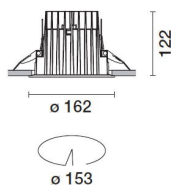
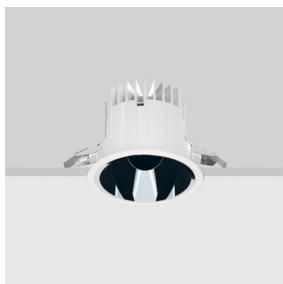


Last information update: April 2024

Product configuration: N012

N012: Fixed circular recessed luminaire - Ø153 mm - warm white - medium optic - UGR<19

**Product code**

N012: Fixed circular recessed luminaire - Ø153 mm - warm white - medium optic - UGR<19

Technical description

Fixed round luminaire designed to use a LED lamp with C.O.B. technology. Version with rim for surface-mounting. Reflector vacuum-metallised with aluminium vapours with an anti-scratch protective layer. Die-cast aluminium body and passive dissipation system. Product complete with LED lamp in warm white colour tone (3000K). General light emission, with controlled luminance UGR<19 1500 cd/m² α>65° medium optic.

Installation

Recessed using torsion springs which allow easy installation in false ceilings with thickness ranging from 1 mm to 25 mm.

Colour

White / Aluminium (39)

Weight (Kg)

1.22

Mounting

ceiling recessed

Wiring

product complete with DALI components

Complies with EN60598-1 and pertinent regulations



IP20

IP54

On the visible part of the product once installed

**Technical data**

lm system:	2820	Life Time LED 1:	> 50,000h - L90 - B10 (Ta 25°C)
W system:	24.9	Lamp code:	LED
lm source:	3250	Number of lamps for optical assembly:	1
W source:	22	ZVEI Code:	LED
Luminous efficiency (lm/W, real value):	113.2	Number of optical assemblies:	1
lm in emergency mode:	-	Power factor:	See installation instructions
Total light flux at or above an angle of 90° [Lm]:	0	Inrush current:	18 A / 250 µs
Light Output Ratio (L.O.R.) [%]:	87	Maximum number of luminaires of this type per miniature circuit breaker:	B10A: 21 luminaires B16A: 34 luminaires C10A: 35 luminaires C16A: 57 luminaires
Beam angle [°]:	24°	Minimum dimming %:	1
CRI (minimum):	80	Overvoltage protection:	2kV Common mode & 1kV Differential mode
Colour temperature [K]:	3000	Control:	DALI-2
MacAdam Step:	2		

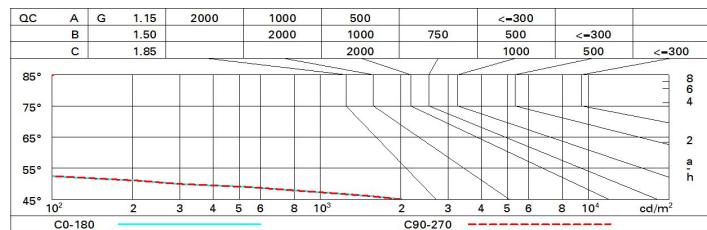
Polar

Imax=10961 cd		CIE		Lux			
90°	180°	nL 0.87	h	d	Em	Emax	
		99-100-100-100-87	2	0.9	2088	2740	
		UGR 15.7-15.7	4	1.7	522	685	
		DIN A.61	6	2.6	232	304	
		UTE 0.87A+0.00T	8	3.4	130	171	
		F*1=993					
		F*1+F*2=1000					
		F*1+F*2+F*3=1000					
		CIBSE LG3 L<1500 cd/m² at 65°					
		UGR<16 L<1500 cd/mq @65°					
α=24°							

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	78	74	71	69	73	71	70	68	78
1.0	82	78	75	73	77	75	74	72	83
1.5	86	83	81	79	82	80	79	77	88
2.0	88	86	85	83	85	84	83	80	93
2.5	90	89	87	86	87	86	85	83	96
3.0	91	90	89	88	89	88	87	85	98
4.0	92	91	91	90	90	89	88	86	99
5.0	93	92	92	91	91	90	89	87	100

Luminance curve limit



UGR diagram

Corrected UGR values (at 3250 lm bare lamp luminous flux)											
Reflect.: ceiling/cav 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	16.6	18.4	17.0	18.7	19.0	16.6	18.4	17.0	18.7	19.0
	3H	16.5	17.8	16.8	18.1	18.4	16.5	17.8	16.8	18.1	18.4
	4H	16.4	17.5	16.8	17.9	18.2	16.4	17.5	16.8	17.9	18.2
	6H	16.3	17.4	16.7	17.7	18.1	16.3	17.4	16.7	17.7	18.1
	8H	16.3	17.3	16.6	17.7	18.0	16.3	17.3	16.6	17.7	18.0
	12H	16.2	17.3	16.6	17.6	18.0	16.2	17.3	16.6	17.6	18.0
4H	2H	16.4	17.5	16.8	17.9	18.2	16.4	17.5	16.8	17.9	18.2
	3H	16.2	17.3	16.6	17.6	18.0	16.2	17.3	16.6	17.6	18.0
	4H	16.1	17.1	16.5	17.5	17.9	16.1	17.1	16.5	17.5	17.9
	6H	15.9	17.2	16.3	17.6	18.0	15.9	17.2	16.3	17.6	18.0
	8H	15.7	17.2	16.2	17.7	18.1	15.7	17.2	16.2	17.7	18.1
	12H	15.6	17.2	16.1	17.7	18.2	15.6	17.2	16.1	17.7	18.2
8H	4H	15.7	17.2	16.2	17.7	18.1	15.7	17.2	16.2	17.7	18.1
	6H	15.6	17.1	16.1	17.6	18.1	15.6	17.1	16.1	17.6	18.1
	8H	15.6	16.9	16.1	17.4	17.9	15.6	16.9	16.1	17.4	17.9
	12H	15.6	16.6	16.1	17.1	17.6	15.6	16.6	16.1	17.1	17.6
12H	4H	15.6	17.2	16.1	17.7	18.2	15.6	17.2	16.1	17.7	18.2
	6H	15.6	16.9	16.1	17.4	17.9	15.6	16.9	16.1	17.4	17.9
	8H	15.6	16.6	16.1	17.1	17.6	15.6	16.6	16.1	17.1	17.6
Variations with the observer position at spacing:											
S =	1.0H	5.1 / -31.3					5.1 / -31.3				
	1.5H	7.9 / -31.6					7.9 / -31.6				
	2.0H	9.9 / -31.8					9.9 / -31.8				