

TECHNICAL SPECIFICATIONS

BIRNS Reactor Hall Lighting Fixture Model 4301

Materials

| | |
|-----------------------------|--|
| All Housing and Yoke Parts: | 300-series stainless steel, electropolished to 20RA (Type III) |
| Lens: | Tempered borosilicate glass, steel-reinforced |
| Hardware: | 18-8 or 300-series stainless steel |
| Lamp socket: | Ceramic |
| Terminal block: | Ceramic |
| Optional Power Cable: | 14 AWG, 3-conductor fully annealed stranded copper per ASTM B-174. Available in these options: |
| Super-Vutron: | Chlorinated Polyethylene (CPE) jacket; Ethylene Propylene Diene Monomer (EPDM) color-coded insulation; yellow jacket |
| Aquaprene: | Polychloroprene jacket; Styrene rubber (STR) color-coded insulation; black jacket |

Physical

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|-------------------------------|--------------------|
| Width: | 286 mm (11.3 in) |
| Depth (front to back): | 296 mm (11.6 in) |
| Height (closed) with yoke: | 533 mm (21.0 in) |
| Height (closed) without yoke: | 229 mm (9.0 in) |
| Weight (fixture and yoke): | 12.7 kg (28.0 lbs) |
| Weight of channel clamp: | 1.82 kg (4.0 lb) |

Electrical

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|-------------------|------------------------------------|
| Current: | 8.3 amperes (120 VAC) |
| Input Voltage: | 115 +/- 15 VAC or VDC ¹ |
| Supply frequency: | 60 or 50 Hz |
| Lamp Power: | 1,000 watts |
| Power Factor: | 1.0 |

Lighting/Photometric

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|--------------------------------------|--|
| Lamp type: | Tungsten-halogen PAR 64, prong base GX16D |
| Bulb Designation: | PAR-64, 203 mm (8.0 inch) nominal diameter |
| Max. Overall Length: | 15.3 cm (6 in) |
| Filament type: | CC-6 |
| Start time: | <1 second to 95% of peak output |
| Restart time: | <1 second to 95% of peak output on power re-application after interruption of any duration |
| Operating Position: | Universal (i.e. any position) |
| Dimming range: | 0 to 100% |
| Rated Average ² Lifetime: | See Table A, Table of Available Lamps |

¹Substantive input voltage variation will affect lamp performance characteristics, including light output, lamp life, consumed power, color temperature, etc. Generally, higher voltage use will increase light output, power, and color temperature and will lessen lamp life, and lower voltages will have converse effects. However, the relationships are linear only near the rated input voltage value.

²The time after which 50% of test lamps were no longer operating.

Table A — Table of Available Lamps

| Lamp | V ³ | W ⁴ | Color ⁵ | Desc. | Beam ⁶ | CBCP ⁷ | Light Output ⁸ | Rated Life ⁹ |
|---------|----------------|----------------|--------------------|--------|-------------------|-------------------|---------------------------|-------------------------|
| 32D-005 | 120 | 1000 | 3,200 | Narrow | 8 x 20 | 135,000 | 16,000 | 4,000 |
| 32D-006 | 120 | 1000 | 3,200 | Medium | 10 x 30 | 82,000 | 16,000 | 4,000 |
| 32D-007 | 120 | 1000 | 3,200 | Wide | 20 x 60 | 23,000 | 16,000 | 4,000 |

³This is the nominal input voltage of the lamp, expressed in volts (RMS).

⁴This is the nominal power consumption rating of the lamp, expressed in watts.

⁵This is the “Correlated Color Temperature”, expressed in degrees Kelvin (K).

⁶This is the Beam Angle, expressed in degrees and measured to 50% of maximum candlepower, in accordance with ANSI C78.389, “Method for the Classification of the Beam Patterns of Reflector Lamps”. For beam angles less than 13°, beam angles are rounded to the nearest whole number. For beam angles 13° and greater, beam angles are rounded to the nearest 5°. For example, a lamp with a nominal beam angle of 13° is classified at 15°.

⁷This is the Center Beam Candle Power, expressed in Candela units.

⁸This is the total light output of the lamp, expressed in lumens. Although there are conflicting light output claims by different lamp manufacturers (General Electric, for example, claims 19,400 lumens), BIRNS has had samples tested by an independent test laboratory, and has determined that these lamps consistently produce 16,000 lumens.

⁹These ratings, expressed in hours, are determined by the lamp manufacturer based on laboratory tests under controlled conditions. Your own field results may vary.