

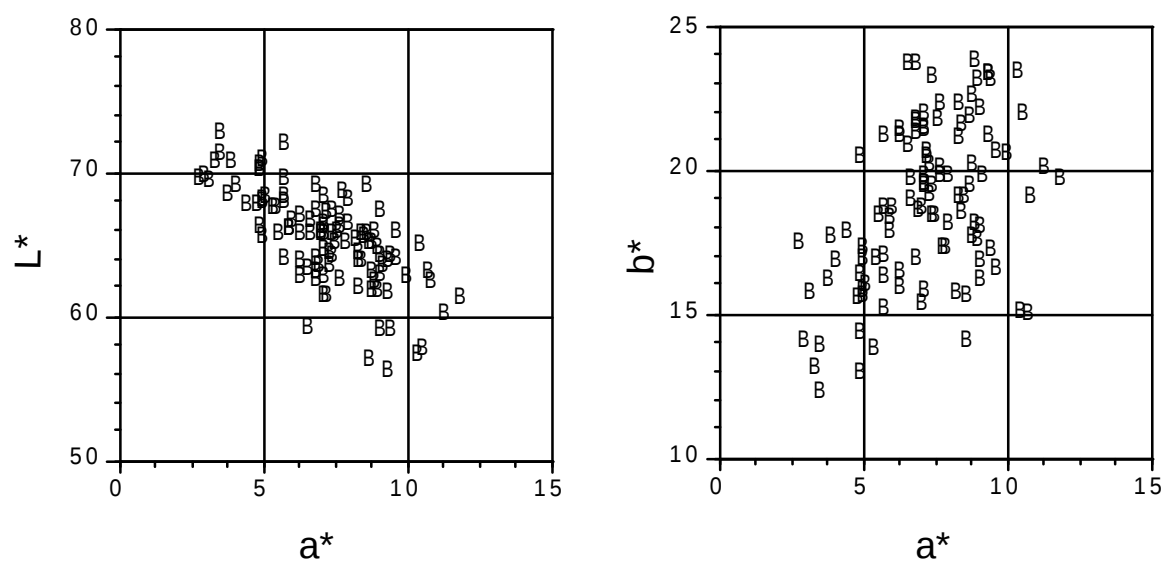


Figure 1. Distribution of skin colors used in principal component analysis.

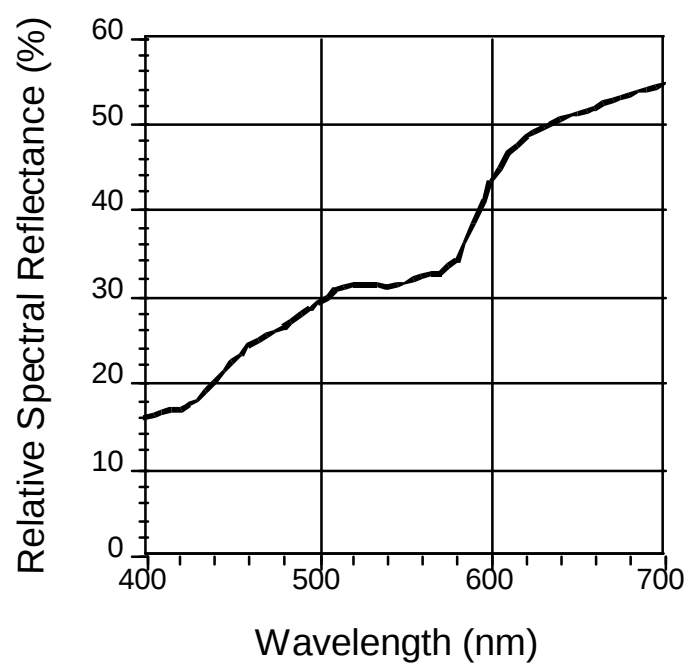


Figure 2. Averaged Spectral Reflectance of Human Skin.

