

## Laser Pinhole

Design iGuzzini

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Last information update: June 2023

### Product configuration: P451

P451: recessed adjustable



#### Product code

P451: recessed adjustable **Attention! Code no longer in production**

#### 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, upper barrel made of black-coated thermoplastic for guaranteeing maximum visual comfort and preventing stray light dispersion, black-coated extruded aluminium heat sink. Spot optic. Adjustable internally around the horizontal axis by 35° and around the vertical axis by 358°. Passive cooling system. Product inclusive of electronic components.

#### Installation

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

#### Colour

White (01)

#### Weight (Kg)

1.3

#### Mounting

ceiling surface

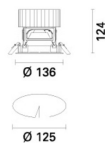
#### Wiring

Product inclusive of electronic components.

Complies with EN60598-1 and pertinent regulations



IP20



#### Technical data

Im system:	1160	MacAdam Step:	3
W system:	33.9	Life Time LED 1:	> 50,000h - L80 - B10 (Ta 25°C)
Im source:	2900	Ballast losses [W]:	2.9
W source:	31	Lamp code:	LED
Luminous efficiency (Im/W, real value):	34.2	Number of lamps for optical assembly:	1
Im in emergency mode:	-	ZVEI Code:	LED
Total light flux at or above an angle of 90° [Lm]:	0	Number of optical assemblies:	1
Light Output Ratio (L.O.R.) [%]:	40	Power factor:	See installation instructions
Beam angle [°]:	18°	Inrush current:	186 A / 240 µs
CRI (minimum):	90	Overvoltage protection:	2kV Common mode & 1kV Differential mode
Colour temperature [K]:	2700		

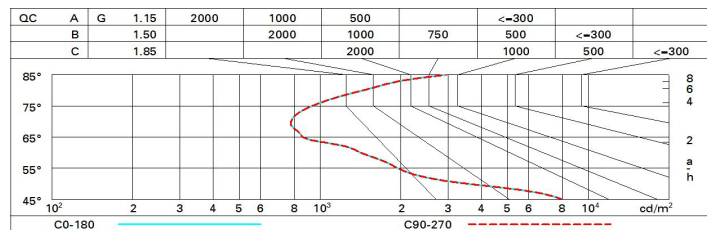
#### Polar

<p><math>\alpha = 18^\circ</math></p>	<b>CIE</b> nL 0.40 98-100-100-100-40 UGR <10- <10 <b>DIN</b> A.61 <b>UTE</b> 0.40A+0.00T F*1=985 F*1+F*2=997 F*1+F*2+F*3=999 <b>CIBSE</b> LG3 L<3000 cd/m <sup>2</sup> at 65° UGR<10   L<3000 cd/mq @65°				<b>Lux</b>			
					h	d	Em	E <sub>max</sub>
					2	0.6	1275	1707
					4	1.3	319	427
					6	1.9	142	190
					8	2.5	80	107

# Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	36	34	33	32	34	32	32	31	77
1.0	37	36	35	34	35	34	34	33	82
1.5	39	38	37	36	38	37	36	35	88
2.0	41	40	39	38	39	38	38	37	92
2.5	41	41	40	40	40	40	39	38	95
3.0	42	41	41	41	41	40	40	39	97
4.0	42	42	42	42	41	41	41	40	99
5.0	43	42	42	42	42	42	41	40	100

# Luminance curve limit



# UGR diagram

Corrected UGR values (at 2900 lm bare lamp luminous flux)											
Reflect.: ceiling walls work pl. Room dim x y		viewed crosswise					viewed endwise				
		0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
		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	0.20
2H	2H	0.1	0.2	0.5	0.5	0.8	0.1	0.2	0.5	0.5	0.8
	3H	0.0	0.7	0.4	0.0	0.3	0.0	0.7	0.4	0.0	0.3
	4H	0.1	0.4	0.4	0.7	0.1	0.0	0.3	0.3	0.7	0.0
	6H	0.2	0.2	0.6	0.5	0.9	0.9	0.0	0.3	0.3	0.7
	8H	0.3	0.3	0.7	0.6	0.0	0.9	0.3	0.3	0.7	0.6
	12H	0.4	0.5	0.8	0.8	0.2	0.8	0.3	0.7	0.6	0.0
4H	2H	0.0	0.3	0.3	0.6	0.0	0.1	0.4	0.4	0.7	0.1
	3H	0.0	0.0	0.4	0.3	0.7	0.0	0.1	0.4	0.4	0.7
	4H	0.0	0.0	0.4	0.4	0.8	0.0	0.0	0.4	0.4	0.8
	6H	0.9	0.6	0.4	0.0	0.5	0.7	0.4	0.2	0.8	0.3
	8H	0.0	0.9	0.5	0.4	0.9	0.6	0.5	0.1	0.9	0.4
	12H	0.3	0.2	0.8	0.7	0.2	0.5	0.5	0.0	0.9	0.5
8H	4H	0.6	0.5	0.1	0.9	0.4	0.0	0.9	0.5	0.4	0.9
	6H	0.9	0.7	0.4	0.2	0.7	0.1	0.9	0.6	0.4	0.9
	8H	0.2	0.8	0.7	0.3	0.8	0.2	0.8	0.7	0.3	0.8
	12H	0.0	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.0	0.0
12H	4H	0.5	0.5	0.0	0.0	0.6	0.3	0.2	0.8	0.7	0.2
	6H	0.9	0.5	0.5	0.0	0.6	0.6	0.2	0.1	0.7	0.2
	8H	0.5	0.5	0.0	0.0	0.6	0.0	0.0	0.5	0.5	0.0
Variations with the observer position at spacing:											
S =	1.0H	1.4 / -2.1					1.4 / -2.1				
	1.5H	3.1 / -2.0					3.1 / -2.0				
	2.0H	4.7 / -3.0					4.7 / -3.0				