

Reflection Behavior of the Screen

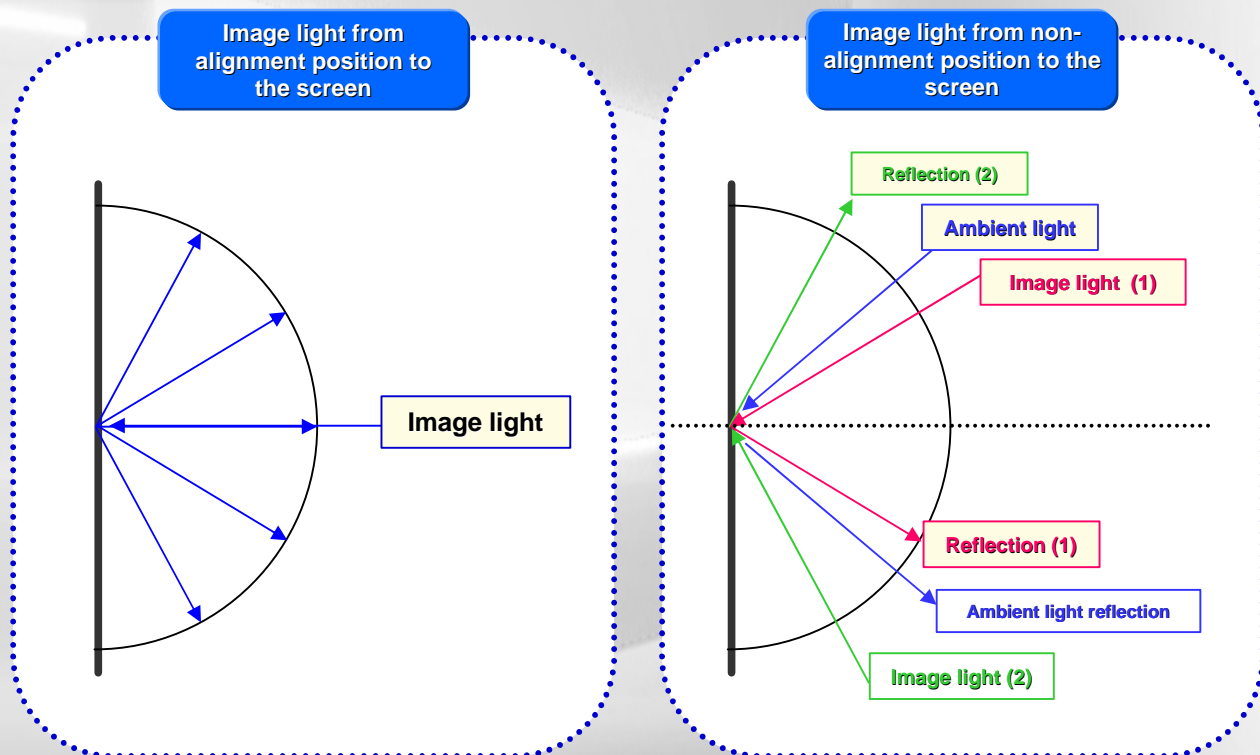
The light reflection behavior on the BOS-F5711W is a Regular Reflection (also called mirror, angular, or specular reflection) in which the projected light reflects off the screen at the same optical angle as it hit the surface (angle of incidence equals the angle of reflection).

It is very important to consider the light reflection behavior of the screen when designing the theater room: positioning the screen and projector for the optimal viewing position.

Note the following points for ideal installation.

1. Place the screen where the center axis of image light reflects to the viewing position.
2. Avoid placing the screen where the ambient light reflects to the viewing position as much as possible.

The reflection behavior on the screen surface is the same between image light from the projector and ambient light.



Ambient Light Reflection Behavior on the Screen

The reflection behavior on the BOS-F5711W is a regular reflection (mirror / angular / specular).
The projected light reflects off the screen at the same optical angle as it hit the surface.

(Example 1)

When the position of the window is near the screen as described in figure 1, the light from the window hits on the screen and reflects to the other side in the same optical angle as it comes in.

Use of curtain/drape on the window is recommended when the ambient light reflection is inside the visible range of the viewer.



