

Last information update: June 2018

**Down LED plate - DALI - Working UGR < 19 - Neutral Warm - L 896****Product code**

QB93

Technical description

LED module set up for housing in initial or intermediate system profiles. High efficiency down emission for Working profiles (with a controlled luminance micro-prismatic screen). DALI dimmable control gear integrated in the luminaire. Extruded aluminium heat sink; high emission yield flux enhancer. Neutral 4000K LED

Installation

Module insertion on profiles facilitated by a quick coupling system.

Colour

Indeterminate (00)

Weight (Kg)

0.99

Wiring

Quick coupling terminal block connection to simplify connections between the subsequent modules. Complete with integrated dimmable digital DALI control gear.

Complies with EN60598-1 and pertinent regulations

IP20

**Product configuration: QB93****Product characteristics**

Total lighting output [Lm]: 923
 Total power [W]: 8.2
 Luminous efficacy [Lm/W]: 112.7
 Life Time: > 50,000h - L90 - 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.) [%]: 71
 Lamp code: LED
 ZVEI Code: LED
 Nominal power [W]: 6.7
 Nominal luminous [Lm]: 1300
 Lamp maximum intensity [cd]: /
 Beam angle [°]: /

Number of lamps for optical assembly: 1
 Socket: /
 Ballast losses [W]: 1.5
 Colour temperature [K]: 4000
 CRI: 80
 Wavelength [Nm]: /
 MacAdam Step: 3

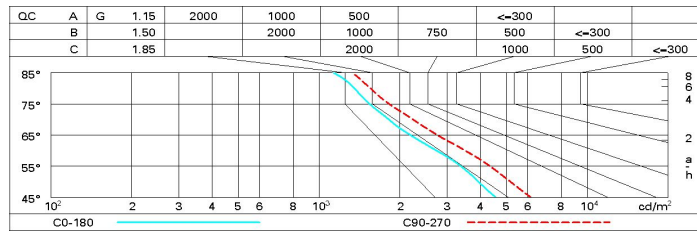
Polar

Polar		CIE		Lux	
Imax=573 cd	CO-180	nL 0.71		h	d1 d2 Em Emax
90°	180°	67-91-98-100-71		1	1.3 1.6 401 573
		UGR 17.4-18.2		2	2.7 3.2 100 143
		DIN		3	4 4.9 45 64
		A.51		4	5.4 6.5 25 36
		UTE			
		0.71C+0.00T			
		F*1=667			
		F*1+F*2=908			
		F*1+F*2+F*3=984			
		CIBSE			
		LG3 L<3000 cd/m ² at 65°			
		UGR<19 L<3000 cd/mq @65°			
α=68° / 78°					

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	53	47	43	40	46	42	42	38	54
1.0	57	52	48	45	51	47	47	43	61
1.5	64	59	56	53	58	55	54	51	72
2.0	67	64	61	59	62	60	59	56	79
2.5	69	66	64	62	65	63	62	59	83
3.0	71	68	66	65	67	65	64	61	86
4.0	72	70	69	67	69	68	66	64	90
5.0	73	72	70	69	70	69	68	65	92

Luminance curve limit



UGR diagram

Corrected UGR values (at 1300 lm bare lamp luminous flux)											
Reflect.:		viewed crosswise					viewed endwise				
ceiling	av	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	viewed crosswise					viewed endwise				
2H	2H	15.7	16.6	16.0	16.9	17.1	17.0	17.9	17.3	18.2	18.4
	3H	16.3	17.1	16.6	17.4	17.7	17.2	18.0	17.5	18.3	18.6
	4H	16.5	17.3	16.8	17.6	17.9	17.2	18.0	17.5	18.3	18.6
	6H	16.6	17.4	17.0	17.7	18.0	17.1	17.9	17.5	18.2	18.6
	8H	16.7	17.4	17.1	17.7	18.1	17.1	17.8	17.5	18.2	18.5
	12H	16.7	17.4	17.1	17.7	18.1	17.1	17.8	17.5	18.1	18.5
4H	2H	16.1	16.9	16.4	17.2	17.5	17.7	18.6	18.1	18.9	19.2
	3H	16.8	17.5	17.2	17.8	18.2	18.1	18.8	18.5	19.1	19.5
	4H	17.1	17.7	17.5	18.1	18.5	18.2	18.8	18.6	19.2	19.6
	6H	17.3	17.9	17.8	18.3	18.7	18.2	18.8	18.7	19.2	19.6
	8H	17.4	17.9	17.9	18.3	18.8	18.2	18.7	18.7	19.1	19.6
	12H	17.5	17.9	17.9	18.3	18.8	18.2	18.6	18.7	19.1	19.5
8H	4H	17.2	17.7	17.6	18.1	18.5	18.5	18.9	18.9	19.4	19.8
	6H	17.5	17.9	18.0	18.4	18.9	18.6	19.0	19.1	19.4	19.9
	8H	17.7	18.0	18.2	18.5	19.0	18.6	19.0	19.1	19.4	19.9
	12H	17.8	18.1	18.3	18.6	19.1	18.6	18.9	19.1	19.4	19.9
12H	4H	17.2	17.6	17.6	18.1	18.5	18.5	18.9	19.0	19.4	19.8
	6H	17.6	17.9	18.0	18.4	18.9	18.6	19.0	19.1	19.5	20.0
	8H	17.7	18.0	18.2	18.5	19.0	18.7	19.0	19.2	19.5	20.0
Variations with the observer position at spacing:											
S =	1.0H	0.5 / -0.5					0.3 / -0.5				
	1.5H	0.6 / -1.3					0.8 / -1.2				
	2.0H	1.2 / -1.9					1.8 / -1.8				