# HDTV BY CHAD B.
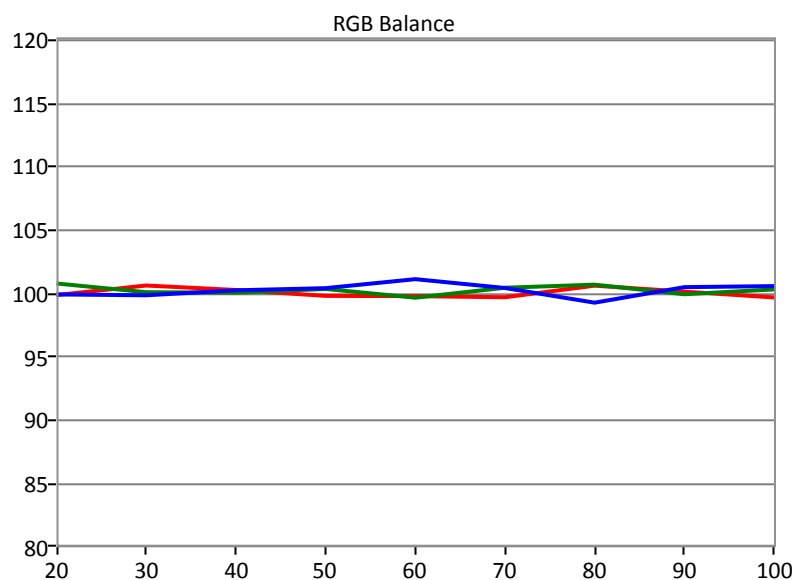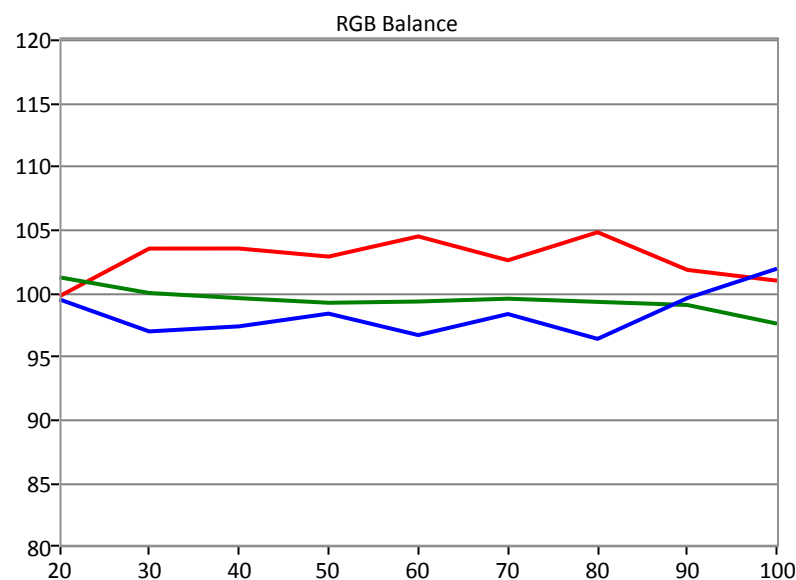
**ISF Certified Calibrator**

