



Juniper R

RECESSED DOWNLIGHTS | DALI EM SERIES

Compact LED ceiling-recessed luminaire providing a symmetric, wide-beam light distribution. Provides high illuminance levels and better homogeneity on the working plane. Juniper R is suitable for general lighting purposes. Best for applications such as offices, showrooms, commercial areas, hospitals, hotels, airports. Housing available in signal white color, easy to complement any type of ceiling.

Juniper R recessed luminaires come in several series, with various add-on and controls:

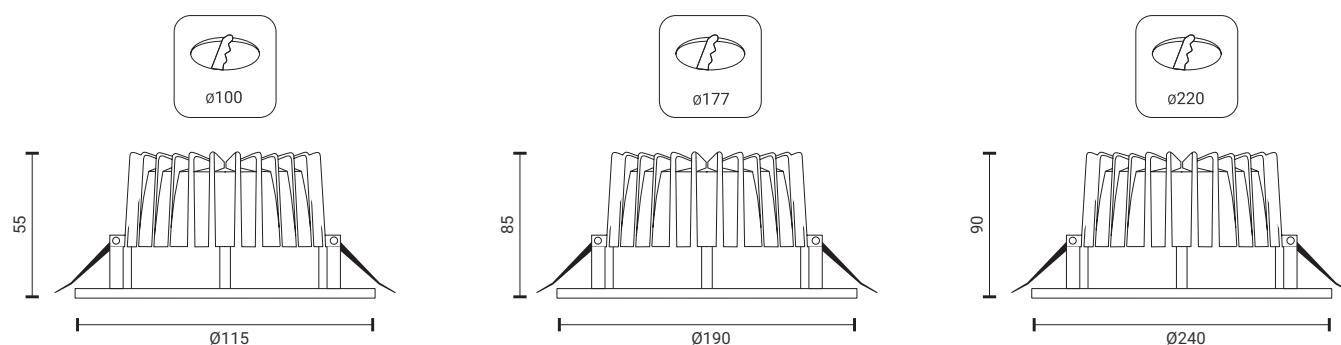
- Juniper R Non-DALI - the standard for a large number of spaces – offices, showrooms, restaurants
- Juniper R Non-DALI EM - with emergency lighting kit
- Juniper R DALI - with DALI controls for illumination adjustments
- Juniper R DALI EM - with both dimming and emergency kit

FEATURES & BENEFITS

- CRI \geq 80 standard
- IP40 when encased in closed ceilings
- Very long service life: 50,000 h at 90% luminous flux
- High efficiency of 125 lm/watt
- Lens angle of 75°
- Very low UGR starting with factor 17
- Comes in three diameters, suitable for any replacement of traditional lamps
- Dimmable
- With emergency kits of 1h and 3 h

APPLICATION

Grocery & Supermarkets | Office | Healthcare | Hospitality | DIY

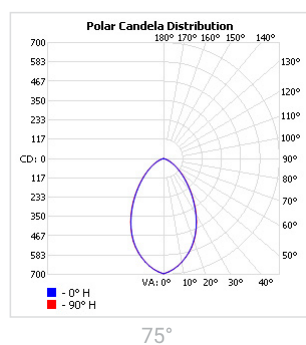


| | | | |
|--------------------------------|---------------------------------|-------------------|------------------------|
| Power consumption | 9W, 17W | 9W, 17W, 23W, 30W | 9W, 17W, 23W, 30W, 40W |
| Dimensions | 115x55xØ100±1mm | 190x85xØ177±1mm | 240x90xØ220±1mm |
| Weight | 0.9 - 1.3 Kg | 1.5 - 1.8 Kg | 2 - 2.3 Kg |
| Housing materials | Aluminium, Glass | | |
| IK code | IK02 | | |
| THD (at 230V, 50Hz, Full load) | <10% | | |
| Protection class | Safety class 1 | | |
| Operating temperature [°C] | +5°C ... +40°C / +41F ... +104F | | |
| Operating humidity [%] | 10 ÷ 85 | | |
| Power factor | ≥0.95 | | |
| AC Input [Vac] | 220 - 240 VAC | | |
| Lens angle [°] | 75° | | |
| Lifespan [h] | 50,000 | | |
| Housing color | ○ RAL 9003 - signal white | | |
| Lumen maintenance | L90/B10@50.000h at 25°C | | |
| IP factor (front face) | IP40 | | |
| Control option | DALI | | |
| Warranty [years] | 5 | | |
| Storage temperature range [°C] | +5°C ... +25°C / +41F ... +77F | | |
| Emergency option | EM1H, EM3H | | |

