

CARA LED Area Lights

High-Performance Area and Site Lighting



**Three sizes, six distributions, and EXTREME-LIFE performance
— built BAA and TAA compliant in 3000K, 4000K, and 5000K.**

One Family, Three Sizes, Six Distributions

Most sites need three lights, not one: a small light over the walkway, a mid-size light over parking, and a large light over the far row. CARA is that family. Three die-cast aluminum housings share a mounting system, an accessory set, an IP66 sealed LED compartment, and a five-year warranty. Every CARA in this guide is offered in 3000K, 4000K, or 5000K at 80 CRI.

CARA Compact

AF33XKH15Q

22w · 37w · 56w
2,536 – 7,469 lumens
Up to 121 lm/W
Replaces 70w – 175w HID
Mounting heights 10 – 20 ft
11 $\frac{3}{4}$ " × 9 $\frac{1}{2}$ " × 3 $\frac{5}{8}$ " · 11 lbs

CARA Standard

AF33XKH25Q

65w · 81w · 112w
6,158 – 15,944 lumens
Up to 132 lm/W
Replaces 150w – 400w HID
Mounting heights 14 – 25 ft
15" × 13 $\frac{3}{8}$ " × 3 $\frac{5}{8}$ " · 15 lbs

CARA Large

AF33XKH45Q

99w through 256w
12,327 – 37,035 lumens
133 lm/W calculated at 256w
Nine wattages, six optics
Rotated optics available
22" × 15 $\frac{3}{4}$ " × 4" · 33 lbs



BAA and TAA compliant.

CARA meets Buy American Act and Trade Agreements Act requirements, so federal, state, municipal, and school projects can specify it without a waiver. Ask your lighting specialist for documentation with your quote.

SHARED ACROSS ALL THREE SIZES

Construction

Die-cast aluminum housing and front frame with integral heat sinking and a separate driver compartment. Nickel-plated stainless steel hardware. Textured architectural bronze powdercoat over a chromate conversion coating; custom colors on request.

EXTREME-LIFE

EXTREME-LIFE is the Access Fixtures designation for an L70 projection above 100,000 hours. All three CARA sizes earn it: 320,000 hours on Compact and Standard, 290,000 hours on Large, at 25°C.

Ratings

ETL listed for wet locations to ANSI/UL 1598 and UL 8750. IP66 sealed LED compartment. DesignLights Consortium qualified models available. Five-year warranty for a -40°C to +50°C environment.

Electrical

120-277V or 347-480V drivers, 50/60Hz, less than 20% THD, power factor above 0.90. 0-10V dimming standard, 100% to 10%. Internal surge protection: 2kV on the 22w Compact, 6kV on all other models.

CARA Compact — AF33XKH15Q

The small CARA replaces 70w to 175w metal halide and high pressure sodium at mounting heights of 10 to 20 feet. Specify it for walkways, small lots, building perimeters, and accent work where a full-size area light would overlight the space. Two standard wattages and one optimized wattage, seven factory-installed mounting options, and a battery backup option on the easy-hang wall bracket.

7,469

MAX LUMENS

121 lm/W

PEAK EFFICACY

320,000 hr

EXTREME-LIFE L70 AT 25°C

DELIVERED LUMENS BY CCT — 80 CRI

LED Board	Input Watts	Optic	3000K	4000K	5000K	lm/W at 5000K
22w	25	C — Type III	2,659	2,767	2,875	116
22w	25	F — Type V	2,536	2,639	2,742	111
22w	25	I — Narrow Beam	—	—	2,682	112
37w	41	C — Type III	—	4,653	4,834	118
37w	41	F — Type V	4,266	4,439	4,611	113
37w	41	I — Narrow Beam	—	—	4,647	114
56w optimized	62	C — Type III	—	7,189	7,469	121
56w optimized	62	F — Type V	—	6,858	7,125	116

CCT availability: 3000K on the 37w Type V, or the 22w Type III and Type V. 4000K on Type III and Type V. 5000K across all optics. A dash means the combination is not offered.

SPECIFICATIONS

Dimensions — 11³/₄" (299mm) long × 9¹/₂" (240mm) wide × 3⁵/₈" (92mm) high. Length with mount: 12³/₄" to 17³/₄" depending on the option selected.