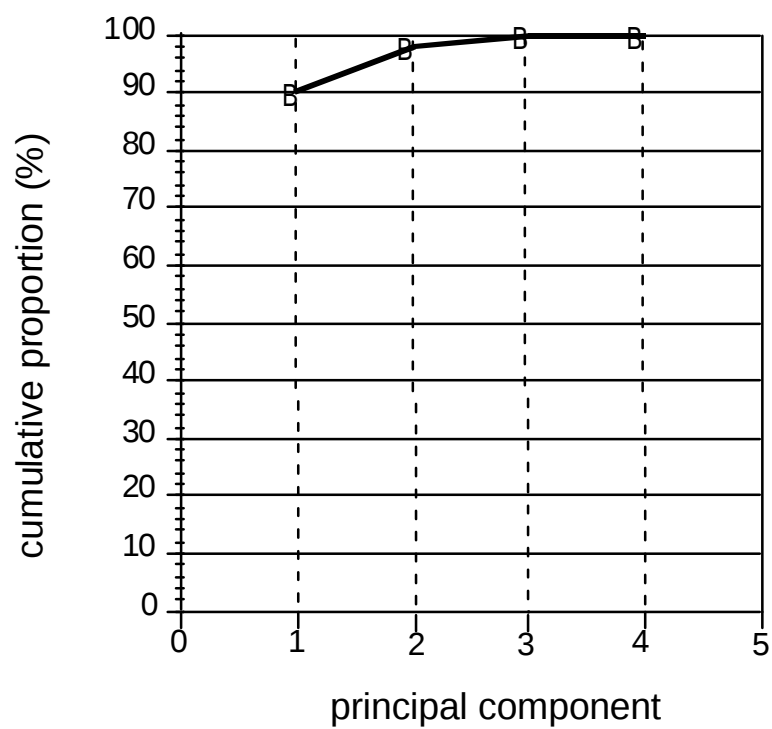


Figure 3. Cumulative contribution ratio of principal components of the spectral reflectance of skin.

