Laser Pinhole

Last information update: April 2025

Product configuration: P440
P440: recessed adjustable

Product code
P440: recessed adjustable

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. Medium 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.

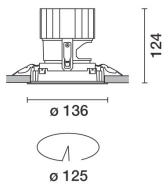| Colour	Weight (Kg)
White (01)	1.3

Mounting
ceiling surface

Wiring
Product inclusive of electronic components.

Complies with EN60598-1 and pertinent regulations

Technical data

lm system:	960	CRI (minimum):	90
W system:	22.2	Colour temperature [K]:	2700
lm source:	2000	MacAdam Step:	2
W source:	19	Life Time LED 1:	> 50,000h - L80 - B10 (Ta 25°C)
Luminous efficiency (lm/W, real value):	43.2	Lamp code:	LED
lm in emergency mode:	-	Number of lamps for optical assembly:	1
Total light flux at or above an angle of 90° [Lm]:	0	ZVEI Code:	LED
Light Output Ratio (L.O.R.) [%]:	48	Number of optical assemblies:	1
Beam angle [°]:	12°		

Polar

Imax=18349 cd

Lux			
h	d	Em	Emax
2	0.4	3437	4587
4	0.8	859	1147
6	1.3	382	510
8	1.7	215	287

$\alpha = 12°$
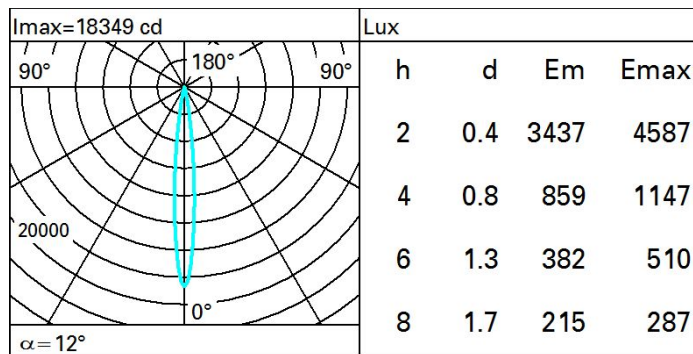
Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	43	41	40	38	41	39	39	38	78
1.0	45	43	42	41	43	41	41	40	83
1.5	47	46	45	44	45	44	44	42	88
2.0	49	48	47	46	47	46	46	45	93
2.5	50	49	48	48	48	48	47	46	96
3.0	50	50	49	49	49	49	48	47	98
4.0	51	51	50	50	50	50	49	48	99
5.0	51	51	51	51	50	50	49	48	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

85°
75°
65°
55°
45° 10² 2 3 4 5 6 8 10³ 2 3 4 5 6 8 10⁴ cd/m²

8
6
4
2
a
h

C0-180 ———— C90-270 - - - - - - - -