

MEDMASTER™ TROFFER

Luminaires for MRI/Imaging Suites

MRIT SERIES

PRODUCT FEATURES:

- » Recessed mount – Grid; 2'x2', 2'x4'
- » Non-ferrous construction safe for sensitive MRI equipment
- » High-output, high-CRI LED lamp options
- » NSF2 rating for ease of wipe-down cleaning



MRIT22

MRIT24

PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

SPECIFICATIONS

HOUSING/REFLECTOR: Fabricated aluminum construction. Matte white powder coat finish with five-stage pre-treatment.

LENS: Extruded frosted acrylic.

ELECTRICAL: Serviceable mid-power LED array. Available 3000K, 3500K, 4000K and 5000K color temperatures with maximum 3-step MacAdam variation allowance. Minimum 80 CRI standard with optional minimum 90 CRI available. Luminaire input 24VDC from remote-located 120-277VAC, high-power-factor power supply with EMI filter. Dimming line EMI filter required if utilizing dimming function. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities. See below for ordering information.

INSTALLATION: Designed 1" T-grid ceilings. All power and signal wiring must be in completely grounded aluminum conduit. Light engine and internal driver are replaceable post-installation. MRI room EMI filters required (supplied by others).

WARRANTY: Limited five (5) year LED warranty.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For additional photometric data, please go to www.kenall.com.

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Damp Location and recessed type IC installations. NSF2 Splash/Non-Food Zone.



ORDERING INFORMATION (Ex: MRIT24-60L-40K8-DCC-24V)

Model	Lamp Power	Lamp Color	Driver Type		Voltage	Options
			DIM1	24V		
Model		Lamp Color			Voltage	
MRIT22 2'x2'		30K8 3000K / 80 CRI min.			24V 24VDC Input	
MRIT24 2'x4'		30K9 3000K / 90 CRI min.				
		35K8 3500K / 80 CRI min.			Options	
Lamp Power		35K9 3500K / 90 CRI min.			FS Fuse & Holder	
2x2		40K8 4000K / 80 CRI min.				
23L 23 Watt White LED		40K9 4000K / 90 CRI min.				
45L 45 Watt White LED						
		Driver Type				
2x4		DIM1 0-10V Dimming to 1%				
45L 45 Watt White LED						
60L 60 Watt White LED						

ACCESSORIES ORDERED SEPARATELY

- MRIPSF-480 Remote Power Supply with EMI Filter ([click here](#) for specifications)
- MRIFD-1A Dimming Filter (one per dimming circuit, [click here](#) for specifications)

MRI LUMINAIRE CONNECTION PER POWER SUPPLY

Luminaire Number	Lamp Power	Amps/ Luminaire	Max Luminaires/ Power
MRIT22	23L	1.24	15
MRIT22	45L	2.58	7
MRIT24	45L	2.58	7
MRIT24	60L	3.63	5



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For additional photometry, go to www.kenall.com

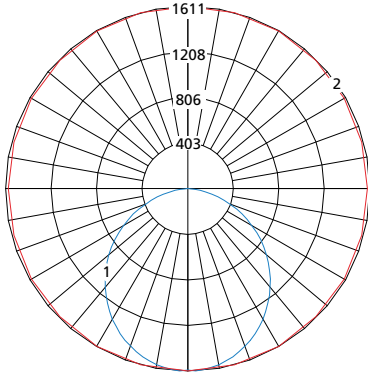
MRIT SERIES

PERFORMANCE

Model	Lamp Power	Initial Delivered Lumens, By Lamp Color						Efficacy (lm/W)	Input Power (W)	Drive Current (mA)	Estd. L70 LED Life (hrs)
		30K8	30K9	35K8	35K9	40K8	40K9				
MRIT22	23L	2,426	2,236	2,501	2,293	2,586	2,333	88 - 101	26	100	100,000
	45L	4,620	4,257	4,763	4,366	4,926	4,444	84 - 97	51	100	80,000
MRIT24	45L	5,316	4,898	5,480	5,023	5,667	5,113	90 - 105	54	100	100,000
	60L	7,247	6,678	7,471	6,849	7,726	6,970	90 - 104	74	71	80,000

Information subject to change without notice. Visit www.kenall.com for IES files and additional information.

