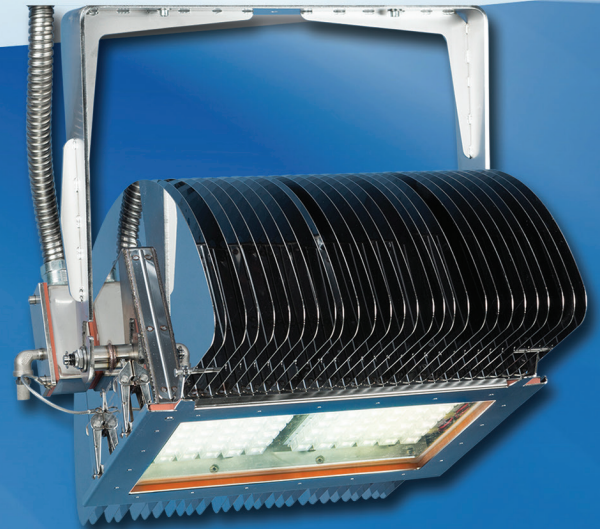


The BIRNS Quantum™ LED floodlight delivers powerful illumination for demanding high ceiling applications inside containment. With a 21,383 lumen output of 4,872K white light, it provides safer, more comfortable and efficient working conditions. It has a low 210W power draw and a 109,000 hour lamp life—along with high optical efficiency of 102 lumens per Watt—delivering huge energy savings over metal halide and tungsten halogen lamp options.



High Performance . . . Under Pressure®

The extended-life UL-listed BIRNS Quantum (model 4301) offers a wide range of input voltages, from 110 to 277VAC, in a robust all stainless steel exterior housing. This versatile system has a unique adjustable Universal mount for both ceiling and wall mount configurations, and captivated flex-top nuts that make it easy to securely lock the fixture in place. The system includes an exclusive breather system to withstand containment integrated leak testing at full pressure. Like all field-proven BIRNS nuclear lighting lines, the BIRNS Quantum is designed with safety and productivity in mind. All corners and edges are rounded for worker safety, and surfaces are smooth for easy cleaning and decontamination.



KEY FEATURES

- Powerful wide area lighting >21,000 lumens
- 109,000 hour lamp life; low 210W power draw
- UL listed
- Near daylight 4,872K color temperature
- Seismically qualified per IEEE-344
- Wide range of input voltage (110-277 VAC)
- Extremely robust 430 stainless steel housing
- High radiation tolerance 2.5×10^5 Gy (2.5×10^7 R)
- Exclusive breather system allows fixture to withstand containment integrated leak rate testing at full pressure
- Versatile installation options with Universal mount
- Containment-grade materials and construction
- Lexan window shield for complete glass captivation

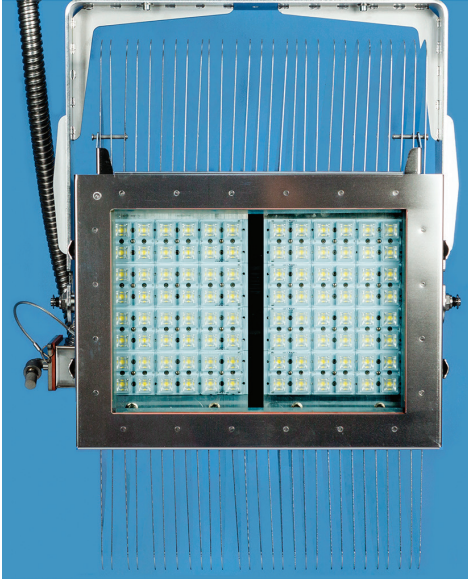
APPLICATIONS

This powerful, energy-efficient system is created for wide range illumination in reactor halls, fuel buildings, or anywhere an efficient, long-life floodlight is needed.



