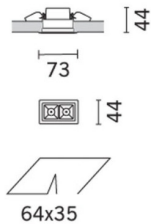
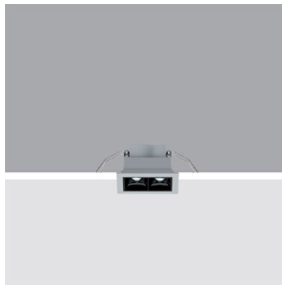


Last information update: May 2018

**2 - cell Recessed luminaire - LED - Warm white medium****Product code**  
MK48**Technical description**

rectangular miniaturised recessed luminaire with 2 optical elements with LED lamps - fixed optics - medium beam angle. Main body with die-cast aluminium radiant surface, version with perimeter surface frame. Metallised thermoplastic high definition optics, integrated in a rear position in the black anti-glare screen. Connecting cable supplied. Ballast not included, available with separate code. Warm white LED.

**Installation**

recessed with steel wire springs for false ceilings from 1 to 20 mm thick - preparation hole 35 x 64

**Dimension (mm)**

73x44x44

**Colour**

White (01) | White/Brass (41) | Black/Black (43) | Black/White (47) | Grey/Black (74) | (E7)

**Weight (Kg)**

0.09

**Mounting**

wall recessed|ceiling recessed

**Wiring**

direct current ballasts to be ordered separately: electronic (MXF9) for max. 7 LEDs; DALI dimmable (BZM4) for max. 20 LEDs (check instruction leaflet for compatible lengths of cables to be used)

Complies with EN60598-1 and pertinent regulations



IP20

IP23

On the visible part of the product once installed

**Product configuration: MK48****Product characteristics**

Total lighting output [Lm]: 315  
Total power [W]: 4.2  
Luminous efficacy [Lm/W]: 75  
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.) [%]: 83  
Lamp code: LED  
ZVEI Code: LED  
Nominal power [W]: 4.2  
Nominal luminous [Lm]: 380  
Lamp maximum intensity [cd]: /  
Beam angle [°]: 32°

Number of lamps for optical assembly: 1  
Socket: /  
Ballast losses [W]: 0  
Colour temperature [K]: 3000  
CRI: 90  
Wavelength [nm]: /  
MacAdam Step: 3

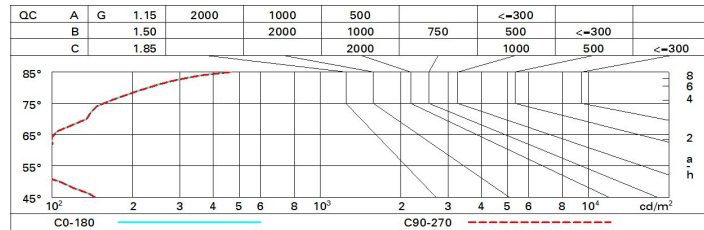
**Polar**

Imax=1058 cd		CIE nL 0.83 100-100-100-100-83 UGR <10<10 DIN A.61 UTE 0.83A+0.00T F*1=999 F*1+F*2=999 F*1+F*2+F*3=1000 CIBSE LG3 L<500 cd/m² at 65° UGR<10   L<500 cd/mq @65°	Lux			
90°	180°		h	d	Em	E <sub>max</sub>
			1	0.6	822	1058
			2	1.1	205	264
			3	1.7	91	118
			4	2.3	51	66

# Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	75	71	68	66	70	68	68	65	78
1.0	78	75	72	70	74	72	71	69	83
1.5	82	79	77	76	78	77	76	73	89
2.0	84	83	81	80	81	80	79	77	93
2.5	86	85	84	83	83	82	82	79	96
3.0	87	86	85	85	85	84	83	81	98
4.0	88	87	87	86	86	86	84	82	99
5.0	89	88	88	87	87	86	85	83	100

# Luminance curve limit



# UGR diagram

Corrected UGR values (at 380 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	-2.9	-2.4	-2.6	-2.1	-1.9	-2.9	-2.4	-2.6	-2.1	-1.9
	3H	-2.9	-2.5	-2.6	-2.2	-1.9	-3.0	-2.5	-2.7	-2.3	-2.0
	4H	-3.0	-2.5	-2.6	-2.2	-1.9	-3.1	-2.6	-2.7	-2.3	-2.0
	6H	-2.9	-2.5	-2.6	-2.2	-1.9	-3.1	-2.7	-2.8	-2.4	-2.1
	8H	-2.9	-2.5	-2.5	-2.2	-1.8	-3.2	-2.8	-2.8	-2.4	-2.1
	12H	-2.8	-2.4	-2.4	-2.1	-1.7	-3.2	-2.8	-2.8	-2.5	-2.1
4H	2H	-3.1	-2.6	-2.7	-2.3	-2.0	-3.0	-2.5	-2.6	-2.2	-1.9
	3H	-3.1	-2.7	-2.7	-2.4	-2.1	-3.1	-2.7	-2.7	-2.4	-2.0
	4H	-3.1	-2.8	-2.7	-2.4	-2.0	-3.1	-2.8	-2.7	-2.4	-2.0
	6H	-3.0	-2.7	-2.6	-2.3	-1.9	-3.2	-2.9	-2.7	-2.5	-2.1
	8H	-2.9	-2.6	-2.5	-2.2	-1.8	-3.2	-2.9	-2.7	-2.5	-2.1
	12H	-2.7	-2.5	-2.2	-2.0	-1.6	-3.2	-3.0	-2.8	-2.5	-2.1
8H	4H	-3.2	-2.9	-2.7	-2.5	-2.1	-2.9	-2.6	-2.5	-2.2	-1.8
	6H	-3.0	-2.8	-2.5	-2.3	-1.9	-2.8	-2.6	-2.4	-2.2	-1.7
	8H	-2.8	-2.6	-2.3	-2.1	-1.7	-2.8	-2.6	-2.3	-2.1	-1.7
	12H	-2.4	-2.3	-1.9	-1.8	-1.3	-2.7	-2.6	-2.2	-2.1	-1.6
12H	4H	-3.2	-3.0	-2.8	-2.5	-2.1	-2.7	-2.5	-2.2	-2.0	-1.6
	6H	-3.0	-2.8	-2.5	-2.3	-1.8	-2.6	-2.4	-2.1	-1.9	-1.4
	8H	-2.7	-2.6	-2.2	-2.1	-1.6	-2.4	-2.3	-1.9	-1.8	-1.3
Variations with the observer position at spacing:											
S =	1.0H	5.6 / -3.8					5.6 / -3.8				
	1.5H	8.3 / -4.0					8.3 / -4.0				
	2.0H	10.3 / -4.1					10.3 / -4.1				