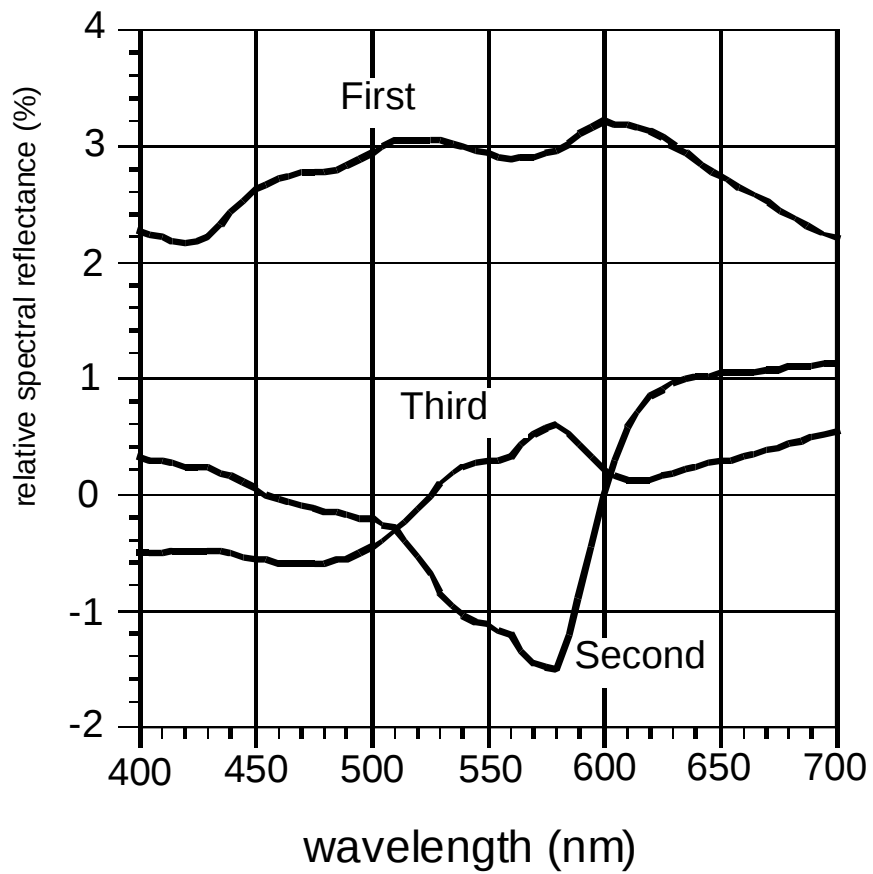


Figure 4. The first, second and third principal components of the spectral reflectance of skin.

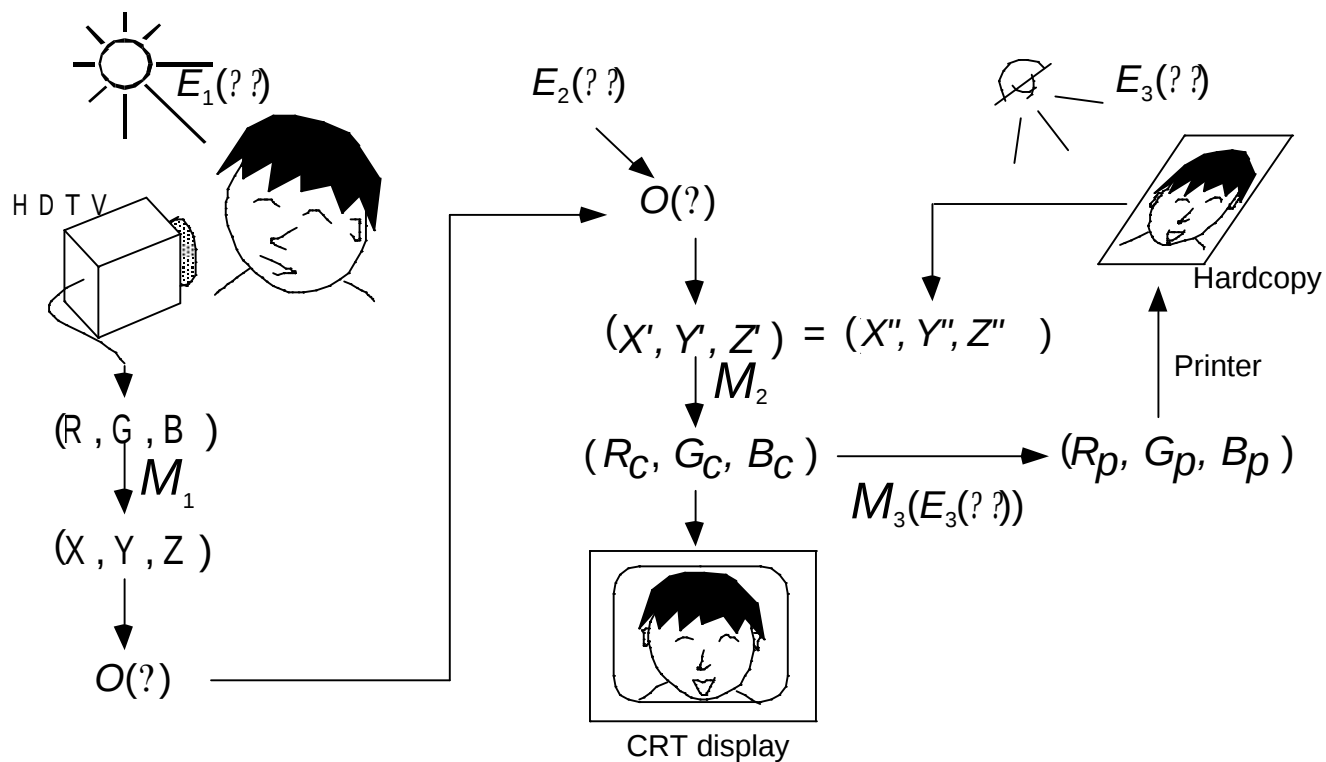


Figure 5. Diagram of the proposed color reproduction system for CRT and hardcopy to predict skin color image taken under various illuminants