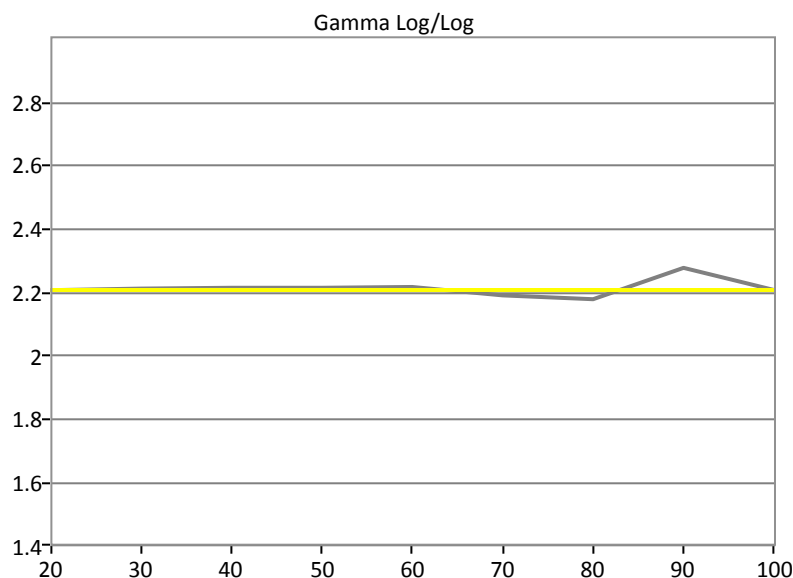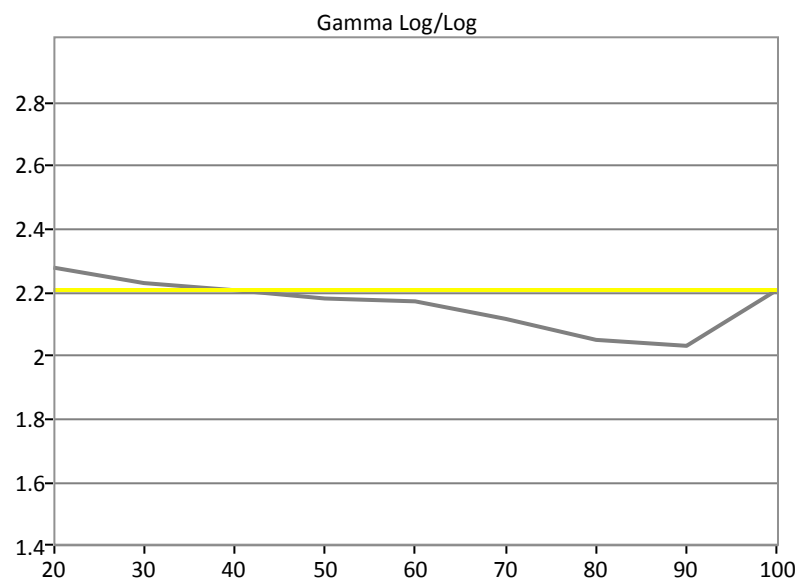**THX CERTIFIED PROFESSIONAL VIDEO CALIBRATION**
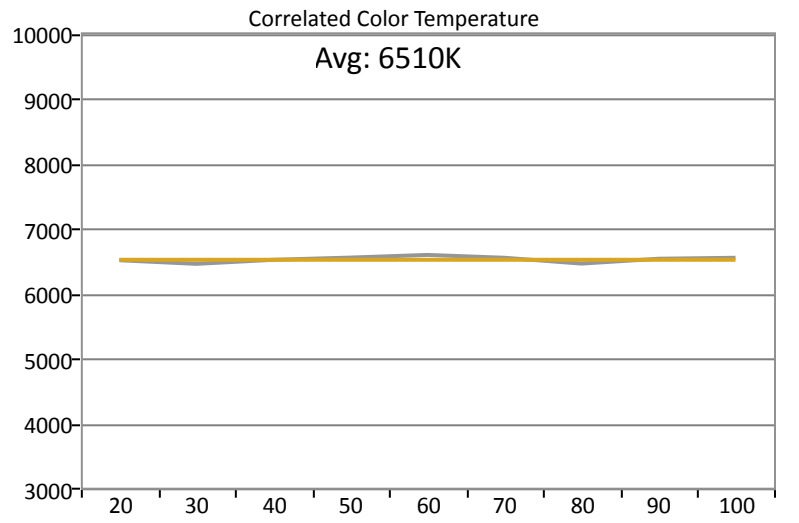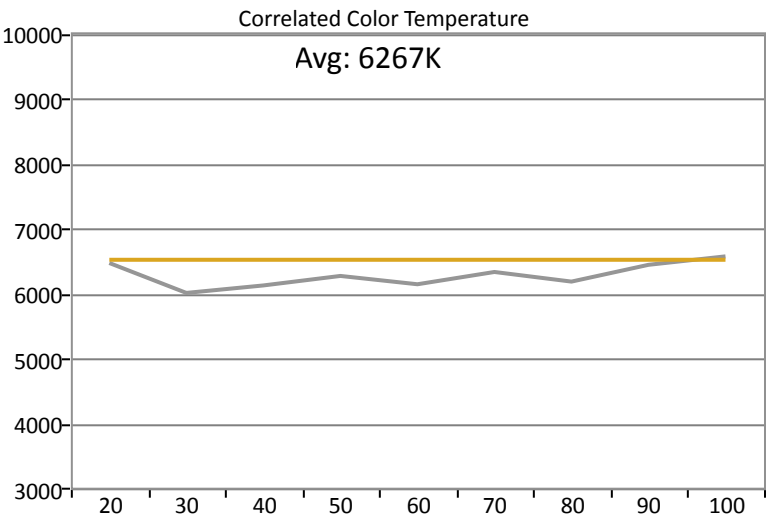
## Before calibration:

