Last information update: June 2018


## Medium body spotlight - Neutral white - electronic ballast and dimmer - wide flood optic

## Product code

MP90

## Technical description

Pendant luminaire equipped with a multiphase adapter made of die-cast aluminium and thermoplastic material. The pendant system consists of steel cables $\mathrm{L}=2000$ that provide a simple mechanical anchoring system. Having been rotated and tilted, the luminaire can be locked mechanically in position to ensure efficient light aiming (even during maintenance operations). Luminaire for high output LED lamp with monochrome emission in a neutral white colour tone (4000K). Dimmable electronic ballast. Equipped with an accessory holding ring designed to contain a flat accessory. Another external component can also be applied, selected from directional flaps and an asymmetric screen. All external accessories rotate $360^{\circ}$ about the spotlight longitudinal axis.

## Installation

Mounted on an electrified track with a multiphase adapter.

## Dimension (mm)

Ø156x215

## Colour

White (01) | Grey/Black (74)

## Weight (Kg)

1.45

## Mounting

ceiling pendant

## Wiring

The dimmable electronic components are housed in the luminaire.


## Product configuration: MP90

## Product characteristics

Total lighting output [Lm]: 2479
Total power [W]: 23.9
Luminous efficacy [Lm/W]: 103.7
Life Time: 50,000h-L80-B10 (Ta $25^{\circ} \mathrm{C}$ )
Total luminous flux at or above an angle of $90^{\circ}$ [Lm]: 0
Emergency luminous flux [Lm]: /

## Optical assembly Characteristics Type 1

Voltage [V]: -
Number of optical assemblies: 1

Light Output Ratio (L.O.R.) [\%]: 73
Lamp code: LED
ZVEI Code: LED
Nominal power [W]: 20
Nominal luminous [Lm]: 3400
Lamp maximum intensity [cd]: /
Beam angle [ ${ }^{\circ}$ ]: $48^{\circ}$

Number of lamps for optical assembly: 1
Socket: /
Ballast losses [W]: 3.9
Colour temperature [K]: 4000
CRI: 80
Wavelength [ Nm ]: /
MacAdam Step: 2

Polar

| Imax=4127 cd | $\begin{aligned} & \hline \text { CIE } \\ & \text { nL } 0.73 \\ & 99-100-100-100-73 \end{aligned}$ | Lux |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | h | d | Em | Emax |
|  | $\begin{aligned} & \text { UGR 14.4-14.4 } \\ & \text { DIN } \\ & \text { A. } 61 \end{aligned}$ | 2 | 1.8 | 811 | 1032 |
| $x$ | $\left\{\begin{array}{l} 0.73 A+0.00 T \\ \text { F"1 }=989 \end{array}\right.$ | 4 | 3.6 | 203 | 258 |
|  | F"1+F"2=998 | 6 | 5.3 | 90 | 115 |
| $\triangle 10^{\circ} \times$ | LG3 L< $1500 \mathrm{~cd} / \mathrm{m}^{2}$ at $65^{\circ}$ |  |  |  |  |
| $\alpha=48^{\circ}$ | UGR<16 I L<1500 cd/mq | $65^{\circ}$ | 7.1 | 51 | 64 |


| $R$ | 77 | 75 | 73 | 71 | 55 | 53 | 33 | 00 | DRR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K0.8 | 66 | 62 | 60 | 58 | 62 | 59 | 59 | 57 | 78 |
| 1.0 | 68 | 65 | 63 | 61 | 65 | 63 | 62 | 60 | 82 |
| 1.5 | 72 | 70 | 68 | 66 | 69 | 67 | 66 | 64 | 88 |
| 2.0 | 74 | 73 | 71 | 70 | 71 | 70 | 70 | 68 | 93 |
| 2.5 | 76 | 74 | 73 | 72 | 73 | 72 | 72 | 70 | 95 |
| 3.0 | 77 | 76 | 75 | 74 | 74 | 74 | 73 | 71 | 97 |
| 4.0 | 77 | 77 | 76 | 76 | 76 | 75 | 74 | 72 | 99 |
| 5.0 | 78 | 77 | 77 | 77 | 76 | 76 | 75 | 73 | 100 |

