**PHILIPS Lighting**

# Your everyday LEDspot MR16

## Essential LEDspot MR16

Essential LEDspots MR16 are compatible with most existing fixtures with a GU5.3 socket and are designed as a retrofit replacement for halogen spots. Essential LEDspots MR16 deliver significant energy savings and minimize initial investment.

**Benefits**
- Up to 90% energy saving compared with traditional halogen lamps
- Lower maintenance costs
- Low initial investment

**Features**
- Easy retrofit
- Lifetime up to 15,000 hours
- Non-dimmable
- UV- and IR-free light

**Application**
- Hotels, restaurants, bars, cafés, shops
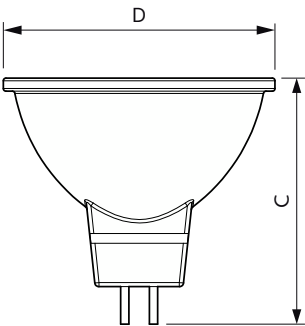- Lobbies, corridors, stairwells, washrooms, reception areas

# Essential LEDspot MR16

## Versions



**LEDspot Essential 50W GU5.3**
**MR16 827 24D ND**

## Dimensional drawing



| Product | D | C |
|---|---|---|
| ESS LED MR16 3-35W 36D 830 SO 100-240V | 50.5 mm | 46.5 mm |
| ESS LED MR16 4.5-50W 36D 830 SO 100-240V | 50.5 mm | 46.5 mm |
| ESS LED MR16 4.5-50W 36D 865 SO 100-240V | 50.5 mm | 46.5 mm |
| Essential LED 5-50W 2700K MR16 24D | 50 mm | 46 mm |
| Essential LED 5-50W 6500K MR16 24D | 50 mm | 46 mm |

### General Information

| | |
|---|---|
| Cap-Base | GU5.3 |
| Switching Cycle | 50,000 |
| Nominal lifetime | 15,000 hour(s) |

### Light Technical

| | |
|---|---|
| Color rendering index (CRI) | 80 |
| LLMF At End Of Nominal Lifetime (Nom) | 70 % |

### Operating and Electrical

| | |
|---|---|
| Starting Time (Nom) | 0.5 s |

### Controls and Dimming

| | |
|---|---|
| Dimmable | No |

### Mechanical and Housing

| | |
|---|---|
| Bulb Shape | MR16 |

### General Information

| Order Code | Full Product Name | Rated Lifetime (Hours) |
|---|---|---|
| 929001240108 | Essential LED 5-50W 2700K MR16 24D | 15,000 hour(s) |
| 929001240208 | Essential LED 5-50W 6500K MR16 24D | 15,000 hour(s) |
| 929001874008 | ESS LED MR16 4.5-50W 36D 830 SO 100-240V | – |
| 929001874108 | ESS LED MR16 4.5-50W 36D 865 SO 100-240V | – |
| 929001874208 | ESS LED MR16 3-35W 36D 830 SO 100-240V | – |

## Light Technical (1/2)

# Essential LEDspot MR16

| Order Code | Full Product Name | Beam Angle (Nom) | Correlated Color Temperature (Nom) | Color Code | Luminous Flux |
|---|---|---|---|---|---|
| 929001240108 | Essential LED 5-50W 2700K MR16 24D | 24 degree(s) | 2700 K | 827 | 400 lm |
| 929001240208 | Essential LED 5-50W 6500K MR16 24D | 24 degree(s) | 6500 K | 865 | 435 lm |
| 929001874008 | ESS LED MR16 4.5-50W 36D 830 SO 100-240V | 36 degree(s) | 3000 K | 830 | 400 lm |

| Order Code | Full Product Name | Beam Angle (Nom) | Correlated Color Temperature (Nom) | Color Code | Luminous Flux |
|---|---|---|---|---|---|
| 929001874108 | ESS LED MR16 4.5-50W 36D 865 SO 100-240V | 36 degree(s) | 6500 K | 865 | 400 lm |
| 929001874208 | ESS LED MR16 3-35W 36D 830 SO 100-240V | 36 degree(s) | 3000 K | 830 | 230 lm |

## Light Technical (2/2)

| Order Code | Full Product Name | Luminous Intensity (Nom) |
|---|---|---|
| 929001240108 | Essential LED 5-50W 2700K MR16 24D | 1,700 cd |
| 929001240208 | Essential LED 5-50W 6500K MR16 24D | 1,700 cd |
| 929001874008 | ESS LED MR16 4.5-50W 36D 830 SO 100-240V | 700 cd |

| Order Code | Full Product Name | Luminous Intensity (Nom) |
|---|---|---|
| 929001874108 | ESS LED MR16 4.5-50W 36D 865 SO 100-240V | 700 cd |
| 929001874208 | ESS LED MR16 3-35W 36D 830 SO 100-240V | 550 cd |

