Design iGuzzini

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# recessed adjustable

## Product code

# P415

#### Technical description

Round adjustable luminaire designed for housing 2700K Warm White COB LED light sources with high colour rendering and OPTIBEAM reflector made of thermoplastic material. Rim made of white-coated die-cast aluminium incorporating a black-coated thermoplastic component for guaranteeing maximum visual comfort and preventing stray light dispersion. Medium optic. Adjustable internally around the horizontal axis by 35° and around the vertical axis by 358°. Passive cooling system, by means of a black-coated heat sink made of extruded aluminium. The power supply unit is available with a separate code.

## Installation

Recessed installation in false ceilings with 1 mm to 20 mm thickness with steel springs.



# Dimension (mm) Ø82x100

Colour White (01)

Weight (Kg)

0.38

### Mounting

ceiling surface

# Wiring

Constant-current ballasts available with separate code: ON-OFF / 1-10 V dimmable / phase-cut dimmer / the recessed luminaire is supplied with the cable and connector to be connected to the connector provided on the driver.



# Complies with EN60598-1 and pertinent regulations

### Product configuration: P415

### Product characteristics

Total lighting output [Lm]: 426 Total power [W]: 10 Luminous efficacy [Lm/W]: 42.6 Life Time: > 50,000h - L80 - B10 (Ta 25°C)

# Optical assembly Characteristics Type 1

Light Output Ratio (L.O.R.) [%]: 37 Lamp code: LED ZVEI Code: LED Nominal power [W]: 10 Nominal luminous [Lm]: 1150 Lamp maximum intensity [cd]: / Beam angle [°]: 20° Total luminous flux at or above an angle of 90  $^{\circ}$  [Lm]: 0 Emergency luminous flux [Lm]: / Voltage [V]: - Number of optical assemblies: 1

Number of lamps for optical assembly: 1 Socket: / Ballast losses [W]: 0 Colour temperature [K]: 2700 CRI: 90 Wavelength [Nm]: / MacAdam Step: 2

| Polar                               |  |        |     |     |      |
|-------------------------------------|--|--------|-----|-----|------|
| Imax=3268 cd                        |  | Lux    |     |     |      |
| 90° 180° 90°                        | nL 0.37<br>99-100-100-100-37<br>UGR <10-<10        | h      | d   | Em  | Emax |
|                                     | DIN<br>A.61  | 2      | 0.7 | 664 | 817  |
| $\times$ $\times$ $\times$ $\times$ | UTE<br>0.37A+0.00T<br>F"1=985                      | 4      | 1.4 | 166 | 204  |
| 3000                                | F"1+F"2=996<br>F"1+F"2+F"3=1000<br>CIBSE           | 6      | 2.1 | 74  | 91   |
| α=20°                               | LG3 L<3000 cd/m² at 65°<br>UGR<10   L<3000 cd/mq @ | 965° 8 | 2.8 | 42  | 51   |

Utilisation factors

| R    | 77 | 75 | 73 | 71 | 55 | 53 | 33 | 00 | DRR |
|------|----|----|----|----|----|----|----|----|-----|
| K0.8 | 33 | 31 | 30 | 29 | 31 | 30 | 30 | 29 | 77  |
| 1.0  | 35 | 33 | 32 | 31 | 33 | 32 | 32 | 30 | 82  |
| 1.5  | 36 | 35 | 34 | 34 | 35 | 34 | 34 | 33 | 88  |
| 2.0  | 38 | 37 | 36 | 35 | 36 | 36 | 35 | 34 | 92  |
| 2.5  | 38 | 38 | 37 | 37 | 37 | 37 | 36 | 35 | 95  |
| 3.0  | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 97  |
| 4.0  | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 99  |
| 5.0  | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 37 | 100 |

# Luminance curve limit

| QC    | A              | G | 1.15 | 2000  | 1000  | 500            |           | <-300 |                         |                   |
|-------|----------------|---|------|-------|-------|----------------|-----------|-------|-------------------------|-------------------|
|       | в              |   | 1.50 |       | 2000  | 1000           | 750       | 500   | <=300                   |                   |
|       | С              |   | 1.85 |       |       | 2000           |           | 1000  | 500                     | <=300             |
| 85°   | _              |   |      |       |       |                | ~/~~      |       |                         |                   |
| 55    |                |   |      |       |       |                |           |       |                         | 8                 |
| 75°   |                |   |      |       |       |                |           |       | _                       | - 4               |
|       |                |   |      |       |       | 1              |           |       |                         |                   |
| 65°   |                |   |      |       |       |                |           |       |                         | 2                 |
| 55°   |                |   |      |       |       |                |           |       |                         | a                 |
|       |                |   |      |       |       |                |           |       | $\overline{\mathbb{N}}$ | h                 |
| 45° 1 | 0 <sup>2</sup> |   | 2    | 3 4 5 | 6 8 1 | 0 <sup>3</sup> | 2 3       | 4 5 6 | 8 10 <sup>4</sup>       | cd/m <sup>2</sup> |
|       | C0-18          | • | -    |       |       | -              | C90-270 - |       | -                       |                   |

