GUIDELINES TO CONDUCTING A SITE SURVEY

The following guidelines are designed to help maximise the results of our lighting design and ensure that the final solution is accurate to the project specification and within budget. It is possible to remotely design the lighting for a particular site, however without sufficient information, the lighting design results may not accurately portray the best solution for the specific site requirements.

Background Information/Questions

- What is the prime use of the site?
- Is there public access?
- Existing Lighting – can we make use of the existing positions?
- Can equipment be mounted on existing buildings?
- New site?
  - Any underground obstructions?
  - Any over ground restrictions?
  - Is there a restriction on mounting height?
  - What is the topography of the site?
  - Are there restrictions relating to existing plant?
  - Are there any landscaping issues?
  - Are there any adjacent roads or buildings that must NOT have overspill of light?

1. Purpose

Defining the purpose is critical to ensuring that the client is satisfied with the final lighting scheme. The choice of product is influenced heavily by this requirement.

- What is the purpose of the lighting?
  - Security
  - Amenity
  - Personal
  - Multipurpose

- What is the final application?
  - CCTV illumination
  - Car Park
  - Perimeter
  - Prison
  - Critical Infrastructure
  - Footpath

Note: Raytec have significant experience in CCTV lighting and have a range of dedicated tools available to help you match your light to the scene requirements.

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2. Design Specification

The lighting design may be influenced by a specification document detailing your project requirements. Submitting this information to us prior to the lighting design stage will ensure that we recommend the correct solution for your site needs. However if a specification document does not exist it is good practice to determine some key requirements in relation to the purpose of the scheme.

- Do you have minimum lighting requirements?
  - Average Illuminance.
  - Minimum Illuminance.
  - Uniformity (Min/Avg).
  - Diversity (Min/Max).
  - Disability Glare.
  - Horizontal, Vertical or Specified angle of Illuminance.
- Is light pollution an issue? Do we need to eliminate or reduce light to any area in the scene such as residential areas etc? We are able to provide 'Obtrusive Light' calculations for all of the designs produced by Raytec.
- How will the illumination be switched on?
- Is colour rendition index (CRI) a critical factor?
- How will we measure the light on scene? (See separate guidelines)

Note: if cameras are involved, consider the positioning of the camera in relation to lighting to avoid them looking directly into the light or in the case of dome cameras, avoid positioning the light to close to the dome enclosure (see recommended setup).

3. Site Specific / Plan Details

Our lighting design packages can receive site drawings in several formats including CAD dxf, pdf etc. If the suitable format is received we can layer our lighting design on to the site plan to give a visual representation of the final result – however some site plans do not always include all the information necessary to accurately reflect the scene.

- Do you have building(s)/column(s) heights?
- Does the site plan accurately reflect the site?
- Does the plan include detail of topography?

  Note: Mounds, hillocks, trees etc can significantly impact the illumination on scene or the light reflected back to the camera.
- Are any obstacles on the site that are not shown on the plans?
- Does the site plan include a fence line or wall?

  Note: It is often assumed that a mesh fence allows light to pass through with only a small loss – in fact, dependent upon angle, fencing in some installations can block up to 90% of the light. This can be critical if the speciation calls for light measurement in close proximity to the fence line.

Existing Lighting:

- What is the existing lighting on scene?
- Is the existing lighting to be replaced?
- If not what impact will the existing lighting have on the scene?

4. Electrical and Environmental Considerations

Switching and Control of the RAYLUX White-Light illuminators:

- How are the units intended to be switched on?
- Is a central photocell required or are the units intended to be switched on independently via an integrated photocell?
- Do all of the units require immediate switch on?

  Note: Consider the impact on the electrical design – switching via the telemetry input is advised.
- Is the environment corrosive or prone to unusual environmental factors?

  Note: Hazardous area and marine lighting options are available.