## Operating and Electrical

| Order Code | Full Product Name | Input Frequency | Line Frequency | Power Consumption | Wattage Equivalent |
|---|---|---|---|---|---|
| 929001240108 | Essential LED 5-50W 2700K MR16 24D | – Hz | – Hz | 5 W | 50 W |
| 929001240208 | Essential LED 5-50W 6500K MR16 24D | – Hz | – Hz | 5 W | 50 W |
| 929001874008 | ESS LED MR16 4.5-50W 36D | 50 to 60 Hz | 50 to 60 Hz | 4.5 W | 50 W |

| Order Code | Full Product Name | Input Frequency | Line Frequency | Power Consumption | Wattage Equivalent |
|---|---|---|---|---|---|
|  | 830 SO 100-240V |  |  |  |  |
| 929001874108 | ESS LED MR16 4.5-50W 36D 865 SO 100-240V | 50 to 60 Hz | 50 to 60 Hz | 4.5 W | 50 W |
| 929001874208 | ESS LED MR16 3-35W 36D 830 SO 100-240V | 50 to 60 Hz | 50 to 60 Hz | 3 W | 35 W |

## Temperature

| Order Code | Full Product Name | T-Case Maximum (Nom) |
|---|---|---|
| 929001240108 | Essential LED 5-50W 2700K MR16 24D | 76 ℃ |
| 929001240208 | Essential LED 5-50W 6500K MR16 24D | 76 ℃ |
| 929001874008 | ESS LED MR16 4.5-50W 36D 830 SO 100-240V | 65 ℃ |

| Order Code | Full Product Name | T-Case Maximum (Nom) |
|---|---|---|
| 929001874108 | ESS LED MR16 4.5-50W 36D 865 SO 100-240V | 65 ℃ |
| 929001874208 | ESS LED MR16 3-35W 36D 830 SO 100-240V | 55 ℃ |

## Approval and Application

| Order Code | Full Product Name | Energy Consumption kWh/1000 h |
|---|---|---|
| 929001240108 | Essential LED 5-50W 2700K MR16 24D | – kWh |

| Order Code | Full Product Name | Energy Consumption kWh/1000 h |
|---|---|---|
| 929001240208 | Essential LED 5-50W 6500K MR16 24D | – kWh |

# Essential LEDspot MR16

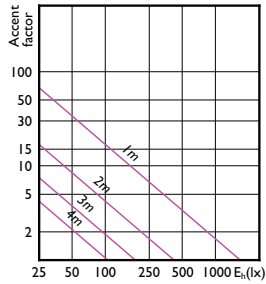| Order Code | Full Product Name | Energy Consumption kWh/1000 h |
|---|---|---|
| 929001874008 | ESS LED MR16 4.5-50W 36D 830 SO 100-240V | 4.5 kWh |
| 929001874108 | ESS LED MR16 4.5-50W 36D 865 SO 100-240V | 4.5 kWh |
| 929001874208 | ESS LED MR16 3-35W 36D 830 SO 100-240V | 3 kWh |
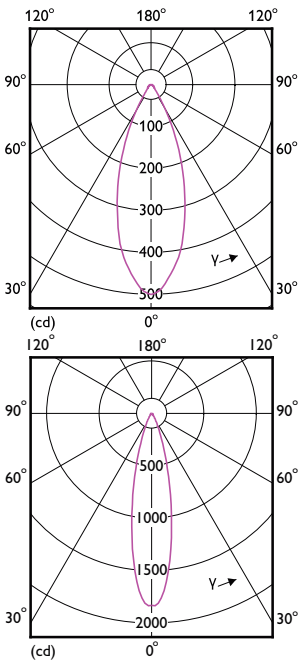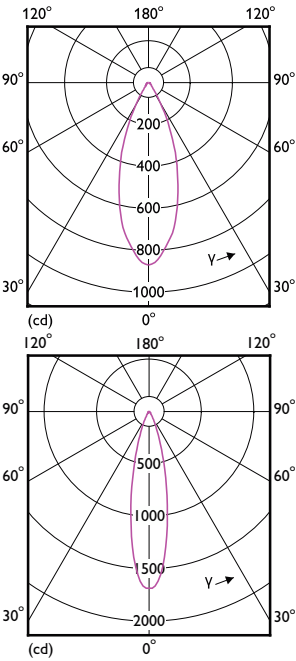
## Accent Diagrams
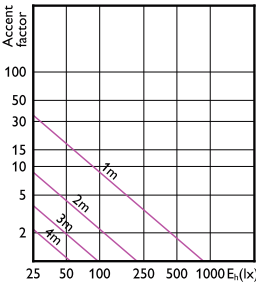
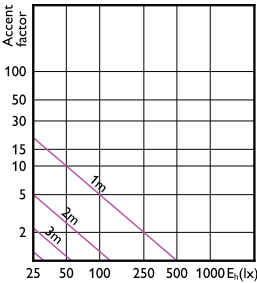**Accent Diagram - ESS LED MR16 4.5-50W 36D 865 SO 100-240V**
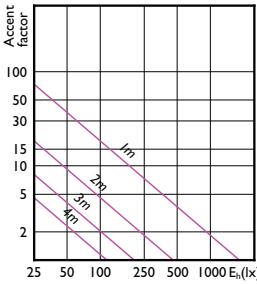
**Accent Diagram - Essential LED 5-50W 6500K MR16 24D**
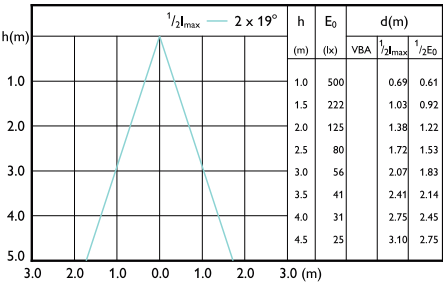
**Accent Diagram - Essential LED 5-50W 2700K MR16 24D**
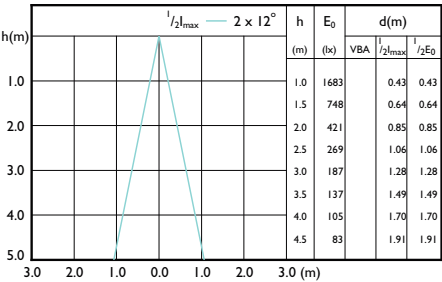
# Essential LEDspot MR16