Voltage — 120-277V standard; 347-480V on the 37w model only.

Weight and EPA — 11 lbs, 0.35 sq ft single mount; 22 lbs and 0.48 to 0.70 sq ft at two per pole.

Battery backup — 90-minute standard or -20°C cold-start, 120-277V, easy-hang wall bracket only.

CARA Standard — AF33XKH25Q

The mid-size CARA replaces 150w to 400w metal halide and high pressure sodium at mounting heights of 14 to 25 feet. It carries the full IES distribution set — Type I through Type V plus a narrow beam — so a single housing lights the perimeter row, the drive aisle, and the center of the lot.

15,944

MAX LUMENS

132 lm/W

PEAK EFFICACY

320,000 hr

EXTREME-LIFE L70 AT 25°C

DELIVERED LUMENS BY CCT — 80 CRI

LED Board	Input Watts	Optic	3000K	4000K	5000K	lm/W at 5000K
65w	68	C — Type III	—	6,823	7,089	105
65w	68	D — Type IV	6,158	—	—	—
65w	68	F — Type V	—	6,508	6,762	100
81w	84	A — Type I	—	10,109	10,503	125
81w	84	B — Type II	9,268	9,644	10,019	119
81w	84	C — Type III	10,181	10,594	11,007	131
81w	84	D — Type IV	9,563	9,950	10,338	123
81w	84	F — Type V	9,712	10,106	10,499	125
112w	121	A — Type I	—	14,644	15,214	126
112w	121	B — Type II	—	13,970	14,514	120
112w	121	C — Type III	14,748	15,346	15,944	132
112w	121	D — Type IV	12,986	13,513	14,039	116
112w	121	F — Type V	13,161	13,637	15,209	126

3000K is offered on the 65w Type IV; the 81w Type II, III, IV, and V; and the 112w Type III, IV, and V. Narrow beam is 5000K only at 81w and 112w.

SPECIFICATIONS

Dimensions — 15" (381mm) long × 13³/₈" (340mm) wide × 3⁵/₈" (92mm) high. Length with mount: 16" to 19¹/₄".

Weight and EPA — 15 lbs, 0.60 sq ft single mount; 30 lbs and 0.82 to 1.20 sq ft at two per pole.

CARA Large — AF33XKH45Q

The large CARA is the pole-spacing fixture. Nine wattages from 99w to 256w and six distributions let a lighting engineer hold a footcandle target with fewer poles, and the rotated-optic mounting option puts maximum candela on an automobile dealership front line.

37,035

MAX LUMENS

9 Wattages

99W TO 256W

290,000 hr

EXTREME-LIFE L70 AT 25°C

DELIVERED LUMENS AT 5000K — 80 CRI

Optic	99w 104.8 input W	133w 139.5 input W	167w 178.8 input W	199w 210.6 input W	256w 271.2 input W	BUG at 256w
A — Type I	13,331	17,909	22,487	26,796	34,471	B5-U0-G3
B — Type II	12,717	17,084	21,452	25,563	32,884	B3-U0-G3
C — Type III	13,970	18,768	23,566	28,082	36,125	B4-U0-G4
D — Type IV	14,160	19,024	23,888	26,601	34,221	B3-U0-G5
F — Type V	13,326	17,903	22,479	26,787	34,459	B5-U0-G2
I — Narrow Beam	14,320	19,238	24,160	28,791	37,035	N/A

3000K AND 4000K — TYPE III AND TYPE V

Optic / CCT	99w	133w	167w	199w	256w
Type III — 3000K	12,922	17,360	21,798	25,975	33,416
Type III — 4000K	13,446	18,064	22,682	27,028	34,770
Type V — 3000K	12,327	16,560	20,793	24,778	31,875
Type V — 4000K	12,826	17,231	21,636	25,782	33,167

111w, 136w, 183w, and 225w are also available; 3000K is not offered on the 136w or 225w. Type I, II, IV, and narrow beam are 4000K and 5000K.

SPECIFICATIONS

Dimensions — 22" (559mm) long × 15¾" (400mm) wide × 4" (102mm) high. Length with mount: 23¾" to 29¼".

