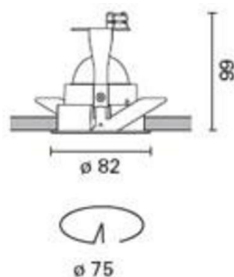## Laser Pinhole

Design iGuzzini **iGuzzini**

Last information update: May 2018

fixed recessed WW

Product code
P414

Technical description
Round fixed luminaire designed for housing 3000K 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. Flood optic. 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)
Ø82x99

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

III   IP20

CE

Product configuration: P414

Product characteristics

Total lighting output [Lm]: 562	Total luminous flux at or above an angle of 90° [Lm]: 0
Total power [W]: 10	Emergency luminous flux [Lm]: /
Luminous efficacy [Lm/W]: 56.2	Voltage [V]: -
Life Time: > 50,000h - L80 - B10 (Ta 25°C)	Number of optical assemblies: 1

Optical assembly Characteristics Type 1

Light Output Ratio (L.O.R.) [%]: 47	Number of lamps for optical assembly: 1
Lamp code: LED	Socket: /
ZVEI Code: LED	Ballast losses [W]: 0
Nominal power [W]: 10	Colour temperature [K]: 3000
Nominal luminous [Lm]: 1200	CRI: 90
Lamp maximum intensity [cd]: /	Wavelength [Nm]: /
Beam angle [°]: 28°	MacAdam Step: 2

Polar

Imax=2594 cd

CIE
nL 0.47
99-100-100-100-47
UGR <10-<10
DIN
A.61
UTE
0.47A+0.00T
F"1=988
F"1+F"2=997
F"1+F"2+F"3=1000
CIBSE
LG3 L<3000 cd/m² at 65°
UGR<10 l L<3000 cd/mq @65°

α=28°

Lux			
h	d	Em	Emax
2	1	506	649
4	2	126	162
6	3	56	72
8	4	32	41
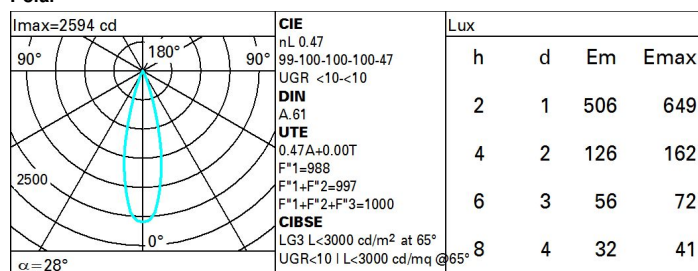
Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	42	40	38	37	39	38	38	36	78
1.0	44	42	41	39	42	40	40	38	82
1.5	46	45	44	43	44	43	43	41	88
2.0	48	47	46	45	46	45	45	43	92
2.5	49	48	47	46	47	46	46	45	95
3.0	49	49	48	48	48	47	47	46	97
4.0	50	49	49	49	49	48	48	46	99
5.0	50	50	49	49	49	49	48	47	100

Luminance curve limit

QC	A	G	1.15	2000	1000	500		<=300		
	B		1.50		2000	1000	750	500	<=300	
	C		1.85			2000		1000	500	<=300

C0-180   C90-270
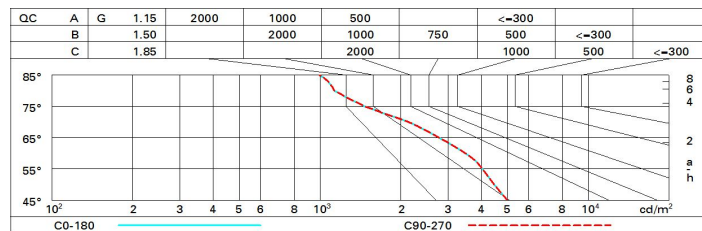
UGR diagram

Corrected UGR values (at 1200 lm bare lamp luminous flux)

Riflect.: ceil/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	viewed crosswise					viewed endwise				
2H	2H	4.8	7.0	5.2	7.3	7.6	4.8	7.0	5.2	7.3	7.6
	3H	5.5	7.1	5.9	7.5	7.8	5.1	6.8	5.5	7.1	7.5
	4H	5.6	7.0	6.0	7.3	7.6	5.2	6.6	5.6	6.9	7.2
	6H	5.7	6.7	6.1	7.0	7.4	5.3	6.2	5.6	6.6	6.9
	8H	5.7	6.7	6.1	7.0	7.4	5.2	6.2	5.6	6.5	6.9
	12H	5.7	6.7	6.1	7.0	7.4	5.2	6.1	5.6	6.5	6.8
4H	2H	5.2	6.6	5.6	6.9	7.2	5.6	7.0	6.0	7.3	7.6
	3H	6.0	6.9	6.4	7.3	7.7	6.1	7.0	6.5	7.4	7.7
	4H	6.2	7.1	6.6	7.4	7.8	6.2	7.1	6.6	7.4	7.8
	6H	5.9	7.6	6.4	8.1	8.5	5.9	7.6	6.4	8.0	8.5
	8H	5.9	7.8	6.4	8.2	8.7	5.8	7.7	6.3	8.1	8.6
	12H	5.8	7.8	6.3	8.3	8.8	5.7	7.7	6.2	8.1	8.7
8H	4H	5.8	7.7	6.3	8.1	8.6	5.9	7.8	6.4	8.2	8.7
	6H	5.9	7.7	6.4	8.2	8.7	5.9	7.7	6.4	8.2	8.7
	8H	6.0	7.6	6.5	8.1	8.6	6.0	7.6	6.5	8.1	8.6
	12H	6.1	7.3	6.7	7.8	8.3	6.1	7.2	6.6	7.7	8.3
12H	4H	5.7	7.7	6.2	8.1	8.7	5.8	7.8	6.3	8.3	8.8
	6H	5.9	7.5	6.4	8.0	8.5	6.0	7.6	6.5	8.1	8.6
	8H	6.1	7.2	6.6	7.7	8.3	6.1	7.3	6.7	7.8	8.3

Variations with the observer position at spacing:

S =	1.0H	0.6 / -0.5	0.6 / -0.5
	1.5H	1.3 / -1.3	1.3 / -1.3
	2.0H	2.2 / -2.0	2.2 / -2.0