Window

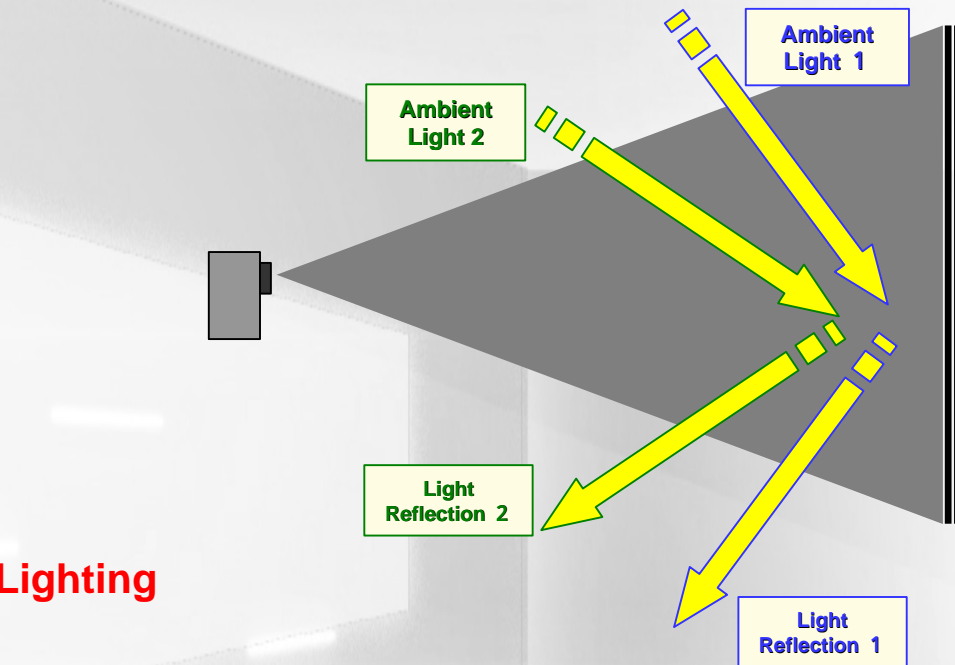
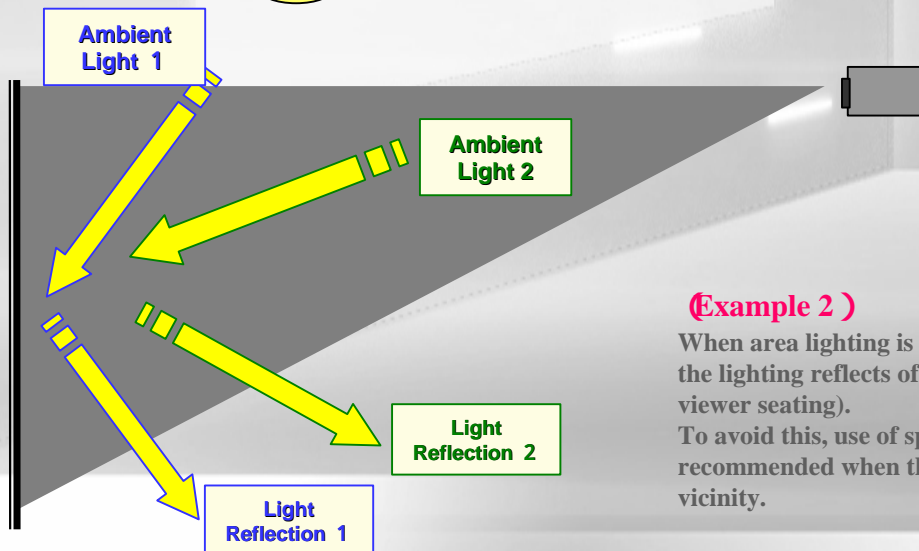


Fig. 1

Fig. 2



(Example 2)

When area lighting is ceiling-mounted as described in figure 2, the lighting reflects off the screen to the floor (and possibly to viewer seating).

To avoid this, use of spotlighting (directional lighting) is recommended when the area lighting is installed in the screen vicinity.

Installation

Avoid allowing strong ambient light (such as direct sunlight) from projector position to the screen.

To minimize diffused reflection on the matte-surface of the screen, avoid lighting that directly hits the screen surface.

Diffused reflection on the matte-surface causes the image (picture) on the screen to appear washed out and reduces image (picture) contrast.

Lens characteristics of the projector, i.e. short or long throwing distance, determine the relationship between desired picture size and the effective position/distance of the projector.

Lens characteristics of the projector should be considered when designing the theater room.