Voltage and lens — 120-277V or 347-480V; clear flat glass standard, SoftLED or prismatic on Type V.

Weight and EPA — 33 lbs, 1.00 sq ft single mount; 66 lbs and 1.36 to 2.00 sq ft at two per pole.

Optics and Distribution

Optic selection sets pole spacing, uniformity, and how much light leaves the property. Every CARA distribution is published with both its IES type and its NEMA beam designation, so a lighting engineer can model the site before a pole is set.

Code	Distribution	Beam / NEMA	Available on	Typical use
A	Type I	130°H × 70°V · 7H × 5V	Standard, Large	Narrow walkways and drive aisles with center-mounted poles
B	Type II	110°H × 30°V · 7H × 6V	Standard, Large	Roadways, wide walkways, entry drives
C	Type III	120°H × 70°V · 7H × 7V	Compact, Standard, Large	General parking and site lighting — the default choice
D	Type IV	110°H × 30-50°V · 6H × 5V or 7H × 6V	Standard, Large	Perimeter poles and building-mounted forward throw
F	Type V	115°H × 110°V · 7H × 7V	Compact, Standard, Large	Square symmetric coverage from center-of-lot poles
I	Narrow beam	30°H × 30°V · 4H × 4V	All three, 5000K	Long-throw flood, façade wash, signage, storage yards



CONTROLLING SPILL AND GLARE

BUG ratings for CARA Large run from B2-U0-G1 to B5-U1-G5 by optic and wattage, and every standard-mount distribution rates U0 — no uplight. Where a property line sits close to the pole, add the glare and house side shield: KH15GSZ, KH25GSZ, or KH45GSZ. Our lighting engineers confirm spill at the property line in a photometric study before you buy.

Mounting Options — Visual Reference

Mounts are factory installed and ordered as the eighth field of the catalog number. Match the mount to what is already on site: square pole, tenon, horizontal arm, wall, or existing hardware.



KA — CARA die-cast arm.
Square poles, direct.



SF — Adjustable slipfitter for 2 $\frac{3}{8}$ "
tenons.



MA — Adaptor for 2 $\frac{3}{8}$ " horizontal
arms.



BR — Two-piece swivel bracket,
wall or structure.



EH — Easy-hang wall bracket.
(Compact and Standard)



Y — Heavy-duty stamped steel
Yoke.



Mount Availability and EPA

Confirm total EPA against the pole manufacturer's wind loading before ordering. EPA below is shown with the arm mount — add the fixture EPA for every head on the pole, then check the total against the pole's rated capacity at your site's design wind speed.

Code	Mount	Fits	Compact	Standard	Large
KA	Die-cast arm	Square poles, direct	Yes	Yes	Yes
SF	Adjustable slipfitter	2⅝" tenons	Yes	Yes	Yes
MA	Mounting arm adaptor	2⅝" horizontal arms	Yes	Yes	Yes
Y	Heavy-duty steel yoke	Flood and surface aiming	Yes	Yes	Yes
BR	Two-piece swivel bracket	Wall and structure	Yes	Yes	Yes
EH	Easy-hang wall bracket	Wall, one-person install	Yes	Yes	—
WM	Stamped steel wall mount	Wall	—	—	Yes
K	½" NPS knuckle	Threaded stanchion	Yes	—	—
NM	No mount	Existing hardware	Yes	Yes	Yes

EFFECTIVE PROJECTED AREA AND WEIGHT

Configuration	Compact EPA / Weight	Standard EPA / Weight	Large EPA / Weight
Single	0.35 sq ft / 11 lbs	0.60 sq ft / 15 lbs	1.00 sq ft / 33 lbs
Two at 90°	0.48 sq ft / 22 lbs	0.82 sq ft / 30 lbs	1.36 sq ft / 66 lbs
Two at 180°	0.70 sq ft / 22 lbs	1.20 sq ft / 30 lbs	2.00 sq ft / 66 lbs
Three at 120°	0.70 sq ft / 33 lbs	1.20 sq ft / 45 lbs	2.00 sq ft / 99 lbs
Four at 90°	0.77 sq ft / 44 lbs	1.32 sq ft / 60 lbs	2.20 sq ft / 132 lbs

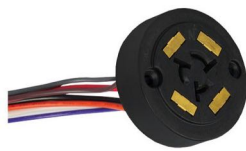
Round pole and wall adaptors extend the KA arm to 3-5" round poles (KH20RPZ) and 4-6" round poles (KH40RPZ). Pole tenon spoke brackets are available for one to four heads; three-head and four-head brackets are non-stock.

