

## MINUS FOUR Minimal Recessed

### Quick Facts

- Class 2 Fixture, Remote Powered up to 45m (150ft) max
- Minimal fixture aperture - 55mm (2 - 3/16")
- 19mm (3/4") recess depth required
- 12W Cree LED
- Up to 1000lm from source (IES files available upon request)
- Available in Warm White (2700K) and Soft White (3000K)
- Color Rendering Index  $\geq 90$
- 2-step SDCM ellipse for accurate color consistency between fixtures
- Full dimming range via remote power supply
- Suitable for installation in drywall, wood, and stone ceilings
- Suitable for dry and damp locations
- Type IC Rated, Plenum Rated, Airtight Rated
- Patented Product
- Engineered and made in Germany



### Description

The MINUS FOUR by Apure features a powerful reflector with 3 beam spreads, to accommodate the specialized requirements of architects and lighting designers. While in-keeping with the advanced technology and minimal depth of the entire MINUS Series, the visible 55 mm (2 3/16") Louver encompasses lenses and glare preventers, which produce uniquely flexible and extremely shallow, yet sophisticated, downlight illumination.

### Construction

- Extruded aluminum fixture body, featuring Apure's signature louver designed by Studio F·A·Porsche
- 50,000 hours LED lifetime
- Approximate fixture weight: 720g (1.58lbs)
- Operating Temperature: 10°C to 50°C

### Fixture Size

- Visible Aperture: 55mm x 55mm (2 - 3/16" x 2 - 3/16")
- Recess Depth: 19mm (3/4")
- Heat Sink: 120mm x 120mm (4 - 3/4" x 4 - 3/4")

### Light Output

- High performance Cree LED, available in various color temperatures
- 1000lm source light output
- 2-step SDCM ellipse
- Color rendering index (CRI) min. 90
- Integral microprocessor controlled thermal protection

### Electrical Specifications

24V DC Input (Class 2, 12W Power Consumption)

- 96W 24V DC Power Supply Required (powers up to 4 fixtures)
- Magnetic Low Voltage (MLV) Dimming (or) 3-Wire Lutron Hi-Lume dimming protocols
- Recommended wire, min. 16 AWG plenum rated (CMP, when required) up to 150ft from remote transformer

12V DC Input (Class 2, 12W Power Consumption)

- Remote 1000mA Constant Current Driver Required
- 0-10V 0.1% Dimming (or) 1-10V/Push/DALI (or) Phase Dimming drivers available
- Recommended wire, min. 16 AWG plenum rated (CMP, when required) up to 82ft from remote transformer

### Installation Types

- Drywall installation for new construction and retrofit installations possible with the Universal Drywall Bracket, available for various drywall thicknesses.
- Custom installations for wood, metal and stone ceilings. Requires shop drawings available per request by Apure.
- The Minus series is not suitable for installation within steam rooms or saunas!

### Listings

- UL Listed, CE Conform, Type IC Rated, Plenum Rated, Airtight Rated
- Suitable for dry and damp locations

### Resources / Installation Videos

Scan QR Code or visit at [apurelighting.com/resources/](http://apurelighting.com/resources/)



Resources



Videos



## ORDERING INFORMATION

#### SERIES

AM - Minus Series

#### MODEL

4 - Minus Four

#### TYPE

1 - LED

#### ORIENTATION

F - Fixed

#### TEMPERATURE (CCT)

- 27 - Warm White (2700K)  
 30 - Soft White (3000K)

#### COLOR RENDERING INDEX

90 - ≥90

#### OPTICS (DEGREE)

- S - Spot (14°)  
 N - Flood (32°)  
 F - Wide Flood (55°)

