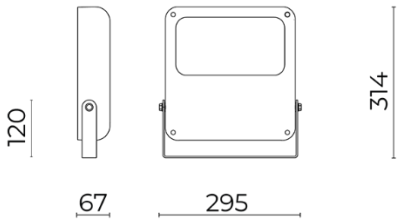
Line sheet
Rev 09.02.24

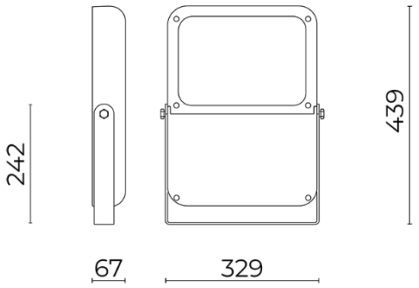
Newton 2.0
Options: x-small, small, medium, large
Colour temperature: 3000K / 4000K
Type of optics: asymmetrical street LA-03
asymmetrical LT-63, LT-64

06NN_____
Colour: grey RAL9006

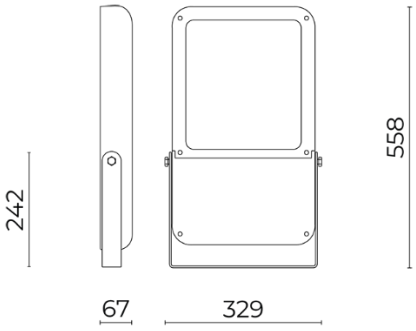
X-Small



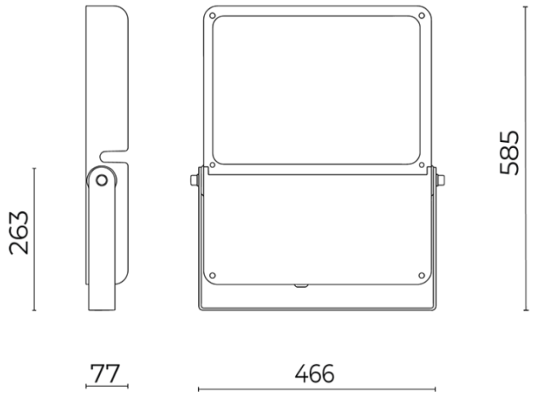
Small



Medium



Large



General features

Description: LED floodlight
Insulation class: class II; class I (large versions at maximum power)
Nominal voltage: 220-240 V / 50-60 Hz
Protection level: IP66
Protection against impact: IK09
Power factor: > 0.95
Ambient temperature Ta: -30°C +50°C, -30°C +45°C (large version @1020mA), -30°C +40°C (large versions at maximum power)
Weight: 4 kg (x-small), 6.8 kg (small), 9.8 kg (medium), 14 kg (large)
Maximum exposed surface: (x-small) 0.075 m², (small) 0.119 m², (medium) 0.155 m², (large) 0.229 m²
Exposed lateral surface: (x-small) 0.019 m², (small) 0.026 m², (medium) 0.034 m², (large) 0.039 m²
Common mode surge protection: 10kV
Differential mode surge protection: 10kV
Surge protection device: integrated 10 kV-10 kA
Driver: electronic and programmable via NFC, included
Lifetime driver: F10 >100.000h @Ta25°C (x-small, small, medium, large)

Cariboni group

Marks and Certifications: ENEC (pending) / CE

Safety against ball throwing: the Newton 2.0 medium and large variants have passed the ball throwing test according to DIN 18032-3

Production site: Made in Italy

Materials

Body, chassis and cover: die-cast aluminium alloy UNI EN AB 47100 (copper content < 1%)

Screen: flat tempered glass 4 mm. When opening the lighting fixture, the optical compartment is always protected and is inaccessible.

