

Last information update: June 2018

**Fixed round recessed luminaire - Ø212 mm - warm white - wide flood optic****Product code**

MM98

**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 cd/m<sup>2</sup> α>65° wide flood optic.

**Installation**

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

**Dimension (mm)**

Ø226x150

**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

**Product configuration: MM98****Product characteristics**

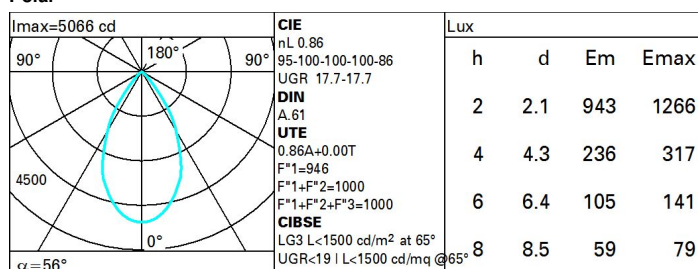
Total lighting output [Lm]: 4297  
Total power [W]: 35.9  
Luminous efficacy [Lm/W]: 119.7  
Life Time: 50,000h - L80 - B10 (Ta 25°C)

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.) [%]: 86  
Lamp code: LED  
ZVEI Code: LED  
Nominal power [W]: 33  
Nominal luminous [Lm]: 5000  
Lamp maximum intensity [cd]: /  
Beam angle [°]: 56°

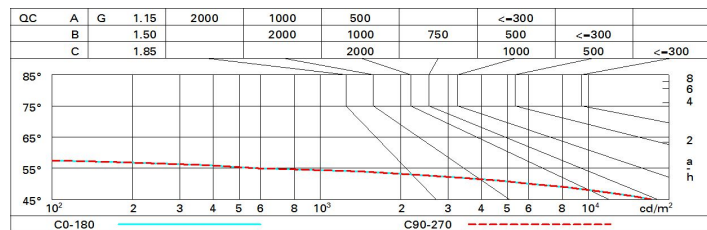
Number of lamps for optical assembly: 1  
Socket: /  
Ballast losses [W]: 2.9  
Colour temperature [K]: 3000  
CRI: 80  
Wavelength [Nm]: /  
MacAdam Step: 2

**Polar**

# 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 5000 lm bare lamp luminous flux)											
Reflect.: ceiling walls work pl. Room dim x y		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
		viewed crosswise					viewed endwise				
2H	2H	18.3	19.0	18.6	19.2	19.5	18.3	19.0	18.6	19.2	19.5
	3H	18.2	18.8	18.5	19.0	19.3	18.2	18.8	18.5	19.0	19.3
	4H	18.1	18.6	18.4	18.9	19.2	18.1	18.7	18.4	18.9	19.2
	6H	18.0	18.5	18.4	18.8	19.2	18.0	18.5	18.4	18.8	19.2
	8H	18.0	18.5	18.3	18.8	19.1	18.0	18.5	18.3	18.8	19.1
	12H	17.9	18.4	18.3	18.7	19.1	17.9	18.4	18.3	18.7	19.1
4H	2H	18.1	18.7	18.4	18.9	19.2	18.1	18.6	18.4	18.9	19.2
	3H	17.9	18.4	18.3	18.7	19.1	17.9	18.4	18.3	18.7	19.1
	4H	17.8	18.3	18.2	18.6	19.0	17.8	18.3	18.2	18.6	19.0
	6H	17.8	18.1	18.2	18.5	18.9	17.8	18.1	18.2	18.5	18.9
	8H	17.7	18.0	18.1	18.5	18.9	17.7	18.0	18.1	18.5	18.9
	12H	17.7	18.0	18.1	18.4	18.9	17.7	18.0	18.1	18.4	18.9
8H	4H	17.7	18.0	18.1	18.5	18.9	17.7	18.0	18.1	18.5	18.9
	6H	17.6	17.9	18.1	18.3	18.8	17.6	17.9	18.1	18.3	18.8
	8H	17.6	17.8	18.0	18.3	18.8	17.6	17.8	18.0	18.3	18.8
	12H	17.5	17.7	18.0	18.2	18.7	17.5	17.7	18.0	18.2	18.7
12H	4H	17.7	18.0	18.1	18.4	18.9	17.7	18.0	18.1	18.4	18.9
	6H	17.6	17.8	18.0	18.3	18.8	17.6	17.8	18.0	18.3	18.8
	8H	17.5	17.7	18.0	18.2	18.7	17.5	17.7	18.0	18.2	18.7
Variations with the observer position at spacing:											
S =		4.5 / -24.2					4.5 / -24.2				
		7.2 / -33.8					7.2 / -33.8				
		9.2 / -34.2					9.2 / -34.2				