#### DIMMING PROTOCOL

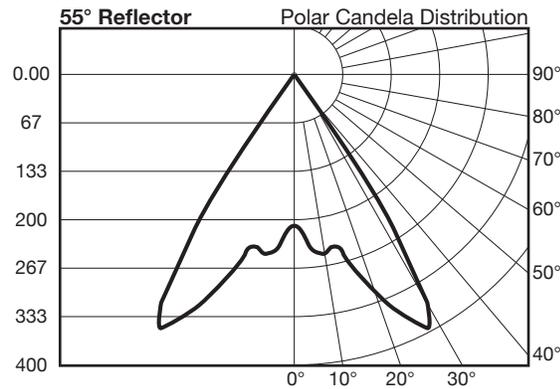
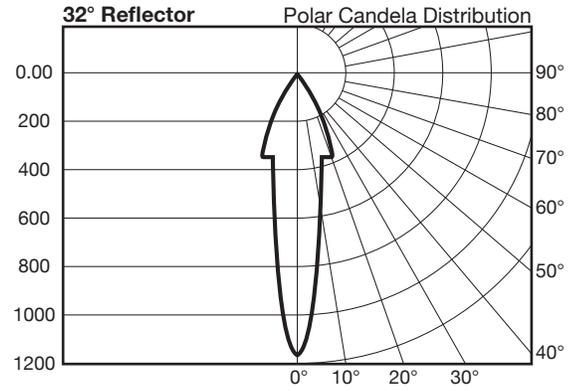
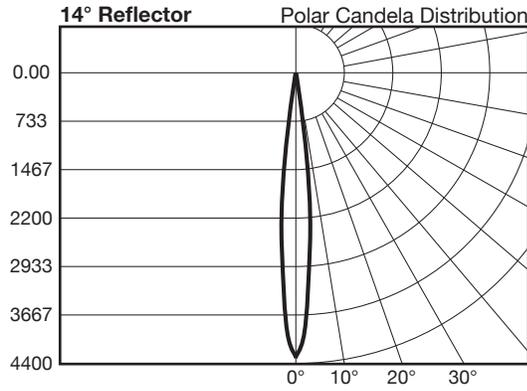
- A - Magnetic Low Voltage (MLV) (24V)\*  
 L - Lutron 3-Wire Hi-Lume 0.1% (24V)\*  
 EU - 0-10V / DALI / Phase Dim (12V)\*

\*remote powered fixture, power supply required

#### ORDERING EXAMPLE

AM41F3090FA

## LED Photometrics



### Drywall Accessories

Universal Drywall Bracket  
 Universal Drywall Bracket  
 Universal Drywall Bracket - (US Standard)

**Part Number**  
 AM4BRKU10  
 AM4BRKU12  
 AM4BRKU15

**Thickness**  
 10mm  
 12.5mm  
 15mm

**Requirement**  
 Drywall Installations  
 Drywall Installations  
 Drywall Installations

### Remote Power Supply for MLV Variant - [A]

Magnitude Power Supply (96W 24VDC)  
 Lumiron Power Supply (96W 24VDC)

**Part Number**  
 AA3096M  
 AA3100L

**Input Voltage**  
 120Vac  
 120Vac

**Listings**  
 ETL  
 ETL

### Remote Power Supply for Lutron Variant - [L]

Lutron 3-wire Hi-Lume Premier Eco Driver  
 Lutron 3-wire HomeWorks Digital Control

**Part Number**  
 L3D0-96W24V-U  
 LHD0-96W24V-U

**Input Voltage**  
 120-277V  
 120-277V

**Listings**  
 UL  
 UL

### Remote Power Supply for EU Variant - [EU]

Magnitude AFLEX Power Supply (1000mA 60W)\*  
 Magnitude AFLEX JBZN Series (1000mA 60W)\*\*  
 Apure Phase Dimmable (1000mA 29W)  
 Apure Phase Dimmable (1000mA 30-65W)  
 Apure DALI, Push, 1-10V (1000mA 30-65W)\*

**Part Number**  
 AA3010M  
 AA3010MJBXX  
 AA32202DEU  
 AA32205DEU  
 AA3DALIDEU

**Input Voltage**  
 120-277Vac  
 120-277Vac  
 220-240Vac  
 220-240Vac  
 110-240Vac

**Listings**  
 UL Listed  
 UL Listed  
 CE  
 CE  
 CE

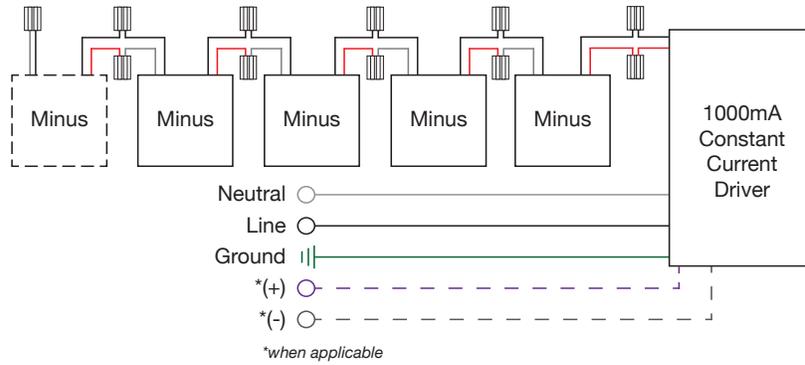
\*Driver enclosure required where applicable.