## Accent Diagrams



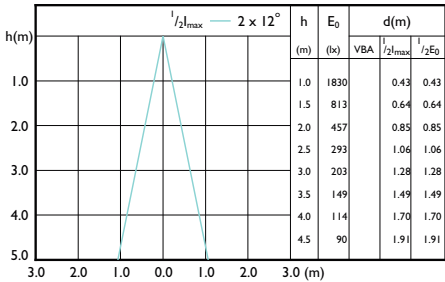**Accent Diagram – ESS LED MR16 3-35W 36D 830 SO 100-240V**

## Beam Diagrams



| h (m) | E₀ (lx) | VBA | ¹/₂Imax | ¹/₂E₀ |
|---|---|---|---|---|
| 1.0 | 500 | | 0.69 | 0.61 |
| 1.5 | 222 | | 1.03 | 0.92 |
| 2.0 | 125 | | 1.38 | 1.22 |
| 2.5 | 80 | | 1.72 | 1.53 |
| 3.0 | 56 | | 2.07 | 1.83 |
| 3.5 | 41 | | 2.41 | 2.14 |
| 4.0 | 31 | | 2.75 | 2.45 |
| 4.5 | 25 | | 3.10 | 2.75 |

**Beam diagram – ESS LED MR16 3-35W 36D 830 SO 100-240V**



| h (m) | E₀ (lx) | VBA | ¹/₂Imax | ¹/₂E₀ |
|---|---|---|---|---|
| 1.0 | 1683 | | 0.43 | 0.43 |
| 1.5 | 748 | | 0.64 | 0.64 |
| 2.0 | 421 | | 0.85 | 0.85 |
| 2.5 | 269 | | 1.06 | 1.06 |
| 3.0 | 187 | | 1.28 | 1.28 |
| 3.5 | 137 | | 1.49 | 1.49 |
| 4.0 | 105 | | 1.70 | 1.70 |
| 4.5 | 83 | | 1.91 | 1.91 |

**Beam diagram – Essential LED 5-50W 2700K MR16 24D**



| h (m) | E₀ (lx) | VBA | ¹/₂Imax | ¹/₂E₀ |
|---|---|---|---|---|
| 1.0 | 1830 | | 0.43 | 0.43 |
| 1.5 | 813 | | 0.64 | 0.64 |
| 2.0 | 457 | | 0.85 | 0.85 |
| 2.5 | 293 | | 1.06 | 1.06 |
| 3.0 | 203 | | 1.28 | 1.28 |
| 3.5 | 149 | | 1.49 | 1.49 |
| 4.0 | 114 | | 1.70 | 1.70 |
| 4.5 | 90 | | 1.91 | 1.91 |

**Beam diagram – Essential LED 5-50W 6500K MR16 24D**



| h (m) | E₀ (lx) | VBA | ¹/₂Imax | ¹/₂E₀ |
|---|---|---|---|---|
| 1.0 | 869 | | 0.69 | 0.61 |
| 1.5 | 386 | | 1.03 | 0.92 |
| 2.0 | 217 | | 1.38 | 1.22 |
| 2.5 | 139 | | 1.72 | 1.53 |
| 3.0 | 97 | | 2.07 | 1.83 |
| 3.5 | 71 | | 2.41 | 2.14 |
| 4.0 | 54 | | 2.75 | 2.45 |
| 4.5 | 43 | | 3.10 | 2.75 |

**Beam diagram – ESS LED MR16 4.5-50W 36D 865 SO 100-240V**

**Essential LEDspot MR16**

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2023, November 28 – data subject to change