

Last information update: May 2018



**Fixed circular recessed luminaire - Ø 96 mm - warm white - wide flood optic - UGR<19**

**Product code**  
MV93

**Technical description**

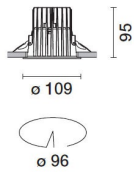
Fixed round luminaire designed to use a LED lamp with C.O.B. technology. Version with rim for surface-mounting. Reflector vacuum-metallised with aluminium vapours with an anti-scratch protective layer. Die-cast aluminium body and passive dissipation system. Product complete with LED lamp in warm white colour tone (3000K). General light emission, with controlled luminance UGR<19 1500 cd/m<sup>2</sup> α>65° wide flood optic.

**Installation**

Recessed using torsion springs which allow easy installation in false ceilings with thickness ranging from 1 mm to 20 mm.

**Dimension (mm)**

Ø109x95



**Colour**

White/Aluminium (39)

**Weight (Kg)**

0.65

**Mounting**

ceiling recessed

**Wiring**

product complete with DALI components

Complies with EN60598-1 and pertinent regulations



**Product configuration: MV93**

**Product characteristics**

Total lighting output [Lm]: 1109  
Total power [W]: 11.8  
Luminous efficacy [Lm/W]: 94  
Life Time: 50,000h - L80 - B10 (Ta 25°C)

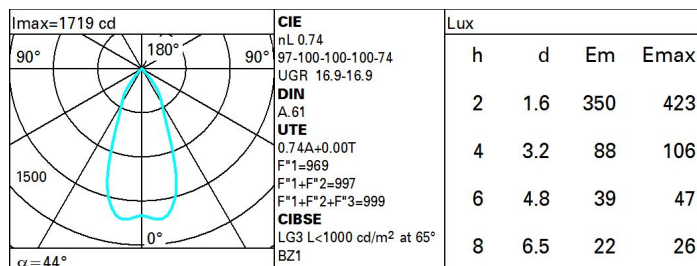
Total luminous flux at or above an angle of 90° [Lm]: 0  
Emergency luminous flux [Lm]: /  
Voltage [V]: -  
Number of optical assemblies: 1

**Optical assembly Characteristics Type 1**

Light Output Ratio (L.O.R.) [%]: 74  
Lamp code: LED  
ZVEI Code: LED  
Nominal power [W]: 9.3  
Nominal luminous [Lm]: 1500  
Lamp maximum intensity [cd]: /  
Beam angle [°]: 44°

Number of lamps for optical assembly: 1  
Socket: /  
Ballast losses [W]: 2.5  
Colour temperature [K]: 3000  
CRI: 80  
Wavelength [Nm]: /  
MacAdam Step: 2

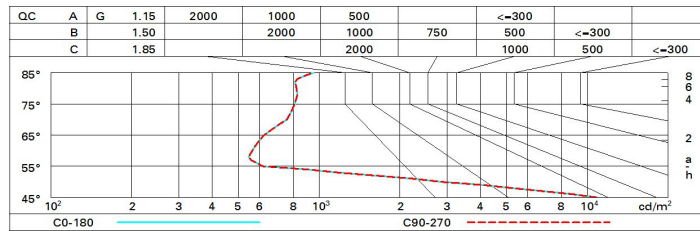
**Polar**



Utilisation factors

| R    | 77 | 75 | 73 | 71 | 55 | 53 | 33 | 00 | DRR |
|------|----|----|----|----|----|----|----|----|-----|
| K0.8 | 66 | 62 | 60 | 58 | 61 | 59 | 59 | 56 | 76  |
| 1.0  | 69 | 66 | 63 | 61 | 65 | 63 | 62 | 60 | 81  |
| 1.5  | 73 | 70 | 68 | 67 | 69 | 67 | 67 | 65 | 87  |
| 2.0  | 75 | 73 | 72 | 70 | 72 | 71 | 70 | 68 | 92  |
| 2.5  | 76 | 75 | 74 | 73 | 74 | 73 | 72 | 70 | 95  |
| 3.0  | 77 | 76 | 76 | 75 | 75 | 74 | 73 | 72 | 97  |
| 4.0  | 78 | 77 | 77 | 76 | 76 | 76 | 75 | 73 | 99  |
| 5.0  | 79 | 78 | 78 | 77 | 77 | 77 | 75 | 74 | 99  |