Optical unit: high-transparency PMMA lenses

Optical recuperator: technopolymer (x-small, small, medium)

Bracket: painted RAL9006 steel (x-small, small, medium); stainless steel AISI 304 (large)

Seal: anti-age silicone

External screws: stainless steel AISI 316 and 304

Internal screws: chrome-plated steel

Cables: PVC

Finish: phospho-chromatation treated and polyester powder-coated in 16 phases to increase weather resistance

Colours

Grey RAL9006

Installation and maintenance

Installation: wall / ceiling / ground / pole; predisposition IN-OUT setup

Fastening system: painted RAL9006 steel bracket (x-small, small, medium); stainless steel AISI 304 bracket (large)

Orientability: -90° ÷ +90° continuously

Ø power cable: 10 ÷ 14 mm (x-small, small, medium), 10 ÷ 17 mm (large)

Cable gland: PG16 (x-small, small, medium), M25 (large)

Electrical connection: terminal block

Power cable anchorage: embedded in cable gland

Predisposition to GORE® valve: in large versions to regulate internal pressure in hostile environments

Screen opening: yes

Power supply compartment: independent from the optical group

Quick and easy replacement of the optical unit and the power supply unit. In order to allow easy maintenance without interfering with the LED optical system, the electrical compartment is separated from the optical compartment, and to meet the demand for maintenance work on the power supply components, the electrical compartment is easily accessible from the underside of

the housing without the use of tools. By turning the finned screws, the wiring compartment can be opened, leaving free access to both the power cable connection area and the electronic components.

Optical unit substitutability: yes

Management system: ZHAGA

Optical system

It is equipped with 4000K and 3000K white emitter, positioned by means of a “pick and place” system on the electrical circuit (MCPCB) granting the thermal management. The same circuit is provided with an optical system, which is composed by high transparency poly-methyl-methacrylate lenses, which have been developed to realize the same beam opening and light up the same area at ground as all the others. By using this solution, it is possible to ensure that, when a single LED is malfunctioning, there is no an area with lower lighting than the others but, at least, a percentage reduction of the lighting is obtained in the entire area of competence.

Colour rendering index (CRI): ≥ 70

Chromatic consistency (SDCM): ≤ 3

Optical unit lifetime: >100.000 h @ Ta 25°C L90B10 (x-small, small, medium, large @1020mA), >80.000 h @ Ta 25°C L80B10 (large @1080÷1200mA)

Photobiological safety class: EXEMPT GROUP

ULOR: 0%

DLOR: 100%

Luminous intensity category: G*3 asymmetrical street LA-03; G*6 asymmetrical LT-63; G*4 asymmetrical LT-64

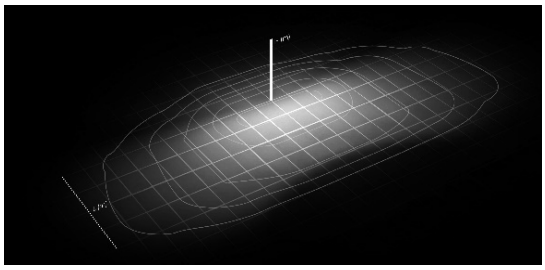
Normative framework

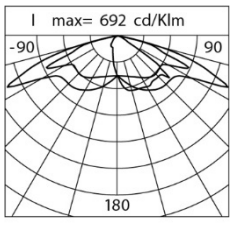
EN60598-1, EN60598-2-3, EN61547; EN62471, EN55015, EN61000-3-2, EN61000-3-3

Asymmetrical street optics

LA-03 Wide street

L/H = 1,25 (L = Street width, H = Pole height)



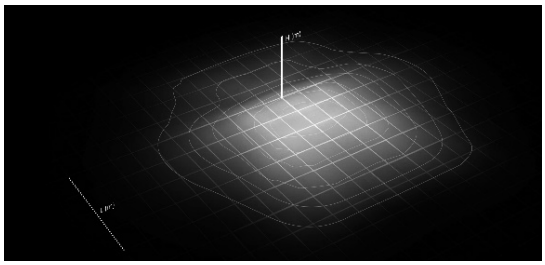


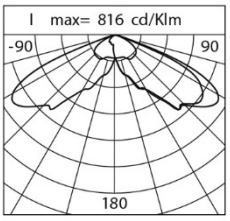
Cariboni group

Asymmetrical optics

LT-63 Asymmetric beam

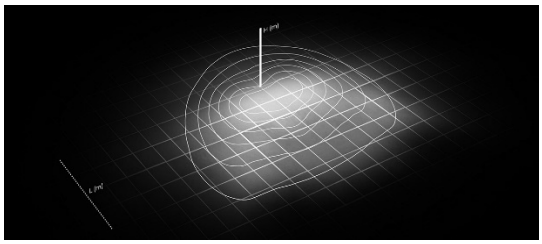
L/H = 2 (L = Street width, H = Pole height)

