

# COOPER LIGHTING - SURE-LITES®

## DESCRIPTION

The XR Series is an efficient, rugged, commercial grade product designed for the demands of emergency lighting applications in this setting. The XR Series, in 6V and 12V models, has the extra capacity to power remote heads for added application flexibility.

Catalog #	Type
Project	
Comments	Date
Prepared by	

## SPECIFICATION FEATURES

### Electronic

- Dual Voltage Input 120/277 VAC, 60 Hz
- Line-latching
- Solid-state Voltage Limited Charger
- Solid-state Switching
- Low-Voltage Disconnect
- Brownout Circuit
- Overload/Short Circuit Protection
- Test Switch/Power Indicator Light

### Battery

- Sealed Nickel Cadmium
- Maintenance-free, Long-life
- Full Recharge Time, 24 hrs. (max.)
- Color Coded Leadwires

### Housing Construction

- 22-Gauge Die-Formed Steel
- Knockout, Conduit or Cord Set
- Universal J-Box
- Mounting Pattern
- Keyhole Mounting Slots
- White Finish

### Code Compliance

- UL 924 Listed
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes

### Warranty

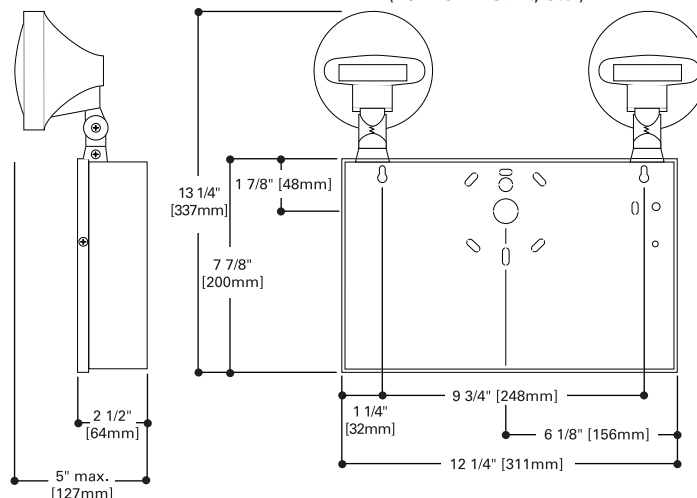
- Unit: 1-year
- Battery: 15-year pro-rata

### Head/Lamp Data

- Two Heads Standard
- Top Mounted - Side Mounting Optional
- Glare-Free Lens
- Fully Adjustable
- Remote Capability
- High Impact - Thermoplastic Matches Housing Finish

### Mounting Requirement

- Mount only on a vertical plane (i.e. wall mount, etc.)



## ELECTRICAL RATINGS

Model	Rated Wattage to 87 1/2% of Rated D.C. Voltage					Lamp Information		
	DC Voltage	1 1/2 Hours	2 Hours	3 Hours	4 Hours	Type	Wattage	Number
XR20	12	30	24	18	14	Incandescent	9	29-86
XR21	12	50	36	28	20	Incandescent	9	29-86

## ORDERING INFORMATION

Series	Options <sup>1,2</sup>	Accessories <sup>4</sup>
XR20	V= Voltmeter	Mounting Kit
XR21	SD= Self Diagnostics <sup>3</sup>	1MSWH= Mounting Shelf, White
	TDM= Time Delay Monitor	1BRWH= Mounting Brackets (2) White
		Protective Housing
		VS2= Polycarbonate Vandal Shield
		VS2WP= Weatherproof Polycarbonate Vandal Shield
		VK1= Voltmeter

- Notes: 1 Add as a suffix.  
 2 Alternate Lamps, Finishes and Options available. Consult your Cooper Lighting Representative.  
 3 SD available on XR15, XR16, XR20, XR21 only.  
 4 Order separately.

