with Soraa's violet-based LEDs, whiteness choices are as clear as the day.



Test subjects were asked to rank calibrated white samples accurately from least white (Rank 1) to most white (Rank 6).

Under a blue-based LED, the ranking was random, as subjects could not tell one white from another.

Under a violet-based LED, they ranked the samples perfectly.

Source: Kevin W. Houser, Minchen Wei, Aurélien David & Michael R. Krames (2014) "Whiteness Perception under LED Illumination", LEUKOS: The Journal of the Illuminating Engineering Society of North America, 10:3, 165-180