## After calibration:

The RGB balance shows the ratio of red, green, and blue that make up the black and white foundation of the picture. It is also known as grayscale or white balance. If this foundation is skewed, no amount of tweaking the color and tint will fix the image. Ideally, the R, G, and B should be well balanced from dark (left) to bright (right).



RGB Balance (Before and After)

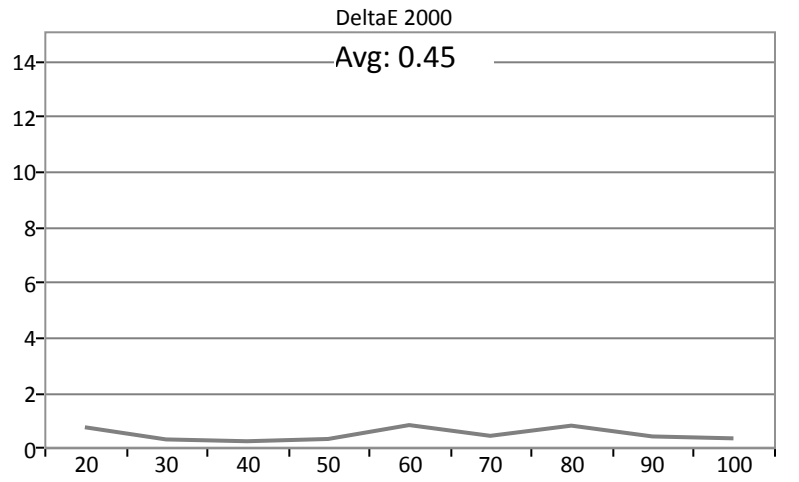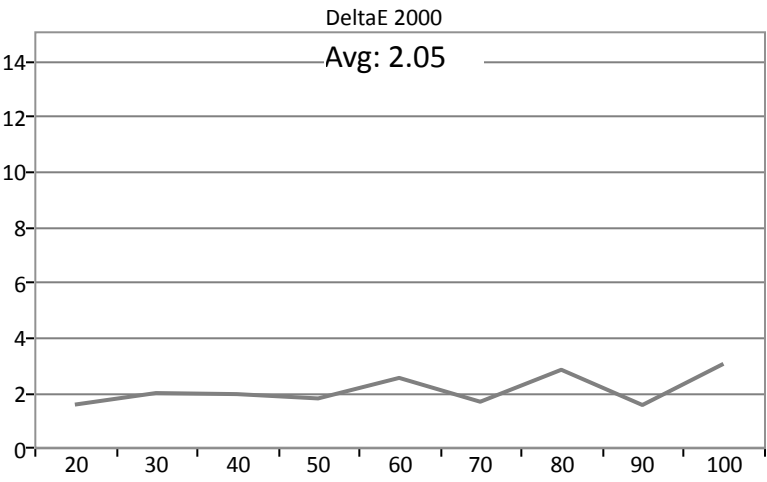The point gamma graph shows the display's brightness ratio as it transitions from dark to bright images. If the gamma is too low, the picture may look washed out with a "caked on makeup" look on brightly lit faces. If it is too high, dark images will be too hard to see and the image will look too contrasty. A good gamma also helps improve the depth of the image.
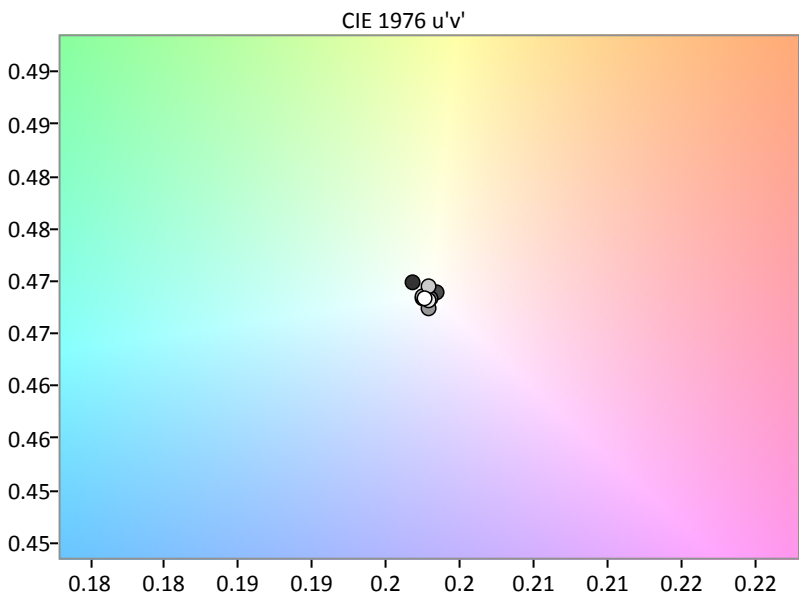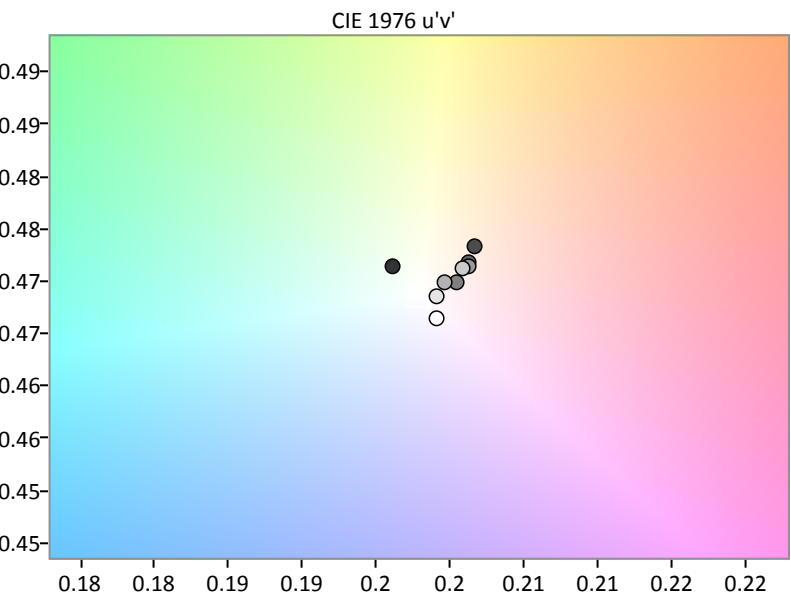


