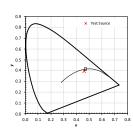
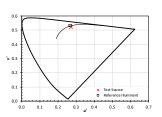


Spectral Power Distribution Comparison
Each SPD has been normalized so that the luminance factor (Y) is 100, as is done in IES TM-30
calculations.

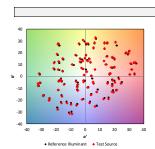


Chromaticity Comparison (CIE 1931)
The CIE 1931 Standard 2° Colorimetric Observer is used for calculations.

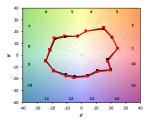
Color Rendition by Hue-Angle Bin



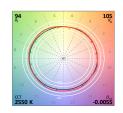
Chromaticity Comparison (CIE 1976)
The CIE 1931 Standard 2° Colorimetric Observer is used for calculation



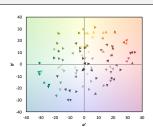
Shift in Hue-Chroma Plane $\begin{tabular}{ll} The (a,b) coordinates of CAM02-UCS are calculated for each of the 99 CSs under the test and reference conditions. R, on based on the average color difference of the 99 CSs in CAM02-UCS (also including the I dimension). Background is for visual orientation only) <math display="block"> \begin{tabular}{ll} The Visual orientation only) \\ The Visual orientation of the Visual orientation only) \\ The Visual orientation of the Visual orientation of the Visual orientation only) \\ The Visual orientation of the Visual orientation orientation of the Visual orientation of the Visual orientation or the Visual or$



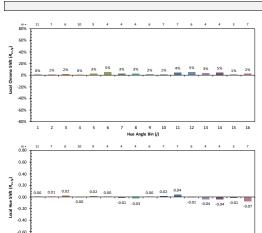
Hue Angle Bin Average Coordinates
The average (x, x) coordinates of CAMO2-UCS are calculated for the CES within each of 16 hue-angle bris. R_i is based on the area of the polygons for the test and reference conditions. The three types of "Coord values are based on the difference in coordinates for each hue-angle bri. [Background is for visual orientation only].



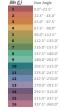
Color Vector Graphic
The Color Vector Graphic (CVG) shows a normalized version of the average change in (d., 8) coordinates of CMG2UCS for the CS within each the angle bin. Alternative versions of the CVG are available in the CVG sheet. Elements of this graphic can be tuned on or off using the means on the Main theel (require control and color only). (Basispoond is for visual orientation only)

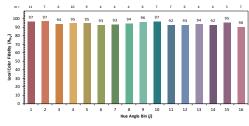


Vector Shifts
Each of the 99 pairs of test and reference coordinates can be
plotted as a vector. This chart does not show the *I* dimension,
which is also included in color fidelity calculations. [Coloring is for
visual orientation only]



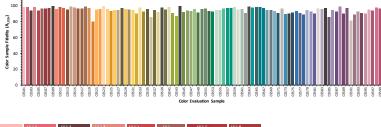
I Hue Shift
has shift a determined from the average charge perpendicular to the
integrable bin for the color evaluation samples within each hus-angle bin.





Local Color Fidelity
Local Color Fidelity is the average difference in CAM02-UCS for the
color evaluation samples in each hus-angle bin. The number of
samples per bin, which can vary based on the CCT used for the
calculation, is shown at the top. [The colors of the bars are for visual
orientation only.]



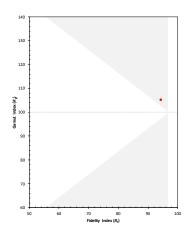


Visualizino (Approximate)
WARRING. The colors in this graphic will not update
unless the option is selected prior to calculation (see Mein
sheed). The colors shown are approximate and depend on
proper monitor calibration. Some colors may be outside
of the gamust of the monotor, and will not be displayed

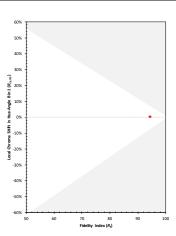




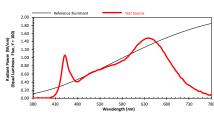
Measure Comparisons

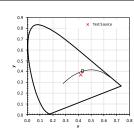


Gamut Index vs. Fidelity Index
The range in possible R_g values increases as R_l decreases. The gray shaded area indicates the approximate region of combinations that are not possible for nominally white light sources.

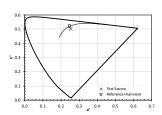


Local Chroma Shift in Hue-Angle Bin 1 vs. Fidelity Index The range in possible $R_{cs,h1}$ values increases as R_i decreases. The gray shaded area indicates the approximate region of combinations that a not possible for nominally white light sources.

