

Illumination Quality (IQ) Test:

Run through this quick 10 point check every time you specify or install a CCTV system:

1) Is White-Light or Infra-Red illumination required?

	Advantages	Disadvantages	Camera Type Suitable
White-Light	Visible deterrent	Light pollution	Colour
	Full colour rendition	Reduced distances	Day/Night
	Easy set up		Monochrome
Infra-Red	Covert	Limited deterrent	Day/Night
	Longer distances	More difficult to set up	Monochrome
	No light pollution		

2) Ensure the horizontal angle of illumination cover the full field of view? To provide high quality images it is essential. Simply match the illumination to the field of view of the lens using a lens calculator.

TECHNICAL TIP

If the exact field of view is unknown Adaptive Illumination products can be used to provide vari-focal lighting.

3) What is the maximum distance to illuminate? Specify the illuminator model based on the illumination angle and distance required.

4) If White-Light is needed, ensure that colour corrected White-Light is used. Check that red, green and blue colours can all be seen accurately during night-time operation.

5) If Infra-Red is needed specify the wavelength carefully. Lower wavelengths such as 850nm provide greater distances. Longer wavelengths such as 950nm provide covert illumination but achievable distances are reduced and there is an increased risk of focus shift between day and night.

6) Consider the maintenance and running costs of the illumination system. Ensure that long life, low consumption lighting is used.

7) Consider the positioning of the lighting. It should be fitted so that no camera is looking directly at a light source. The best solution is mounting the illumination at the camera position. Also consider any line of sight obstacles. As light travels in straight lines any obstacles such as overgrown foliage will create shadows.

8) Consider the camera and lens. A high performance camera and lens will provide higher quality images with CCTV lighting. Lower performance camera and lens combinations will require additional lighting to provide similar results.

9) If the illumination is being used with a fully functional dome camera then a choice must be made between wide angle illumination, local area illumination or target area illumination. Wide angle illumination is preferential as it can provide 360° lighting for the dome.

10) Is light pollution a critical factor? Using White-Light ensure that the illuminators are pointing down to minimise light pollution. If no light pollution is permissible then Infra-Red lighting must be used.

TECHNICAL TIP

Even illumination – every CCTV lighting system should provide even illumination. This is the responsibility of the manufacturer and Raytec design every illuminator to have a highly even beam distribution. This aids the camera system in achieving higher quality images throughout the scene.