

Rama

Luminaire

Gonzalo Milá
2000



Product description

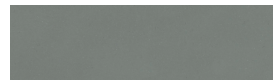
Certificates



Finishes



Light grey



Medium grey



Dark grey

The colours shown are purely indicative. Other colours are available upon request. Check finishes for marine environments.

Materials

- Anodised injection-moulded aluminium EN-AC-47100 luminaire with powder-coated finish, suitable for C5 zones.
- Tempered optical glass diffuser.
- A2 stainless steel hardware and metal cable gland.

Installation and maintenance

- The luminaire has a variety of accessories that allow it to be adapted for different columns, structures or surfaces.
- The element is delivered as two separate components: the luminaire and the accessory.
 - Instructions and hardware included.
 - Includes pressure compensation valve and 10kV surge protector (CE).
 - Clean using pH neutral, alcohol-free, non-abrasive cleaning products. The optical glass can be cleaned with non-abrasive cleaning products.

Regulations

- UNE-EN 60529
- UNE-EN 60598
- UNE-EN 55015
- UNE-EN 61000
- UNE-EN 50102
- UNE-EN 62031
- UL 1598
- UL 8750
- E-505192
- Lighting system with CE marking from a laboratory certified by ENAC [Spanish National Accreditation Body]
- IP66 (hermetically protected from penetration of dust and water jets)
- Suitable for wet areas.
- IK08 (protected from external mechanical impacts)
- Electrical class: Class I (CE)

Technical information

System power (W)

- High efficiency optical unit
- 12 LEDs 14W, 20W, 28W
 - 24 LEDs 27W, 38W, 53W
 - 48 LEDs 51W, 73W, 102W
 - 72 LEDs 78W, 111W, 156W

Operating current (mA)

- 350
- 500
- 700

Colour temperature (K)

- 2700 CRI min 80
- 3000 CRI min 80
- 4000 CRI min 80

Other colour temperatures and/or CRIs are available upon request.

Power supply

Constant current driver.

Protocols and control

- Protocols
- 1-10V protocol
 - Dali protocol

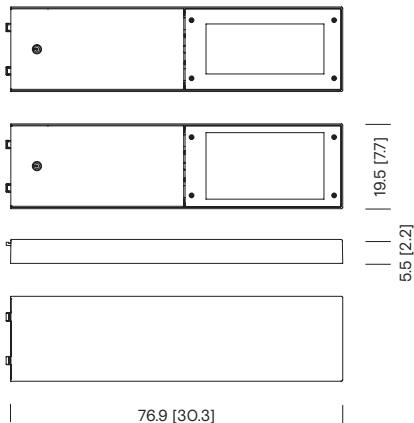
- Control
- Dynamic programming
 - Analogue control

- Functionalities
- Constant Luminous Management (CLM)
 - Temperature control
 - Surge protector

Recommended cable

- 0.6-1kV
- 5 x 1.5 mm² (AWG18)
- 3 x 2.5 mm² (AWG16)

Dimensions cm [in]



Operating voltage

- 220-240V 50-60Hz (CE)
- 120-277V 60Hz (UL)

Nominal operating temperature (°C)

Ta 30

Service life

TM21 L90 (10k) > 100,000 h
Luminous flux is maintained at 90% after 100,000 h.

Upper Hemisphere Flux (UHF%)

0

Surface exposed to wind (m²)

SW 0.04

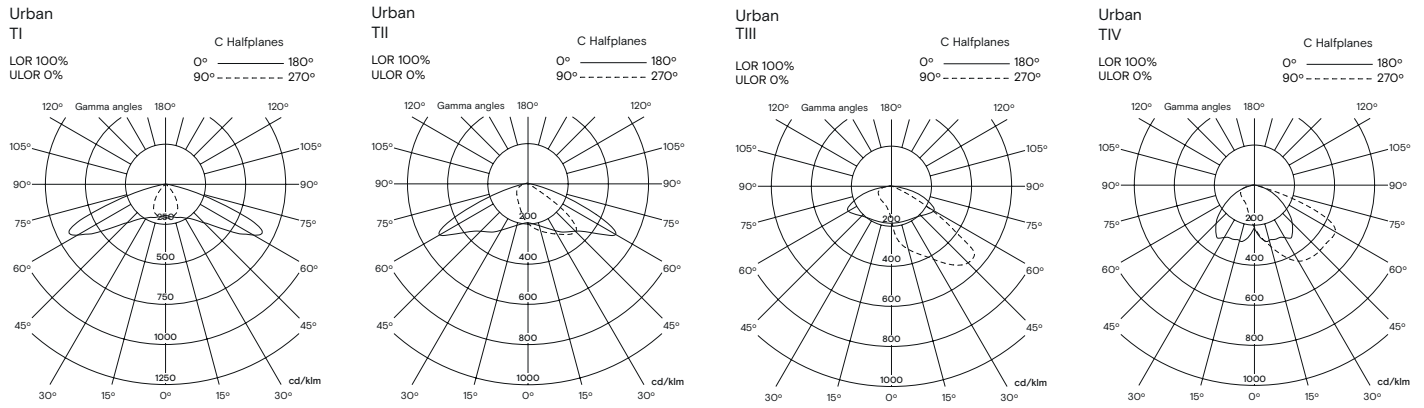
Weight kg [lb]

Luminaire: 7.8 [17.2]
Approximate weight without packaging.