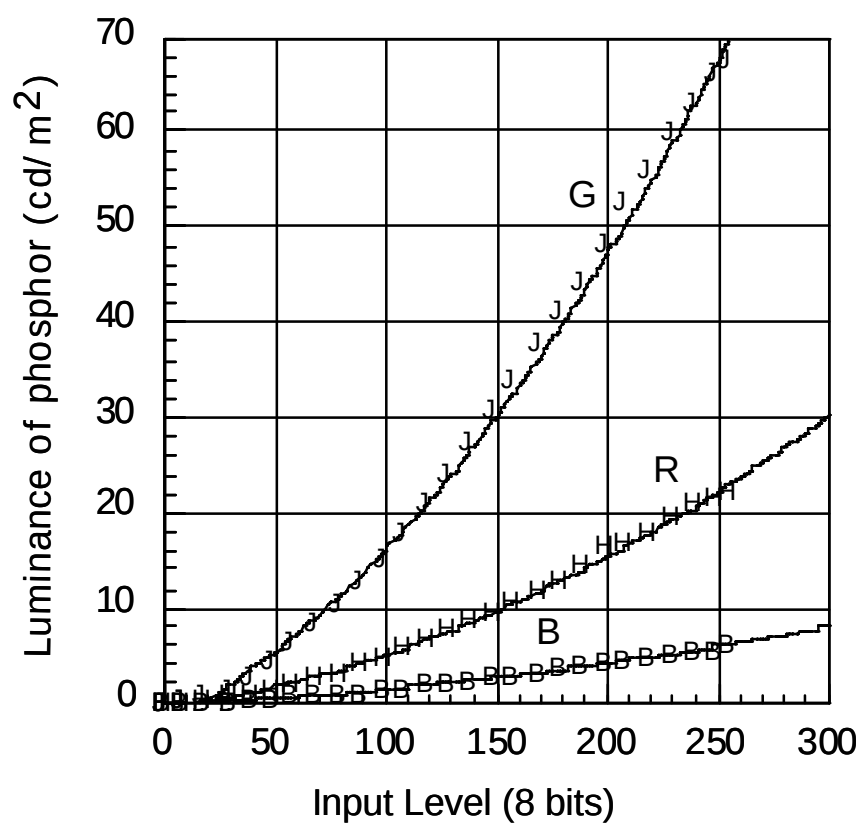
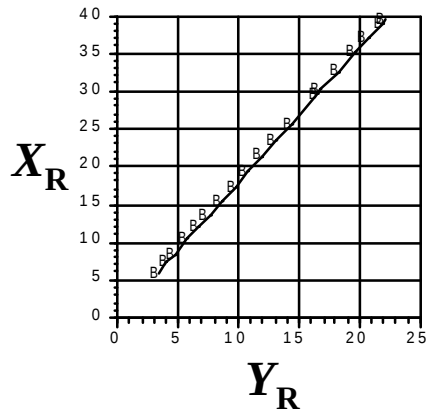
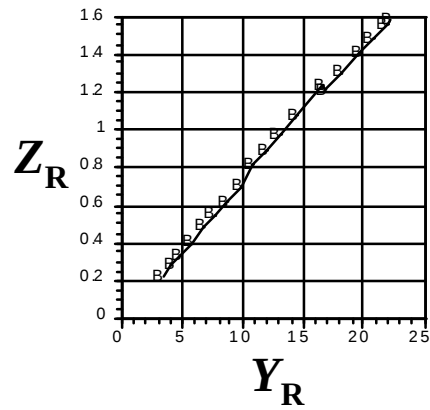


