

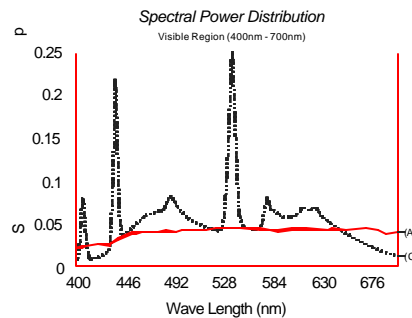
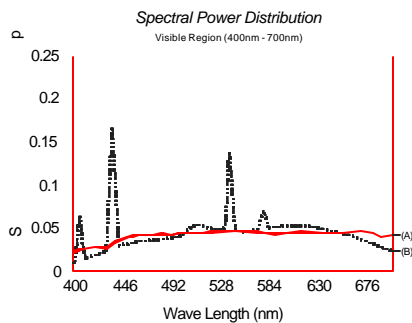
Technical & Applications Information on the -
Products of GTI Graphic Technology, Inc.

SOME FACTS ABOUT COLOR VIEWING

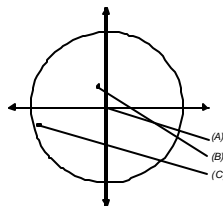
Color is present on a color press sheet or in a color transparency only if that color is present in the light source. For this reason, light sources having different color outputs will render the same colored image differently.

The 5000K standard that has been universally accepted for viewing color images in the graphic arts and photographic industries is only as good as the quality of the 5000K light.

The following curves illustrate how the color energy output from two manufacturers' products differ from the reference D50 curve. Both sources are advertised as standard 5000K sources. The curve from manufacturer (C) shows light quality having much greater variation than the reference 5000K (D50) source (A), while the curve from manufacturer (B) is much closer. Interestingly enough, the CRI (color rendering index) of manufacturer (C) measures higher than that of manufacturer (B). This is a quick illustration why the CRI of a light source can be misleading.



The circle below is an enlargement of a section of the CIE 1976 UCS chromaticity diagram with the center representing the D50 aim reference. The further away from the center, the greater the color difference from the standard. The circle represents the outside allowable tolerances. Light quality from manufacturer (C) with the high CRI rating is barely within tolerance (being both greener and bluer than the reference), while manufacturer (B) is a much tighter tolerance source and is, therefore, a technically better product for your color viewing needs.



Individuals needing to visually communicate with each other must view under the same light quality and surround conditions. Tight tolerance viewing products represents the best solution to this need. The benefit of everyone viewing with 5000K standard light energy is color images that everyone will see rendered the same. This means that color being viewed in Barcelona will be seen the same in New York City or Chicago. Viewing products having very tight tolerances with the D50 standard, such as Graphiclite® by GTI Graphic Technology, Inc., will provide better and more consistent results than light sources that are barely within tolerance (even with a high CRI). Many light sources claimed to be 5000K fall outside the tolerances of the standard and, therefore, are unsuitable as a standard viewing system.