Power factor (cos Φ)

Current (mA)	P (W) 100% CLO 90%			
	12 LEDs	24 LEDs	48 LEDs	72 LEDs
350	0.95	0.97	0.97	0.98
500	0.96	0.98	0.99	0.99
700	0.96	0.99	0.99	1.00

Lighting distributions



Rama				IESNA **TI		IESNA **TII		IESNA **TIII		IESNA **TIV			
Reference	System power (W)	No. of LEDs	Colour temperature (K)	Current (mA)	Luminous flux (lm)	Luminous efficacy (lm/W)	Luminous flux (lm)	Luminous efficacy (lm/W)	Luminous flux (lm)	Luminous efficacy (lm/W)	Luminous flux (lm)	Luminous efficacy (lm/W)	
RAL12A2**	14	12	4000K CRI min 80	350	1576	113	1730	124	1629	116	1694	121	
RAL12B2**	20			500	2169	108	2380	119	2241	112	2331	117	
RAL12C2**	28			700	2869	102	3148	112	2964	106	3083	110	
RAL12A1**	14		3000K CRI min 80	350	1420	101	1558	111	1467	105	1526	109	
RAL12B1**	20			500	1954	98	2144	107	2019	101	2100	105	
RAL12C1**	28			700	2584	92	2836	101	2670	95	2778	99	
RAL12A3**	14		2700K CRI min 80	350	1420	101	1558	111	1467	105	1526	109	
RAL12B3**	20			500	1954	98	2144	107	2019	101	2100	105	
RAL12C3**	28	700		2584	92	2836	101	2670	95	2778	99		
RAL24A2**	27	24	4000K CRI min 80	350	3120	116	3424	127	3224	119	3354	124	
RAL24B2**	38			500	4269	112	4684	123	4411	116	4588	121	
RAL24C2**	53			700	5604	106	6149	116	5791	109	6024	114	
RAL24A1**	27		3000K CRI min 80	350	2811	104	3085	114	2905	108	3021	112	
RAL24B1**	38			500	3846	101	4220	111	3974	105	4134	109	
RAL24C1**	53			700	5049	95	5540	105	5217	98	5427	102	
RAL24A3**	27		2700K CRI min 80	350	2811	104	3085	114	2905	108	3021	112	
RAL24B3**	38			500	3846	101	4220	111	3974	105	4134	109	
RAL24C3**	53			700	5049	95	5540	105	5217	98	5427	102	
RAL48A2**	51		48	4000K CRI min 80	350	6342	124	6959	136	6554	129	6817	134
RAL48B2**	73				500	8626	118	9466	130	8914	122	9272	127
RAL48C2**	102				700	11241	110	12335	121	11616	114	12082	118
RAL48A1**	51	3000K CRI min 80		350	5714	112	6269	123	5904	116	6141	120	
RAL48B1**	73			500	7772	106	8528	117	8031	110	8353	114	
RAL48C1**	102			700	10127	99	11112	109	10465	103	10885	107	
RAL48A3**	51	2700K CRI min 80		350	5714	112	6269	123	5904	116	6141	120	
RAL48B3**	73			500	7772	106	8528	117	8031	110	8353	114	
RAL48C3**	102			700	10127	99	11112	109	10465	103	10885	107	
RAL72A2**	78	72		4000K CRI min 80	350	9420	121	10337	133	9734	125	10125	130
RAL72B2**	111				500	12739	115	13979	126	13164	119	13693	123
RAL72C2**	156				700	16477	106	18080	116	17026	109	17710	114
RAL72A1**	78		3000K CRI min 80	350	8487	109	9312	119	8770	112	9122	117	
RAL72B1**	111			500	11477	103	12593	113	11859	107	12336	111	
RAL72C1**	156			700	14844	95	16288	104	15339	98	15955	102	
RAL72A3**	78		2700K CRI min 80	350	8487	109	9312	119	8770	112	9122	117	
RAL72B3**	111			500	11477	103	12593	113	11859	107	12336	111	
RAL72C3**	156			700	14844	95	16288	104	15339	98	15955	102	
Opal							-13%		-11%		-11%		-11%