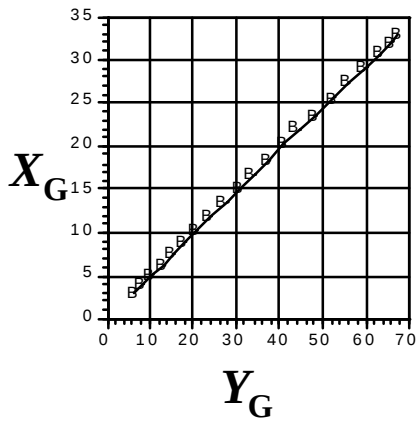
Figure 6. The relationship between input levels of CRT display and luminance of phosphor.



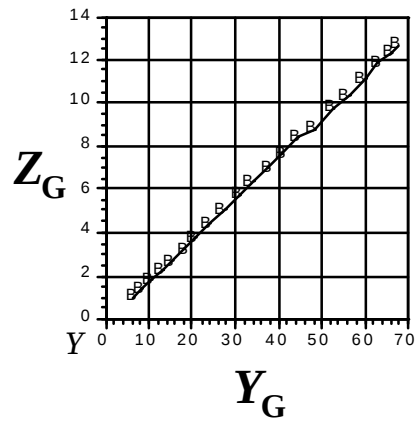
a) R channel (X-Y)



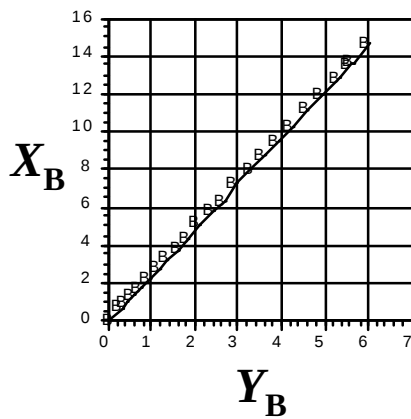
b) R channel (Z-Y)



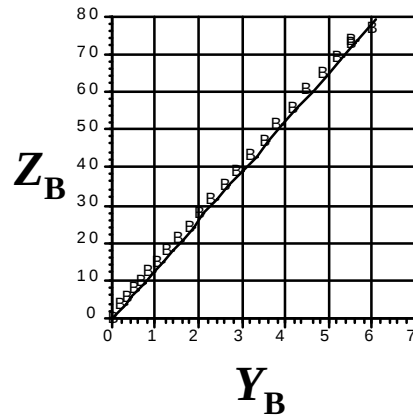
c) G channel (X-Y)



d) G channel (Z-Y)



e) B channel (X-Y)



f) B channel (Z-Y)

Figure 7. X-Y and Z-Y relationship for each channel of the CRT display.