\*\*Refer to reseller for more information.

### Custom Installation Types

- The universal bracket (AM4BRKUXX) is intended only for drywall installations.
- System ceilings, stone, wood and metal ceiling integrations are accomplished through custom fabrication by others. Please note, not all materials are suitable for installation. However, Apure will make every effort to accommodate custom integrations. Please contact your authorized Minus reseller for more information regarding custom ceiling integrations.
- Fixtures must have a minimum clearance of 12 inches (30cm) **below or horizontally** from the light source at all times!
- Observe and follow all local and national installation codes for all installation types.
- Test and make sure that all fixtures are working properly before any mudding, painting or finishing occurs!
- Read and adhere to all instructions supplied with each power supply and fixture.
- Follow all instructions supplied by power supply / driver manufacturer!

### Wiring Diagram for Constant Current Minus products - [EU]



**Fixture Leads In**  
 Red with Red (+)  
 Black with Black (-)

**Fixture Leads Out**  
 Black with Black  
 White with Red

*Warning: failure to wire correctly may cause fixture to fail.*

*Note: The white and black cables of the last fixture in the series must be bridged together!*

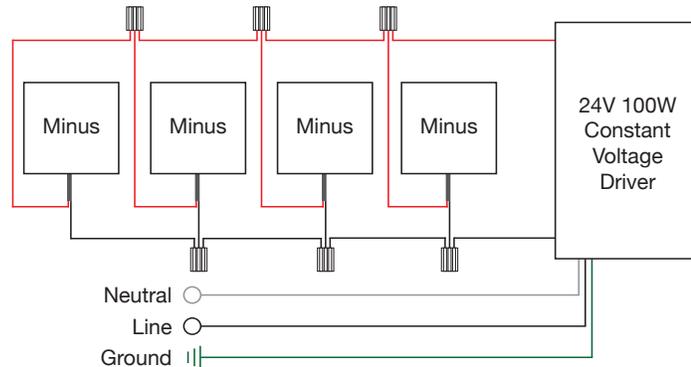
#### Additional Considerations

The above wiring diagram applies only to Constant Current Minus products with product ordering codes ending with "EU". The diagram above shows the typical wiring schematic, however the total number of fixtures per driver is driver specific.

- |   |           |                    |
|---|-----------|--------------------|
| • Magnitude AFLEX Power Supply (1000mA 60W) | 1-4 Minus | 16AWG - 82ft (25m) |
| • Apure Phase Dimmable (1000mA 29W)         | 1-2 Minus | 16AWG - 82ft (25m) |
| • Apure Phase Dimmable (1000mA 30-65W)      | 3-5 Minus | 16AWG - 82ft (25m) |
| • Apure DALI, Push, 1-10V (1000mA 30-65W)   | 1-4 Minus | 16AWG - 82ft (25m) |

**WARNING:** The power supply must operate within the range of minimum to maximum fixtures. Operation with less or more fixtures from the specified amount will result in damage to the power supply and/or lighting fixture. Incorrectly wiring the Constant Current lighting fixture may cause luminaire to fail.

### Wiring Diagram for 24V Minus Products - [A] MLV or [L] Lutron



**Fixture Leads**  
 Red (+)  
 Black (-)

#### Additional Considerations

The above wiring diagram applies only to 24V Minus products with product ordering codes ending with "A" or "L". The diagram above shows the typical wiring schematic, however the total number of fixtures per driver is driver specific.

- |  |           |                      |
|--|-----------|----------------------|
| • Magnitude Constant Voltage Driver (96W 24VDC)        | 1-4 Minus | ≤16AWG - 150ft (45m) |
| • Lutron Hi-Lume Constant Voltage Driver (96W 24VDC)   | 1-4 Minus | ≤16AWG - 150ft (45m) |
| • Lutron HomeWorks Constant Voltage Driver (96W 24VDC) | 1-4 Minus | ≤16AWG - 150ft (45m) |

**WARNING:** The power supply must operate within the range of minimum to maximum fixtures. Operation with less or more fixtures from the specified amount will result in damage to the power supply and/or lighting fixture.