

Critical Light

INTRODUCTION

While critical light will not adversely affect the performance of the wall system, it can affect the appearance of any cladding system in different times of day or weather conditions.

HOW CRITICAL LIGHT AFFECTS APPEARANCE

The phenomenon of critical light may temporarily affect the appearance of any cladding system and occurs when light strikes a wall surface at an angle of approximately 15 degrees or less. At this angle, minor planar irregularities of approximately 1/32" or greater can cast a shadow. For Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage, this can affect the finished appearance on large walls that are generally flat and lack shapes or other architectural lines to help break up the wall area. Any elevation may be affected at a certain time of day for a short period of time, then disappear as the light source is removed or, in the case of the sun, the angle changes. The same effect can occur from an acutely-angled artificial light – up lighting or downlighting the wall. **Figure 1** provides an illustration of this phenomenon.

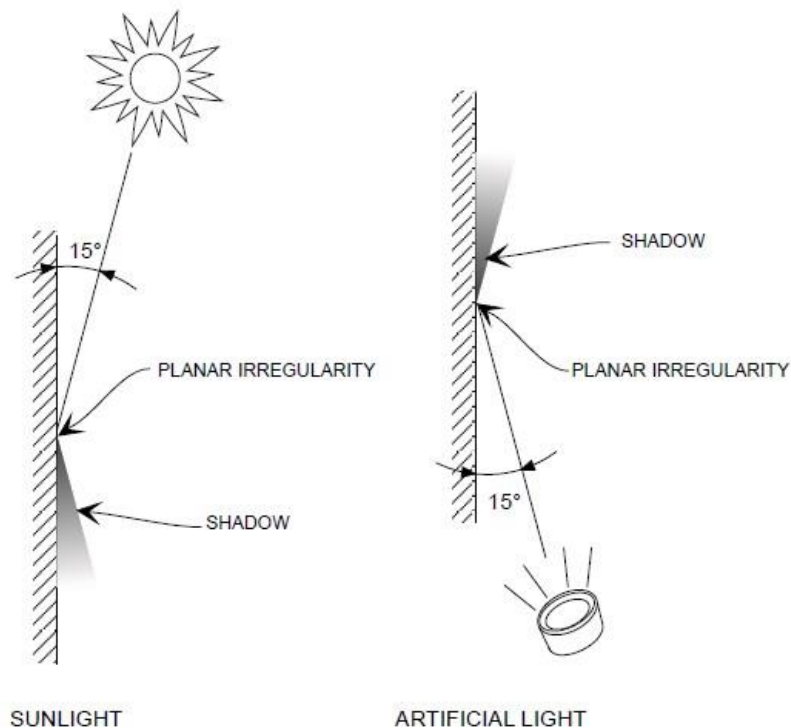


Figure 1: Illustration of light strikes on cladding systems

THE RESOLUTION

Review project plans and determine areas which may require additional attention such as signage lighting, up lighting or other artificial lighting which may increase the potential effects of critical light. **Figure 2** provides examples of natural light diffusion and up lighting.

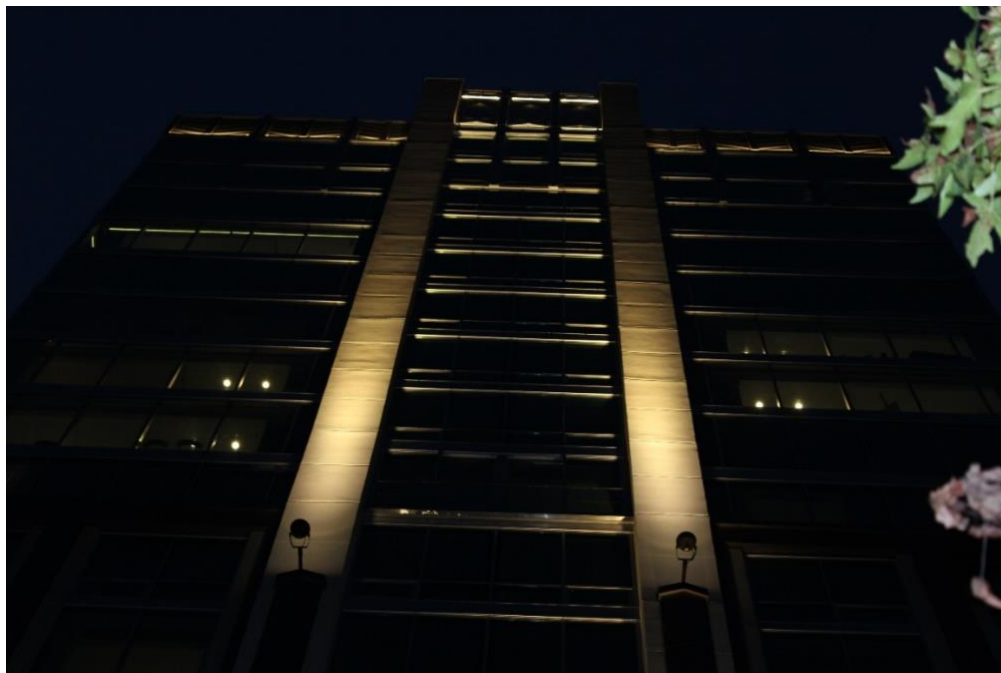


Figure 2: Example of building with natural diffused light (top photo) and effect of up lighting (bottom photo).

SUMMARY

Because critical light may temporarily affect the appearance of any cladding system and occurs when light strikes a wall surface at an angle of approximately 15 degrees or less, it is important to review project plans and determine areas which may require additional attention such as signage lighting, up lighting or other artificial lighting that may have an effect on critical light. It is important to understand that critical light will not adversely affect the performance of the wall system.

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