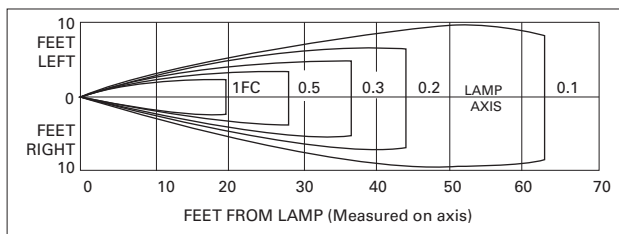
## ENERGY DATA

**XR20**  
 Input Current (Max.):  
 120V= .13A  
 277V= .06A

**XR21**  
 Input Current (Max.):  
 120V= .15A  
 277V= .07A

## PHOTOMETRICS

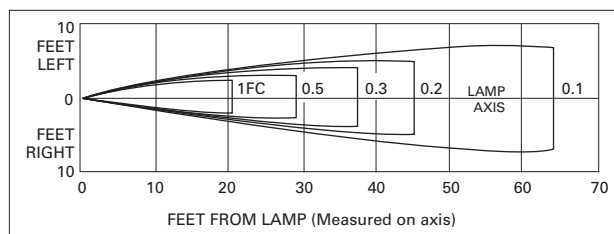
## Horizontal Distribution



Lamp No. 29-86

Initial Lumens – 29-86 @ 138

## Vertical Distribution



Lamp No. 29-86

## TECHNICAL DATA

## Heads

The lamp housing is constructed of flame- and impact-resistant injection molded thermoplastic with matching finish. The three dimensional swivel assembly permits approximate aiming adjustment from 80° vertical and 358° rotation. The placement is secured with a lockable pivot mounted on a rotating base ring.

## Lamps

Designed specifically for emergency lighting applications, the PAR 36 sealed beam type design insures optimum glare-free light distribution along with horizontal and vertical adjustment by rotating the lens within the housing. Tungsten halogen lamps (XR5, XR9) maximize light output with lower wattage.

## Housing

The rugged 22-gauge die-formed cold rolled steel housing is finished with white corrosion-resistant polyester powder coat paint. Cabinet has keyhole mounting slots and knockouts in top, rear and side for AC/DC wiring connections and has universal mounting pattern.

## Line-Latched

Sure-Lites' line-latched electronic circuitry makes installation easy and economical. A labor efficient AC-activated load switch prevents the lamps from turning on during installation to a non-energized AC circuit. Line-latching eliminates the need for a contractor's return to a job site to connect the batteries when the building's main power is permanently turned on.

## Solid-State Charger

Supplied with a 120/277 VAC, voltage regulated solid-state charger. Immediately upon restoration of AC current after a power failure, the charger provides a high charge rate. The charge circuit reacts to the condition of the battery and alters the rate of charge in order to maintain peak battery capacity and maximize battery life. Solid-state construction recharges the battery following a power failure in accordance with UL 924.

## Overload and Short-Circuit Protection

The solid-state overload monitoring device in the DC circuit disconnects the lamp load from the battery should excessive wattage demands be made and automatically resets when the overload or short-circuit is removed. This overload current protective feature eliminates the need for fuses or circuit breakers for the DC load.

## Brownout Circuit

The brownout circuit in Sure-Lites' units monitors the flow of AC current to the unit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

## Solid-State Transfer

The unit incorporates a solid-state switching transistor which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps. Upon restoration of the AC power, the emergency lamps will switch off and the charger will automatically recharge the battery.

## Low-Voltage Disconnect

When the battery's terminal voltage falls below 80% of the rated voltage, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

## Test Switch/Power Indicator Light

Conveniently located combination Test Switch/Power Indicator Light allows for manual verification of proper operation of the transfer circuit and emergency lamps.

## Sealed Nickel Cadmium Battery

Sure-Lites sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery utilizes positive and negative sintered plate construction which offers high discharge rates and stable performance over a wide range of temperatures. The specially designed resealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process. The nickel cadmium battery can be operated from 0°C to 50°C.

## Warranty

All Sure-Lites' units are backed by a firm one-year warranty against defect in material and workmanship (excluding lamps). Rechargeable, long-life, sealed nickel cadmium batteries carry a fifteen-year pro-rata warranty.