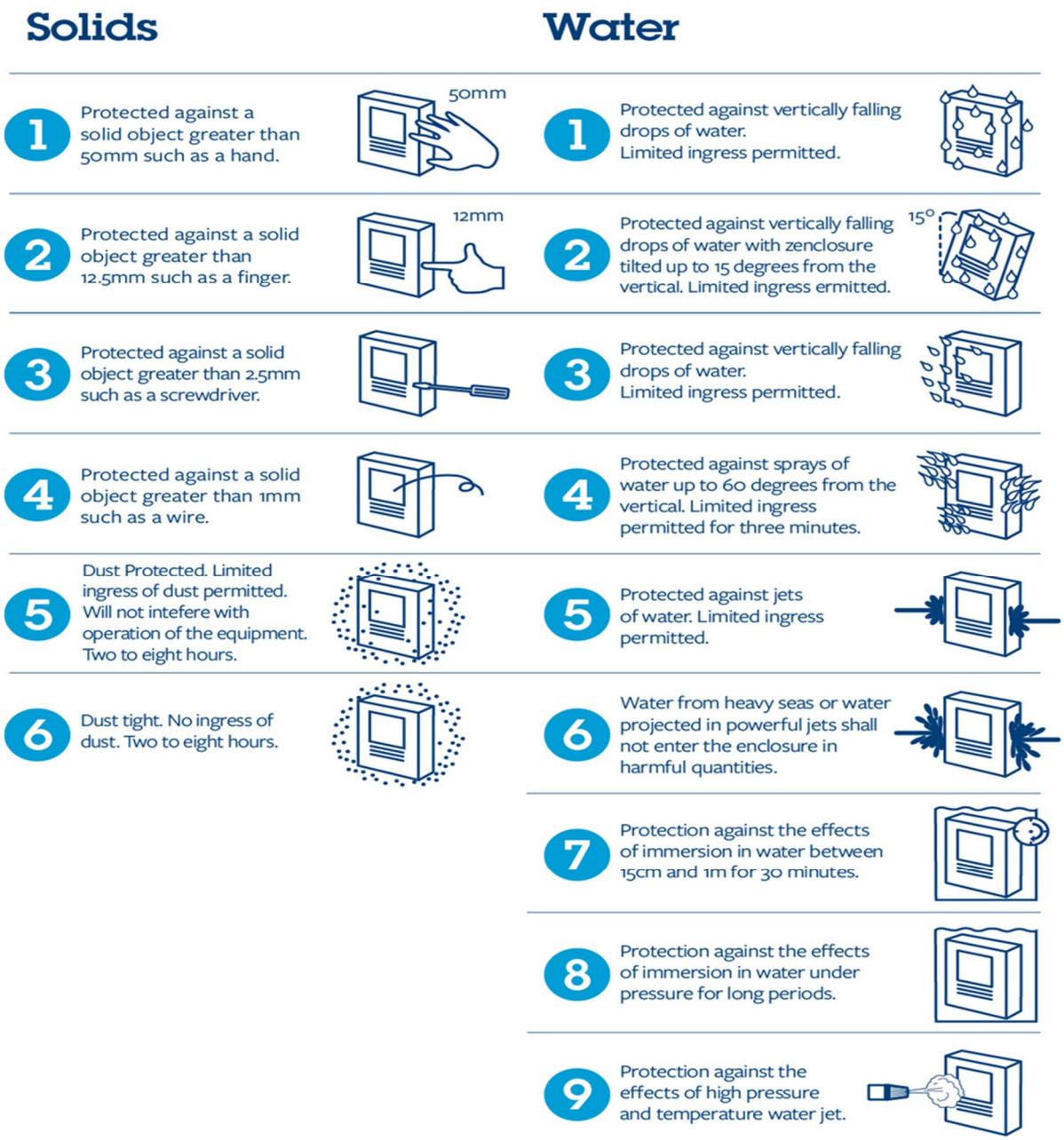
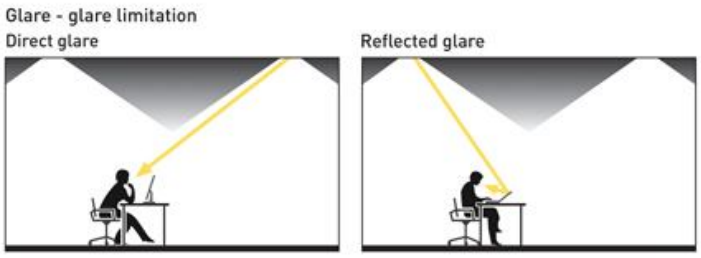
IP - Ingress Protection Rating