Controls and Sensors

Every CARA ships with 0-10V dimming standard, 100% to 10%, with a 150-microamp dimming source current. Photocells and motion sensors are factory installed and internally wired for switching, dimming, or both. Fixtures are not designed for use with line voltage dimmers.



Photocells — button, pencil, and twist-lock.



R7 receptacle — ANSI C136.41 networked node.



Sensors — infrared and microwave, dimming or on/off.



Accessory housing — ACCHSG1Z for external controls.

Code	Control	Available on	Notes
PC3	Photocell, 120-277VAC	Compact	Dusk-to-dawn switching, button style
P12 / P14	Pencil photocell	Compact	P12 at 277VAC; P14 at 120-277VAC
R3 / R5 / R7	Twist-lock receptacle	Standard, Large	R7 is ANSI C136.41—2013 for networked controls
M1 / M2	Infrared motion sensor	All three	M1 for 20 to 35 ft; M2 for 18 ft or less; 120-277V
S23	Microwave sensor with dimming	Standard, Large	Standard to 25 ft; Large to 35 ft; 120-277V
S43	Microwave on/off motion sensor	Standard, Large	Mounting heights of 8 to 19 ft; 120-277V
SP	Surge protection	All three	Adds to the internal 2kV or 6kV standard protection
SF / DF	Single or double fusing	All three	120-277V models
BU4 / BUC4	90-minute battery backup	Compact	BUC4 cold-starts to -20°C; easy-hang wall bracket only

THREE THINGS TO SETTLE BEFORE YOU ORDER CONTROLS

1. Mounting height

It sets the sensor. Infrared and microwave sensors each have a published height range.

2. Switching or dimming

Dimming to a low level after hours keeps a site visible on camera while cutting energy.

3. Local or networked

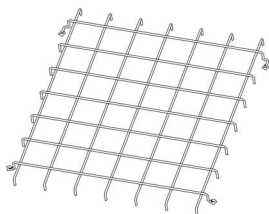
A photocell runs one pole. An R7 receptacle accepts a node for the whole site.

Accessories and Replacement Parts

Ordered separately and field installed. Bronze powdercoat finish with hardware included unless noted. A shield, a lens, and a mount on the shelf turn a service call into a fifteen-minute job.



Glare / house side shield



Stainless wire guard



SoftLED and prismatic lenses



Polycarbonate Sensor Housing

SHIELDS, GUARDS, AND LENSES

KH15GSZ / KH25GSZ / KH45GSZ	Glare and house side shield
KH15WG / KH25WG / KH45WG	Stainless steel wire guard
KH15GLSS / KH25GLSS / KH45GLSS	SoftLED flat glass lens
KH25GL	Tempered clear flat glass lens
KH45GLP	Tempered prismatic flat glass lens
SSBS	Stainless steel bird spikes

MOUNTING HARDWARE

KH25AZ / KH45AZ	Die-cast arm, square poles
FL73SFXZ	Adjustable slipfitter, 2 $\frac{3}{8}$ " tenons
ALMAAZ	Adaptor, 2 $\frac{3}{8}$ " horizontal arms
KH15YZ / KH25YZ / KH45YZ	Heavy-duty steel yoke
FL73BRZ / WBR2Z	Swivel bracket / wall bracket
KHEHZ / FLSTZ	Easy-hang bracket / $\frac{1}{2}$ " NPS knuckle

PHOTOCELLS AND SENSORS

P18103	120-277VAC photocell
P18112 / P18114	Pencil photocell
P18140 / P18152	Twist-lock photocell, 120V / 277V
P18156 / P18157	Twist-lock photocell, 120-277V / 480V
P18131 / P18132	Twist-lock open / shorting cap, IP65
P17117 / P17123	Microwave sensor, dimming / on-off

HOUSINGS AND POLE BRACKETS

ACCHSG1Z	Die-cast accessory housing
ACCHSG3	Polycarbonate sensor housing
ACCHSG4	Empty housing, uniform appearance
KH20RPZ / KH40RPZ	Round pole adaptor
KH20WMZ / KH40WMZ	Wall mount adaptor
PTSB series	Tenon spoke brackets, one to four heads

Specify Z for bronze, B for black, or C for a custom color where offered. Three-head and four-head spoke brackets are non-stock — ask your lighting specialist for current lead time.