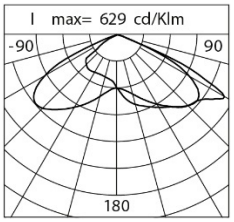




LT-64 Asymmetric beam with backlight

L/H = 2 (L = Street width, H = Pole height)





Performance data

Street asymmetrical and asymmetrical optics

LA-03 LT-63 LT-64								
Options	**Source**	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
X-Small	LED R1	4000	2040	9	227	1755	12	146
X-Small	LED R1	4000	2330	10,5	222	2000	13	154
X-Small	LED R1	4000	2885	13	222	2480	16	155
X-Small	LED R1	4000	3425	16	214	2945	19	155
X-Small	LED R1	4000	3960	19	208	3405	22	155
X-Small	LED R1	4000	4480	21,5	208	3850	25	154
X-Small	LED R1	4000	4975	24,5	203	4275	28	153
X-Small	LED R1	4000	5465	27,5	199	4700	31	152
X-Small	LED R1	4000	5935	30,5	195	5105	34	150
X-Small	LED R1	4000	6415	33,5	191	5520	37	149
X-Small	LED R1	4000	6860	36,5	188	5900	41	144
Small	LED R1	4000	2040	9	227	1755	12	146
Small	LED R1	4000	2330	10,5	222	2000	13	154
Small	LED R1	4000	2885	13	222	2480	16	155
Small	LED R1	4000	3425	16	214	2945	19	155
Small	LED R1	4000	3960	19	208	3405	22	155

Small	LED R1	4000	4480	21,5	208	3850	25	154
Small	LED R1	4000	4975	24,5	203	4275	28	153
Small	LED R1	4000	5465	27,5	199	4700	31	152
Small	LED R1	4000	5935	30,5	195	5105	34	150
Small	LED R1	4000	6415	33,5	191	5520	37	149
Small	LED R1	4000	6860	36,5	188	5900	41	144
Small	LED R2	4000	6805	32	213	5855	36	163
Small	LED R2	4000	7855	37,5	209	6755	42	161
Small	LED R2	4000	8880	43	207	7635	47	162
Small	LED R2	4000	9840	49	201	8460	53	160
Small	LED R2	4000	10785	55	196	9275	60	155
Small	LED R2	4000	11720	61	192	10080	65	155
Small	LED R2	4000	12620	67	188	10855	72	151
Small	LED R2	4000	13490	73	185	11600	78	149
Small	LED R2	4000	14320	79	181	12315	86	143
Small	LED R2	4000	15165	85,5	177	13045	93	140
Medium	LED R3	4000	13255	65	204	11400	71	161
Medium	LED R3	4000	14660	73,5	199	12610	80	158
Medium	LED R3	4000	16045	82	196	13800	89	155
Medium	LED R3	4000	17435	91	192	14995	98	153
Medium	LED R3	4000	18775	100	188	16145	108	149
Medium	LED R3	4000	20030	109	184	17230	119	145
Medium	LED R3	4000	21270	118,5	179	18290	129	142
Medium	LED R3	4000	22480	127,5	176	19330	137	141
Medium	LED R4	4000	21425	109,5	196	18425	119	155
Medium	LED R4	4000	23245	121,5	191	19990	131	153
Medium	LED R4	4000	25075	133,5	188	21565	144	150
Medium	LED R4	4000	26755	145,5	184	23010	155	148
Medium	LED R4	4000	28405	158	180	24425	168	145
Medium	LED R4	4000	30025	170	177	25820	181	143
Medium	LED R4	4000	31490	182,5	173	27085	194	140
Large	LED R6	4000	32280	164,5	196	27770	179	155
Large	LED R6	4000	35080	182	193	30170	196	154
Large	LED R6	4000	37780	200	189	32490	215	151
Large	LED R6	4000	40305	218	185	34670	237	146
Large	LED R6	4000	42795	236,5	181	36800	257	143
Large	LED R6	4000	45230	255	177	38900	274	142
Large	LED R6	4000	47430	274	173	40790	295	138
Large	LED R6	4000	49580	293	169	42640	315	135
Large	LED R8	4000	46770	243	192	40230	261	154
Large	LED R8	4000	50455	267	189	43390	287	151
Large	LED R8	4000	53830	291	185	46300	310	149

