

# COOPER LIGHTING - SURE-LITES®

## DESCRIPTION

The real workhorse in emergency lighting systems...these durable, reliable units are unparalleled in performance and freedom from maintenance.

The HR Series units provide a low-cost, yet totally solid-state lighting system for application in industrial, commercial or multi-housing environments. The high and ultra high capacity are ideal for installations where a large number of heads/exits will be remotely operated.

Catalog #	Type
Project	
Comments	
Prepared by	Date

## SPECIFICATION FEATURES

<b>Electronic</b>	18 Gauge Die-Formed Steel Cover	CSA Certified
Dual Voltage Input 120/277 VAC, 60 Hz	Knockout, Conduit or Cord Set	NEC/OSHA
Line-latching	Universal J-Box Mounting Pattern	Most State and Local Codes
Solid-state Voltage Limited Charger	Keyhole Mounting Slots	<b>Warranty</b>
Solid-state Switching	White Finish	Unit - 1 year
Low Voltage Disconnect	<b>Battery</b>	Battery - 5 year pro-rata
Brownout Circuit	Sealed Lead Calcium, Recombination	<b>Head/Lamp Data</b>
Overload/Short Circuit Protection	Maintenance Free, Long Life	Two Heads Standard
Test Switch/Power Indicator Light	Full Recharge Time, 24 hrs. (max.)	Top Mounted
Isolation Transformer	Polarized Battery Terminals	Glare-Free Lens
<b>Housing Construction</b>	<b>Code Compliance</b>	Fully Adjustable
18 Gauge Die-Formed Steel Housing	UL 924 Listed	Remote Capability
	Life Safety NFPA 101	High Impact - Thermoplastic
		Matches Housing Finish



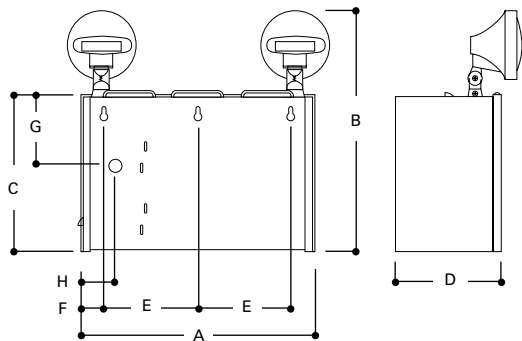
## HR SERIES

**HIGH CAPACITY**  
87-117 WATTS,  
**ULTRA-HIGH CAPACITY**  
170-360 WATTS

Emergency Lighting

TOTALLY PREDICTABLE  
**RELIABILITY.**

## DIMENSIONS



	High Capacity	Ultra High Capacity
A	12 1/4" (311mm)	17" (432mm)
B	13 1/4" (337mm)	16 7/8" (429mm)
C	7 7/8" (200mm)	11 1/2" (292mm)
D	4 1/4" (108mm)	8" (203mm)
E	4 3/4" (121mm)	6" (152mm)
F	1 3/8" (35mm)	2" (51mm)
G	-----	5 3/4" (146mm)
H	-----	2 1/2" (64mm)

## ELECTRICAL RATINGS

Model	Battery	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
HR87*	SLC	6	87	65	43	32	Incandescent	9	29-84
HR117*	SLC	6	117	87	58	43	Incandescent	9	29-84
HR12117*	SLC	12	117	87	58	43	Incandescent	9	29-86
HR12117347 <sup>1</sup>	SLC	12	117	87	—	—	Incandescent	9	29-86
HR180*	SLC	6	180	135	90	67	Incandescent	9	29-84
HR12170*	SLC	12	170	128	85	64	Incandescent	9	29-86
HR12210*	SLC	12	210	157	105	78	Incandescent	9	29-86
HR12360*	SLC	12	360	270	180	135	Incandescent	9	29-86