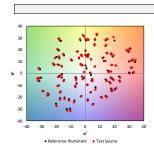




Chromaticity Comparison (CIE 1931)
The CIE 1931 Standard 2° Colorimetric Obsused for calculations.



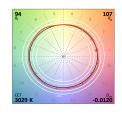
Chromaticity Comparison (CIE 1976)
The CIE 1931 Standard 2" Colorimetric Obs



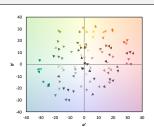
Shift in Hue-Chroma Plane $\begin{tabular}{ll} The (a,b) coordinates of CAM02-UCS are calculated for each of the 99 CSs under the test and reference conditions. R, on based on the average color difference of the 99 CSs in CAM02-UCS (also including the I dimension). Background is for visual orientation only) <math display="block"> \begin{tabular}{ll} The Visual orientation only) \\ The Visual orientation of the Visual orientation only) \\ The Visual orientation of the Visual orientation of the Visual orientation only) \\ The Visual orientation of the Visual orientation orientation of the Visual orientation of the Visual orientation or the Visual or$

20 0 -10 -20 -40 -30 -20 -10 0 10 20 30 40

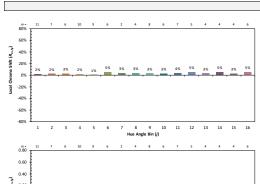
Hue-Angle Bin Average Coordinates
The average (r,b) coordinates of CAM02-UCS are calculated
for the CES within each of 16 hue-angle bins. R_i is based on the
area of the polygons for the test and reference conditions. The
three types of "Local" valutes are based on the difference in
coordinates for each hue-angle bin. [Background is for visual
orientation much.



Color Vector Graphic (CVG) shows a normalized version of the average change in (g', b') coordinates of CAMO2-UCS for the CES within each hux-angle bin. Alternative versions of the VGF are available in the UCG sheet. Elements of this Graphic can be turned on or off using the mean on the Main sheet (requires recalculation). (Background is for visual orientation only)



Vector Shifts
Each of the 99 pairs of test and reference coordinates can be potent as a vector. This chart does not show the /f dimension, which is also included in color fidelity calculations. [Coloring is for visual orientation only]



0.40 0.20 0.00 0.20 0.20 0.20 0.40 -0.02 -0.02 -0.01 -0.60 -0.80 E 7 8 9 10 11 12 13 14 15 16 Hue Angle Bin (j)

Color Rendition by Hue-Angle Bin

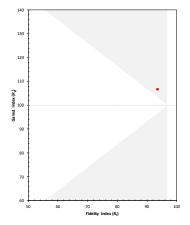


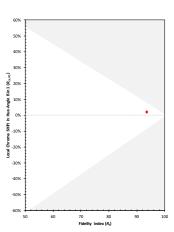
Local Color Fidelity
Local Color Fidelity is the average difference in CAM02-UCS for the
color evaluation samples in each hue-angle bin. The number of
samples per bin, which can vary based on the CCT used for the
calculation, is shown at the top. [The colors of the bars are for visua
orientation only.]

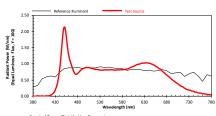


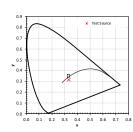
Ref Test



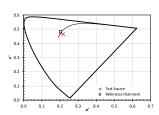




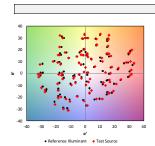




Chromaticity Comparison (CIE 1931)
The CIE 1931 Standard 2° Colorimetric Obsused for calculations.



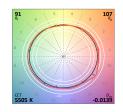
Chromaticity Comparison (CIE 1976)
The CIE 1931 Standard 2" Colorimetric Obs



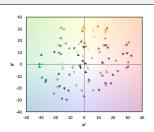
Shift in Hue-Chroma Plane
The (ρ , δ) coordinates of CAM02-UCS are calculated for each of the 90 CSs under the test and reference conditions. R, on based on the average color difference of the 90 CSs in CAM02-UCS (salor including the f dimension). [Background is for visual orientation only]

-10 -20 -30

Hue-Angle Bin Average Coordinates
The average (a', b') coordinates of CAM02-UCS are calculated
for the CES within each of 16 hue-angle bins. R_i is based on the
area of the polygons for the test and reference conditions. The
three types of "tocal" values are based on the difference in
coordinates for each hue-angle bin. [Background is for visual