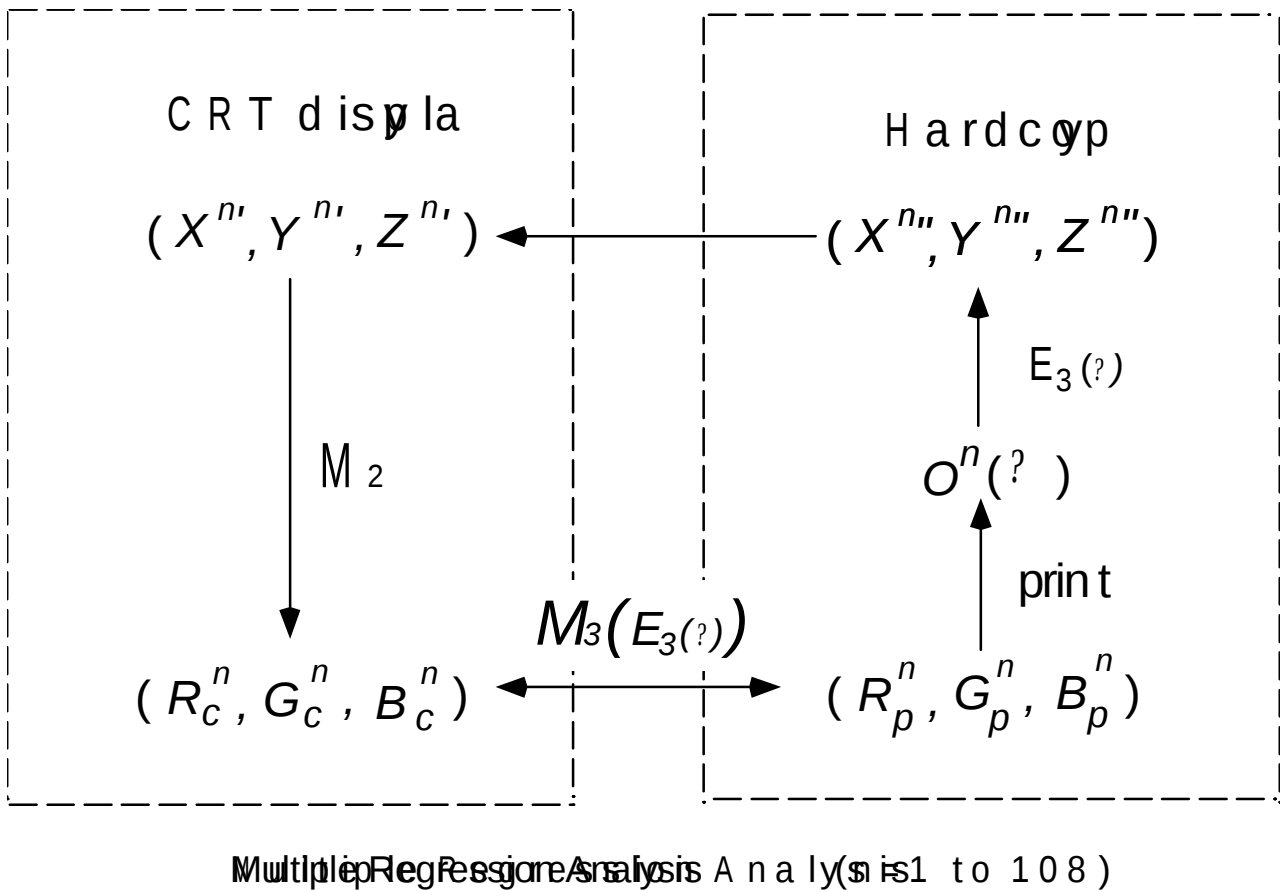


Figure 8. Diagram of the multiple regression analysis to reproduce skin color on hardcopy

