LIGHTING FOR FOOD & BEVERAGE PROCESSING FACILITIES
LITHONIA LIGHTING MAKES CHOOSING THE RIGHT FIXTURE EASY

The application chart below defines three categories found in food and beverage processing environments. Each category is represented by an icon so you can identify fixtures best suited for your specific application.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Category</th>
<th>Conditions</th>
<th>Typical Applications</th>
</tr>
</thead>
</table>
| ![Icon](image) | NSF non-food zone/ non-conditioned storage | Areas where direct contact with food products during normal operations would not be expected. Equipment is located outside the normal wash-down area. There is a concern that the fixture will add contamination to the protected space or food product (i.e. will the finish withstand cleaning, chipping paint, deteriorating paints or finishes, lens impact resistance, lamp glass breakage, etc.). | • Kitchens
• Dry process areas
• Damp process areas
• Warehouses
• Inspection areas
• Shipping/receiving |
| ![Icon](image) | NSF splash zone | Areas where direct contact with food products during normal operations would not be expected; however, the fixture may be situated such that liquids used in the processing or cleaning procedures may splash the surface of the fixture. Since these fixtures are often used in wash-down areas, a wet-location listing is not sufficient. Fixtures must be tested to withstand high-pressure hose wash-down. | • Meat processing
• Canning/bottling
• Milking operations
• Boiling and keg washing
• Egg processing
• Cleanrooms
• Manufacturing
• Car washes
• Treatment plants
• Parking garages
• Commercial kitchens |
| ![Icon](image) | Cold storage | Food processing often requires refrigeration or freezing in process or storage areas. Luminaires must be specifically designed to operate in these cold locations and withstand the rigors of frequent washing and cleaning. **Unless operated 24 hours a day, 7 days a week, please contact an Acuity Brands representative for options regarding manual switching or sensing.** | • Cold and frozen food storage
• Carcass coolers
• Food processing facilities
• Cleanrooms
• Commercial kitchens |
SIMPLIFIED PRODUCT SELECTION

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<table>
<thead>
<tr>
<th>Category</th>
<th>Conditions</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold storage Food processing</td>
<td>Often requires refrigeration or temperature control to prevent spoilage. Luminaires are typically mounted in freezers and walk-in coolers.</td>
<td>Cold and frozen food storage, commercial kitchens, warehouse, restaurant kitchens, etc.</td>
</tr>
<tr>
<td>NSF splash zone Areas where direct contact with food products may occur.</td>
<td>Washing and cleaning, food preparation areas, etc.</td>
<td>Commercial kitchens, food processing facilities, etc.</td>
</tr>
<tr>
<td>Non-conditioned storage NSF non-food zone</td>
<td>Areas where food products may not be directly handled.</td>
<td>Inspecting areas, shipping/receiving, etc.</td>
</tr>
</tbody>
</table>

For more detailed information on each product, please refer to specification sheets on www.lithonia.com.
CHARACTERISTICS OF THE ENVIRONMENT

Food processing environments present a unique set of challenges to the performance and durability of lighting equipment. A food processing facility typically includes many different areas, each of which demands a lighting solution that meets its specific environmental and illumination needs.

A typical food processing facility consists of a number of distinct areas:
- NSF classified areas: food zone, splash zone and non-food zone
- Warehousing, staging, distribution areas including cold storage and non-conditioned storage areas
- Some of the above areas may be classified as hazardous locations
- General indoor and outdoor areas: offices, lobbies, corridors, loading docks and parking lots

Lithonia Lighting’s extensive offering not only meets the luminaire construction requirements set forth by the USDA, FDA and NSF, but also delivers superior optical performance requiring fewer luminaires and less wattage than average.

CHALLENGES OF THE ENVIRONMENT

Luminaires must be able to withstand the daily wash-downs required to prevent bacteria growth or harborage of other contaminants, and must be able to endure the corrosive effects of cleaning solutions. Because some areas of a processing facility are refrigerated, luminaires must be able to turn on and deliver appropriate light levels at sub-zero temperatures.

LITHONIA LIGHTING TESTING PARAMETERS

Testing parameters vary by product. The typical hose-down procedure is best described in the third condition below. All these tests were performed with no water ingress.

1. Laboratory-controlled water pressure: 1200 psi ⅛-inch diameter nozzle, 3 to 5 GPM from a distance of 5 to 6 feet.

2. Municipal water pressure: variable 20 to 100 psi, ½-inch diameter nozzle, 15 to 17 GPM from a distance of 10 to 12 feet.

3. Municipal water pressure: variable 20 to 100 psi, Strahman Hydro-Pro™ 150° (typical industrial wash-down nozzle), 5 to 7 GPM from a distance of 10 to 12 feet.

4. IP65 test performed to the standards of the International Electrotechnical Commission by a third-party listing organization: approximately 20 psi, ¼-inch diameter nozzle, 3.3 GPM from a distance of 10 to 12 feet.

HOSE-DOWN TESTING:

When hose-down conditions are expected, hose-down testing should be quantifiable and meet the rigors of actual application conditions. Many manufacturers of lighting equipment simply list a nozzle pressure value such as 1200 psi for hose-down rating. To properly quantify a true picture of the severity of the test conditions, other parameters such as nozzle diameter, flow rate and distance from the nozzle to the luminaire are necessary.
CHARACTERISTICS OF THE ENVIRONMENT
Food processing environments present a unique set of challenges to the performance and durability of lighting equipment. A food-processing facility typically includes many different areas, each of which demands a lighting solution that meets specific environmental and illumination needs.

A typical food-processing facility consists of a number of distinct areas:

- NSF-classified areas: food zone, splash zone and non-food zone
- Warehousing, staging, distribution areas including cold storage and conditioned storage areas
- Some of the above areas may be classified as hazardous locations
- Current indoor and outdoor areas: offices, bilge, coats.

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For certain applications, the Food and Drug Administration and United States Department of Agriculture guidelines include:

- Fixtures can have no exposed glass.
- Must completely hose down at a minimum standard of 20 to 100 psi (pounds per square inch) of water at the nozzle.
- If painted, must be with FDA-compliant paint.
- Should be manufactured from a low-copper-content, aluminum alloy.
- Should utilize a wet-location-listed hanging device (if applicable).
- Should be smooth and rounded with little or no surfaces for food to accumulate.
- Must utilize stainless steel or corrosion-resistant hardware.