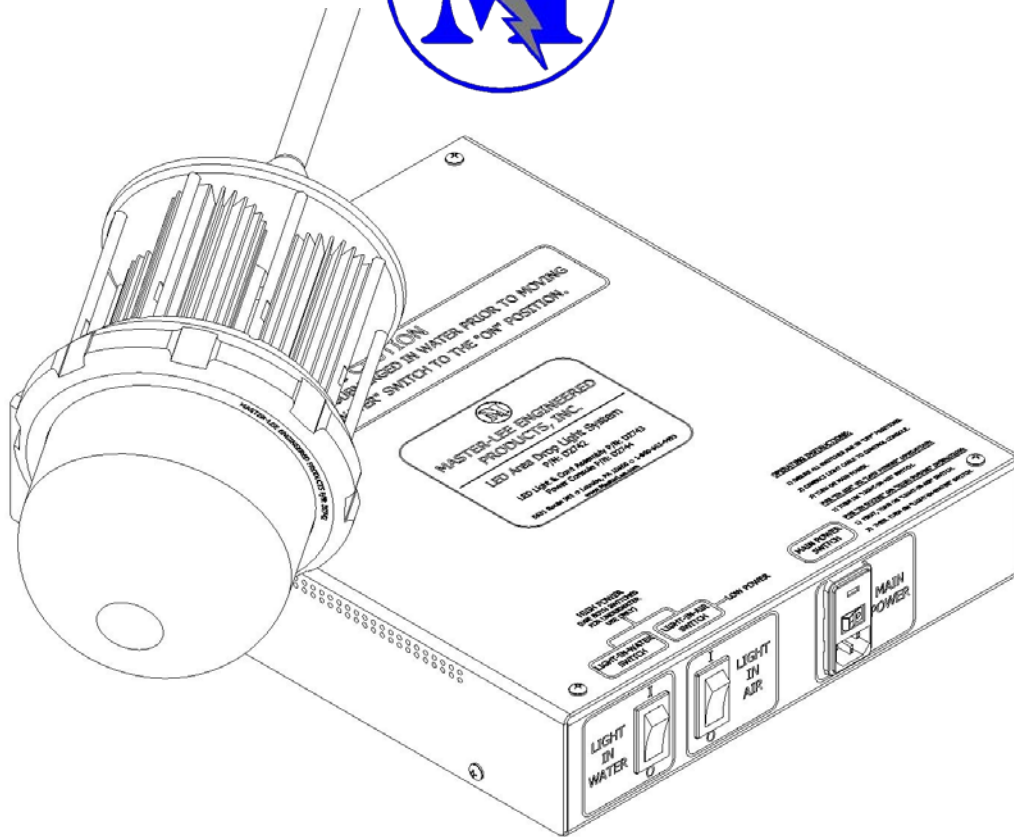


# MASTER-LEE ENGINEERED PRODUCTS, INC.



## LED AREA DROP LIGHT

### USER MANUAL

PART NUMBER: D2742

Revision: 0

**IMPORTANT:**  
**Read Before Using**

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# 1. SAFETY



**”READ AND UNDERSTAND ALL**

**INSTRUCTIONS” – Failure to follow the SAFETY RULES listed below and other safety precautions, may result in serious personal injury.**

## Work Area Safety

- **Do not operate light in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Excessive heat from electrical sources may ignite dust or fumes.
- **Do not store or operate around rotating/moving equipment.** The electrical cord may become entangled in rotating equipment or severed by moving parts which may cause electrical shock to nearby personnel.
- **Do not operate the Power Console in High-Power mode unless the Light is fully submerged in water.** Excessive heat generated in High-Power mode may put personnel at risk of burns if handled. Water is required to cool the Light in this mode.

## Electrical Safety

- **Before plugging in the Power Console, be certain the outlet voltage supplied is compatible with the voltage identified on the name plate.**

- Incompatible outlet voltage may result in serious hazards and/or damage to the equipment.
- **Do not expose the Power Console to wet environments.** Water entering the Power Console will increase the risk of electric shock.
- **Never use the cord of the Power Console to carry or support the Power Console. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged cords increase the risk of electric shock.

## Personal Safety

- **Do not look directly at the source of light while it is energized.** Temporary or permanent vision impairment may occur as a result.
- **Be sure Power Console switches are in the “OFF” position before plugging into an electrical outlet or connecting the Light cord.** Personal injury or damage to the Light may occur if turned on in High-Power mode without being submerged in water.
- **Check that all cord connections are tight and secure.** Loose or partial electrical connections may increase the risk of electric shock and/or damage to the components.
- **Do not store anything on top of the Power Console.** Placing items on top of the Power Console obstructs the view of warning and operating information and may cause damage to the component.

**SAVE THESE INSTRUCTIONS!**



”READ ALL INSTRUCTIONS” – Failure to follow the SAFETY RULES listed below and other safety precautions, may result in serious personal injury.

## Operation and Care

- **Ensure the Collar of the Light Body is tightly fastened.** If loose, water may enter the globe and cause damage to the lighting components.
- **Ensure all cord connectors are free of moisture and are clean before making connections.** Dirt or moisture may cause the light to malfunction and/or may decrease the life expectancy of the components.
- **Handle, package, and use all components with care.** The globe of the light body is made of an impact-resistant plastic but can fracture if struck with excessive force causing a hazard and/or Foreign Material.
- **Globes and O-Rings shall be replaced with the manufacturer specified parts as outlined in this document.** Failure to use the specified parts may lead to product failure.
- **Decontamination or cleaning of the lighting assembly shall be performed with care.** Hand-washing with wet rags or a mild cleaning solution may be performed on the lighting assembly and cord. Use of pressure applied water may damage the components.

