

BIRNS Emergency Lighting Fixture-LED

The BIRNS Emergency Lighting Fixture-LED (ELF-LED) is the world's most advanced seismically qualified (tested to IEEE-344*) nuclear-grade emergency light. This UL listed system delivers up to five times more standby illumination than required by 10CFR50, App. R Sect. III.J., in case of SBO or loss of AC power, and helps nuclear stations achieve B.5.b (EA-02-026) Post-Fire Safe-Shutdown.

High Performance . . . Under Pressure®

The slim-profiled BIRNS ELF-LED has a mirror-finish front and stainless steel construction that's highly resistant to humidity, acids and other corrosives and is easy to clean. It provides 24 to 40 hours of standby service in case of a power failure and is certified to UL 924, "Emergency Lighting Equipment" and designed in accordance with NFPA 70, "National Electrical Code." The system helps comply with NRC EA-12-049/SECY-11-0124, especially near-term actions 4.1 and 4.2, and 10CFR50.54 (hh)(2).



CE marked model 4710-230

Applications

Precision engineered for use inside primary nuclear containment, this powerful system has multiple light, voltage and mounting options and provides safe and reliable emergency illumination. It features integral sealed rechargeable batteries and solid state charging circuitry, delivering superior performance.

Exclusive Features:

- 24 to 40 hours automatic SSE lighting; seismic qualification per IEEE-344
- UL listed
- Containment-grade materials and construction
- LED lamp operating life of 35,000 hours (L70)
- Low 35W total system power draw
- Slim design (only 90mm depth)
- Nine conduit knock-outs for ease of power cable access
- Voltage input 115-277 VAC
- Sealed maintenance-free batteries (no need to maintain electrolyte levels)
- Long-life LED indicator lights
- Helps comply with NRC EA-12-049/SECY-11-0124, especially near-term actions 4.1 and 4.2, and 10CFR50.54 (hh)(2).
- Factory-programmable PCB for superior battery performance
- Five mounting holes for greater mounting flexibility (min. three holes must be used)
- Robust stainless steel construction
- Glare-free silver-on-black labeling is easy for operators to read at any angle
- Can be tested from any angle with the momentary toggle switch

*Recommended practices for seismic qualification of Class 1E equipment; seismic margin requirements per IEEE 323-1974 - Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations.

ORDERING INFORMATION

Model	Description	Input Voltage
4710-115	Emergency Lighting Fixture, with two attached LED headlights	115
4710-230	Emergency Lighting Fixture, with two attached LED headlights	220/230/240
4710-277	Emergency Lighting Fixture, with two attached LED headlights	277*
4726-115	Emergency Power Unit (for use with remote LED headlights)	115
4726-230	Emergency Power Unit (for use with remote LED headlights)	220/230/240
4726-277	Emergency Power Unit (for use with remote LED headlights)	277*
Remote Headlight Assemblies		
Model	LED Headlights	
4630	1*	
4631	2	
4632	3*	

*This configuration not yet UL listed.

MATERIALS

Housing, cover, internal bracketry: Type 304 Stainless steel
 All Hardware: Type 18-8 or 316 Stainless steel
 Lamp Housings: 300 Series Stainless steel
 Battery Enclosures: ABS
 Internal Wires: XLPE insulated stranded copper
 All Labels: Glare-free mylar (PET)

ELECTRICAL AND PHOTOMETRIC DATA (per lamp T_a = 25°C)

Input Voltage, V (typ)	Power (W)	Current (A)	Total Lumens	Maximum Candela	Efficacy lm/W	CRI	Color Temp. (Kelvin)	LED Emitting Color	Beam Angle ¹
14VDC	5.6 W	0.402A	432 lm	1153 cd	77	75	4800K~5200K	True White	25°

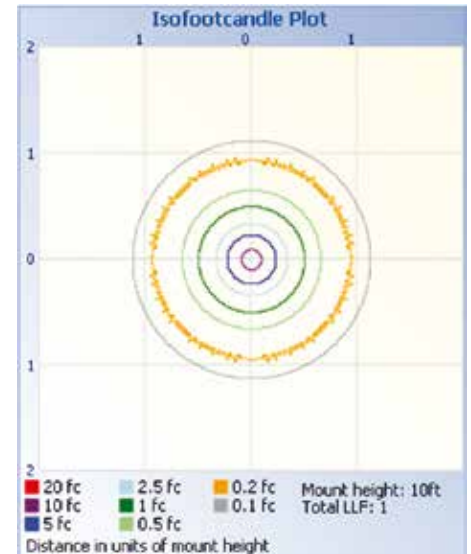
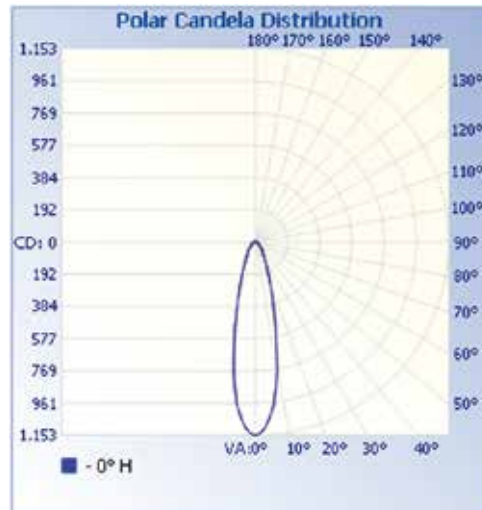
¹Full Beam Width at 50% Intensity

Flood Summary

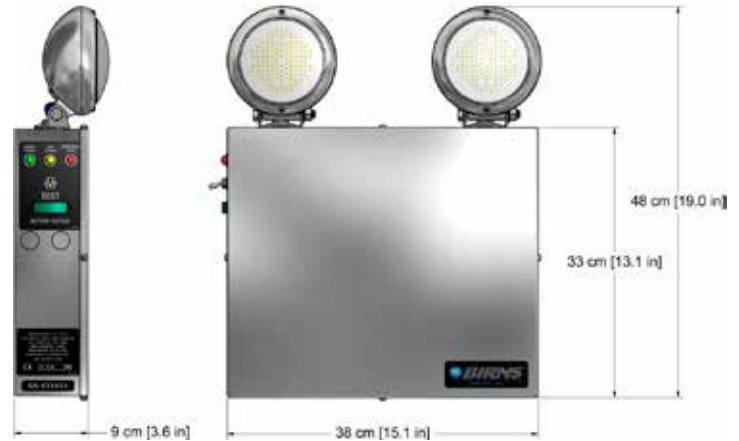
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	65%	280.9	57.4	57.4
Beam (50%):	28.3%	122.1	24.8	24.8
Total:	100%	431.9		

	Center Beam FC	Beam Width
1.7R	415.08 fc	0.7ft
3.3R	103.77 fc	1.5ft
5.0R	46.12 fc	2.2ft
6.7R	25.94 fc	2.9ft
8.3R	16.60 fc	3.7ft
10.0R	11.53 fc	4.4ft

■ Beam Spread: 24.8°



Specifications



Weight: 16.6kg (36.6 lbs.)



BIRNS' Quality Management System is
 ISO 9001:2008 Certified;
 NRC 10CFR50, App. B Compliant

AREVA Inc.
Chris Gallier
 Product Development Manager
 and Business Manager
Chris.Gallier@areva.com
 Tel: 434.832.3510 – Cell: 434.841.6047
us.aveva.com

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