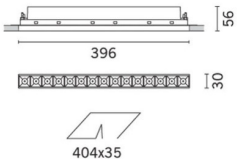
Laser Blade

Design iGuzzini **iGuzzini**

Last information update: April 2024

Product configuration: MM89
MM89: 15 - cell Frameless Recessed luminaire - LED - Warm white - Incorporated DALI dimmable power supply - Flood optic



Product code
MM89: 15 - cell Frameless Recessed luminaire - LED - Warm white - Incorporated DALI dimmable power supply - Flood optic
Attention! Code no longer in production

Technical description
rectangular miniaturised recessed luminaire with 15 optical elements with LED lamps - fixed optics - flood beam angle. Main body with die-cast aluminium radiant surface; minimal (frameless) version for mounting flush with the ceiling. Metallised thermoplastic high definition optics, integrated in a rear position in the black anti-glare screen; the structure of the optical system prevents a pinpoint effect, allowing precise, circular light distribution and emission with controlled glare . Supplied with DALI dimmable electronic control gear connected to the luminaire. Warm white high colour rendering LED

Installation
recessed with steel wire springs on the specific adapter (included) which allows flush-mounting with the ceiling. Adapter fixed to false ceiling (12.5 mm thick) with self-tapping screws; subsequent filling and smoothing operations; insertion of luminaire body and aesthetic finishing. Preparation hole 35 x 403

Colour
White (01) | Black (04)

Weight (Kg)
1.1

Mounting
wall recessed|ceiling recessed

Wiring
on control gear box with quick-coupling connections

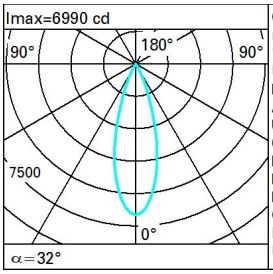
Complies with EN60598-1 and pertinent regulations

IP20 IP23 On the visible part of the product once installed

Technical data

lm system:	2037	CRI:	95
W system:	35	Colour temperature [K]:	2700
lm source:	2550	MacAdam Step:	3
W source:	31	Life Time LED 1:	50,000h - L90 - B10 (Ta 25°C)
Luminous efficiency (lm/W, real value):	58.2	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.) [%]:	80	Number of optical assemblies:	1
Beam angle [°]:	32°	Control:	DALI

Polar



CIE
nL 0.80
100-100-100-100-80
UGR <10-<10
DIN
A.61
UTE
0.80A+0.00T
F"1=1000
F"1+F"2=1000
F"1+F"2+F"3=1000
CIBSE
LG3 L<1500 cd/m² at 65°
UGR<10 | L<1500 cd/mq @65°

Lux

h	d	Em	Emax
2	1.1	1344	1747
4	2.3	336	437
6	3.4	149	194
8	4.6	84	109

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	72	69	66	64	68	66	65	63	78
1.0	75	72	70	68	71	69	69	66	83
1.5	79	77	75	73	76	74	73	71	89
2.0	81	80	78	77	79	77	76	74	93
2.5	83	82	81	80	80	79	79	77	96
3.0	84	83	82	81	82	81	80	78	98
4.0	85	84	84	83	83	82	81	79	99
5.0	85	85	85	84	84	83	82	80	100

UGR diagram

Corrected UGR values (at 2550 lm bare lamp luminous flux)

Riflect.:											
ceil/cav		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										
2H	2H	-3.7	-3.2	-3.4	-3.0	-2.7	-3.7	-3.2	-3.4	-3.0	-2.7
	3H	-3.8	-3.4	-3.5	-3.1	-2.8	-3.8	-3.4	-3.5	-3.1	-2.8
	4H	-3.9	-3.5	-3.6	-3.2	-2.9	-3.9	-3.5	-3.6	-3.2	-2.9
	6H	-4.0	-3.6	-3.6	-3.3	-3.0	-4.0	-3.6	-3.6	-3.3	-3.0
	8H	-4.0	-3.6	-3.7	-3.3	-3.0	-4.0	-3.6	-3.7	-3.3	-3.0
	12H	-4.1	-3.7	-3.7	-3.4	-3.0	-4.1	-3.7	-3.7	-3.4	-3.0
4H	2H	-3.9	-3.5	-3.6	-3.2	-2.9	-3.9	-3.5	-3.6	-3.2	-2.9
	3H	-4.1	-3.7	-3.7	-3.4	-3.0	-4.1	-3.7	-3.7	-3.4	-3.0
	4H	-4.2	-3.8	-3.8	-3.5	-3.1	-4.2	-3.8	-3.8	-3.5	-3.1
	6H	-4.2	-4.0	-3.8	-3.6	-3.1	-4.2	-4.0	-3.8	-3.6	-3.1
	8H	-4.3	-4.0	-3.9	-3.6	-3.2	-4.3	-4.0	-3.9	-3.6	-3.2
	12H	-4.3	-4.1	-3.9	-3.7	-3.2	-4.3	-4.1	-3.9	-3.7	-3.2
8H	4H	-4.3	-4.0	-3.9	-3.6	-3.2	-4.3	-4.0	-3.9	-3.6	-3.2
	6H	-4.4	-4.2	-3.9	-3.7	-3.2	-4.4	-4.2	-3.9	-3.7	-3.2
	8H	-4.4	-4.3	-4.0	-3.8	-3.3	-4.4	-4.3	-4.0	-3.8	-3.3
	12H	-4.5	-4.3	-4.0	-3.8	-3.3	-4.5	-4.3	-4.0	-3.8	-3.3
12H	4H	-4.3	-4.1	-3.9	-3.7	-3.2	-4.3	-4.1	-3.9	-3.7	-3.2
	6H	-4.4	-4.3	-4.0	-3.8	-3.3	-4.4	-4.3	-4.0	-3.8	-3.3
	8H	-4.5	-4.3	-4.0	-3.8	-3.3	-4.5	-4.3	-4.0	-3.8	-3.3

Variations with the observer position at spacing:

S =	1.0H	6.8 / -18.5	6.8 / -18.5
	1.5H	9.6 / -18.7	9.6 / -18.7
	2.0H	11.6 / -23.0	11.6 / -23.0