

LED MR16 LAMP SPECIFICATIONS

Single lens with replaceable optics



ONE LAMP
4 BEAM SPREADS!
15°, 30°
45° & 60°

Illumicare's award winning LED MR16 single lens lamp features a unique single chip design with four interchangeable optics, allowing for ultimate adaptability, with everything in one box.



The Ultimate Flexibility in One Box

Easily update the beam spread by unscrewing the face of the lamp to install your choice of 15°, 30°, 45° or 60° collimators. This revolutionary design allows for ultimate adaptability with everything in one box, reducing shelf space requirements for installer and distributor alike. With three color temperatures and two levels of intensity, the new MR16 also meets the creative needs of discerning designers.

Available Color Temperatures

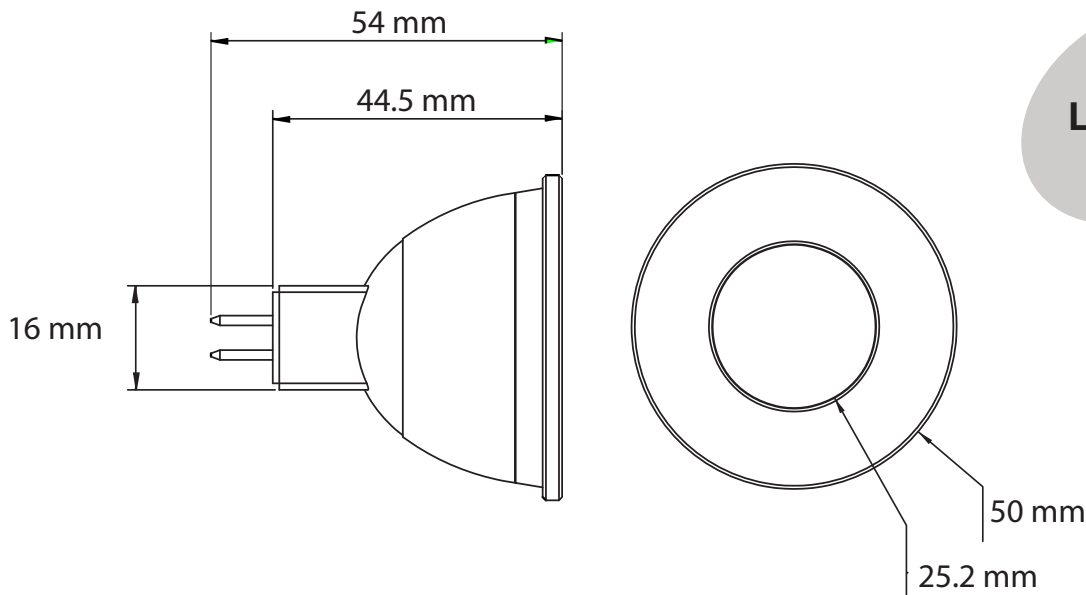
LED MR16 5W 2700K	Very Warm White 5W
LED MR16 5W 3000K	Warm White 5W
LED MR16 5W 4000K	Neutral White 5W
LED MR16 7W 2700K	Very Warm White 7W
LED MR16 7W 3000K	Warm White 7W
LED MR16 7W 4000K	Neutral White 7W



The new gasketed design afforded an IP67 rating for the lamp, validating confidence in its ability to work in the outdoor environment.

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1 Cree
LED Chip

Up to
40,000
Hours

5
YEAR
Warranty

Performance Data

Input Voltage	Output Power	Operating Temperature	Operating Environment	L70
12V AC or DC (9-15V AC/DC)	5W, 7W	35-40°C (95-104°F)	-20-40°C (-4-104°F)	40,000 hours
Base	Luminous Flux	Color Temperature	Beam Spreads	CRI
GU5.3, GX5.3 Bipin Base	220-250lm (5W) 450-510lm (7W)	2700K, 3000K, 4000K	15°, 30°, 45°, 60°	85%

Unique Thermal Control

By using a fully-stepped LED IC driver instead of an electrolytic capacitor, we have eliminated the most problematic part of an LED lamp. Combining the IC driver with our unique heat sink, our MR16 is capable of operating at temperatures well below the heat specifications of most leading LED chips, even when sealed inside weatherproof fixtures. This unique thermal control allows for maximum light output and a life expectancy of over 10 times that of most halogen lamps. Illumicare's LED MR16 lamp retrofits into thousands of standard MR16 fixtures and housings, providing immediate efficiencies in reduced electrical consumption and maintenance.