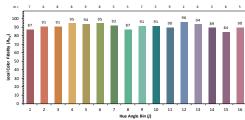
Color Vector Graphic (CVG) shows a normalized version of the average change in (g', b') coordinates of CAMO2-UCS for the CES within each hux-angle bin. Alternative versions of the VGF are available in the UCG sheet. Elements of this Graphic can be turned on or off using the mean on the Main sheet (requires recalculation). (Background is for visual orientation only)



Vector Shifts
Each of the 99 pairs of test and reference coordinates can be potent as a vector. This chart does not show the /f dimension, which is also included in color fidelity calculations. [Coloring is for visual orientation only]

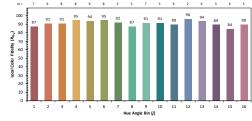
m = 80% 60% 60% 60% 40% 20% -20% -40% -60% 7 8 9 Hue Angle Bin (j) 0.60

0.40 0.20 0.00 0.00 0.00 -0.20 -0.60 -0.80 E 7 8 9 10 11 12 13 14 15 16 Hue Angle Bin (j)

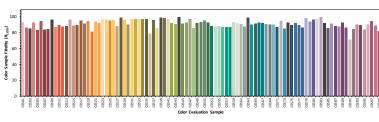


Color Rendition by Hue-Angle Bin



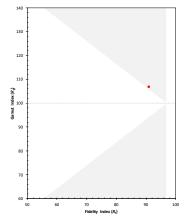


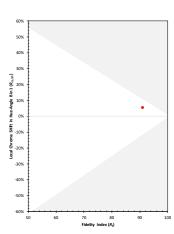
Local Color Fidelity
Local Color Fidelity is the average difference in CAM02-UCS for the
color evaluation samples in each hue-angle bin. The number of
samples per bin, which can vary based on the CCT used for the
calculation, is shown at the top. [The colors of the bars are for visus
orientation only.]

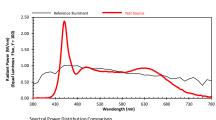


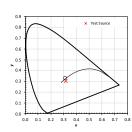


Ref Test

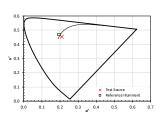




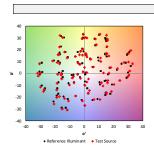




Chromaticity Comparison (CIE 1931)
The CIE 1931 Standard 2° Colorimetric Obsused for calculations.



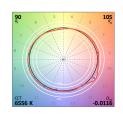
Chromaticity Comparison (CIE 1976)
The CIE 1931 Standard 2" Colorimetric Obs



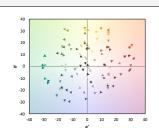
Shift in Hue-Chroma Plane
The [v] x] condinates of CAM02-UCS are calculated for each of the 90 CSs under the text and reference conditions. R_i on based on the average cotor difference of the 90 CSs in CAM02-UCS (also including the 1 dimension). [Background is for visual orientation only]

20 -30 -40 -30 -20 -10 0 10 20 30 40 -0 -20 -10 0 0 10 20 30 40

Hue-Angle Bin Average Coordinates
The average (a', b') coordinates of CAM02-UCS are calculated
for the CES within each of 16 hue-angle bins. R_i is based on the
area of the polygons for the test and reference conditions. The
three types of "tocal" values are based on the difference in
coordinates for each hue-angle bin. [Background is for visual



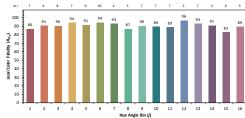
Color Vector Graphic (CVG) shows a normalized version of the average change in (g', b') coordinates of CAMO2-UCS for the CES within each hux-angle bin. Alternative versions of the VGF are available in the UCG sheet. Elements of this Graphic can be turned on or off using the mean on the Main sheet (requires recalculation). (Background is for visual orientation only)



Vector Shifts
Each of the 99 pairs of test and reference coordinates can be potent as a vector. This chart does not show the /f dimension, which is also included in color fidelity calculations. [Coloring is for visual orientation only]

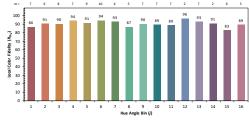
m = 80% 60% 60% 60% 40% 20% -20% -40% -60% 8 9 Hue Angle Bin (j) o.80

0.60 0.40 0.20 0.00 0.00 0.00 -0.20 -0.60 -0.80 E 7 8 9 10 11 12 13 14 15 16 Hue Angle Bin (j)



Color Rendition by Hue-Angle Bin





Local Color Fidelity
Local Color Fidelity is the average difference in CAM02-UCS for the
color evaluation samples in each hue-angle bin. The number of
samples per bin, which can vary based on the CCT used for the
calculation, is shown at the top. [The colors of the bars are for visus
orientation only.]