Gamma Log/Log (Before and After)

The color temperature is the color tone of the picture, from dark (left) to bright (right). Lower numbers will result in a rustic, earthy tone while higher numbers suggest a bluish, steel-gray look. The HDTV standard is 6504 degrees Kelvin.

Correlated Color Temperature

Avg: 6267K

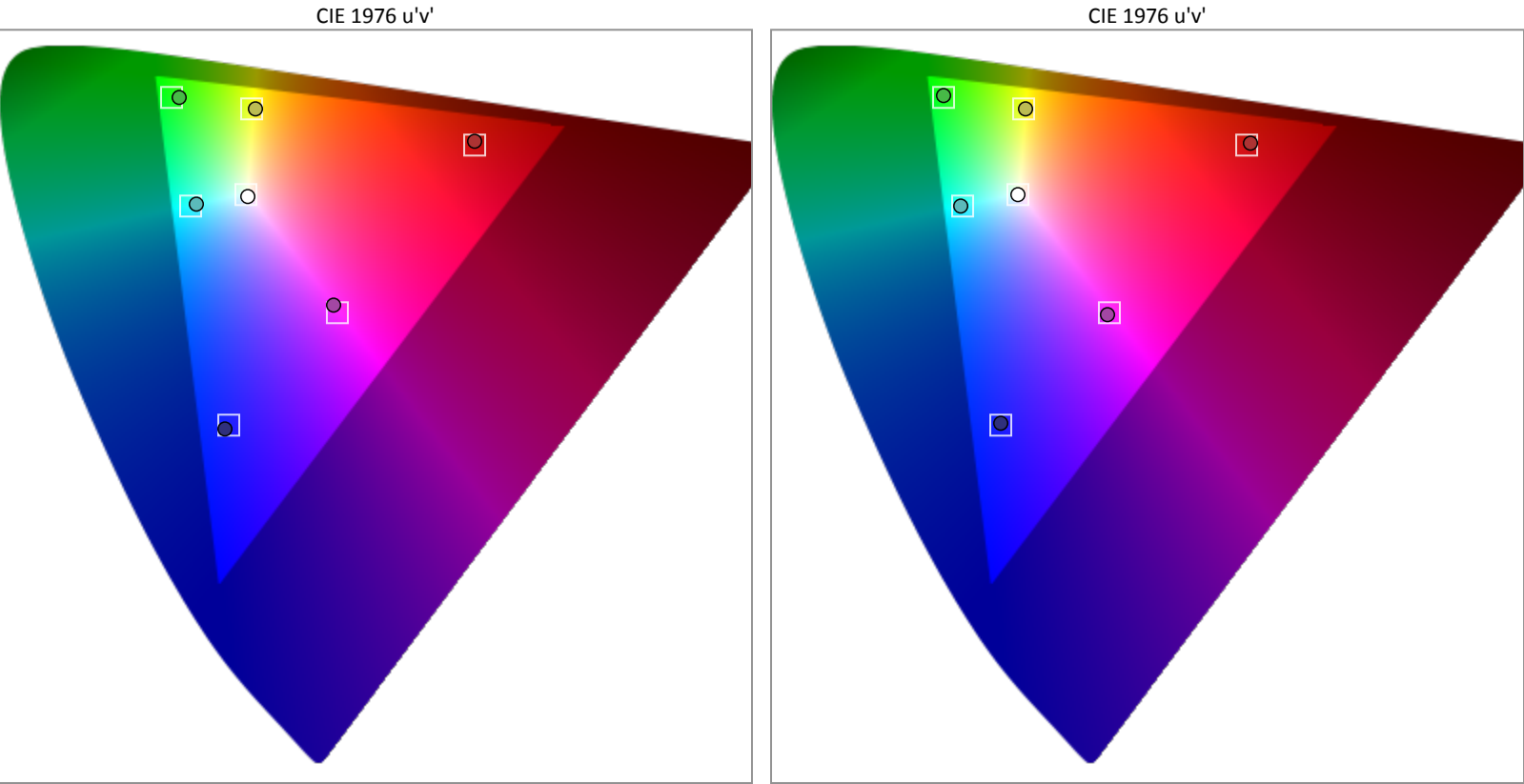Correlated Color Temperature

Avg: 6510K

The grayscale DeltaE is a standardized measure of error based on the eye's sensitivity to color error. It shows how visibly serious the above errors are with real images, with lower numbers indicating better performance. Errors of less than 5 are generally thought to be acceptable, while errors less than 3 are generally thought to be imperceptible with normal program material.