EXTREME-LIFE, Lumen Maintenance, and Warranty

EXTREME-LIFE is the Access Fixtures designation for a luminaire with an L70 projection above 100,000 hours. All three CARA sizes qualify. Life is a projection, not a promise, and it depends on ambient temperature — the figures below are projected per IESNA TM-21-11 from 10,000 hours of LED testing per IESNA LM-80-08, for the base model at 5000K.

CARA COMPACT AND CARA STANDARD — WATTAGES THROUGH 121 INPUT WATTS

TM-21-11 projection	Initial	25,000 hr	50,000 hr	100,000 hr	Calculated LED life
L70 at 25°C / 77°F	1.00	0.98	0.95	0.91	320,000 hr
L70 at 50°C / 122°F	1.00	0.95	0.89	0.79	141,000 hr
L80 at 40°C / 104°F	1.00	0.96	0.93	0.85	134,000 hr

CARA LARGE

TM-21-11 projection	Initial	25,000 hr	50,000 hr	100,000 hr	Calculated LED life
L70 at 25°C / 77°F	1.00	0.97	0.95	0.90	290,000 hr
L70 at 50°C / 122°F	1.00	0.94	0.88	0.76	84,000 hr
L80 at 40°C / 104°F	1.00	0.95	0.91	0.81	108,000 hr

WARRANTY, LISTINGS, AND PROCUREMENT

Five-year warranty

Covers the luminaire in a -40°C to +50°C environment. Register the project with your lighting specialist so serial numbers and install date are on file from day one.

Listings

ETL listed for wet locations to ANSI/UL 1598 and UL 8750, IP66 sealed LED compartment, and DesignLights Consortium qualified models for utility rebate programs.



BAA and TAA compliant. CARA meets Buy American Act and Trade Agreements Act requirements — specify it on federal, state, municipal, and school work without a waiver.

Order Information — Compact and Standard

Read the matrix left to right and take one entry from each column. AF33X is the prefix that leads every CARA catalog number.

ORDER INFORMATION EXAMPLE AF33XKH25QF1X112U4KCZKASP

CARA COMPACT · AF33XKH15Q

Prefix + Model	Optics	Wattage	Driver	CCT	Lens	Color	Mounting	Options
AF33XKH15Q	C = Type III F = Type V I = Narrow beam* *22 & 37w, 5K only	1X22 = 22w 1X37 = 37w 1X56 = 56w optimized	U = 120-277V H = 347-480V* *37w only	3K = 3000K* 4K = 4000K♦ 5K = 5000K *37w F, or 22w C & F ♦C & F optics	C = Clear flat S = SoftLED* *Type V only	Z = Bronze C = Custom	KA = Arm SF = Slipfitter MA = Arm adapter Y = Yoke BR = Swivel bracket EH = Easy-hang K = ½" NPS knuckle NM = No mount	SF = Single fuse DF = Double fuse SP = Surge protection M1 = IR sensor 20-35 ft M2 = IR sensor ≤18 ft PC3 = Photocell P12 / P14 = Pencil PC BU4 = Battery backup BUC4 = Cold-start BU

CARA STANDARD · AF33XKH25Q

Prefix + Model	Optics	Wattage	Driver	CCT	Lens	Color	Mounting	Options
AF33XKH25Q	A = Type I B = Type II C = Type III D = Type IV F = Type V I = Narrow beam* *81 & 112w, 5K only	1X65 = 65w* 1X81 = 81w 1X112 = 112w *D optic 3K, or C & F optics 4K & 5K	U = 120-277V H = 347-480V* *65 & 81w only	3K = 3000K* 4K = 4000K 5K = 5000K *65w D; 81w B, C, D, F; 112w C, D & F	C = Clear flat S = SoftLED* *Type V only	Z = Bronze C = Custom	KA = Arm SF = Slipfitter MA = Arm adapter Y = Yoke BR = Swivel bracket EH = Easy-hang NM = No mount	SF = Single fuse DF = Double fuse SP = Surge protection M1 / M2 = IR sensor R3 / R5 / R7 = Twist-lock receptacle S23 = Microwave, dimming S43 = Microwave on/off

Fusing and sensor options are 120-277V models only. Maximum tilt is 45° above horizontal with an R3, R5, or R7 receptacle.