| | |
|-------------------|-------------------------|
| Light application | Standard |
| CRI | CRI 80 |
| CCT [K] | 3000K/4000K/5000K/6500K |
| MacAdam | 4 |

CRI - Color rendering, CCT - Color temperature, MacAdam - Color consistency

LIGHT DISTRIBUTION



TOLERANCES

Luminous flux tolerances: -/+ 5%

Consumption tolerance: -/+ 5% for Non-DALI | -/+ 10% for Non-DALI & KIT EM | -/+ 10% for DALI | -/+ 15% for DALI & KIT EM

BATTERY WARRANTY

Non-DALI EM & DALI EM: 12 months warranty

Non-DALI & DALI: -

MAXIMUM NO. OF LUMINAIRES ON A CIRCUIT

| Luminaire Power(W) | Control type | Circuit Breaker Type | | | | | |
|--------------------|--------------|----------------------|----|----|-----|----|----|
| | | B | | | C | | |
| | | 20 | 16 | 10 | 20 | 16 | 10 |
| 9-17W | Non-DALI | 62 | 50 | 31 | 104 | 85 | 52 |
| 23-30W | Non-DALI | 24 | 20 | 10 | 47 | 40 | 20 |
| 45W | Non-DALI | 37 | 30 | 18 | 62 | 65 | 31 |
| 9-17W | DALI | 62 | 50 | 31 | 104 | 85 | 52 |
| 23-30W | DALI | 25 | 21 | 13 | 50 | 42 | 26 |
| 45W | DALI | 17 | 14 | 9 | 34 | 28 | 18 |

RISK GROUP

| | |
|--------------------------------|-----|
| Standard (CRI80) | RG1 |
| FOOD (BVF, FBS, FSM) | RG1 |
| FOOD ≤35W (FZM, FSH) | RG1 |
| FOOD >35W (FZM, FSH) | RG2 |
| FAS | RG1 |
| AMB2200 | RG1 |
| ART | RG1 |
| AGI | RG1 |
| CRI90 | RG1 |
| CRI95 | RG1 |
| ENT | RG1 |

RG1

The evaluation of photobiological safety is carried out according to the standard IEC 62471:2008 ("Photobiological safety of lamps and lamp systems"). Following the definition of the risk grouping system of the mentioned IEC standard, the LEDs mounted on this family fall into the class "Low Risk (RG1 – No photobiological hazard under normal behavioral limitations)". Under real circumstances (regarding exposure time, pupils, observation distance), it is assumed that there is no endangerment to the eye from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect.

RG2

The evaluation of photobiological safety is carried out according to the standard IEC 62471:2008 ("Photobiological safety of lamps and lamp systems"). Following the definition of the risk grouping system of the mentioned IEC standard, the LEDs mounted on this family fall into the class "Moderate Risk (RG2)". Under real circumstances (regarding exposure time, pupils, observation distance), it is assumed that there is no endangerment to the eye from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect.