Luminance curve limit



UGR diagram

| Corrected UGR values (at 1500 lm bare lamp luminous flux) |     |                  |      |      |      |      |                |      |      |      |      |
|---|-----|------------------|------|------|------|------|----------------|------|------|------|------|
| Reflect.:   |     | viewed crosswise |      |      |      |      | viewed endwise |      |      |      |      |
| ceiling   | cav | 0.70             | 0.70 | 0.50 | 0.50 | 0.30 | 0.70           | 0.70 | 0.50 | 0.50 | 0.30 |
| walls   |     | 0.50             | 0.30 | 0.50 | 0.30 | 0.30 | 0.50           | 0.30 | 0.50 | 0.30 | 0.30 |
| work pl.  |     | 0.20             | 0.20 | 0.20 | 0.20 | 0.20 | 0.20           | 0.20 | 0.20 | 0.20 | 0.20 |
| Room dim  |     |                  |      |      |      |      |                |      |      |      |      |
| x   | y   |                  |      |      |      |      |                |      |      |      |      |
| 2H  | 2H  | 17.5             | 18.1 | 17.7 | 18.4 | 18.6 | 17.5           | 18.1 | 17.7 | 18.4 | 18.6 |
|   | 3H  | 17.3             | 17.9 | 17.6 | 18.2 | 18.5 | 17.3           | 17.9 | 17.6 | 18.2 | 18.5 |
|   | 4H  | 17.3             | 17.8 | 17.6 | 18.1 | 18.4 | 17.2           | 17.8 | 17.6 | 18.1 | 18.4 |
|   | 6H  | 17.2             | 17.7 | 17.5 | 18.0 | 18.3 | 17.2           | 17.7 | 17.5 | 18.0 | 18.3 |
|   | 8H  | 17.1             | 17.6 | 17.5 | 18.0 | 18.3 | 17.1           | 17.6 | 17.5 | 18.0 | 18.3 |
|   | 12H | 17.1             | 17.6 | 17.5 | 17.9 | 18.3 | 17.1           | 17.6 | 17.5 | 17.9 | 18.3 |
| 4H  | 2H  | 17.2             | 17.8 | 17.6 | 18.1 | 18.4 | 17.3           | 17.8 | 17.6 | 18.1 | 18.4 |
|   | 3H  | 17.1             | 17.6 | 17.5 | 17.9 | 18.3 | 17.1           | 17.6 | 17.5 | 17.9 | 18.3 |
|   | 4H  | 17.0             | 17.4 | 17.4 | 17.8 | 18.2 | 17.0           | 17.4 | 17.4 | 17.8 | 18.2 |
|   | 6H  | 16.9             | 17.3 | 17.4 | 17.7 | 18.1 | 16.9           | 17.3 | 17.4 | 17.7 | 18.1 |
|   | 8H  | 16.9             | 17.2 | 17.3 | 17.6 | 18.1 | 16.9           | 17.2 | 17.3 | 17.6 | 18.1 |
|   | 12H | 16.9             | 17.2 | 17.3 | 17.6 | 18.0 | 16.8           | 17.1 | 17.3 | 17.6 | 18.0 |
| 8H  | 4H  | 16.9             | 17.2 | 17.3 | 17.6 | 18.1 | 16.9           | 17.2 | 17.3 | 17.6 | 18.1 |
|   | 6H  | 16.8             | 17.1 | 17.3 | 17.5 | 18.0 | 16.8           | 17.1 | 17.3 | 17.5 | 18.0 |
|   | 8H  | 16.8             | 17.0 | 17.2 | 17.5 | 18.0 | 16.8           | 17.0 | 17.2 | 17.5 | 18.0 |
|   | 12H | 16.7             | 16.9 | 17.2 | 17.4 | 17.9 | 16.7           | 16.9 | 17.2 | 17.4 | 17.9 |
| 12H   | 4H  | 16.8             | 17.1 | 17.3 | 17.6 | 18.0 | 16.9           | 17.2 | 17.3 | 17.6 | 18.0 |
|   | 6H  | 16.8             | 17.0 | 17.2 | 17.5 | 18.0 | 16.8           | 17.0 | 17.3 | 17.5 | 18.0 |
|   | 8H  | 16.7             | 16.9 | 17.2 | 17.4 | 17.9 | 16.7           | 16.9 | 17.2 | 17.4 | 17.9 |
| Variations with the observer position at spacing:         |     |                  |      |      |      |      |                |      |      |      |      |
| S =   |     | 1.0H             |      |      |      |      | 4.5 / -14.0    |      |      |      |      |
|   |     | 1.5H             |      |      |      |      | 7.3 / -14.3    |      |      |      |      |
|   |     | 2.0H             |      |      |      |      | 9.3 / -14.3    |      |      |      |      |