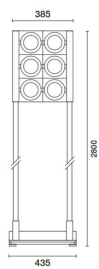


Last information update: August 2023

Product configuration: MH45

MH45: standard lamp luminaire with 6 optical assemblies - warm white passive dissipation LEDs - integrated electronic control gear - spot

**Product code**MH45: standard lamp luminaire with 6 optical assemblies - warm white passive dissipation LEDs - integrated electronic control gear - spot **Attention! Code no longer in production****Technical description**

Multi-lamp standard lamp luminaire. LED lamps with passive heat dissipation system. Entirely aluminium frame; die-cast aluminium universal joints; can be adjusted +/- 45° relative to the horizontal and vertical axes; two extruded aluminium supporting rods with (+/- 45°) adjustable joints coupling to frame; lever-operated mechanical locks. Aluminium and steel base housing electronic control gear units and control switches. Die-cast aluminium optical assemblies. Shaped so that heat is effectively carried away, guaranteeing that the performance of the lamps remains unaffected. PMMA emission optics; spot beam angle. Warm white high efficiency LEDs; CRI (Ra) > 90.

Installation

standing on the floor on surface-protector rubber elements

Colour

Grey (15)

Mounting

free standing

Wiring

power cable L 2500 mm with Schuko plug; set up for multiple switch on in groups of two assemblies; control switch on base.

Complies with EN60598-1 and pertinent regulations

**Technical data**

Im system:	9722	CRI:	95
W system:	144.4	Colour temperature [K]:	3000
Im source:	1800	MacAdam Step:	3
W source:	19	Life Time LED 1:	50,000h - L90 - B10 (Ta 25°C)
Luminous efficiency (lm/W, real value):	67.3	Ballast losses [W]:	5.1
Im in emergency mode:	-	Lamp code:	LED
Total light flux at or above an angle of 90° [Lm]:	0	Number of lamps for optical assembly:	1
Light Output Ratio (L.O.R.) [%]:	90	ZVEI Code:	LED
Beam angle [°]:	14°	Number of optical assemblies:	6

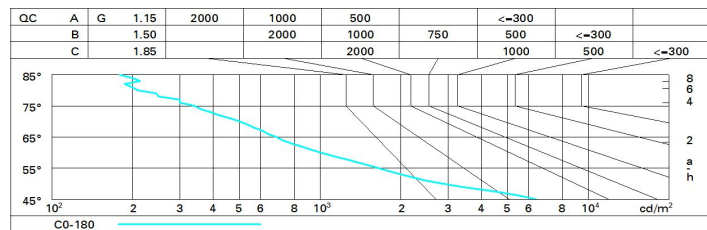
Polar

Imax=12804 cd		CIE		Lux			
90°	180°	nL 0.90		h	d	Em	E _{max}
		91.99-100-100-90		2	0.5	2502	3201
		UGR 10.8-10.8		4	1	625	800
		DIN		6	1.5	278	356
		A.61		8	2	156	200
		UTE					
		0.90A+0.00T					
		F*1=914					
		F*1+F*2=991					
		F*1+F*2+F*3=999					
		CIBSE					
		LG3 L<1500 cd/m ² at 65°					
		UGR<16 L<1500 cd/mq @ 65°					
α = 14°							

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	78	73	69	66	72	69	68	65	72
1.0	82	77	74	72	76	73	73	70	77
1.5	87	84	81	79	83	80	79	76	85
2.0	90	88	86	84	86	85	84	81	90
2.5	92	90	89	87	89	87	86	84	93
3.0	93	92	91	90	90	89	88	86	95
4.0	95	94	93	92	92	91	90	87	97
5.0	95	95	94	93	93	92	91	88	98

Luminance curve limit



UGR diagram

Corrected UGR values (at 1800 lm bare lamp luminous flux)											
Reflect.: ceiling/cav 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	11.5	13.2	11.9	13.5	13.8	11.5	13.2	11.9	13.5	13.8
	3H	11.5	12.6	11.8	12.9	13.2	11.5	12.6	11.8	12.9	13.2
	4H	11.4	12.4	11.8	12.7	13.0	11.4	12.4	11.8	12.7	13.0
	6H	11.4	12.2	11.7	12.5	12.9	11.3	12.2	11.7	12.5	12.9
	8H	11.3	12.2	11.7	12.5	12.9	11.3	12.2	11.7	12.5	12.9
	12H	11.2	12.2	11.6	12.6	12.9	11.2	12.2	11.6	12.5	12.9
4H	2H	11.4	12.4	11.8	12.7	13.0	11.4	12.4	11.8	12.7	13.0
	3H	11.3	12.3	11.7	12.6	13.0	11.3	12.3	11.7	12.6	13.0
	4H	11.2	12.3	11.6	12.7	13.1	11.2	12.3	11.6	12.7	13.1
	6H	10.9	12.4	11.4	12.8	13.3	10.9	12.4	11.4	12.8	13.3
	8H	10.8	12.4	11.3	12.9	13.3	10.8	12.4	11.3	12.9	13.3
	12H	10.8	12.3	11.2	12.8	13.3	10.7	12.3	11.2	12.8	13.3
8H	4H	10.8	12.4	11.3	12.9	13.3	10.8	12.4	11.3	12.9	13.3
	6H	10.8	12.2	11.3	12.6	13.2	10.8	12.2	11.3	12.6	13.2
	8H	10.8	11.9	11.3	12.4	12.9	10.8	11.9	11.3	12.4	12.9
	12H	10.9	11.7	11.4	12.2	12.7	10.9	11.7	11.4	12.1	12.7
12H	4H	10.7	12.3	11.2	12.8	13.3	10.8	12.3	11.2	12.8	13.3
	6H	10.8	11.9	11.3	12.4	12.9	10.8	11.9	11.3	12.4	12.9
	8H	10.9	11.7	11.4	12.1	12.7	10.9	11.7	11.4	12.2	12.7
Variations with the observer position at spacing:											
S =	1.0H	1.9 / -4.9					1.9 / -4.9				
	1.5H	4.2 / -7.4					4.2 / -7.4				
	2.0H	6.2 / -8.6					6.2 / -8.6				