## The Three Elements of Light

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General or Ambient lighting</strong></td>
<td>Provides an area with overall illumination. Also known as ambient lighting, general lighting radiates a comfortable level of brightness, enabling one to see and walk about safely.</td>
</tr>
<tr>
<td><strong>Task Lighting or Lighting at the Work plane</strong></td>
<td>Helps you perform specific tasks such as reading, sewing, cooking, homework, hobbies, games, or balancing your checkbook.</td>
</tr>
<tr>
<td><strong>Light or Highlighting</strong></td>
<td>Adds drama to a room by creating visual interest. As part of a decorating scheme, it is used to spotlight paintings, houseplants, sculpture, and other prized possessions, or to highlight the texture of a wall, drapery or outdoor landscaping.</td>
</tr>
</tbody>
</table>

---

### Richard Kelly

**Focal Glow or Task light is...**

- “the campfire of all time, the glowing embers around which stories are told”
- “the light burning at the window or welcoming gleam of the open door”
- “directive, creates a brighter center: tells us what to look at, organizes, marks the important element”
Richard Kelly

General or Ambient light is…
“a snowy morning in open country”
“twilight haze in a mountain top or cloudy day on the ocean”
“the light in a white tent at noon”

Richard Kelly

Sparkle or Glitter is…
“a play of brilliants”
“the sensation of a cache of diamonds in an opened cave”
“a ballroom of crystal chandeliers”
Subjective Impressions

- Professor John Flynn’s studies in the 1970’s established fundamental research about how the distribution of light and resulting patterns of light effect our subjective impressions.

- In particular patterns of light on vertical surfaces, because they are more noticeable, strongly influence our impressions of:
  
  ➢ Spaciousness / Confinement
  ➢ Visual Clarity / Haziness
  ➢ Relaxation / Activation
  ➢ Private/ Public

Subjective Impressions

Reinforced by

- Uniform peripheral lighting, especially on walls
- Brightness is reinforcing, but not decisive

SPACIOUSNESS
Lighting a Vertical Surface

• Lighting vertical surfaces, such as walls, emphasizes the spatial perception of a room


• Types of Lighting Solutions:
  – Wall Wash Lighting
  – Wall Grazing Lighting
  – Art Accent Lighting

Lighting a Vertical Surface: Wall Washing

Lighting a Vertical Surface

Mounting Choices:

- Surface to the ceiling
- Surface to Track
- Recessed
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Washing

Layout Choices:

- Individuals
- Continuous

Wall Washing: Uniform Distribution of Light on a Vertical Surface
Lighting a Vertical Surface: Wall Washers

1. Rule of Thumb: Mounting Distance = Spacing Distance
2. Rule of Thumb: Mounting Distance = 1/3 the Ceiling height
   1. Mount the wall wash fixtures 2 to 3 feet from the wall on ceilings up to 9 feet high.
   2. Mount the wall wash fixtures 3 to 4 feet from the wall on ceilings up to 9 feet and 11 feet high.
3. Follow Manufactures Recommendations!
4. Optional corner and double wall (corridor) housing available
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Washers

Lighting a Vertical Surface: Wall Washing
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Washing

Lighting a Vertical Surface: Wall Washing
Lighting a Vertical Surface

Wall Grazing: High Gradient of Light on a Vertical Surface

Lighting a Vertical Surface: Wall Grazing
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

Lighting a Vertical Surface: Wall Grazing
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

[Images of wall lighting examples]
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

WHAT IS WALL GRAZING

Wall grazing is the technique of pinpointing an area of interest, as it is lit from an angle below the full height of a wall, to focus like-minded visual attention.

WHAT IS NOT WALL GRAZING

Wall grazing involves light from the ground to graze with light hitting the top of the wall to contrast light with dark, but if you are limited to using wallwashers, become aware of light in such case. Glimpses of posters are desirable, not fully illuminated. For effect, use a wall illuminated wall but use white surfaces or downlighter rather than covered.

[Images of lighting examples]
What Makes A Good Wall for Grazing

**TEXTURED**
Any wall surface with an interesting texture is a good candidate for wall grazing, including:
- stone, like marble, granite or travertine
- wood, especially with expressed grazing
- fabric, either stretched or draped
- tile, particularly mosaics
- glass with an accent pattern
- plaster or stucco, but only when well executed

**SMOOTH**
Smooth wall surfaces, like polished stone, are often best illuminated by wall grazing because the technique minimizes annoying lamp reflections. In comparison, lighting a slick wall with ceiling-mounted wallwash fixtures results in a pattern of bright reflections visible from all angles below.

**WHAT MAKES A BAD WALL**
Any wall surface with an unpleasant texture is a bad candidate for wall grazing. A common example is a badly rippled or spotted sheet rock wall, all of the walls' imperfections will be highlighted.

Any wall to which things will be mounted should be considered carefully before grazing. Two of the more annoying effects possible are pronounced shadows, as those from framed paintings and blinding reflections on different from a charming finished building directory.

---

Lighting a Vertical Surface: Wall Grazing

**Fixtures close to ceiling**

The effect should be gradient from Top to Bottom

**Section**

**Elevation**

---
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

Wall Section - Option B

Lighting a Vertical Surface: Wall Grazing
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

Lighting a Vertical Surface: Wall Grazing
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

Lighting a Vertical Surface: Wall Grazing
Lighting a Vertical Surface

Lighting a Vertical Surface: Wall Grazing

Lighting a Vertical Surface: Wall Grazing
Lighting a Vertical Surface

Vertical Surface - Wall Gazing

[Images of vertical surfaces and wall gazing]
Lighting a Vertical Surface
Lighting a Vertical Surface

**Accent Lighting**

Generally Rule of Thumb

- fixtures should be aimed at a 30 degree angle from the vertical to prevent light from shining in anyone's eyes and to avoid disturbing reflections on the surface of the object.
Accent Lighting

Generally Rule of Thumb
- Usually, one fixture is required for each object being accented, but two can provide soften shadows and provide a wider wash of light.

MR16 Bare Lamp Data / Guide

Accent Lighting Performance Data

| MR16 Low Voltage Halogen Bi-Pin Lamps |
|---|---|---|---|---|---|---|---|---|---|
| 650 | 3000 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | 0.1 | 0.0 |
| 950 | 3000 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | 0.1 | 0.0 |
| 1250 | 3000 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | 0.1 | 0.0 |
| 1600 | 4000 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | 0.1 | 0.0 |
Lighting a Vertical Surface

Accent Lighting

![Accent Lighting Example 1](image1)

![Accent Lighting Example 2](image2)

Accent Lighting

![Accent Lighting Example 3](image3)

![Accent Lighting Example 4](image4)
Lighting a Vertical Surface

Accent Lighting – Framing Projector

Light accentuates and brightens the ceiling while making the room appear larger. Light washes the wall to brighten the space and create a feeling of definition.