\*Batteries may be shipped separately. SLC=Sealed Lead Calcium

## ORDERING INFORMATION

SAMPLE NUMBER: HR8TDM

HR	Options (Add as suffix)	Accessories (order separately)	Energy Data
<b>Model Number</b>	A=Ammeter	VK1=Voltmeter	Input Current (Max.):
HR87	TDM=Time Delay Monitor	3BRWH=Mounting Brackets	120V .50A
HR117	V=Voltmeter	2MSWH=Mounting Shelf (High Capacity)	277V .21A
HR12117	GY=Grey Finish	WG3=Wire Guard (Ultra High Capacity)	347V .22A
HR12117	Alternate Lamps <sup>2</sup>	WG7=Wire Guard (High Capacity)	HR12117347 .26A .13A .60A
HR180	Other Options <sup>2</sup>	CSK120=Cord Set (120VAC)	HR180 .98A .43A
HR12170	Other finishes <sup>2</sup>	CSK277=Cord Set (277VAC)	HR12170 1.08A .45A
HR12210	MH=Metal heads	VS2=Polycarbonate Vandal Shield	HR12210 1.02A .47A
HR12360		VS2WP=Weatherproof Polycarbonate Vandal Shield	HR12360 1.17A .54A

## ENERGY DATA

**HR87**  
Input Current (Max.):  
120V=.50A  
277V=.21A

**HR117**  
Input Current (Max.):  
120V=.53A  
277V=.22A

**HR12117**  
Input Current (Max.):  
120V=.26A  
277V=.13A

**HR180**  
Input Current (Max.):  
120V=.98A  
277V=.43A

**HR12170**  
Input Current (Max.):  
120V=1.08A  
277V=.45A

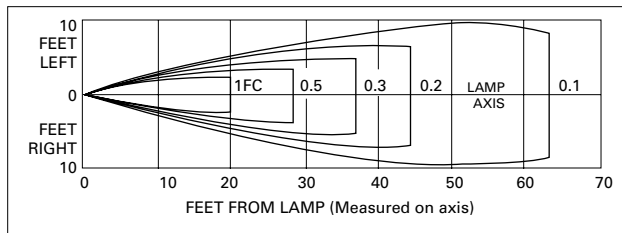
**HR12210**  
Input Current (Max.):  
120V=1.02A  
277V=.47A

**HR12360**  
Input Current (Max.):  
120V=1.17A  
277V=.54A

Note: 0, 1, 3 & 4 Heads also available. Specify after catalog number (i.e., HR-12117379)  
(1) 347=120/347V (2) Consult your Cooper Lighting Representative.

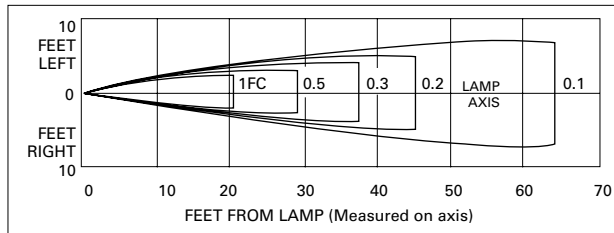
## PHOTOMETRICS

## Horizontal Distribution



Lamp No. 29-84 or No. 29-86  
Initial Lumens – 29-84 @ 132  
29-86 @ 138

## Vertical Distribution



Lamp No. 29-84 or No. 29-86

## TECHNICAL DATA

**Heads**

The lamp housing is constructed of flame-resistant 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 trapezoidal light distribution along with horizontal and vertical adjustment by rotating the lens within the housing.

**Housing**

The rugged 18 gauge die-formed steel housing is finished with an attractive white corrosion-resistant polyester powder coat paint. Cabinet has keyhole mounting slots, universal mounting pattern, and knockouts in rear and side for AC/DC wiring connections and accessory cord set. Up to three lighting heads can be mounted on the cabinet.

**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 Test Switch allows for manual verification of proper operation of the transfer circuit and emergency lamps. The Power Indicator Light provides visual assurance that the AC power is on.

**Sealed Lead Calcium Battery**

The fully sealed, long life, maintenance free lead calcium battery is ideal for emergency lighting applications. These recombinant cycle batteries typically provide eight to ten years of life and may be operated in any position.

**Warranty**

All Sure-Lites' units are backed by a firm one year warranty against defect in material and workmanship (excluding lamps). Maintenance free, long life, sealed lead calcium batteries carry a five-year pro-rata warranty.