SKU SPECIFICATIONS

| Product Code | Dimensions (mm) | CCT (K) | Lumens (lm) | Power (W) | Eff. (lm/watt) | Lens Angle (°) |
|--|---------------------|---------|-------------|-----------|----------------|----------------|
| CRI 80 | | | | | | |
| 209044 JuniperR 100mm/3000/9W/80/A75/EM1H | D115xH55xØ100mm±1mm | 3000 | 900 | 9W | 100 | 75° |
| 209045 JuniperR 100mm/4000/9W/80/A75/EM1H | D115xH55xØ100mm±1mm | 4000 | 940 | 9W | 105 | 75° |
| 209046 JuniperR 100mm/5000/9W/80/A75/EM1H | D115xH55xØ100mm±1mm | 5000 | 965 | 9W | 108 | 75° |
| 209047 JuniperR 100mm/6500/9W/80/A75/EM1H | D115xH55xØ100mm±1mm | 6500 | 940 | 9W | 105 | 75° |
| 209048 JuniperR 177mm/3000/9W/80/A75/EM1H | D190xH85xØ177mm±1mm | 3000 | 935 | 9W | 104 | 75° |
| 209049 JuniperR 177mm/4000/9W/80/A75/EM1H | D190xH85xØ177mm±1mm | 4000 | 975 | 9W | 109 | 75° |
| 209050 JuniperR 177mm/5000/9W/80/A75/EM1H | D190xH85xØ177mm±1mm | 5000 | 1000 | 9W | 112 | 75° |
| 209051 JuniperR 177mm/6500/9W/80/A75/EM1H | D190xH85xØ177mm±1mm | 6500 | 975 | 9W | 109 | 75° |
| 209052 JuniperR 220mm/3000/9W/80/A75/EM1H | D240xH90xØ220mm±1mm | 3000 | 940 | 9W | 105 | 75° |
| 209053 JuniperR 220mm/4000/9W/80/A75/EM1H | D240xH90xØ220mm±1mm | 4000 | 980 | 9W | 109 | 75° |
| 209054 JuniperR 220mm/5000/9W/80/A75/EM1H | D240xH90xØ220mm±1mm | 5000 | 1005 | 9W | 112 | 75° |
| 209055 JuniperR 220mm/6500/9W/80/A75/EM1H | D240xH90xØ220mm±1mm | 6500 | 980 | 9W | 109 | 75° |
| 209056 JuniperR 100mm/3000/17W/80/A75/EM1H | D115xH55xØ100mm±1mm | 3000 | 1800 | 17W | 106 | 75° |
| 209057 JuniperR 100mm/4000/17W/80/A75/EM1H | D115xH55xØ100mm±1mm | 4000 | 1875 | 17W | 111 | 75° |
| 209058 JuniperR 100mm/5000/17W/80/A75/EM1H | D115xH55xØ100mm±1mm | 5000 | 1925 | 17W | 114 | 75° |
| 209059 JuniperR 100mm/6500/17W/80/A75/EM1H | D115xH55xØ100mm±1mm | 6500 | 1875 | 17W | 111 | 75° |
| 209060 JuniperR 177mm/3000/17W/80/A75/EM1H | D190xH85xØ177mm±1mm | 3000 | 1950 | 17W | 115 | 75° |
| 209061 JuniperR 177mm/4000/17W/80/A75/EM1H | D190xH85xØ177mm±1mm | 4000 | 2035 | 17W | 120 | 75° |
| 209062 JuniperR 177mm/5000/17W/80/A75/EM1H | D190xH85xØ177mm±1mm | 5000 | 2090 | 17W | 123 | 75° |
| 209063 JuniperR 177mm/6500/17W/80/A75/EM1H | D190xH85xØ177mm±1mm | 6500 | 2035 | 17W | 120 | 75° |
| 209064 JuniperR 220mm/3000/17W/80/A75/EM1H | D240xH90xØ220mm±1mm | 3000 | 1955 | 17W | 115 | 75° |
| 209065 JuniperR 220mm/4000/17W/80/A75/EM1H | D240xH90xØ220mm±1mm | 4000 | 2035 | 17W | 120 | 75° |
| 209066 JuniperR 220mm/5000/17W/80/A75/EM1H | D240xH90xØ220mm±1mm | 5000 | 2090 | 17W | 123 | 75° |
| 209067 JuniperR 220mm/6500/17W/80/A75/EM1H | D240xH90xØ220mm±1mm | 6500 | 2035 | 17W | 120 | 75° |
