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RADIANT ECO
RADIANT LUX
RADIANT MAX

FRC
A Safe Fleet Brand

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SAFETY SUMMARY

FRC lighting products are engineered and manufactured with safety in mind. It is critical that FRC scene lights are installed, maintained, and operated correctly. Read and understand all instructions before installing, performing maintenance, or operating.

All components, equipment, and installation procedures shall conform to NFPA 1901, Standard for Automotive Fire Apparatus and NFPA

70 National Electrical Code.

The following safety precautions shall be observed.

General Safety Precautions

Ensure power is off prior to connecting or disconnecting wires and plugs or performing maintenance.

Scene lighting lamp heads are designed for outdoor use, and will be extremely hot when operating. Do not use in areas with limited ventilation.

Installation Safety Precautions

CAUTION: Do not use Loctite on any screws near the lamp head lens. FRC led lamp heads use Lexan lenses that can become brittle and prone to cracking when exposed to Loctite compounds.

Ensure power is off prior to connecting wires or cable to the power source.

Connect only to the type of power source as indicated on the lamp head identification label.

⚠ ***Ensure an appropriate sized circuit protection device is installed (circuit breaker or fuse). Do not use GFI protection with an AC LED light, as the breaker will trip when the light is powered.***

⚠ ***Refer to the tables on page 2 for DC lighting fixtures. DC lights may not fully illuminate without sufficient gauge wire.*** Use a Minimum of 16 AWG wire to connect AC lights.

⚠ FRC lights are intended for mounting to a noncombustible surface only. Do not install insulation within 76 mm (3 in) of any part of the light, lighting fixture, or its components.

Install approved rubber or plastic grommets or bushings where wires or cable pass through a surface.

⚠ All connections to lamp head wires should be joined so that the wire ends are sealed.

Ensure all wire connectors or terminals provide a positive mechanical and electrical connection.

Electrical connections not enclosed in a box must be covered with an insulation equivalent to that on the conductors.

⚠ Lamp heads are extremely hot when operating, do not mount such that personnel or equipment could inadvertently come in contact with the lamp head.

Recessed lights require a minimum of 3 inch clearance between wall insulation and the light housing.

Operation Safety Precautions

Operate portable lighting products only from the power source indicated on the identification label.

⚠ During operation use the handle to move the light, the housing will be extremely hot.

Ensure that all lighting components are clear of obstructions when raising telescopic poles. Ensure that telescopic poles are lowered and stowed before moving the vehicle.

Maintenance

Use a clean soft cloth, mild soap, and water to clean the lens.

Note: FRC LED lamp heads use Lexan lenses and cleaning with abrasive materials, solvents, or most chemical cleaners can cause lens surface degradation and reduced performance of the light. Some chemicals will cause the lens to become brittle and prone to cracking.

Typical Minimum Wire Size for DC LED Lighting Fixtures

The numbers in these tables will vary dependent on the specific wire used.

Notes on these calculations:

The wire length is a straight run from the power source to the lamp head. It does not take into account losses due to terminal connections, switches, relay contacts, plugs, etc.

The wire size is calculated for 125% of maximum lamp head current and not to exceed a 10% voltage drop. Using one size smaller AWG is OK for 24v DC supply.

12V DC LED Lighting Fixtures

Typical Minimum Wire Size

Wire Length (Distance in feet from power source.) / Typical Wire Size (AWG)	20	30	40	50	60	70	80	90	100	120	140	160	180	200	250
Radiant ECO Q15,	16	16	14	14	12	12	12	10	10	10	10	10	10	10	8
Radiant LUX Q22	12	12	12	10	10	8	8	8	8	6	6	6	4	2	2
Radiant MAX Q32	10	10	10	8	8	8	6	6	6	4	4	4	4	2	2

Typical Current Required and Light Output for LED Lighting Fixtures

Lamphead Style	Voltage	Current	Light Output
-K15	120/240 Volts AC	0.9/ 0.45 Amps	15,000 Lumens
-K17	120/240 Volts AC	1/0.5 Amps	17,000 Lumens
-K32	120/240 Volts AC	1.7/0.9 Amps	32,000 Lumens
-K22	120/240 Volts AC	1.25/ .7 Amp	22,000 Lumens
-Q15	12/24V DC	8.5/4.25 Amps	15,000 Lumens
-Q17	12/24V DC	10/5 Amps	17,000 Lumens
-Q32	12/24V DC	18/9 Amps	32,000 Lumens
-Q22	12/24V DC	12.5/6.3 Amps	22,000 Lumens

American Wire Gauge (AWG) to Metric Wire Gauge (mm^2) Sizes

Closest equivalent cross-section.

AWG	mm^2
18	1.0
16	1.5
14	2.5
12	4.0
10	6.0
8	10
6	16
4	25
2	32

Note 1: Using a lower voltage at the lamp head will increase the current draw to be higher than the outputs indicated in the above table.

Note 2: All values are at 77°F (25°C) ambient temperature. Higher ambient temperatures will reduce the power to keep lights in safe operating condition and may decrease the current draw.