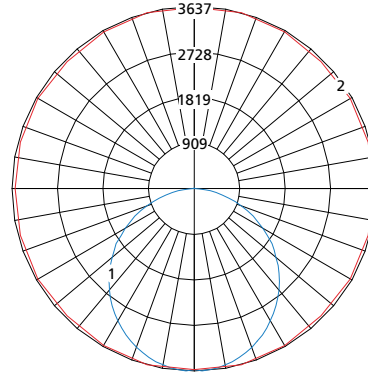
Model: MRIT22-45L-40K8-DIM1-24V



Maximum Candela = 1611 Located At Horizontal Angle = 90, Vertical Angle = 2.5

- 1 - Vertical Plane Through Horizontal Angles (90-270) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MRIT24-60L-40K8-DIM1-24V

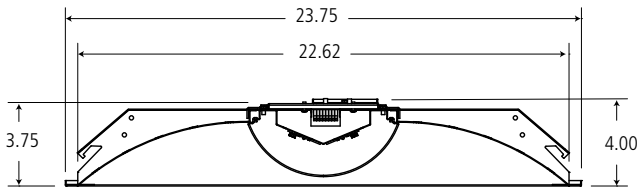


Maximum Candela = 2526 Located At Horizontal Angle = 75, Vertical Angle = 2.5

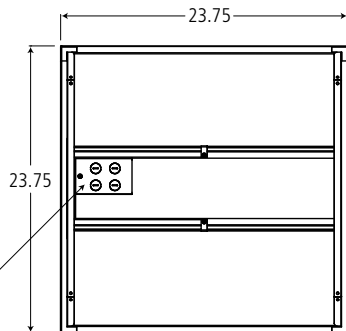
- 1 - Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

DIMENSIONAL DATA

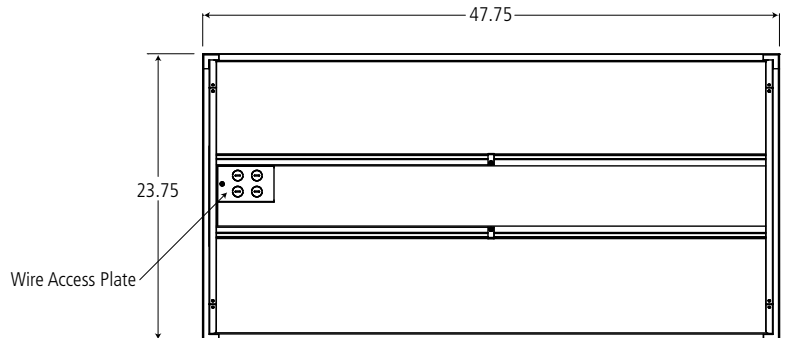
CROSS SECTION



MT22 TOP VIEW



MT24 TOP VIEW



IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED. DISCONNECT POWER TO ALL CIRCUITS BEFORE WIRING FIXTURE. INSTALL IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODES. DO NOT CONNECT TO AN UNGROUNDED SUPPLY. READ ALL FIXTURE MARKINGS AND LABELS TO ENSURE CORRECT INSTALLATION OF FIXTURE. SUPPLEMENTAL INSTRUCTIONS MAY BE LOCATED ON THE FIXTURE, IN ADDITION TO THIS INSTRUCTION SHEET, REGARDING ORIENTATION, OR MOUNTING RESTRICTIONS.

SAVE THESE INSTRUCTIONS

FIXTURE INSTALLATION

Install in compliance with the National Electric Code, any applicable local codes and any specific instructions given on the luminaire labels. If installing in conjunction with any additional options and/or accessories, also refer to the respective instruction sheets. For installation only by a qualified electrician.

NOTE: To maintain the ratings and approvals noted on the fixture nameplate, any fittings or mounting hardware supplied with this fixture, must be used with this fixture. Wiring from power supply to fixture must be in a rigid aluminum conduit with aluminum fittings. Access to the back side of the fixture is required after installation, therefore recessed grid mounting only.