DeltaE 2000

Avg: 2.05

DeltaE 2000

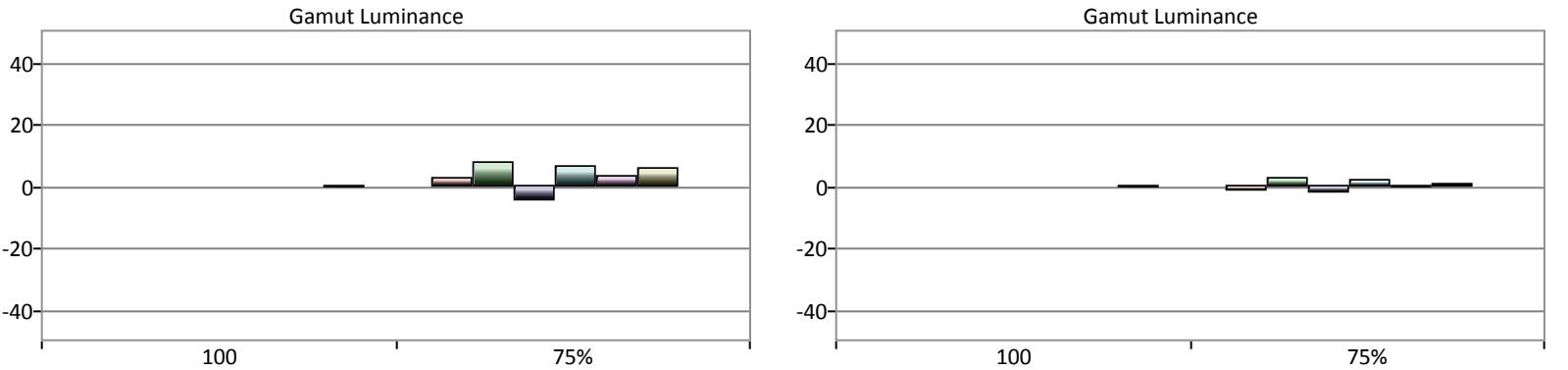Avg: 0.45

The grayscale scatter chart illustratess which direction the display's white balance gravitates toward at different brightness levels.  Tight groups at the center target area indicate excellent performance.  If the group cannot be in the target area, the next best thing is for it to be clustered along the black line, which is known as the Blackbody Curve.
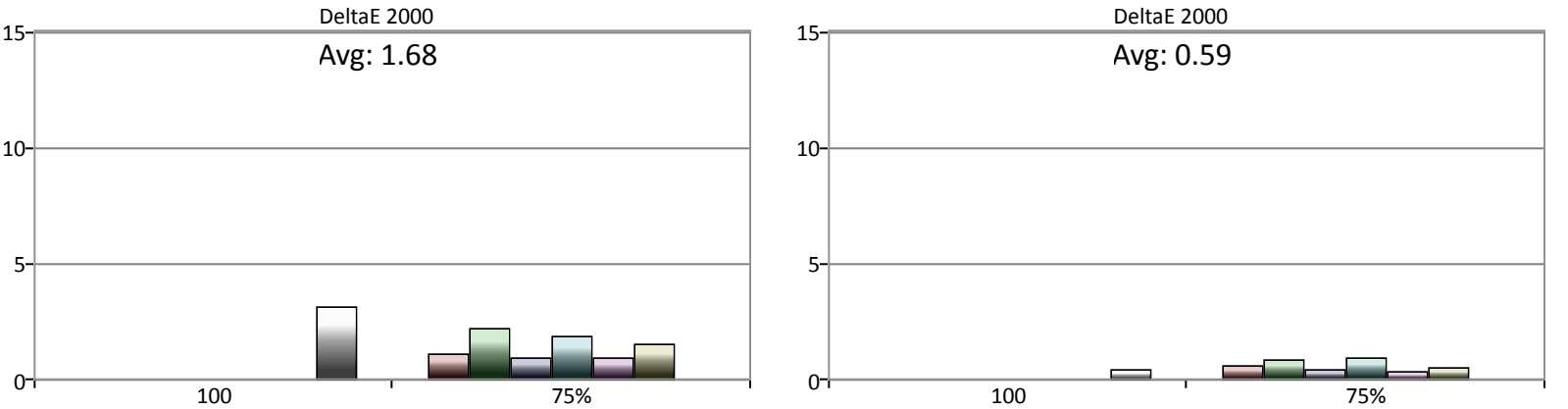
CIE 1976 u'v'

CIE 1976 u'v'

The gamut saturation CIE chart shows the consistency of the purity and hue of each color from very pale to fully colored. Tight alignment of the measurement dots in their respective target square indicates consistent color performance. These are typically measured at 75% level.



CIE 1976 u'v'

CIE 1976 u'v'

The Gamut Saturation Luminance shows if a particular color is pushed or de-emphasized. Tight groupings averaging around 0 indicate proper color intensities.



Gamut Luminance

Gamut Luminance

The gamut saturation DeltaE shows how visible the errors of each color are with real program material. While the first DeltaE chart was for white balance and gamma, this DeltaE chart shows the error for each primary and secondary color. It takes into account each color's amount of paleness or saturation and it's intensity, or how much of that color is added to the image.



DeltaE 2000

Avg: 1.68

DeltaE 2000

Avg: 0.59

# Before max fL: 7.1

# After max fL: 9.3

Picture mode:

To restore the calibrated settings, start with default settings of calibrated picture mode. Then make the changes listed below in order as they appear in the menu.

Basic settings:

Advanced settings: