Sure-Lites

DESCRIPTION

The Sure-Lites UEL NEMA 4X Emergency Light is designed for those emergency lighting applications where ruggedness and dependability are a must. The UEL's housing is constructed of durable die cast aluminum combined with the strength of a glass-clear polycarbonate shield. Designed for the most severe environments, the UEL Emergency Light will provide maximum performance against rain, moisture, cold, corrosives and dust. The injection molded, glass-clear polycarbonate shield provides protection against vandalism, as well. The UEL Emergency Light is UL listed for -25°C(-13°F) to +40°C (+104°F) ambient environments.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Electrical
- Watchguard EMS Self-Diagnostic System
- Dual Voltage Input, 120/277VAC, 60Hz Isolation Transformer
- Push-in AC power connectors facilitate installation
- Line-latching
- Solid-state Voltage Limited Charger
- Low Voltage Disconnect
- Brownout Circuit
- Overload/Short Circuit Protection
- Test Switch/Power Indicator Light
- Photocell Test Switch (requires accessory LASER for activation)
- Fully Recharged in 24 hrs.

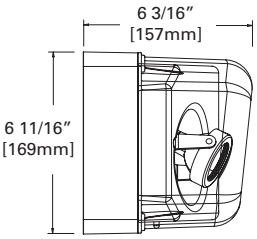
Battery
- Sealed Nickel Cadmium
- Maintenance-Free, Long-Life
- Full recharge time, 24 hrs. (max.)

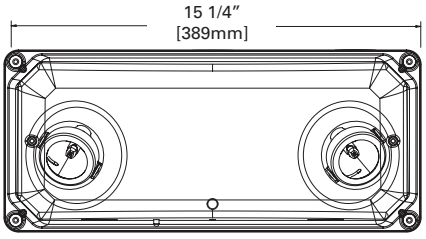
Housing Construction
- Die Cast Aluminum Housing
- Universal pattern knockouts on rear of housing for direct mounting to junction box
- Knockout provided on housing for surface attachment
- Powder Coat Paint Finish
- UV stable, glass-clear polycarbonate, vandal resistant shield (.150" thick) with Torx head tamperproof screws, stainless steel
- Knockouts provided for conduit entry
- Silicone gasketing

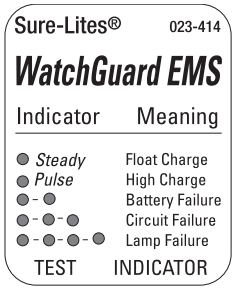
Code Compliance
- UL924 Listed Self-Diagnostics
- UL924, Outdoor Wet Location Listed (suitable for wet and damp locations)
- UL50, NEMA 4X
- Life Safety NFPA 101
- Most State and Local Codes
- NSF, National Sanitation Foundation/Splash Zone for Food Processing)
- IP66, Ingress Protection from IEC (International Electrical Commission)
- Cleanroom Class 10,000
- City of Chicago Approved

Warranty
- Unit: 1-Year
- Battery: 15-Year, Pro-rata

Head/Lamp Data
- Two Heads Standard
- 12V 12W MR16 Lamp
- Fully Adjustable







ELECTRICAL RATINGS

	Rated Wattage to 87 1/2% of Rated D.C. Voltage		Lamp Information			
Model	DC Voltage	1 1/2 Hours	Type	Wattage	Number	Spacing[1]
UEL1SDC	**12**	**24**	**MR16**	**12**	**29-141**	**50.0'**

ORDERING INFORMATION

Sample Number: UEL1WHSDC

Series
UEL1 =Nema 4X Ultimate Emergency Light

Housing Finish
__=Silver
WH=White
BK=Black

Standard
SD=Self Diagnostics

City of Chicago Approved
C=City of Chicago Approved

Options
V=Voltmeter
HAZ =Hazardous Location (Class 1, Division 2, Groups A, B, C, D)

Accessories [1]
LASER =Key Chain, Red Laser Pointer (activation tested at 30 feet).
UXPKA =Pendant Adapter Kit (fitting adapts exit to 1/2'' NPT threaded pendant-supplied by others)
VRSD =No.8 Centerpin Torx Screwdriver

Notes: [1] Order separately.