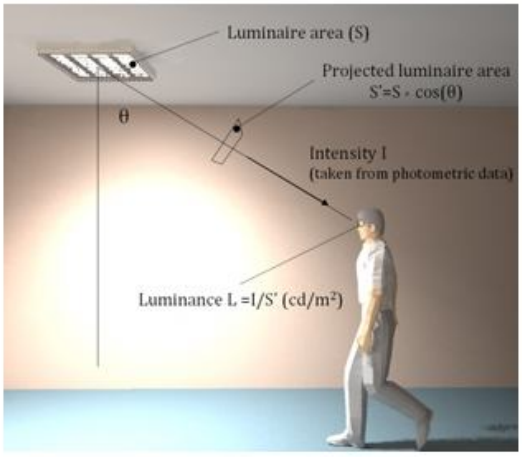
The IP system is an internationally recognized method to indicate the degree of protection against the ingress of dust, solid objects and moisture into an enclosure. The letters "IP" are followed by two numerals. The IP rating has been in use in Europe and other countries outside of North America for many years, and has just recently been added to the Canadian Electrical Code (for hazardous locations). They are similar in intent to the NEMA ratings but there is no direct relationship. These ratings are widely used on portions of enclosures and components, as well as complete enclosures. In North America, the common practice has been to use NEMA enclosure ratings for both water and dust resistance. As the name suggests, these standards were originally developed and published by the National Electrical Manufacturer's Association (NEMA) and have been adopted by UL, CSA and other standards bodies in North America. International Standards use the IEC IP ratings instead of the NEMA ratings.



Note: Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that produces no harmful effects.

UGR – Unified Glare Rating





UGR ≤ 16

Technical drawing

UGR ≤ 19

Reading, writing, training, meetings, computer-based work

UGR ≤ 22

Craft and light industries

UGR ≤ 25

Heavy industry

UGR ≤ 28

Railway platforms, foyers

CCT - Correlated Color Temperature:

Aside from the type of the light bulb itself, using Kelvin temperature can also help guide you in determining which fixture is right for each room.Whether you need an ambient source of light or one for highly-focused task lighting, keep in mind the following Kelvin ranges:

2700K-3000K

Gives off a soft white glow, often yellow in appearance; best for living rooms, dining rooms, bedrooms and outdoor spaces

3100K-4500K

Gives off a bright amount of white light; best for kitchens, offices, work spaces and vanities where task lighting is needed