BIRNS' Quality Management System is
ISO 9001:2015 Certified;
NRC 10CFR50, App. B Compliant

**High Performance . . .
Under Pressure[®]**

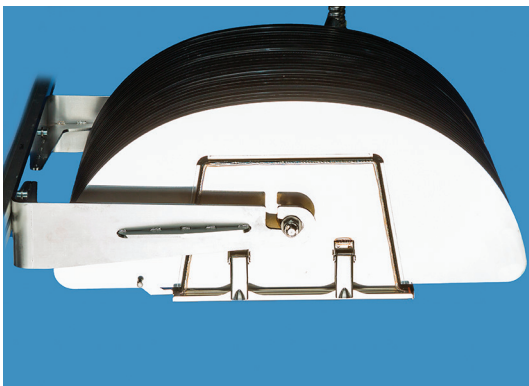
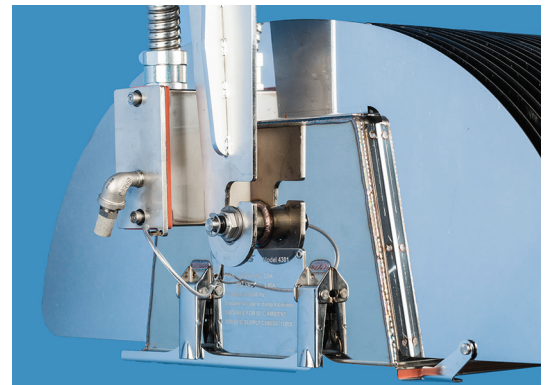


This powerful system emits 21,383 lumens, with an extended lamp life that can run 12 hours a day for 25 years before needing replacement.

The BIRNS Quantum has an optical efficiency of ~83% with a near daylight color temperature for comfortable, productive working conditions.

The fixture is engineered with a robust housing and features rounded edges, and all captivated parts for safety and efficiency of use. Its integral junction box is affixed to the housing, for seamless electrical connecting.

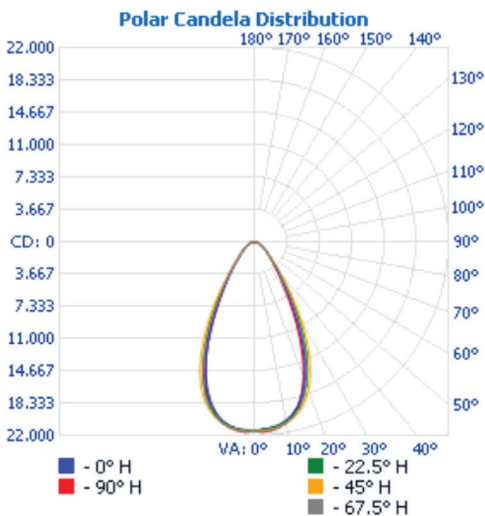
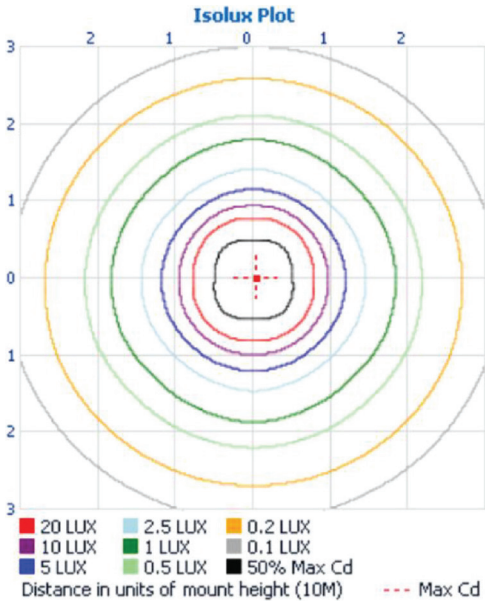
It features an exclusive breather system, so it withstands full pressure containment leak testing.



