

Last information update: October 2023

Product configuration: P299

P299: 600x600 - neutral White - UGR<19 - DALI

**Product code**P299: 600x600 - neutral White - UGR<19 - DALI **Attention! Code no longer in production****Technical description**

Recessed direct emission luminaire designed to use Neutral White colour 4,000K LEDs and be installed in 600x600 modular false ceilings or in plasterboard ceilings using a frame to be ordered as an accessory. The optical assembly is made of a thermoplastic material for controlled luminance with a UGR<19 L<3000 cd/m² @ 65° beam, ideal for environments with video terminals. Product complete with DALI ballast.

Installation

recessed in 600x600 modular false ceilings or in plasterboard ceilings using a frame to be ordered as an accessory.

Colour

White (01)

Mounting

ceiling surface

Wiring

product complete with DALI components

Complies with EN60598-1 and pertinent regulations



IP20

IP43

On the visible part of the product once installed

**Technical data**

lm system:	3771	Colour temperature [K]:	4000
W system:	35	MacAdam Step:	3
lm source:	4600	Life Time LED 1:	50,000h - L80 - B10 (Ta 25°C)
W source:	30	Ballast losses [W]:	5
Luminous efficiency (lm/W, real value):	107.7	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.) [%]:	82	Number of optical assemblies:	1
CRI:	80	Control:	DALI

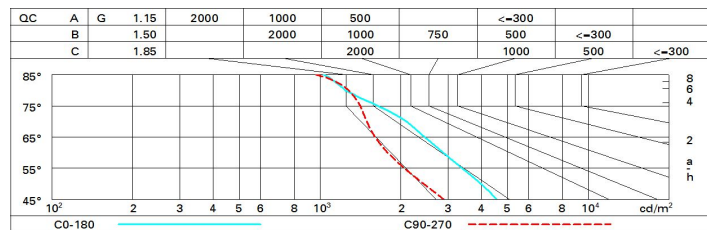
Polar

<p>$\alpha = 92^\circ / 72^\circ$</p>	Imax=1998 cd C0-180		CIE nL 0.82 62-88-98-100-82 UGR 18.4-16.5 DIN A.51 UTE 0.82C+0.00T F*1=619 F*1+F*2=883 F*1+F*2+F*3=979 CIBSE LG3 L<3000 cd/m ² at 65° UGR<19 L<3000 cd/mq @65°		Lux				
	90°	180°	90°	h	d1	d2	Em	E _{max}	
			2	4.1	2.9	336	499		
			4	8.3	5.8	84	125		
			6	12.4	8.7	37	55		
		8	16.6	11.6	21	31			

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	59	52	47	43	51	46	46	41	50
1.0	65	58	53	49	57	52	52	47	57
1.5	72	67	62	59	65	62	61	56	69
2.0	76	72	69	66	71	68	67	63	76
2.5	79	75	73	70	74	71	70	67	81
3.0	81	78	75	73	76	74	73	69	85
4.0	83	80	78	77	79	77	76	72	88
5.0	84	82	80	79	80	79	77	74	91

Luminance curve limit



UGR diagram

Corrected UGR values (at 4000 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	16.5	17.5	18.8	17.8	18.1	14.2	15.2	14.5	15.5	15.7
	3H	17.4	18.3	17.7	18.6	18.9	14.6	15.6	15.0	15.8	16.1
	4H	17.7	18.5	18.0	18.8	19.2	14.8	15.7	15.1	16.0	16.3
	6H	17.8	18.6	18.2	18.9	19.3	14.8	15.6	15.2	16.0	16.3
	8H	17.8	18.6	18.2	19.0	19.3	14.8	15.6	15.2	15.9	16.3
	12H	17.9	18.6	18.3	19.0	19.3	14.8	15.5	15.2	15.9	16.3
4H	2H	16.7	17.6	17.1	17.9	18.2	15.4	16.3	15.8	16.6	16.9
	3H	17.8	18.5	18.2	18.9	19.2	16.0	16.7	16.4	17.1	17.4
	4H	18.1	18.8	18.6	19.2	19.6	16.2	16.9	16.6	17.3	17.7
	6H	18.4	19.0	18.8	19.4	19.8	16.4	17.0	16.8	17.4	17.8
	8H	18.4	19.0	18.9	19.4	19.8	16.5	17.0	16.9	17.4	17.8
	12H	18.5	19.0	18.9	19.4	19.9	16.4	16.9	16.9	17.4	17.8
8H	4H	18.2	18.7	18.7	19.2	19.6	16.8	17.3	17.2	17.7	18.2
	6H	18.5	19.0	19.0	19.4	19.9	17.1	17.5	17.5	17.9	18.4
	8H	18.6	19.0	19.1	19.5	20.0	17.2	17.5	17.6	18.0	18.5
	12H	18.7	19.1	19.2	19.5	20.1	17.2	17.5	17.7	18.0	18.5
12H	4H	18.2	18.7	18.7	19.1	19.6	16.9	17.3	17.3	17.8	18.2
	6H	18.5	18.9	19.0	19.4	19.9	17.2	17.5	17.7	18.0	18.5
	8H	18.7	19.0	19.2	19.5	20.0	17.3	17.6	17.8	18.1	18.6
Variations with the observer position at spacing:											
S =	1.0H	0.2 / -0.3					0.3 / -0.4				
	1.5H	0.6 / -0.9					0.5 / -0.9				
	2.0H	1.4 / -1.3					0.9 / -1.2				