RECESSED GRID FIXTURES

1. Fixture is designed for use with 1.00"/1.50" T bar grid systems with vertical grid T thickness' of less than 1/4" with a maximum height of 2". Grid systems can be installed with standard 24 or 48 inch center line spacing of grid.
2. Fixture housing lays into grid.

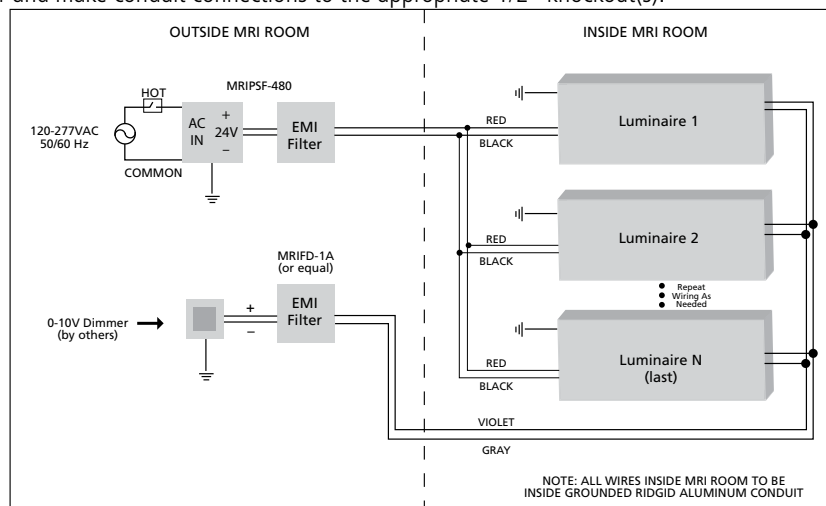
ELECTRICAL CONNECTION

1. Mount and wire the MRIPSF-480 external power supply system per the procedures provided in the supplementary instruction sheet. Run conduit and DC wiring to an MRI room EMI filter. Make sure wiring is completely enclosed in grounded aluminum conduit. Any gaps, regardless of size, must be closed or wrapped with supplied copper foil tape.
2. If a 0-10V dimming circuit is to be connected, install at this time. The 0-10V dimmer must be installed outside the shielded MRI environment with the Kenall MRIFD-1A dimming line filter (or equivalent) installed in accordance with the supplied installation instructions. Kenall recommends the Lutron Diva (DVSTV) and Lutron Nova T (NTSTV-DV) series to ensure the full range of dimming can be achieved.

WARNING: ALL DC POWER AND DIMMING SIGNAL WIRING MUST BE RUN THROUGH SEPARATE EMI FILTERS.

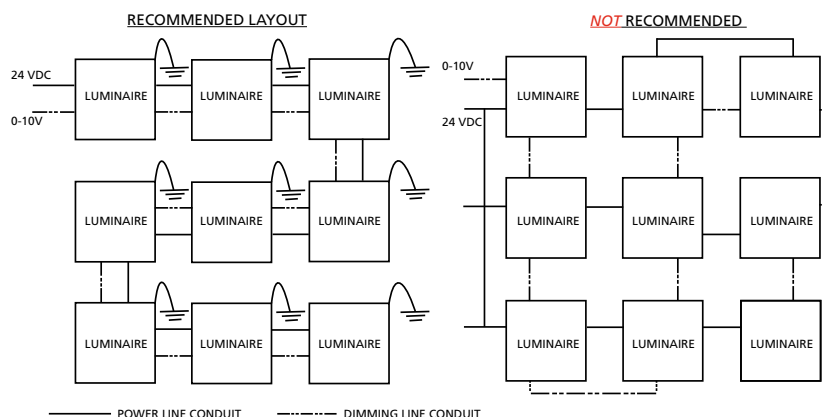
3. Remove junction box cover and make conduit connections to the appropriate 1/2" knockout(s).