| 209068 JuniperR 177mm/3000/23W/80/A75/EM1H | D190xH85xØ177mm±1mm | 3000 | 2665 | 23W | 116 | 75° |
| 209069 JuniperR 177mm/4000/23W/80/A75/EM1H | D190xH85xØ177mm±1mm | 4000 | 2775 | 23W | 121 | 75° |
| 209070 JuniperR 177mm/5000/23W/80/A75/EM1H | D190xH85xØ177mm±1mm | 5000 | 2850 | 23W | 124 | 75° |
| 209071 JuniperR 177mm/6500/23W/80/A75/EM1H | D190xH85xØ177mm±1mm | 6500 | 2775 | 23W | 121 | 75° |
| 209072 JuniperR 220mm/3000/23W/80/A75/EM1H | D240xH90xØ220mm±1mm | 3000 | 2595 | 23W | 113 | 75° |
| 209073 JuniperR 220mm/4000/23W/80/A75/EM1H | D240xH90xØ220mm±1mm | 4000 | 2705 | 23W | 118 | 75° |
| 209074 JuniperR 220mm/5000/23W/80/A75/EM1H | D240xH90xØ220mm±1mm | 5000 | 2775 | 23W | 121 | 75° |
| 209075 JuniperR 220mm/6500/23W/80/A75/EM1H | D240xH90xØ220mm±1mm | 6500 | 2705 | 23W | 118 | 75° |
| 209076 JuniperR 177mm/3000/30W/80/A75/EM1H | D190xH85xØ177mm±1mm | 3000 | 3575 | 30W | 120 | 75° |
| 209077 JuniperR 177mm/4000/30W/80/A75/EM1H | D190xH85xØ177mm±1mm | 4000 | 3725 | 30W | 125 | 75° |
| 209078 JuniperR 177mm/5000/30W/80/A75/EM1H | D190xH85xØ177mm±1mm | 5000 | 3825 | 30W | 128 | 75° |
| 209079 JuniperR 177mm/6500/30W/80/A75/EM1H | D190xH85xØ177mm±1mm | 6500 | 3725 | 30W | 125 | 75° |
| 209080 JuniperR 220mm/3000/30W/80/A75/EM1H | D240xH90xØ220mm±1mm | 3000 | 3590 | 30W | 120 | 75° |
| 209081 JuniperR 220mm/4000/30W/80/A75/EM1H | D240xH90xØ220mm±1mm | 4000 | 3740 | 30W | 125 | 75° |
| 209082 JuniperR 220mm/5000/30W/80/A75/EM1H | D240xH90xØ220mm±1mm | 5000 | 3840 | 30W | 128 | 75° |
| 209083 JuniperR 220mm/6500/30W/80/A75/EM1H | D240xH90xØ220mm±1mm | 6500 | 3740 | 30W | 125 | 75° |
| 209084 JuniperR 220mm/3000/40W/80/A75/EM1H | D240xH90xØ220mm±1mm | 3000 | 4785 | 40W | 120 | 75° |
| 209085 JuniperR 220mm/4000/40W/80/A75/EM1H | D240xH90xØ220mm±1mm | 4000 | 4985 | 40W | 125 | 75° |
| 209086 JuniperR 220mm/5000/40W/80/A75/EM1H | D240xH90xØ220mm±1mm | 5000 | 5120 | 40W | 128 | 75° |
| 209087 JuniperR 220mm/6500/40W/80/A75/EM1H | D240xH90xØ220mm±1mm | 6500 | 4985 | 40W | 125 | 75° |
| 209088 JuniperR 100mm/3000/9W/80/A75/EM3H | D115xH55xØ100mm±1mm | 3000 | 900 | 9W | 100 | 75° |
| 209089 JuniperR 100mm/4000/9W/80/A75/EM3H | D115xH55xØ100mm±1mm | 4000 | 940 | 9W | 105 | 75° |
| 209090 JuniperR 100mm/5000/9W/80/A75/EM3H | D115xH55xØ100mm±1mm | 5000 | 965 | 9W | 108 | 75° |
| 209091 JuniperR 100mm/6500/9W/80/A75/EM3H | D115xH55xØ100mm±1mm | 6500 | 940 | 9W | 105 | 75° |
| 209092 JuniperR 177mm/3000/9W/80/A75/EM3H | D190xH85xØ177mm±1mm | 3000 | 935 | 9W | 104 | 75° |
| 209093 JuniperR 177mm/4000/9W/80/A75/EM3H | D190xH85xØ177mm±1mm | 4000 | 975 | 9W | 109 | 75° |