UEL SERIES

ULTIMATE EMERGENCY LIGHT
NEMA 4X
CITY OF CHICAGO APPROVED
SURFACE MOUNT
SEALED NICKEL CADMIUM BATTERY
MR16 LAMPS
VANDAL PROOF
WATCHGUARD EMS
SELF-DIAGNOSTIC SYSTEM
PATENT PENDING
EMERGENCY LIGHTING

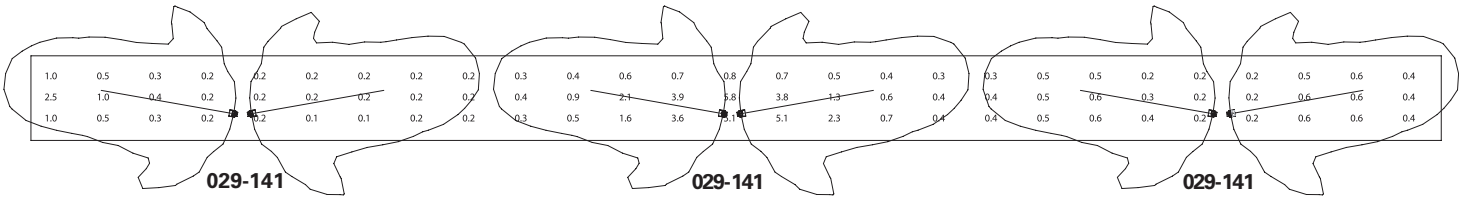
TOTALLY PREDICTABLE RELIABILITY

NSF SPLASH ZONE

ENERGY DATA
Sealed Nickel Cadmium Battery
UEL1SD
Input Current:
120V = .09A
277V = .03A

EATON
Powering Business Worldwide

PHOTOMETRICS



029-141	50' Spacing	Illuminance Values(Fc)	Average=1.04	Maximum =5.8 Minimum =0.2	Avg/Min Ratio=5.20	Max/Min Ratio=29.00

For Standard Fixture:
UEL1SD

The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The corridor used is 100 feet long, 9 foot ceiling with a 6-foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 8.5 feet. Cooper Lighting assumes no responsibility for local requirements or specific project variables. This is a guideline to be used as a design aid, not as guarantee of any code compliance.

TECHNICAL DATA

Lamps
The UEL Family is offered standard with MR16 lamps. The MR16 lamps provide a bright, even illumination along the path of egress.

Housing
Die cast aluminum with a powder coat painted finish. Universal pattern knockouts are in the back of the housing for direct mounting to the junction box. Conduit entry knockouts are provided. UV stable, polycarbonate shield provides vandal-proof protection. Silicone gasketing provides water-tight, dust-tight NEMA 4X enclosure.

Electronics
Dual voltage input 120/277 VAC is standard. Nickel Cadmium battery is standard. All battery and electrical components are enclosed within the housing.

Photocell Test Switch
Allows verification of proper operation of the transfer circuit and emergency lamps with a laser pointer (laser is sold as an accessory). The emergency lamps will test for 30 seconds when activated.

Self-Diagnostics
The self-diagnostic unit will automatically perform all tests required by UL924, and NFPA 101. The system indicates the status of the unit at all times using the LED indicator near the test switch on the side of the unit. A 90 minute battery power (emergency mode) simulation test will occur randomly once every six months.

A 30 second battery power simulation test will occur every 30 days. The charger function is tested upon initial power-up and after every battery discharge cycle thereafter. The AC/DC power transfer circuit is monitored continuously.

The charging mode is also monitored. The unit goes into a high charge mode for 24 hours the first time AC power is applied and when a discharge causes the battery voltage to fall below its nominal value. Pressing the test switch causes the unit to use battery power and test the battery capacity for 30 seconds.
The LED indicator is off when the unit is in the emergency mode and on continuously when the unit is fully charged. The LED blinks when the unit is in the high charge mode. It blinks twice (then repeats) when the battery needs to be replaced, or if it is disconnected. It blinks three times if there is a circuit board (charger or AC/DC transfer function) failure, and four times if there is a lamp failure.

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 turned on.

Solid-State Charger
Supplied with a 120/277 VAC, voltage regulated solid-state charger, the battery is recharged immediately upon restoration of AC current after a power failure. The charge circuit reacts to the condition of the battery 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.

Solid-State Transfer
The UEL Emergency Light incorporates solid-state switching 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 using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low Voltage Disconnect
When the battery's terminal voltage falls, the low voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

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 on Sure-Lites exits 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.

Test Switch/Power Indicator Light
A test switch located on the inside cover of the unit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

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 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.

Warranty
This Sure-Lites UEL Emergency Light is backed by a firm one (1) year warranty against defects in material and workmanship. Maintenance free, long life, sealed nickel cadmium batteries carry a fifteen-year pro-rata warranty.