

the same ad in the viewing booth I could 'see into' the shadows with no problem at all."

We have all seen these types of images. Be alert for possible examples and try it yourself.

Yes, we can take these images into a hallway, office, or some other area of lower level illumination to check on their appearance in addition to their match to the original in the viewing booth. But, such casual illumination is not controlled in either level or color characteristics. When we use such casual illumination with proofs, particularly some of the newer materials, we are going to be forced to adapt to color shifts as well. It is much better to define a lower level viewing condition so those things that match under the comparison standard (2000 lux) will also match under the lower level. In that way, tone reproduction judgments, can be made much more realistic and more practical at the same time. Most importantly, such judgment conditions will be reproducible between sites—something that we do not have now.

The standard also provides specifications for both projection and direct viewing of transparencies. For direct viewing, it specifies that the luminance at the center of the illuminated surface of a transparency illuminator is to be $1270 \text{ cd/m}^2 \pm 320 \text{ cd/m}^2$. It goes on to specify that the surround needs to be at least 50 mm wide on all sides, appear neutral compared to the source, and have a luminance that is no more than 10% of that of the surface of the image plane of the illuminator. However, a transparency mounted with an opaque border may be viewed without removing the mount.

Viewing Environment

Because ambient conditions play such an important role in viewing, the new standard has included the following cautions:

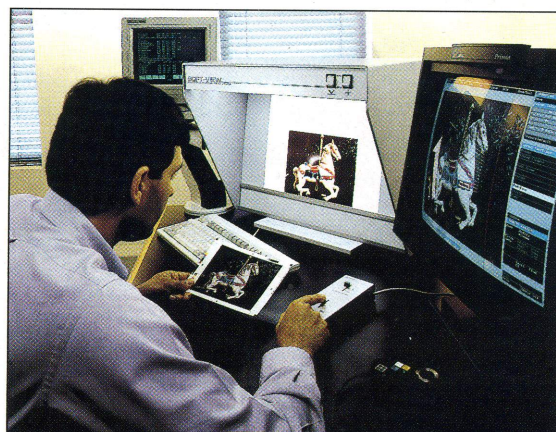
The visual environment shall be designed to minimize interference with the viewing

task. It is important to eliminate extraneous conditions that affect the appraisal of prints or transparencies and an observer should avoid making judgements immediately after entering a new illumination environment because it takes a few minutes to visually adapt to that new environment.

Extraneous light, whether from sources or reflected by objects and surfaces, shall be baffled from view and from illuminating the print, transparency, or other image being evaluated. In addition, no strongly coloured surfaces (including clothing) should be present in the immediate environment.

NOTE: *The presence of strongly coloured objects within the viewing environment is a potential problem because they may cause reflections, which cannot easily be baffled. Walls, ceiling, floors, and other surfaces which are in the field of view shall be baffled or coloured a neutral matte grey, with a reflectance of 60% or less.*

The new standard also specifies that the surround and backing need to be neutral and matte and extend beyond the materials being viewed on all sides by at least one-third of their dimension. The surround must have a reflectance of less than 60% and preferably less than 20%. It does note that where objects are being compared, they may be positioned edge to edge.



Where viewing booths are being used: (top) with hard copy and a monitor; (middle) a separate viewing station; (bottom) in the pressroom.