The BIRNS Quantum has an exclusive Universal mount, which allows a range of installation options on ceilings and walls. Its unique design keeps the light secure even if bolts are loosened. Plus, captivated flex-top nuts make it easy to lock the fixture in place.

High Performance . . .
Under Pressure®

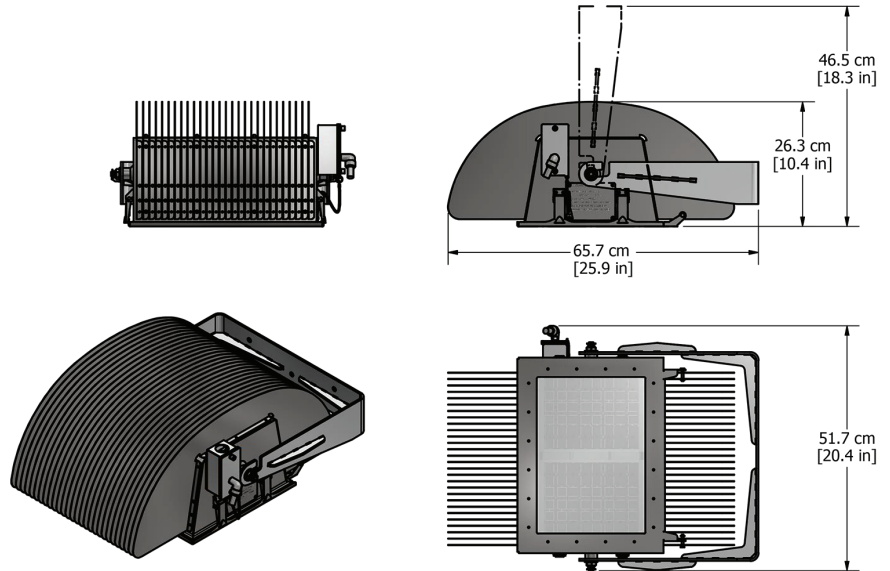
SPECIFICATIONS



Illuminance at a Distance

Distance	Center Beam LUX	Beam Width
4.0M	1,345.8 LUX	4.1 M 4.0 M
8.0M	336.5 LUX	8.3 M 8.0 M
12.0M	149.5 LUX	12.4 M 12.0 M
16.0M	84.1 LUX	16.5 M 16.0 M
20.0M	53.8 LUX	20.7 M 20.0 M

■ Vert. Spread: 54.7°
 ■ Horiz. Spread: 53.2°



ELECTRICAL

Mains Input (VAC):	110-277
Frequency:	50 Hz or 60 Hz
Power:	210W
Power Factor:	.96

LIGHTING/PHOTOMETRIC

Lamp Type:	High-power LED
Luminous Flux:	21,383 lm
Correlated Color Temperature:	4872 K
CRI (Ra):	77
LED Lumen Maintenance (L70):	109,000 hours
Lumens per Watt (LPW):	101.8
Optical Efficiency (%):	83
Operating Position:	Universal
Fixture Type:	Flood

MATERIALS

Housing:	430 Stainless
Mounting Hardware:	300-series stainless steel
Gaskets:	Silicone rubber
Window:	Tempered glass
Window Frame:	300-series stainless steel
Window Shield:	Polycarbonate

ENVIRONMENTAL & QUALIFICATIONS

Protection Level:	IP5X
Radiation Tolerance:	2.5 x 10 ⁵ Gy (2.5 x 10 ⁷ R)
Operating Temperature:	55°C
Certifications:	UL 1598, UL 8750 (UL file E469037)
Seismic Qualifications:	IEEE 696-2005 High Required Response Spectrum, ICC-ES AC156, IEEE-323-1974, IEEE-344-1987, IEEE-382-1996, and NRC Guides 1.89 and 1.100

MOUNTING

Mount Style:	Universal wall/ceiling bracket
Weight:	34.6 kg (76.2 lbs)

MODEL NUMBER

Model Number:	4301
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QUANTUM Data Sheet Rev. A