

## Reflex

Design iGuzzini

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### Product configuration: MM98

MM98: Fixed round recessed luminaire - Ø212 mm - warm white - wide flood optic



### Product code

MM98: Fixed round recessed luminaire - Ø212 mm - warm white - wide flood optic **Attention! Code no longer in production**

### 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 (4,000K). General light emission, with controlled luminance  $UGR < 19$   $1500 \text{ cd/m}^2$   $\alpha > 65^\circ$  wide flood 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)

2.03

### Mounting

ceiling recessed

### Wiring

Product complete with electronic components

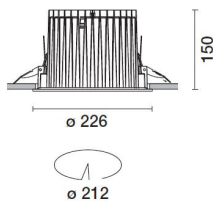
Complies with EN60598-1 and pertinent regulations



IP20

IP54

On the visible part of the product once installed



### Technical data

lm system:	4426	CRI (minimum):	80
W system:	36.4	Colour temperature [K]:	3000
lm source:	5150	MacAdam Step:	2
W source:	32	Life Time LED 1:	> 50,000h - L80 - B10 (Ta 25°C)
Luminous efficiency (lm/W, real value):	121.6	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.) [%]:	86	Number of optical assemblies:	1
Beam angle [°]:	56°		

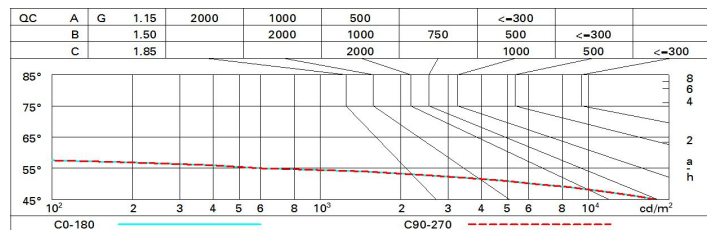
### Polar

Imax=5218 cd		CIE		Lux			
	90°	nL 0.86	h	d	Em	Emax	
	180°	95-100-100-100-86	2	2.1	971	1304	
	90°	UGR 17.8-17.8	4	4.3	243	326	
	4500	DIN A 61	6	6.4	108	145	
	0°	UTE 0.86A+0.00T	8	8.5	61	82	
$\alpha = 56^\circ$		F*1=946					
		F*1+F*2=1000					
		F*1+F*2+F*3=1000					
		CIBSE LG3 L<1500 cd/m² at 65°					
		UGR<19   L<1500 cd/mq @ 65°					

# Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	76	71	68	65	70	67	67	64	74
1.0	79	75	72	70	74	72	71	68	80
1.5	84	81	79	77	80	78	77	74	86
2.0	87	85	83	81	83	82	81	78	91
2.5	89	87	85	84	86	84	83	81	94
3.0	90	88	87	86	87	86	85	83	96
4.0	91	90	89	88	88	88	86	84	98
5.0	91	91	90	90	89	89	87	85	99

# Luminance curve limit



# UGR diagram

Corrected UGR values (at 5150 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	18.4	19.1	18.7	19.3	19.6	18.4	19.1	18.7	19.3	19.6
	3H	18.3	18.9	18.6	19.1	19.4	18.3	18.9	18.6	19.1	19.4
	4H	18.2	18.8	18.5	19.0	19.3	18.2	18.8	18.5	19.0	19.3
	6H	18.1	18.6	18.5	18.9	19.3	18.1	18.6	18.5	18.9	19.3
	8H	18.1	18.6	18.4	18.9	19.2	18.1	18.6	18.4	18.9	19.2
	12H	18.0	18.5	18.4	18.8	19.2	18.0	18.5	18.4	18.8	19.2
4H	2H	18.2	18.8	18.5	19.0	19.3	18.2	18.8	18.5	19.0	19.3
	3H	18.0	18.5	18.4	18.8	19.2	18.0	18.5	18.4	18.8	19.2
	4H	17.9	18.4	18.3	18.7	19.1	17.9	18.4	18.3	18.7	19.1
	6H	17.9	18.2	18.3	18.6	19.0	17.9	18.2	18.3	18.6	19.0
	8H	17.8	18.1	18.3	18.6	19.0	17.8	18.1	18.3	18.6	19.0
	12H	17.8	18.1	18.2	18.5	19.0	17.8	18.1	18.2	18.5	19.0
8H	4H	17.8	18.1	18.3	18.6	19.0	17.8	18.1	18.3	18.6	19.0
	6H	17.7	18.0	18.2	18.4	18.9	17.7	18.0	18.2	18.4	18.9
	8H	17.7	17.9	18.2	18.4	18.9	17.7	17.9	18.2	18.4	18.9
	12H	17.6	17.8	18.1	18.3	18.8	17.6	17.8	18.1	18.3	18.8
12H	4H	17.8	18.1	18.2	18.5	19.0	17.8	18.1	18.2	18.5	19.0
	6H	17.7	17.9	18.2	18.4	18.9	17.7	17.9	18.2	18.4	18.9
	8H	17.6	17.8	18.1	18.3	18.8	17.6	17.8	18.1	18.3	18.8
Variations with the observer position at spacing:											
S =	1.0H	4.5 / -24.2					4.5 / -24.2				
	1.5H	7.2 / -33.8					7.2 / -33.8				
	2.0H	9.2 / -34.2					9.2 / -34.2				