Large	LED R8	4000	57150	315,5	181	49150	336	146
Large	LED R8	4000	60415	340,5	177	51960	362	144
Large	LED R8	4000	63365	365,5	173	54500	389	140
Large	LED R8	4000	66240	391	169	56970	416	137
Large *	LED R8	4000	69085	416,5	166	59410	443	134
Large *	LED R8	4000	71830	442,5	162	61770	471	131
Large *	LED R8	4000	74475	468,5	159	64050	498	129

* Class I

LA-03 LT-63 LT-64								
Options	**Source**	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
X-Small	LED R1	3000	1940	9	216	1670	12	139
X-Small	LED R1	3000	2210	10,5	210	1900	13	146
X-Small	LED R1	3000	2740	13	211	2355	16	147
X-Small	LED R1	3000	3255	16	203	2800	19	147
X-Small	LED R1	3000	3760	19	198	3235	22	147
X-Small	LED R1	3000	4255	21,5	198	3660	25	146
X-Small	LED R1	3000	4725	24,5	193	4065	28	145
X-Small	LED R1	3000	5190	27,5	189	4465	31	144
X-Small	LED R1	3000	5640	30,5	185	4850	34	143
X-Small	LED R1	3000	6095	33,5	182	5240	37	142
X-Small	LED R1	3000	6515	36,5	178	5605	41	137
Small	LED R1	3000	1940	9	216	1670	12	139
Small	LED R1	3000	1940	9	216	1670	12	139
Small	LED R1	3000	2210	10,5	210	1900	13	146
Small	LED R1	3000	2740	13	211	2355	16	147
Small	LED R1	3000	3255	16	203	2800	19	147
Small	LED R1	3000	3760	19	198	3235	22	147
Small	LED R1	3000	4255	21,5	198	3660	25	146
Small	LED R1	3000	4725	24,5	193	4065	28	145
Small	LED R1	3000	5190	27,5	189	4465	31	144
Small	LED R1	3000	5640	30,5	185	4850	34	143
Small	LED R1	3000	6095	33,5	182	5240	37	142
Small	LED R1	3000	6515	36,5	178	5605	41	137
Small	LED R2	3000	6465	32	202	5560	36	154
Small	LED R2	3000	7465	37,5	199	6420	42	153
Small	LED R2	3000	8435	43	196	7255	47	154
Small	LED R2	3000	9345	49	191	8040	53	152
Small	LED R2	3000	10245	55	186	8810	60	147
Small	LED R2	3000	11135	61	183	9575	65	147