SKU SPECIFICATIONS

| Product Code | Dimensions (mm) | CCT (K) | Lumens (lm) | Power (W) | Eff. (lm/watt) | Lens Angle (°) |
|--|---------------------|---------|-------------|-----------|----------------|----------------|
| CRI 80 | | | | | | |
| 209094 JuniperR 177mm/5000/9W/80/A75/EM3H | D190xH85xØ177mm±1mm | 5000 | 1000 | 9W | 112 | 75° |
| 209095 JuniperR 177mm/6500/9W/80/A75/EM3H | D190xH85xØ177mm±1mm | 6500 | 975 | 9W | 109 | 75° |
| 209096 JuniperR 220mm/3000/9W/80/A75/EM3H | D240xH90xØ220mm±1mm | 3000 | 940 | 9W | 105 | 75° |
| 209097 JuniperR 220mm/4000/9W/80/A75/EM3H | D240xH90xØ220mm±1mm | 4000 | 980 | 9W | 109 | 75° |
| 209098 JuniperR 220mm/5000/9W/80/A75/EM3H | D240xH90xØ220mm±1mm | 5000 | 1005 | 9W | 112 | 75° |
| 209099 JuniperR 220mm/6500/9W/80/A75/EM3H | D240xH90xØ220mm±1mm | 6500 | 980 | 9W | 109 | 75° |
| 209100 JuniperR 100mm/3000/17W/80/A75/EM3H | D115xH55xØ100mm±1mm | 3000 | 1800 | 17W | 106 | 75° |
| 209101 JuniperR 100mm/4000/17W/80/A75/EM3H | D115xH55xØ100mm±1mm | 4000 | 1875 | 17W | 111 | 75° |
| 209102 JuniperR 100mm/5000/17W/80/A75/EM3H | D115xH55xØ100mm±1mm | 5000 | 1925 | 17W | 114 | 75° |
| 209103 JuniperR 100mm/6500/17W/80/A75/EM3H | D115xH55xØ100mm±1mm | 6500 | 1875 | 17W | 111 | 75° |
| 209104 JuniperR 177mm/3000/17W/80/A75/EM3H | D190xH85xØ177mm±1mm | 3000 | 1950 | 17W | 115 | 75° |
| 209105 JuniperR 177mm/4000/17W/80/A75/EM3H | D190xH85xØ177mm±1mm | 4000 | 2035 | 17W | 120 | 75° |
| 209106 JuniperR 177mm/5000/17W/80/A75/EM3H | D190xH85xØ177mm±1mm | 5000 | 2090 | 17W | 123 | 75° |
| 209107 JuniperR 177mm/6500/17W/80/A75/EM3H | D190xH85xØ177mm±1mm | 6500 | 2035 | 17W | 120 | 75° |
| 209108 JuniperR 220mm/3000/17W/80/A75/EM3H | D240xH90xØ220mm±1mm | 3000 | 1955 | 17W | 115 | 75° |
| 209109 JuniperR 220mm/4000/17W/80/A75/EM3H | D240xH90xØ220mm±1mm | 4000 | 2035 | 17W | 120 | 75° |
| 209110 JuniperR 220mm/5000/17W/80/A75/EM3H | D240xH90xØ220mm±1mm | 5000 | 2090 | 17W | 123 | 75° |
| 209111 JuniperR 220mm/6500/17W/80/A75/EM3H | D240xH90xØ220mm±1mm | 6500 | 2035 | 17W | 120 | 75° |