Luminance curve limit


UGR diagram

| Corrected UGR values (at 3400 Im bare lamp luminous flux) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rif ceil wa wo Roo x | V <br> pl. <br> $\operatorname{dim}$ y | $\begin{aligned} & 0.70 \\ & 0.50 \\ & 0.20 \end{aligned}$ | $\begin{aligned} & 0.70 \\ & 0.30 \\ & 0.20 \end{aligned}$ | 0.50 <br> 0.50 <br> 0.20 <br> viewed <br> osswis | $\begin{aligned} & 0.50 \\ & 0.30 \\ & 0.20 \end{aligned}$ | $\begin{aligned} & 0.30 \\ & 0.30 \\ & 0.20 \end{aligned}$ | $\begin{aligned} & 0.70 \\ & 0.50 \\ & 0.20 \end{aligned}$ | $\begin{aligned} & 0.70 \\ & 0.30 \\ & 0.20 \end{aligned}$ | $\begin{aligned} & 0.50 \\ & 0.50 \\ & 0.20 \end{aligned}$ <br> viewed <br> endwise | $\begin{aligned} & 0.50 \\ & 0.30 \\ & 0.20 \end{aligned}$ | 0.30 0.30 0.20 |
| 2 H | 2 H | 15.0 | 15.5 | 15.2 | 15.7 | 16.0 | 15.0 | 15.5 | 15.2 | 15.7 | 16.0 |
|  | 3 H | 14.8 | 15.3 | 15.1 | 15.6 | 15.9 | 14.8 | 15.3 | 15.1 | 15.6 | 15.9 |
|  | 4 H | 14.8 | 15.2 | 15.1 | 15.5 | 15.8 | 14.8 | 15.2 | 15.1 | 15.5 | 15.8 |
|  | 6 H | 14.7 | 15.1 | 15.0 | 15.4 | 15.8 | 14.7 | 15.1 | 15.0 | 15.4 | 15.7 |
|  | 8 H | 14.7 | 15.1 | 15.0 | 15.4 | 15.7 | 14.6 | 15.1 | 15.0 | 15.4 | 15.7 |
|  | 12H | 14.6 | 15.0 | 15.0 | 15.3 | 15.7 | 14.6 | 15.0 | 15.0 | 15.3 | 15.7 |
| 4 H | 2 H | 14.8 | 15.2 | 15.1 | 15.5 | 15.8 | 14.8 | 15.2 | 15.1 | 15.5 | 15.8 |
|  | 3 H | 14.6 | 15.0 | 15.0 | 15.4 | 15.7 | 14.6 | 15.0 | 15.0 | 15.4 | 15.7 |
|  | 4 H | 14.5 | 14.9 | 14.9 | 15.2 | 15.6 | 14.5 | 14.9 | 14.9 | 15.2 | 15.6 |
|  | 6 H | 14.4 | 14.8 | 14.9 | 15.1 | 15.6 | 14.4 | 14.8 | 14.9 | 15.1 | 15.6 |
|  | 8 H | 14.4 | 14.7 | 14.8 | 15.1 | 15.5 | 14.4 | 14.7 | 14.8 | 15.1 | 15.5 |
|  | 12H | 14.3 | 14.6 | 14.8 | 15.0 | 15.5 | 14.3 | 14.6 | 14.8 | 15.0 | 15.5 |
| 8 H | 4 H | 14.4 | 14.7 | 14.8 | 15.1 | 15.5 | 14.4 | 14.7 | 14.8 | 15.1 | 15.5 |
|  | 6 H | 14.3 | 14.5 | 14.8 | 15.0 | 15.5 | 14.3 | 14.5 | 14.8 | 15.0 | 15.5 |
|  | 8 H | 14.3 | 14.5 | 14.7 | 14.9 | 15.4 | 14.3 | 14.5 | 14.7 | 14.9 | 15.4 |
|  | 12H | 14.2 | 14.4 | 14.7 | 14.9 | 15.4 | 14.2 | 14.4 | 14.7 | 14.9 | 15.4 |
| 12H | 4 H | 14.3 | 14.6 | 14.8 | 15.0 | 15.5 | 14.3 | 14.6 | 14.8 | 15.0 | 15.5 |
|  | 6 H | 14.3 | 14.4 | 14.7 | 14.9 | 15.4 | 14.3 | 14.4 | 14.7 | 14.9 | 15.4 |
|  | 8 H | 14.2 | 14.4 | 14.7 | 14.9 | 15.4 | 14.2 | 14.4 | 14.7 | 14.9 | 15.4 |
| Variations with the o bserver position at spacing: |  |  |  |  |  |  |  |  |  |  |  |
| $\mathrm{S}=$ | 1.0 H |  |  | / -1 |  |  |  |  | 1 / -14 |  |  |
|  | 1.5 H |  |  | / -15 |  |  |  |  | / / -15 |  |  |
|  | 2.0 H |  |  | / -1 |  |  |  |  | / 9 - 16 |  |  |