Typical Applications

- Landscape Lighting
- Architectural Lighting
- General Interior Lighting
- Commercial Applications
- Retail Displays (less heat than halogen)
- Highlighting Artwork (no damaging UV)

LED MR16 LAMP CHROMATICITY

Single lens with replaceable optics

LED MR16 2700K CIE Color Specification

Chromaticity coordinates:

$x=0.4597$ $y=0.4190$ / $u'=0.2586$ $v'=0.5305$

Correlated color temperature: $T_c=2768K$

Dominant wavelength: $L_d=582.9nm$ Purity=63.8%

Peak wavelength: $L_p=605.5nm$ **HWL:** $L_{hd}=123.4nm$

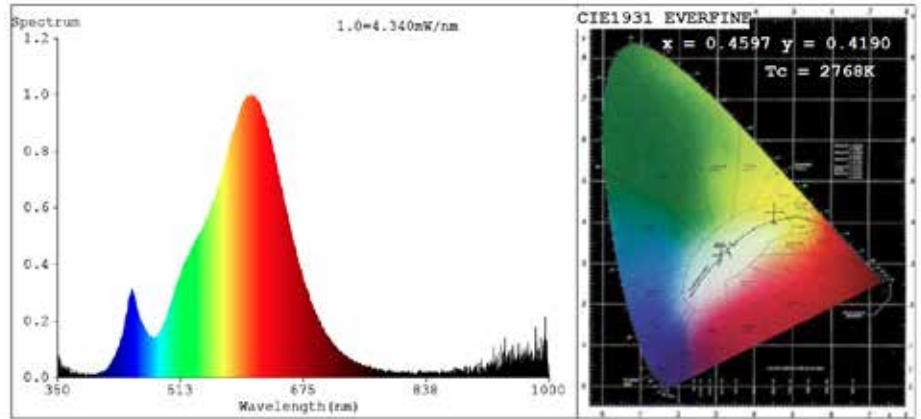
Color rendering Index: $R_a=81.8$

$R_1=80$ $R_2=90$ $R_3=97$ $R_4=79$ $R_5=79$ $R_6=88$

$R_7=83$ $R_8=58$ $R_9=6$ $R_{10}=77$ $R_{11}=78$ $R_{12}=69$

$R_{13}=82$ $R_{14}=99$ $R_{15}=72$

Light efficiency: 47.97 lm/W



LED MR16 3000K CIE Color Specification

Chromaticity coordinates:

$x=0.4349$ $y=0.4050$ / $u'=0.2489$ $v'=0.5214$

Correlated color temperature: $T_c=3042K$

Dominant wavelength: $L_d=582.4nm$ Purity=53.3%

Peak wavelength: $L_p=601.3nm$ **HWL:** $L_{hd}=134.2nm$

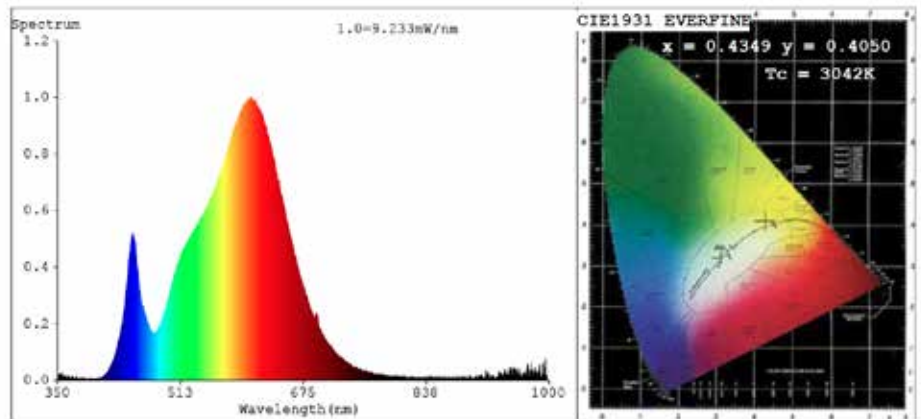
Color rendering Index: $R_a=83.4$

$R_1=80$ $R_2=88$ $R_3=96$ $R_4=82$ $R_5=80$ $R_6=85$

$R_7=85$ $R_8=62$ $R_9=9$ $R_{10}=73$ $R_{11}=81$ $R_{12}=69$

$R_{13}=82$ $R_{14}=97$ $R_{15}=73$

Light efficiency: 75.99 lm/W



LED MR16 4000K CIE Color Specification

Chromaticity coordinates:

$x=0.3786$ $y=0.3793$ / $u'=0.2229$ $v'=0.5024$

Correlated color temperature: $T_c=4065K$

Dominant wavelength: $L_d=577.9nm$ Purity=29.2%

Peak wavelength: $L_p=444.7nm$ **HWL:** $L_{hd}=25.5nm$

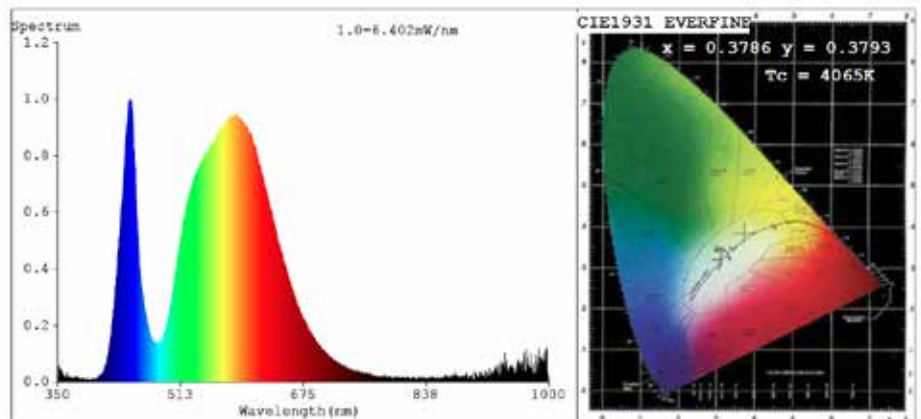
Color rendering Index: $R_a=73.1$

$R_1=71$ $R_2=78$ $R_3=84$ $R_4=74$ $R_5=71$ $R_6=70$

$R_7=81$ $R_8=56$ $R_9=0$ $R_{10}=48$ $R_{11}=71$ $R_{12}=47$

$R_{13}=72$ $R_{14}=91$ $R_{15}=65$

Light efficiency: 66.23 lm/W



LED MR16 LAMP PHOTOMETRICS

Single lens with replaceable optics

LED MR16 15° Spot (3000K)

Distance	Spread	Foot Candles	
		5W	7W
2ft	0.5	405.0	487.5
4ft	1.1	101.3	121.9
6ft	1.6	45.0	54.2
8ft	2.1	25.3	30.5
10ft	2.6	16.2	19.5
12ft	3.2	11.3	13.5
14ft	3.7	8.3	9.9
16ft	4.2	6.3	7.6
18ft	4.7	5.0	6.0
20ft	5.3	4.1	4.9
22ft	5.8	3.3	4.0
24ft	6.3	2.8	3.4
26ft	6.8	2.4	2.9
28ft	7.4	2.1	2.5
30ft	7.9	1.8	2.2

LED MR16 30° Narrow Flood (3000K)

Distance	Spread	Foot Candles	
		5W	7W
2ft	1.1	196.0	317.5
4ft	2.1	49.0	79.4
6ft	3.2	21.8	35.3
8ft	4.3	12.3	19.8
10ft	5.4	7.8	12.7
12ft	6.4	5.4	8.8
14ft	7.5	4.0	6.5
16ft	8.6	3.1	5.0
18ft	9.6	2.4	3.9
20ft	10.7	2.0	3.2
22ft	11.8	1.6	2.6
24ft	12.9	1.4	2.2
26ft	13.9	1.2	1.9
28ft	15.0	1.0	1.6
30ft	16.1	0.9	1.4

LED MR16 45° Flood (3000K)

Distance	Spread	Foot Candles	
		5W	7W
2ft	1.7	133.8	219.0
4ft	3.3	33.4	54.8
6ft	5.0	14.9	24.3
8ft	6.6	8.4	13.7
10ft	8.3	5.4	8.8
12ft	9.9	3.7	6.1
14ft	11.6	2.7	4.5
16ft	13.2	2.1	3.4
18ft	14.9	1.7	2.7
20ft	16.6	1.3	2.2
22ft	18.2	1.1	1.8
24ft	19.9	0.9	1.5
26ft	21.5	0.8	1.3
28ft	23.2	0.7	1.1
30ft	24.8	0.6	1.0

LED MR16 60° Wide Flood (3000K)

Distance	Spread	Foot Candles	
		5W	7W
2ft	2.3	54.5	91.0
4ft	4.6	13.6	22.8
6ft	6.9	6.1	10.1
8ft	9.2	3.4	5.7
10ft	11.6	2.2	3.6
12ft	13.9	1.5	2.5
14ft	16.2	1.1	1.9
16ft	18.5	0.9	1.4
18ft	20.8	0.7	1.1
20ft	23.1	0.5	0.9
22ft	25.4	0.5	0.8
24ft	27.7	0.4	0.6
26ft	30.0	0.3	0.5
28ft	32.3	0.3	0.5
30ft	34.7	0.2	0.4

Why Illumicare?

For over 20 years, Illumicare's lighting professionals have specialized in developing and supplying high-efficiency lighting for commercial and outdoor use. As a manufacturer of innovative LED products, our focus is eliminating the barriers involved in engineering superior LED lighting technologies and adapting to environmental demands to produce an innovative, energy efficient lamp for both new and retrofit lighting installations.

