

## 64-21 Midmark/Ritter 354 Minor Surgery Spotlight (Project 01-23) (1/02)

The Midmark/Ritter 354 Minor Surgery Spotlight is designed to provide an intense light source for surgical procedures. It is advertised as offering counterbalanced, drift-free positioning that requires only two and a half pounds of force to position. The surgical spotlight features an adjustable (from three to ten inches) light-pattern diameter at a 36-inch focal length. It contains a fan-cooled, 150-watt halogen lamp that is described as having a color temperature of 4200 Kelvin and producing an illumination of 43,000 lux at a 36-inch focal length. The light is said to have earned CE, Canadian, and Underwriters Laboratory certification and is compatible with a 120 VAC, 60 Hz electrical supply. It is available for both single- and dual-ceiling mounting to eight- and nine-foot ceilings and is also available as a mobile, floor-mounted light. DIS evaluated only the mobile configuration.



### Manufacturer:

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**Suggested Retail Price:** \$2,137.00

**Government Price:** \$1,206.66

### ADVANTAGES:

- + Provides excellent illumination for surgical procedures.
- + Esthetic, compact design.
- + Bulb is easy to remove and replace.
- + Controls are easy to reach.
- + Light intensity and light pattern diameter can be adjusted.
- + Integral infrared filter reduces radiant heat production and limits infrared emission.
- + Meets International Standard 9680 requirements for radiant heat production.
- + Meets International Standard 9680 requirements for shadow production.
- + Meets all electrical safety requirements.
- + One-year warranty (except for the bulb).
- + Installation and operation manual is well organized and complete.
- + Cost is comparable to that of dental operatory lights presently in use.

### DISADVANTAGES:

- Light intensity at brightest illumination levels may cause eye fatigue during long procedures.
- Instructions that caution the spotlight is "not for use in oxygen-rich atmospheres" is ambiguous.
- Mobile configuration is difficult to maneuver in traditional dental treatment rooms.

### SUMMARY AND CONCLUSIONS:

The Midmark/Ritter 354 Minor Surgery Spotlight is a high-intensity light designed to provide illumination for oral surgery procedures. The spotlight was found to produce an illuminance level approximately four times the level usually observed with dental operatory lights. Furthermore, the well-focused and sharp

light pattern is adjustable from a 3- to 10-inch diameter. The spotlight met electrical safety requirements as well as most of the items from the Medical Procurement Item Description #2 for dental operatory lights. The surgical spotlight also met international standards for radiant heat production and shadow pattern. Oral surgeons found the light to be compact, esthetic, and stable. In addition, they noted that it produced illuminance that was vastly superior to that usually produced by dental operatory lights. The evaluators unanimously rated the surgical spotlight as above average and the USAF Surgeon General's Consultant for Oral and Maxillofacial Surgery thought that the light should be considered for all oral surgery treatment areas. The cost of the ceiling-mounted unit is comparable to that of the type of ceiling-mounted dental operatory light commonly used in USAF oral surgery clinics. The **Midmark/Ritter 354 Minor Surgery Spotlight** is rated **Recommended** for use by the federal dental services.