## Service



Disconnect plug from power source before performing any assembly, adjustment or repair to avoid possible injury.

- **Service and/or repair must be performed only by Master-Lee personnel with the exception of Globe replacement.** Service or maintenance performed by unqualified personnel may result in incorrect reassembly which could cause serious hazard.
- **Do not remove the cover of the Power Console.** Removal of the cover increases the risk of damage to internal components and electrical shock to personnel.

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**SAVE THESE INSTRUCTIONS!**

## 2. ELECTRICAL REQUIREMENTS

- Connect the Power Console to a 120-Volt branch circuit with a minimum breaker rating of 15-Amps.
- The Power Console is provided with a cord having a 3-prong, grounded plug. Only plug the cord into outlets also having a 3-prong outlet of the same size.
- Replace damaged cords immediately. Use of damaged cords can shock, burn or electrocute.
- If an extension cord is necessary, a cord with adequate size conductors should be used to prevent excessive voltage drop, loss of power or overheating. The table below shows the correct size to use depending on cord length.

**Recommended Size of Extension Cord**

<b>Cord Length (ft)</b>	<b>Cord Size in A.W.G</b>
25	18
50	16
100	14

## 3. INSPECTION

- **Inspect globe for discoloration, water infiltration, and damage.** Failure to replace the globe, if visibly damaged or discolored, may result in breakage, poor performance, or water leaks. The globe should be white in color. Discoloration of the globe may indicate embrittlement due to excessive radiation exposure.
- **IF used in the reactor core or within close proximity of irradiated fuel assemblies, THEN perform a visual inspection after approximately 7-10 days of exposure to the radiation.** Failure to inspect and replace the globe, as necessary, may increase the risk of breakage and reduce the emission of light.
- **IF used for general area lighting (i.e. away from high radiation sources), THEN perform a visual inspection after approximately 30 days.** Failure to inspect and replace the globe, as necessary, may increase the risk of breakage and reduce the emission of light.
- **Inspect electrical cables for cuts, wear, fretting, kinks, or any visible signs of degradation.** Use of damaged electrical cables may increase the risk of electrical shock.
- **Inspect components for cleanliness.** Dirt, oil, or chemicals may impair performance and longevity of the components.

## 4. OPERATION INSTRUCTIONS



Injury to personnel may occur from looking directly at the energized light source or from physically touching the light body, which may be hot.

### 4.1. Instructions for operation in “Low Power” or “In-Air” modes

- 4.1.1. Verify the Power Console switches are in the “OFF” position.
- 4.1.2. Plug the Power Console cord into a properly rated electrical outlet.
- 4.1.3. Ensure the lighting cord is tightly connected to the Power Console.
- 4.1.4. Set the “Main Power” switch to the “ON” position, to energize the Power Console.
- 4.1.5. Set the “Light-In-Air” switch to the “ON” position and verify the light turns on.



Light must be submerged in water prior to moving the “Light-In-Water” switch to the “ON” position to avoid damage to the lighting components. Injury to personnel may occur from looking directly at the energized light source or from physically touching the light body, which may be hot.

### 4.2. Instructions for operation in “High Power” or “In-Water” modes

- 4.2.1. Verify the Power Console switches are in the “OFF” position.
- 4.2.2. Plug the Power Console cord into a properly rated electrical outlet.
- 4.2.3. Ensure the lighting cord is tightly connected to the Power Console.
- 4.2.4. Set the “Main Power” switch to the “ON” position, to energize the Power Console.
- 4.2.5. Set the “Light-In-Air” switch to the “ON” position and verify the light turns on.
- 4.2.6. Set the “Light-In-Water” switch to the “ON” position and verify the remaining lights turn on.

## 5. GLOBE & O-RING REPLACEMENT



Power Console must be disconnected from an electrical source prior to performing service. Failure to remove electrical potential to the Power Console and/or light body may increase the risk of electric shock.

- 5.1. Unscrew the locking collar from the Light Assembly.
- 5.2. Remove the globe.
- 5.3. Remove the two (2) O-Rings from the Light Assembly.
- 5.4. Lightly apply Molykote 111 to the new O-Rings.
- 5.5. Install the larger diameter O-Ring into the larger diameter groove of the Light Assembly.
- 5.6. Install the smaller diameter O-Ring into the smaller diameter groove of the Light Assembly.
- 5.7. Ensure the new globe is clean and free of debris or contaminants and install it over the O-Rings.
- 5.8. Install the locking collar onto the Light Assembly and firmly tighten by hand.

## 6. PARTS LIST



Failure to use replacement parts as identified herein or as recommended by the manufacturer may result in reduced performance and/or the potential risk of hazard or injury to personnel.

<i>Part No.</i>	<i>Description</i>	<i>Provided w/ System</i>	<i>Quantity</i>
D2743	LED Area Drop Light & Cord Assembly	Yes	1
D2744	Power Console w/ cord	Yes	1
D2834	Replacement Globe Kit includes: (1) Globe (2) O-Rings (1) 1-oz packet of Molykote 111	No	1