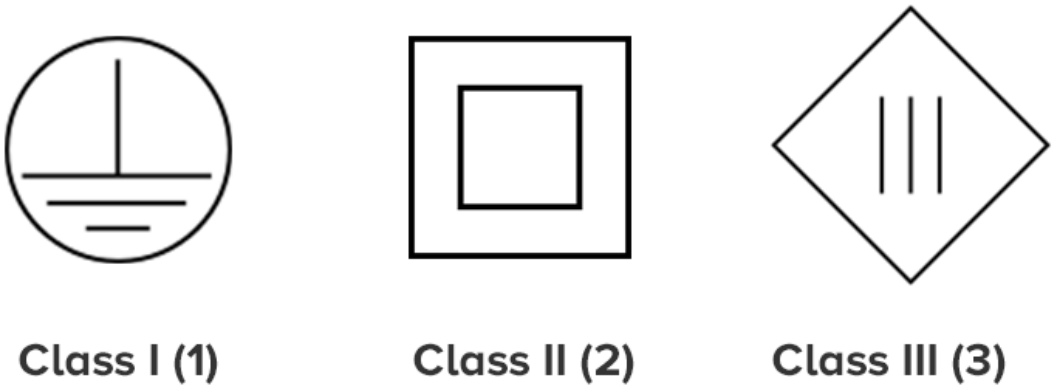
4600K-6500K

Gives off a bright amount of blue-white light, similar to that of daylight; best for display areas and work environments where very bright illumination is needed

6500K and up

Gives off a bright bluish hue of light, often found in commercial locations; best for bright task lighting

Safety Classes



Class I (1) Class II (2) Class III (3)

Safety Class I
Designates luminaires with an earth connection. In the event of a fault, the power supply is switched off by an overload/residual current protective devices.

Safety Class II
Designates luminaires that have not only functional insulation but also additional protective insulation. Under fault conditions, no dangerous voltage can reach metal parts which can be touched. Many safety class I luminaires are also available in safety class II. Please contact us.

Safety Class III
Designates luminaires operating on extra-low safety voltage. They can be connected only to safety transformers in accordance with EN 61558/VDE 0570, EN 61347/VDE 712 or VDE 0100 Part 410. The transformer must be approved for this type of installation.

Maintenance of Pole & Lighting Fixture:

Since street light poles, of all types, are exposed to natural elements and fluctuating weather conditions, it is essential to conduct regular maintenance for these poles. This involves a worker inspecting the pole and the light visually from all angles to ensure the following:

Maintenance of Lighting Fixture:

1. Check for Flickering or Dimness: This could indicate an issue with the wiring system. The worker should also open the lamp cover to inspect for any loose wires or other signs of malfunction.
2. Check for Physical Damage: Look for any visible damage to the lamp, such as broken glass, scratches, or other issues that may affect the lighting capacity. Also, check for signs of rust or corrosion, which could indicate water leakage into the wiring system, potentially causing damage.
3. Examine Connectors and Wires: Inspect the connectors and wires that link the lamp to the junction box. Look for any wire damage, loose connections, or other signs of wear that may require repair or replacement. Loose bolts and nuts can also increase energy consumption, as the lamp would need to work harder to stabilize its power source, which can damage the lens and the lamp's transformer.
4. Regularly Tighten Screws and Nuts: Ensuring all screws and nuts are properly tightened will help secure the light in place, preventing it from vibrating or shifting, which could lead to long-term damage.

Maintenance of Pole:

1. Inspect the Pole for Scratches or Dents: If any are found, they should be treated immediately using local spray paint or by repainting the entire pole.
2. Ensure the Presence of the Pole Door Cover: This cover leads to the electrical junction box. If it is missing, immediately close off the pole by any means, and wrap the area around it with caution tape, as it may pose a significant public safety risk. Install a new cover as soon as possible.
3. Clean the Pole Regularly: Dust and dirt should be removed regularly to maintain the appearance of the pole and prevent corrosion.
4. Clean Around the Pole Base: Removing dust and dirt from the pole's base helps prevent rust and corrosion.
5. Check for Rust at the Pole Base and Fixing Bolts: Rust at the base or on the bolts can weaken the pole's stability. If rust is found, take immediate action by applying protective coatings. Regular application of protective coatings can prevent corrosion and significantly extend the life of the pole.

Benefits of Maintenance:

1. In conclusion, ensuring regular maintenance helps identify potential issues before they become serious. By following these steps, you can:
2. Enhance Safety: Regular maintenance of streetlights and poles can improve pedestrian and driver safety.
3. Improve Energy Efficiency: Regularly maintained lamps operate more efficiently, helping save energy and reduce operating costs.
4. Extend Lifespan: Routine maintenance extends the lifespan of poles and lights, saving money on replacement costs.