

## Laser Pinhole

Design iGuzzini

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recessed adjustable

**Product code**  
P444

### 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. Flood optic. Adjustable internally around the horizontal axis by 35° and around the vertical axis by 358°. Passive cooling system. Product inclusive of DALI components.

### Installation

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

**Dimension (mm)**  
Ø136x104

**Colour**  
White (01)

**Weight (Kg)**  
1.3

**Mounting**  
ceiling surface

### Wiring

Product inclusive of DALI components.

Complies with EN60598-1 and pertinent regulations



IP20



pending

### Product configuration: P444

#### Product characteristics

Total lighting output [Lm]: 1077  
Total power [W]: 21.8  
Luminous efficacy [Lm/W]: 49.4  
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.) [%]: 54  
Lamp code: LED  
ZVEI Code: LED  
Nominal power [W]: 19  
Nominal luminous [Lm]: 2000  
Lamp maximum intensity [cd]: /  
Beam angle [°]: 30°

Number of lamps for optical assembly: 1  
Socket: /  
Ballast losses [W]: 2.8  
Colour temperature [K]: 2700  
CRI: 90  
Wavelength [Nm]: /  
MacAdam Step: 2

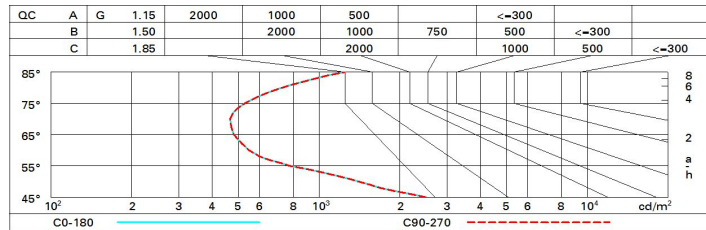
#### Polar

Imax=3781 cd	CIE	Lux			
		h	d	Em	E <sub>max</sub>
	nL 0.54				
	99-100-100-100-54				
	UGR <10-<10				
	<b>DIN</b> A.61				
<b>UTE</b> 0.54A+0.00T	F*1=993	2	1.1	736	945
F*1+F*2=999	4	2.1	184	236	
F*1+F*2+F*3=999	6	3.2	82	105	
<b>CIBSE</b> LG3 L<1500 cd/m <sup>2</sup> at 65°	8	4.3	46	59	
UGR<10   L<1500 cd/mq @65°					

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	49	46	44	43	46	44	44	42	78
1.0	51	48	47	46	48	46	46	44	83
1.5	53	51	50	49	51	50	49	48	88
2.0	55	54	53	52	53	52	51	50	93
2.5	56	55	54	54	54	53	53	51	96
3.0	57	56	55	55	55	55	54	53	98
4.0	57	57	56	56	56	56	55	53	99
5.0	58	57	57	57	56	56	55	54	100

Luminance curve limit



UGR diagram

Corrected UGR values (at 2000 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		viewed crosswise					viewed endwise				
x	y										
2H	2H	7.5	8.0	7.8	8.3	8.5	7.5	8.0	7.8	8.3	8.5
	3H	7.4	7.9	7.7	8.1	8.4	7.4	7.9	7.7	8.1	8.4
	4H	7.3	7.8	7.7	8.1	8.4	7.3	7.8	7.6	8.0	8.3
	6H	7.3	7.7	7.7	8.0	8.3	7.2	7.6	7.6	8.0	8.3
	8H	7.3	7.7	7.7	8.0	8.4	7.2	7.6	7.6	7.9	8.3
	12H	7.3	7.7	7.7	8.0	8.4	7.2	7.5	7.5	7.9	8.2
4H	2H	7.3	7.8	7.6	8.0	8.3	7.3	7.8	7.7	8.1	8.4
	3H	7.2	7.6	7.6	7.9	8.3	7.2	7.6	7.6	7.9	8.3
	4H	7.1	7.5	7.5	7.8	8.2	7.1	7.5	7.5	7.8	8.2
	6H	7.1	7.4	7.5	7.8	8.2	7.1	7.4	7.5	7.8	8.2
	8H	7.1	7.4	7.6	7.8	8.2	7.0	7.3	7.5	7.7	8.2
	12H	7.2	7.4	7.6	7.8	8.3	7.0	7.2	7.4	7.7	8.1
8H	4H	7.0	7.3	7.5	7.7	8.2	7.1	7.4	7.6	7.8	8.2
	6H	7.0	7.3	7.5	7.7	8.2	7.1	7.3	7.6	7.8	8.2
	8H	7.1	7.3	7.6	7.7	8.2	7.1	7.3	7.6	7.7	8.2
	12H	7.1	7.3	7.6	7.8	8.3	7.1	7.2	7.6	7.7	8.2
12H	4H	7.0	7.2	7.4	7.7	8.1	7.2	7.4	7.6	7.8	8.3
	6H	7.0	7.2	7.5	7.7	8.2	7.1	7.3	7.6	7.8	8.3
	8H	7.1	7.2	7.6	7.7	8.2	7.1	7.3	7.6	7.8	8.3
Variations with the observer position at spacing:											
S =	1.0H	4.7 / -0.5					4.7 / -0.5				
	1.5H	7.4 / -0.9					7.4 / -0.9				
	2.0H	9.4 / -7.1					9.4 / -7.1				