Navigating the Shifting Landscape of Lighting Codes and How LEDs Can Help

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LZ-0

Lighting Zone 0 should be applied to areas in which permanent lighting is not expected – *No Ambient Light*

Recommended default zone for wilderness areas, parks and preserves, and undeveloped rural areas.

Includes protected wildlife areas and corridors.
LZ-1

Lighting Zone 1 pertains to areas that desire low ambient lighting levels

Recommended default zone for rural and low density residential areas. May also include the developed areas in parks and other natural settings.

Includes residential single or two family; agricultural zone districts; rural residential zone districts; business parks; open space include preserves in developed areas.

LZ-2

Lighting Zone 2 pertains to areas with moderate ambient lighting levels

Recommended default zone for light commercial business districts and high density or mixed use residential districts.

Includes neighborhood business districts; churches, hospitals, schools and neighborhood recreation facilities; and light industrial zoning with modest nighttime uses or lighting requirements.
LZ-3

Lighting Zone 3 pertains to areas with moderately high lighting levels.

Recommended default zone for large cities’ business districts

Includes town centers, gas stations, nighttime active exterior retail, business zone districts; commercial mixed use; and heavy industrial and/or manufacturing zone districts.

LZ-4

Lighting Zone 4 pertains to areas of high ambient lighting levels and limited to specific intense night uses within large metropolitan areas

Not a default zone.

Includes high intensity business or industrial zone districts.
Finding the Allowances on COMCheck
Finding the Allowances on COMCheck

<table>
<thead>
<tr>
<th>Component</th>
<th>Fixture ID</th>
<th>Fixture Description</th>
<th>Lamp Description/ Wattage Per Lamp</th>
<th>Ballast</th>
<th>Lamps Per Fixture</th>
<th>Number of Fixtures</th>
<th>Picture Wattage</th>
<th>Track Lighting Wattage</th>
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</thead>
<tbody>
<tr>
<td>Building</td>
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<td>1 - Retail Sales Area (5000 sq.ft)</td>
<td>Allowed wattage = 8400</td>
<td>Proposed wattage = 0</td>
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Finding the Allowances on COMCheck
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<thead>
<tr>
<th>Component</th>
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<th>Fixture Description</th>
<th>Lamp Description/Wattage Per Lamp</th>
<th>Bulb</th>
<th>Lamps Per Fixture</th>
<th>Number of Fixtures</th>
<th>Picture Wattage</th>
<th>Track Lighting Wattage</th>
<th>Exception Allowance</th>
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Add/move fixtures to an appropriate building use category.
Finding the **RCR Adder on COMCheck**

[Image of the COMCheck software interface with arrows pointing to the RCR Adder feature and a diagram explaining the calculation of room cavity details.]
# Finding the RCR Adder on COMCheck

## Table Example

<table>
<thead>
<tr>
<th>Component</th>
<th>Picture ID</th>
<th>Picture Description</th>
<th>Lamp Description</th>
<th>Wattage Per Lamp</th>
<th>Ballast</th>
<th>Lamps Per Fixture</th>
<th>Number of Fixtures</th>
<th>Fixture Wattage</th>
<th>Track Lighting Wattage</th>
<th>Expansion Allowance</th>
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</tr>
<tr>
<td>1</td>
<td>Retail Sales Area (3000 sq.ft)</td>
<td>Allowed wattage = 10000</td>
<td>Proposed wattage = 9240</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>Compact Fluorescent</td>
<td>Allowed wattage = 10000</td>
<td>Proposed wattage = 9240</td>
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**Interior Lighting Passes Design 8% better than Code**

Add missing fixtures to an appropriate building use category.
Finding the **Retail, Decorative and Control Incentive Allowances** on COMCheck
Finding the **Control Incentive Allowances** on COMCheck
Finding the **Retail, Decorative and Control Incentive Allowances on COMCheck**

<table>
<thead>
<tr>
<th>Building</th>
<th>Component</th>
<th>Fixture ID</th>
<th>Fixture Description</th>
<th>Lamp Description/Wattage Per Lamp</th>
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<th>Lamps Per Fixture</th>
<th>Number of Fixtures</th>
<th>Fixture Wattage</th>
<th>Track Lighting Wattage</th>
<th>Exemption Allowance</th>
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<td>80</td>
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<td>LED 1</td>
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<td>45</td>
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<td>None</td>
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</table>

- **Additional Controls/Switching**
  - Decorative Appearance
  - Vehicles, sporting goods, small electronics highlighting
  - Furniture, clothing, cosmetics highlighting
  - Jewelry, crystal, china highlighting
  - Other retail highlighting
Finding the **Retail Allowance on COMCheck**

![Image of COMCheck software interface showing the process of finding retail allowance]

**Lighting Power Allowance**

- **Floor area qualifying for allowance** (maximum of 5000 square feet available) = 5000
- **Lighting Power Allowance**: 132.0
- **Allowance:** Not specified in the image

When retail merchandise highlighting allowances are claimed, an additional base allowance of 1000 watts will be considered toward lighting compliance. This 1000 watt supplement will be in addition to the total of future allowances for retail merchandise highlighting.

Press 'Help' for clarification on lighting power allowances.

**Interior Lighting Fail:** Design 19% worse than Code

Adjoin fixtures to an appropriate building use category.
Finding the **Retail Allowance on COMCheck**
Final Retail Space with All Adders on COMCheck

<table>
<thead>
<tr>
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<th>Fixture Wattage</th>
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<th>Exception Allowance</th>
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</thead>
<tbody>
<tr>
<td>Building</td>
<td>Allowed wattage = 17341</td>
<td>Proposed wattage = 15680</td>
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<tr>
<td>1 Retail Sales Area (3000 sq ft)</td>
<td>Allowed wattage = 17341</td>
<td>Proposed wattage = 15680</td>
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<tr>
<td>2 Compact Fluorescent</td>
<td>Other</td>
<td>Electronic</td>
<td>4</td>
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<td>70</td>
<td>132.0</td>
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<td>Allowance: Room...</td>
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<tr>
<td>3 LED 1</td>
<td>Other</td>
<td>Electronic</td>
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<td>Allowance: Add...</td>
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<td>4 LED 2</td>
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<td>100</td>
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<td>Allowance: Decor...</td>
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</table>

8,400 Watts Base Wattage Allowance
Possible 24,089 Watts using Maximum of ALL Adders