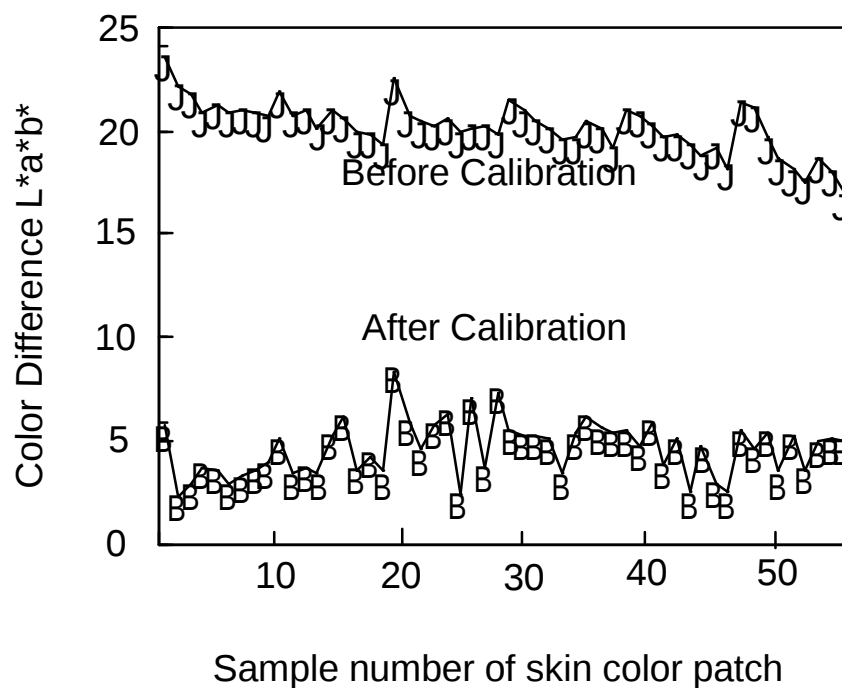


Figure 9. Color differences in LAB color space between skin color patches displayed on a monitor and the corresponding hardcopies viewed in an illumination booth, before and after color transformation.

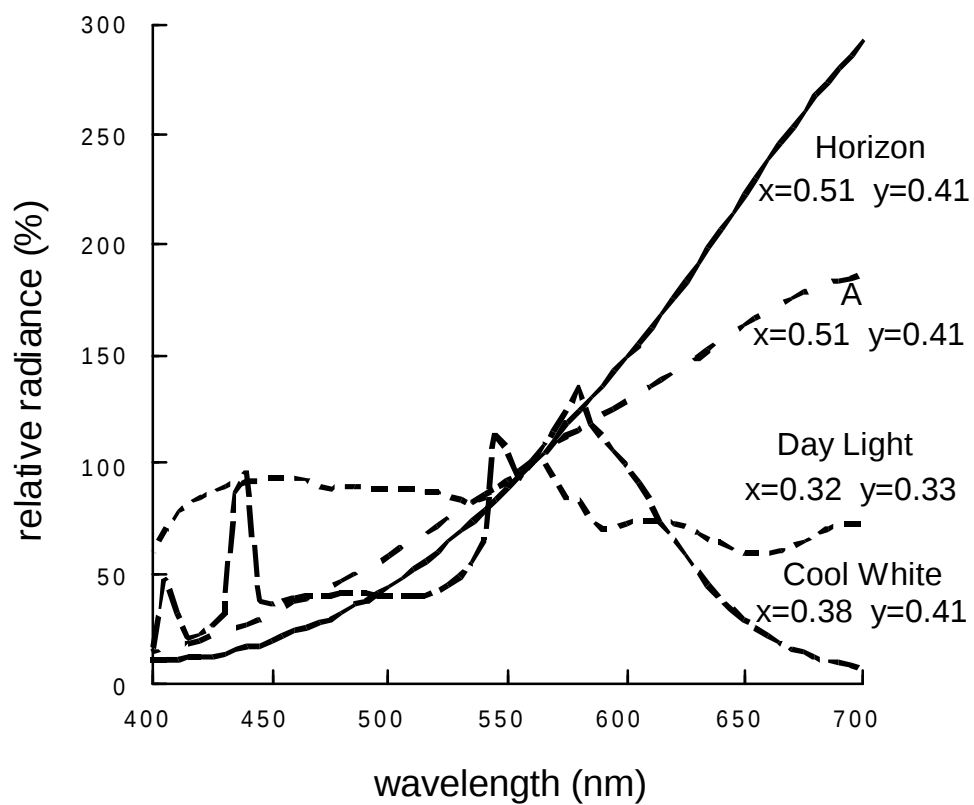


Figure 10. Measured relative spectral radiance of the illumination lamps in the experimental booth.



(a) "Horizon"



(b) Illuminant "A"



(c) "Cool White"



(d) "Day Light"

Figure 11. Portrait reproduced on CRT display under four different illuminants.



(a) "Horizon"



(b) Illuminant "A"



(c) "Cool White"



(d) "Day Light"

Figure 12. Predicted Portrait hardcopy for four different illuminants.