# UGR diagram

| Rifle             |           |            |           |         |           |      |      |            |        |      |      |  |
|-------------------|-----------|------------|-----------|---------|-----------|------|------|------------|--------|------|------|--|
| ceil/c            |           | 0.70       | 0.70      | 0.50    | 0.50      | 0.30 | 0.70 | 0.70       | 0.50   | 0.50 | 0.30 |  |
| walls<br>work pl. |           | 0.50       | 0.30      | 0.50    | 0.30      | 0.30 | 0.50 | 0.30       | 0.50   | 0.30 | 0.30 |  |
|                   |           | 0.20       |           | 0.20    | 0.20      | 0.20 | 0.20 | 0.20       | 0.20   | 0.20 | 0.20 |  |
| Room dim          |           |            |           | viewed  |           |      | 1000 |            | viewed |      |      |  |
| x                 | У         | crosswise  |           |         |           |      |      | endwise    |        |      |      |  |
| 2H                | 2H        | 5.1        | 7.2       | 5.4     | 7.5       | 7.8  | 5.1  | 7.2        | 5.4    | 7.5  | 7.8  |  |
|                   | ЗН        | 5.6        | 7.1       | 6.0     | 7.4       | 7.7  | 5.4  | 6.8        | 5.7    | 7.1  | 7.5  |  |
|                   | <b>4H</b> | 5.7        | 6.8       | 6.1     | 7.2       | 7.5  | 5.5  | 6.6        | 5.8    | 6.9  | 7.2  |  |
|                   | 6H        | 5.8        | 6.5       | 6.2     | 6.9       | 7.2  | 5.5  | 6.2        | 5.9    | 6.5  | 6.9  |  |
|                   | BH        | 5.8        | 6.6       | 6.2     | 6.9       | 7.3  | 5.4  | 6.2        | 5.8    | 6.6  | 6.9  |  |
|                   | 12H       | 5.8        | 6.6       | 6.2     | 6.9       | 7.3  | 5.4  | 6.2        | 5.8    | 6.6  | 6.9  |  |
| 4H                | 2H        | 5.5        | 6.6       | 5.8     | 6.9       | 7.2  | 5.7  | 6.8        | 6.1    | 7.2  | 7.   |  |
|                   | ЗH        | 6.1        | 6.9       | 6.5     | 7.3       | 7.6  | 6.1  | 6.9        | 6.5    | 7.3  | 7.   |  |
|                   | 4H        | 6.1        | 7.1       | 6.6     | 7.5       | 7.9  | 6.1  | 7.1        | 6.6    | 7.5  | 7.   |  |
|                   | 6H        | 5.9        | 7.6       | 6.3     | 0.8       | 8.5  | 5.8  | 7.6        | 6.3    | 0.8  | 8.8  |  |
|                   | 8H        | 5.8        | 7.7       | 6.3     | 8.2       | 8.7  | 5.7  | 7.6        | 6.2    | 8.1  | 8.6  |  |
|                   | 12H       | 5.7        | 7.7       | 6.2     | 8.2       | 8.7  | 5.6  | 7.6        | 6.1    | 8.1  | 8.6  |  |
| вн                | 4H        | 5.7        | 7.6       | 6.2     | 8.1       | 8.6  | 5.8  | 7.7        | 6.3    | 8.2  | 8.   |  |
|                   | 6H        | 5.8        | 7.5       | 6.3     | 0.8       | 8.5  | 5.8  | 7.5        | 6.3    | 0.8  | 8.6  |  |
|                   | BH        | 5.9        | 7.3       | 6.4     | 7.8       | 8.3  | 5.9  | 7.3        | 6.4    | 7.8  | 8.3  |  |
|                   | 12H       | 6.1        | 7.1       | 6.6     | 7.6       | 8.1  | 6.0  | 7.0        | 6.5    | 7.5  | 8.1  |  |
| 12H               | 4H        | 5.6        | 7.6       | 6.1     | 8.1       | 8.6  | 5.7  | 7.7        | 6.2    | 8.2  | 8.3  |  |
|                   | 6H        | 5.8        | 7.3       | 6.4     | 7.8       | 8.3  | 5.9  | 7.3        | 6.4    | 7.8  | 8.4  |  |
|                   | H8        | 6.0        | 7.0       | 6.5     | 7.5       | 8.1  | 6.1  | 7.1        | 6.6    | 7.6  | 8.   |  |
| Varia             | tions wi  | th the ol  | oserver p | osition | at spacir | ng:  |      |            |        |      |      |  |
| S =               | 1.0H      | 0.4 / -0.5 |           |         |           |      |      | 0.4 / -0.5 |        |      |      |  |
|                   | 1.5H      | 0.6 / -1.5 |           |         |           |      |      | 0.6 / -1.5 |        |      |      |  |