Small	LED R2	3000	11990	67	179	10310	72	143
Small	LED R2	3000	12815	73	176	11020	78	141
Small	LED R2	3000	13605	79	172	11700	86	136
Medium	LED R3	3000	12590	65	194	10830	71	153
Medium	LED R3	3000	13925	73,5	189	11980	80	150
Medium	LED R3	3000	15240	82	186	13110	89	147
Medium	LED R3	3000	16560	91	182	14245	98	145
Medium	LED R3	3000	17835	100	178	15340	108	142
Medium	LED R3	3000	19030	109	175	16365	119	138
Medium	LED R3	3000	20205	118,5	171	17375	129	135
Medium	LED R3	3000	21355	127,5	167	18365	137	134
Medium	LED R4	3000	20355	109,5	186	17505	119	147
Medium	LED R4	3000	22080	121,5	182	18990	131	145
Medium	LED R4	3000	23820	133,5	178	20485	144	142
Medium	LED R4	3000	25415	145,5	175	21860	155	141
Medium	LED R4	3000	26985	158	171	23205	168	138
Medium	LED R4	3000	28525	170	168	24530	181	136
Medium	LED R4	3000	29915	182,5	164	25730	194	133
Large	LED R6	3000	30670	164,5	186	26380	179	147
Large	LED R6	3000	33325	182	183	28660	196	146
Large	LED R6	3000	35890	200	179	30870	215	144
Large	LED R6	3000	38290	218	176	32930	237	139
Large	LED R6	3000	40655	236,5	172	34960	257	136
Large	LED R6	3000	42965	255	168	36950	274	135
Large	LED R6	3000	45060	274	164	38750	295	131
Large	LED R6	3000	47100	293	161	40510	315	129
Large	LED R8	3000	44430	243	183	38210	261	146
Large	LED R8	3000	47930	267	180	41220	287	144
Large	LED R8	3000	51140	291	176	43980	310	142
Large	LED R8	3000	54295	315,5	172	46700	336	139
Large	LED R8	3000	57390	340,5	169	49360	362	136
Large	LED R8	3000	60195	365,5	165	51770	389	133
Large	LED R8	3000	62930	391	161	54120	416	130
Large *	LED R8	3000	65630	416,5	158	56440	443	127
Large *	LED R8	3000	68235	442,5	154	58690	471	125
Large *	LED R8	3000	70750	468,5	151	60850	498	122

* Class I

Data of the lighting source flux and efficiency refer to the LED module, without lenses. In case you need data of the LED module complete with lenses, please multiply the mentioned data by 0.9 factor.
Values indicated in this technical sheet are to be considered nominal values with a tolerance of +/-7%.

Legend

K = Colour temperature

φ mod [lm] = Flux source

P mod [W] = Power source

η mod [lm/W] = Efficiency of source

φ app [lm] = Flux fitting

P app [W] = Power fitting

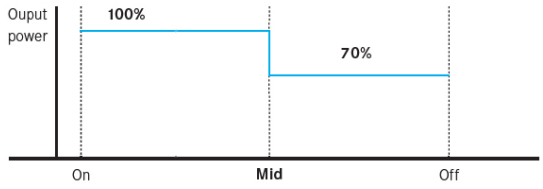
η app [lm/W] = Efficiency of fitting

Flux regulation	Standard	On request
Self-learning virtual midnight	X	
Zhaga - Book 18		X
DALI Regulation	X (large)	X
Constant Light Output (CLO)		X
1-10V Regulation		X
Mains voltage variation		X
Wireless telemanagement		X
Motion / brightness detectors		X

Flux regulation

Self-learning of the virtual midnight with possibility of custom programs (codes ending by _HM4)

Custom programmable versions are available at the customer's request. Using a virtual midnight algorithm, a precise reduction can be made in the luminaire's luminous flux percentage and its electrical power input. On request, the system can be programmed for operation with DALI protocol.



Profile standard

700 mA 525 mA 350 mA

Mid (mezzanotte virtuale - *virtual midnight* - virtuellen mitternacht)

Group Management: flow adjustment DALI (codes ending by _HL)

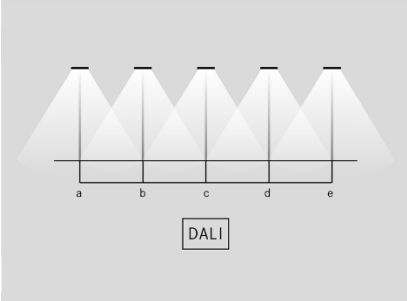
DALI - This is a digital type control system where every device is assigned a unique address that allows the individual light points to be controlled and the control units to be created.

Cariboni group

Line sheet
Rev 09.02.24

Newton 2.0
Options: x-small, small, medium, large
Colour temperature: 3000K / 4000K
Type of optics: asymmetrical street LA-03
asymmetrical LT-63, LT-64

06NN_____
Colour: grey RAL9006



Cariboni group