Order Information — CARA Large

ORDER INFORMATION EXAMPLE

AF33XKH45QF1X256U5KCZKASP

STANDARD MODELS · AF33XKH45Q

Prefix + Model	Optics	Wattage	Driver	CCT	Lens	Color	Mounting	Options
AF33XKH45Q	A = Type I	1X99 = 99w	U = 120-277V	3K = 3000K*	C = Clear flat	Z = Bronze	KA = Arm	SF = Single
	B = Type II	1X111 = 111w	H = 347-480V	4K = 4000K	S = SoftLED*	C = Custom	SF = Slipfitter	fuse
	C = Type III	1X133 = 133w		5K = 5000K	P = Prismatic*		MA = Arm	DF = Double
	D = Type IV	1X136 =		*C & F optics	*Type V only		adapter	fuse
	F = Type V	136w*		only;			Y = Yoke	SP = Surge
	I = Narrow	1X167 = 167w		not on 136 or			BR = Swivel	protection
	beam*	1X183 = 183w		225w			bracket	M1 / M2 = IR
	*5K models	1X199 = 199w					WM = Wall	sensor
	only	1X225 =					mount	R3 / R5 / R7 =
		225w*					NM = No	Twist-lock
		1X256 = 256w					mount	receptacle
		*C, D & F						S23 =
		optics only						Microwave,
								dimming
								S43 =
								Microwave
								on/off

AUTO DEALERSHIP FRONT LINE MODELS

KARD /
KALD

Arm, optics rotated right / left

MARD /
MALD

Arm adapter, rotated right / left

SFRD /
SFLD

Slipfitter, rotated right / left

Available
on

C and D optics, 225w and 256w, 5000K, clear flat glass, 120-277V or 347-480V

ROTATED OPTICS EXAMPLE

AF33XKH45QC1X256U5KCZKARDSP

WORKED EXAMPLES

AF33XKH15QC1X37U3KCZEH

Compact, Type III, 37w, 120-277V, 3000K, clear flat glass, bronze, easy-hang bracket.

AF33XKH25QC1X81U5KCZKAR7

Standard, Type III, 81w, 5000K, clear flat glass, bronze, arm, 7-pin receptacle.

AF33XKH45QF1X167H4KSZSFSP

Large, Type V, 167w, 347-480V, 4000K, SoftLED glass, bronze, slipfitter, surge protection.

Standard lead time is 7 to 10 days. Send the site plan and the mounting heights to a lighting specialist and the catalog numbers come back built for you.

Start With the Photometric Study

Buying area lights by wattage is guesswork. Buying them by footcandles is engineering. Send us the site and our lighting engineers model it — fixture by fixture, pole by pole — so you see the light levels, the uniformity, and the spill at the property line before a single fixture is ordered.

1. Send the site

A site plan or aerial, the pole locations and heights you have or plan, and what the space is used for after dark.

2. Review the study

A point-by-point layout with average and minimum footcandles, uniformity ratios, and the exact CARA catalog numbers behind them.

3. Order with confidence

Approve the layout and the order ships in 7 to 10 days, bronze, mounted, and configured as specified.

Ask a lighting specialist about a photometric study for your site.

Tell us the property, the hours it is used, and the light level you need. We will tell you which CARA size, optic, and color temperature gets you there — and whether a study is provided at no charge for your project.



What to have ready — site plan or aerial photo, existing fixture type and wattage, pole heights and locations, required light level or governing standard, and the target install date. CARA is BAA and TAA compliant, and it is also offered in color temperatures beyond 3000K, 4000K, and 5000K — ask which options fit dark sky friendly and wildlife-sensitive sites.



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