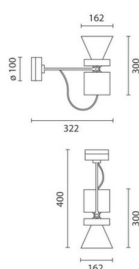


Last information update: May 2024

**Product configuration: MR13**

MR13: Large body spotlight - warm white - electronic ballast - medium optic

**Product code**MR13: Large body spotlight - warm white - electronic ballast - medium optic **Attention! Code no longer in production****Technical description**

Spotlight made of die-cast aluminium and thermoplastic material. The luminaire can be rotated by 340° about the vertical axis and tilted by +/- 100° in relation to the horizontal plane. Hi-precision beam aiming is guaranteed by screw-operated mechanical locks, graduated scales and friction controls. The spotlight is equipped with a die-cast aluminium ballast unit for ceiling mounting. Luminaire for high output LED lamp with monochrome emission in a warm white colour tone (3000K). Electronic ballast. Equipped with an accessory holding ring designed to contain a flat accessory. Another external component can also be applied, selected from directional flaps and an asymmetric screen. All external accessories rotate 360° about the spotlight longitudinal axis.

**Installation**

Ceiling-mounted.

**Colour**

White (01) | Grey (15)

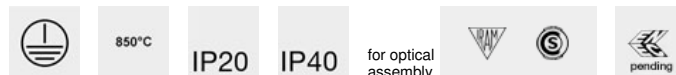
**Mounting**

wall arm|wall surface|ceiling surface

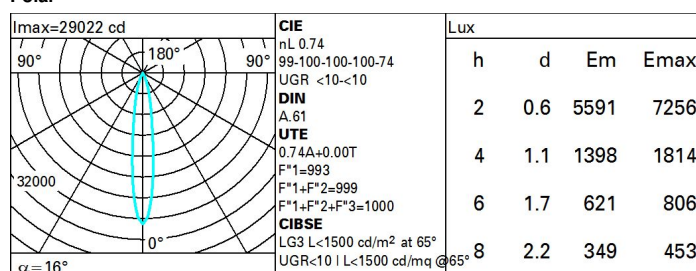
**Wiring**

Electronic components housed in the luminaire.

Complies with EN60598-1 and pertinent regulations

**Technical data**

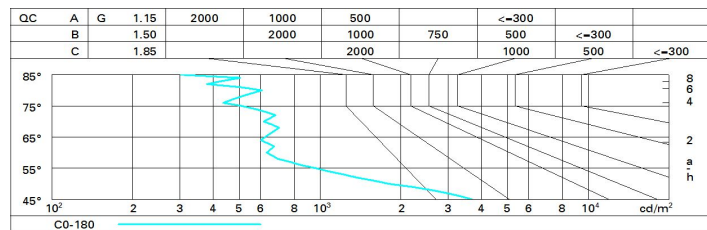
lm system:	3760	CRI (minimum):	80
W system:	42	Colour temperature [K]:	3000
lm source:	5100	MacAdam Step:	3
W source:	38	Life Time LED 1:	50,000h - L80 - B10 (Ta 25°C)
Luminous efficiency (lm/W, real value):	89.5	Lamp code:	LED
lm in emergency mode:	-	Number of lamps for optical assembly:	1
Total light flux at or above an angle of 90° [Lm]:	0	ZVEI Code:	LED
Light Output Ratio (L.O.R.) [%]:	74	Number of optical assemblies:	1
Beam angle [°]:	16°		

**Polar**

# Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	66	63	61	59	62	60	60	58	78
1.0	69	66	64	62	66	64	63	61	83
1.5	73	70	69	67	70	68	67	65	88
2.0	75	73	72	71	72	71	70	68	93
2.5	76	75	74	73	74	73	72	70	96
3.0	77	77	76	75	75	75	74	72	98
4.0	78	78	77	77	76	76	75	73	99
5.0	79	78	78	78	77	77	76	74	100

# Luminance curve limit



# UGR diagram

Corrected UGR values (at 5100 lm bare lamp luminous flux)											
Riflect.: ceil/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	1.3	3.4	1.7	3.7	4.1	1.3	3.4	1.7	3.7	4.1
	3H	1.4	2.9	1.8	3.3	3.6	1.2	2.8	1.6	3.1	3.5
	4H	1.4	2.7	1.8	3.0	3.4	1.2	2.5	1.6	2.8	3.1
	6H	1.5	2.4	1.9	2.8	3.1	1.2	2.1	1.6	2.5	2.8
	8H	1.5	2.4	1.9	2.8	3.1	1.2	2.1	1.5	2.5	2.8
	12H	1.4	2.4	1.8	2.8	3.2	1.1	2.1	1.5	2.4	2.8
4H	2H	1.2	2.5	1.6	2.8	3.1	1.4	2.7	1.8	3.0	3.4
	3H	1.4	2.4	1.8	2.7	3.1	1.5	2.4	1.9	2.8	3.2
	4H	1.4	2.5	1.8	2.8	3.3	1.4	2.5	1.8	2.8	3.3
	6H	1.2	2.9	1.7	3.4	3.9	1.1	2.8	1.6	3.3	3.8
	8H	1.1	3.1	1.6	3.5	4.0	1.0	2.9	1.5	3.4	3.9
	12H	1.1	3.0	1.6	3.5	4.0	0.9	2.9	1.4	3.4	3.9
8H	4H	1.0	2.9	1.5	3.4	3.9	1.1	3.1	1.6	3.5	4.0
	6H	1.1	2.9	1.6	3.4	3.9	1.1	2.9	1.7	3.4	3.9
	8H	1.2	2.7	1.7	3.2	3.8	1.2	2.7	1.7	3.2	3.8
	12H	1.4	2.4	1.9	2.9	3.4	1.4	2.3	1.9	2.8	3.4
12H	4H	0.9	2.9	1.4	3.4	3.9	1.1	3.0	1.6	3.5	4.0
	6H	1.1	2.7	1.7	3.2	3.7	1.2	2.7	1.7	3.2	3.8
	8H	1.4	2.3	1.9	2.8	3.4	1.4	2.4	1.9	2.9	3.4
Variations with the observer position at spacing:											
S =	1.0H	2.2 / -3.3					2.2 / -3.3				
	1.5H	4.5 / -4.1					4.5 / -4.1				
	2.0H	6.3 / -4.2					6.3 / -4.2				