| 209112 JuniperR 177mm/3000/23W/80/A75/EM3H | D190xH85xØ177mm±1mm | 3000 | 2665 | 23W | 116 | 75° |
| 209113 JuniperR 177mm/4000/23W/80/A75/EM3H | D190xH85xØ177mm±1mm | 4000 | 2775 | 23W | 121 | 75° |
| 209114 JuniperR 177mm/5000/23W/80/A75/EM3H | D190xH85xØ177mm±1mm | 5000 | 2850 | 23W | 124 | 75° |
| 209115 JuniperR 177mm/6500/23W/80/A75/EM3H | D190xH85xØ177mm±1mm | 6500 | 2775 | 23W | 121 | 75° |
| 209116 JuniperR 220mm/3000/23W/80/A75/EM3H | D240xH90xØ220mm±1mm | 3000 | 2595 | 23W | 113 | 75° |
| 209117 JuniperR 220mm/4000/23W/80/A75/EM3H | D240xH90xØ220mm±1mm | 4000 | 2705 | 23W | 118 | 75° |
| 209118 JuniperR 220mm/5000/23W/80/A75/EM3H | D240xH90xØ220mm±1mm | 5000 | 2775 | 23W | 121 | 75° |
| 209119 JuniperR 220mm/6500/23W/80/A75/EM3H | D240xH90xØ220mm±1mm | 6500 | 2705 | 23W | 118 | 75° |
| 209120 JuniperR 177mm/3000/30W/80/A75/EM3H | D190xH85xØ177mm±1mm | 3000 | 3575 | 30W | 120 | 75° |
| 209121 JuniperR 177mm/4000/30W/80/A75/EM3H | D190xH85xØ177mm±1mm | 4000 | 3725 | 30W | 125 | 75° |
| 209122 JuniperR 177mm/5000/30W/80/A75/EM3H | D190xH85xØ177mm±1mm | 5000 | 3825 | 30W | 128 | 75° |
| 209123 JuniperR 177mm/6500/30W/80/A75/EM3H | D190xH85xØ177mm±1mm | 6500 | 3725 | 30W | 125 | 75° |
| 209124 JuniperR 220mm/3000/30W/80/A75/EM3H | D240xH90xØ220mm±1mm | 3000 | 3590 | 30W | 120 | 75° |
| 209125 JuniperR 220mm/4000/30W/80/A75/EM3H | D240xH90xØ220mm±1mm | 4000 | 3740 | 30W | 125 | 75° |
| 209126 JuniperR 220mm/5000/30W/80/A75/EM3H | D240xH90xØ220mm±1mm | 5000 | 3840 | 30W | 128 | 75° |
| 209127 JuniperR 220mm/6500/30W/80/A75/EM3H | D240xH90xØ220mm±1mm | 6500 | 3740 | 30W | 125 | 75° |
| 209128 JuniperR 220mm/3000/40W/80/A75/EM3H | D240xH90xØ220mm±1mm | 3000 | 4785 | 40W | 120 | 75° |
| 209129 JuniperR 220mm/4000/40W/80/A75/EM3H | D240xH90xØ220mm±1mm | 4000 | 4985 | 40W | 125 | 75° |
| 209130 JuniperR 220mm/5000/40W/80/A75/EM3H | D240xH90xØ220mm±1mm | 5000 | 5120 | 40W | 128 | 75° |
| 209131 JuniperR 220mm/6500/40W/80/A75/EM3H | D240xH90xØ220mm±1mm | 6500 | 4985 | 40W | 125 | 75° |

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