Figure 1



4. Run DC wiring, equal in size and temperature rating to the filter input wiring, between the filter output cables and the first luminaire within the shielded room. Follow recommended wiring layout described within Figure 2. All wiring must be within completely-enclosed, grounded conduit suitable for an MRI environment. Any gaps, regardless of size, must be closed or wrapped in copper foil tape. Special attention should be paid to the wiring entry point into the shielded space. Class 1 wiring methods are required.
5. Run the dimming signal wiring, equal in specification to the filter input wiring, between the filter output cables and the first luminaire within the shielded room. Maintain polarity between input and output sides of the filter and follow wiring recommendation in Figure 2. All wiring must be within completely enclosed, grounded conduit suitable for an MRI environment. Any gaps, regardless of size, must be closed or wrapped in copper foil tape. Special attention should be paid to the wiring entry point into the shielded space. Cap gray and violet leads at luminaire(s) if dimming function is not implemented.
6. Using at least an 18 AWG wire, each fixture must be grounded to the shielded ceiling.
7. Make DC supply and (optional) dimmer control connections within each luminaire.
8. Replace junction box cover and seal both covers using supplied copper foil tape.

Figure 2



CUSTOMER SERVICE

For technical assistance, call 1-800-4KENALL (1-800-453-6255). For additional instructions, go to www.kenall.com

WARRANTY

For warranty information visit www.kenall.com/Resources/Certified-Performance-Warranties



CUSTOMER ACKNOWLEDGEMENT

Customer acknowledges that these Installation Instructions are part of the product specification, and that the attached Installation Registration Form will be provided to the installer to sign and return to Kenall after installation is complete. This signed release is required by Kenall before order will be released into production.

Signature: _____

Date: _____

Print Name: _____

Company Name: _____

IMPORTANT SAFEGUARDS

To prevent MRI machine interference, all DC power and dimming signal wiring must be completely shielded within grounded aluminum conduit and a suitable MRI room EMI filter must be installed on each line.

When using electrical equipment, basic safety precautions should always be followed, including the following:
THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

SAVE THESE INSTRUCTIONS

-
- Disconnect power to all circuits before wiring system.
 - Install in accordance with all national, state, and local codes.
 - Do not connect to an ungrounded supply.
 - Wiring connections must be made internal to the enclosure.
 - Failure to install unit on a mechanically-sound surface may result in personal injury, physical damage, or potential fire hazard.
 - Use installation procedures appropriate for an environment involving MRI and sensitive electronic equipment.
 - Read all markings and labels to ensure correct installation of the power supply. Supplemental instructions may be located on the enclosure, in addition to this instruction sheet, regarding orientation, or mounting restrictions.
 - Read instructions provided with the MedMaster™ MRIPSF-480 remote power supply and DC filter system for proper installation and electrical connection to the lighting system.



www.kenall.com

P: 800-4-Kenall

F: 262-891-9701

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This product may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details.
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CUSTOMER ACKNOWLEDGEMENT MRI INSTALLATION REGISTRATION FORM

Customer acknowledges that the attached Installation Registration Form will be provided to the installer to sign and return to Kenall after installation is complete. For warranty purposes, please fill out this form and return to Kenall by fax at (262) 891-9701.

I certify that the lighting installation for the listed MRI suite location is completed per the provided installation instructions and to the best of my abilities.

Please check off items to denote status:

- Installation instruction sheets for MRIPSF-480 remote power supply and DC filter system and individual luminaire(s) read and followed.
- MRIPSF-480 power supply and EMI filters are located outside the shielded enclosure.
- All DC supply wiring is completely enclosed within grounded aluminum conduit. Installation has no ungrounded/unshielded portions of conduit or openings of any size or shape.
- All dimming signal wiring is completely enclosed within grounded aluminum conduit. Installation has no ungrounded/unshielded portions of conduit or openings of any size or shape. Check here if dimming is not applicable:
- MRI Room EMI filters for the 24VDC supply and dimming signal are of the type intended for MRI suites and are sized to the electrical load.
- DC supply power and dimming signal are NOT running through the same EMI filter. Check here if dimming is not applicable:
- Lighting system fully tested (including dimming operation, if applicable) while MRI machine is in idle and scan operation mode.

If any of these steps cannot be completed or you need technical assistance, please contact Kenall Technical Support at 1-800-4KENALL (1-800-453-6255).

Electrical Contractor

Name: _____

City/State: _____

Phone: _____

Installation Date: _____

Installation Site

Name: _____

City/State: _____

FAX FORM TO (262) 891-9701

(Do not write below line)

Kenall Received By: _____ Received Date: _____

