City of Arlington
Street Lighting Guide

November 2018

Prepared in conjuction with:

ARLINGTON COMPLETE STREETS

Introduction

All public streets, sidewalks, and other common areas or facilities shall be sufficiently illuminated to ensure the security of property and the safety of persons using such streets, sidewalks, and other common areas or facilities.

The City currently uses four types of street lights:

1. Standard street lights maintained by Snohomish County PUD
2. Street lights maintained by the City of Arlington
3. Pedestrian lights maintained by the City of Arlington
4. Street lights maintained by WSDOT

All roads, driveways, sidewalk, parking lots, entrances, exits and other common areas and facilities in commercial/industrial and multifamily developments shall be sufficiently illuminated to ensure the security of property and the safety of persons using such areas and facilities.

Street lighting systems shall conform to AMC 20.60.400 and the Engineering Standards, Chapter 2-8, and PUD Standards. All street lighting shall consist of LED fixtures unless approved by the City Engineer. Street light locations must be shown in site/civil plans and be energized with underground conduit to the maximum extent feasible. The City may require the Developer to add, reduce, or relocate street lights at Developer's expense.

Maintenance of the completed lighting system in City Right of Way is provided by PUD and paid for by the City. Maintenance of private lighting systems shall be the responsibility of the property owner.

Illumination shall be required on all new roadways. Widening of roadways will require maintaining the existing illumination or designing to current standards, if existing illumination cannot be maintained due to the ultimate roadway width. New roadway lighting shall meet the minimum illumination requirements as prescribed in Table 2-5, as measured in foot-candles (fc). The City Engineer may require a Photometric analysis be completed to demonstrate required illumination levels are met.

Table 2-5 Minimum Roadway Illumination

Roadway Classification	Area Classification		
	Commercial	Industrial	Residential
Arterial	2.0 fc	2.0 fc	1.0 fc
Collector	1.2 fc	0.9 fc	0.6 fc
Residential/Local	0.9 fc	0.6 fc	0.6 fc

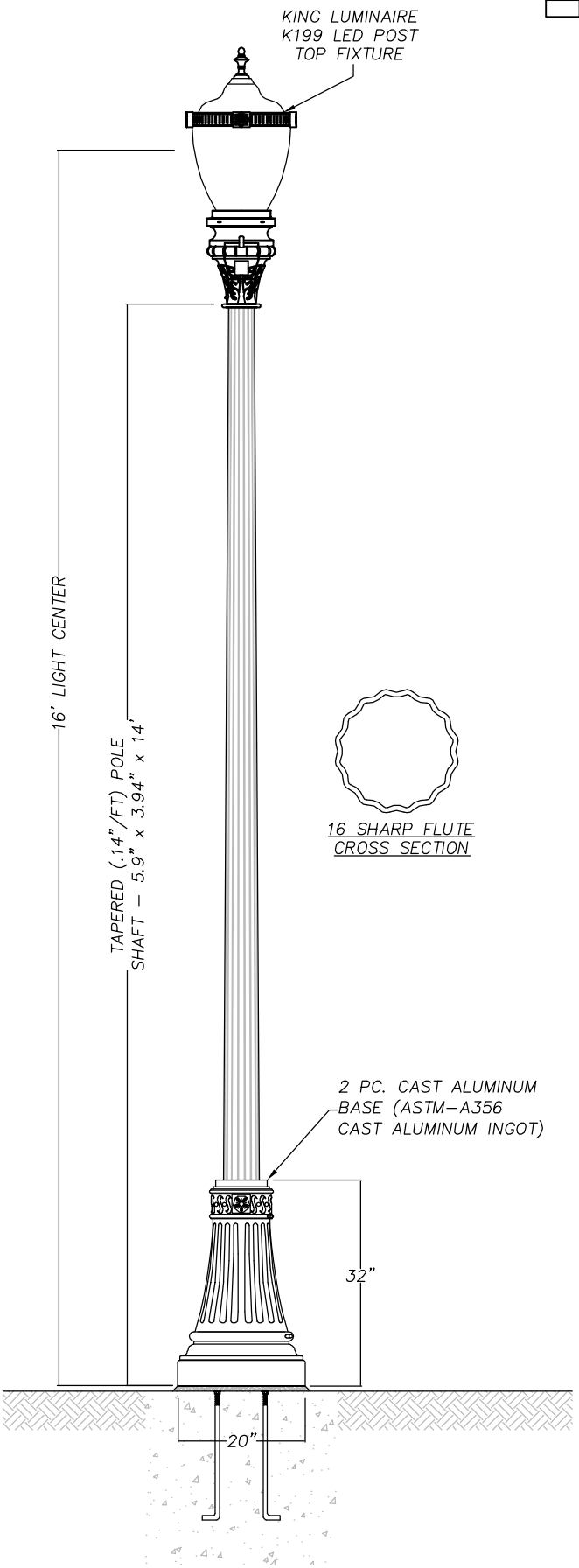
The following roadway lighting luminaire fixtures and poles, or approved equals as determined by the City Engineer, are required on City corridors:

1. LeoTek GreenCobra LED Street Light
    a. Color Temperature: 3000K
    b. Approved Dark Sky Friendly Fixture
2. 1254 Industries Huntington Series tapered decorative pole

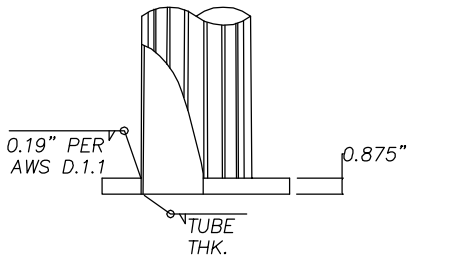
The following pedestrian or trail lighting luminaire fixtures, and poles or approved equals as determined by the City Engineer, are required on designated City trails:

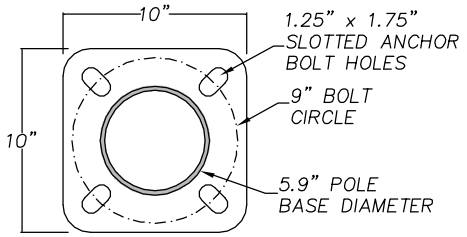
1. K199 California - LED Acorn
    a. Color Temperature: 3000K
    b. BUG Rating: B2U3G2
2. 1254 Industries Huntington Series tapered decorative pole

REV.	REV. #	REVISION NOTE	DATE	CHECKED BY



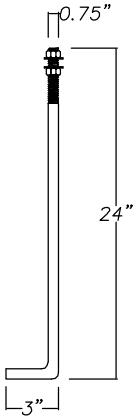
CAT. #: 12–BCHUN2032/590A140/K199–LED





DETAIL 2 – BASE PLATE

(4) 0.75" X 24" X 3"
ANCHOR BOLTS WITH (2) HEX
NUTS AND (2) FLAT WASHERS
PER BOLT ASTM–A36 FULLY
GALVANIZED PER ASTM A123



DETAIL 3 – ANCHOR BOLT

* ALL COMPONENTS POWDER COATED TO MATCH EXISTING

FINISHING SPECIFICATIONS

TWELVE FIFTY FOUR INDUSTRIES

1254 INDUSTRIES
VOICE - 760.798.8531 / FAX - 760.798.8535
SALES@1254INDUSTRIES.COM / WWW.1254INDUSTRIES.COM

DRAWN BY:	CHECKED BY:	APPROVED BY:	CATALOG #:	DATE:
R.R.	--	--	12-BCHUN2032/590A140/K199-LED	1.2.18

CUSTOMER:	PROJECT NAME:	
C.O. ARLINGTON, WA.	VALLEY RD & AIRPORT RD	
	DRAWING NUMBER:	SHEET NUMBER:
	R-1254010218-2A	2 OF 2

K199 CALIFORNIA - LED ACORN

The K199 California luminaire was one of the original acorn styles that graced the streets of North American towns and cities, particularly in Southern California. Teamed with King Luminaire's high performance LED engines it makes for a perfect solution for city streets, parks, schools and commercial areas.

KING LED TECHNOLOGY

PROJECT: _____

PREPARED BY: _____

DATE: _____

PRODUCT SPECIFICATIONS

LED ENGINE
Light engine shall be an array of 36, 42, 54 or 63 solid state Cree X-Series high power LEDs (light emitting diodes) mounted to a multi-sided, vertical heat sink of highly conductive aluminum. The LED emitters are mounted to removable circuit boards such that they are in full thermal contact with the vertical heat sink. The vertical heat sink is open at the bottom and vented at the top to provide appropriate dynamic airflow cooling for the LED array. The emitters are arranged in various patterns on each face of the vertical heat sink to provide the required light distribution.

OPTICS
The LED arrays include optical baffles constructed of optical grade ABS plastic with a vacuum metallized reflective surface or clear acrylic precision refractors over each diode. Both optical options are designed to efficiently control light distribution in IESNA Type IV & V for the B3 and Type III & V for the R1.

LUMINAIRE CONSTRUCTION
All K199 California cast components shall consist of a heavy grade A319 cast aluminum. The main body, or capital, acts as an enclosure for the driver assembly and is of adequate thickness to give sufficient structural rigidity. The capital shall have an opening at the base tenon body to allow the luminaire to be mounted to a tenon of 3-1/2" maximum diameter. The luminaire shall be locked in place by means of heavy duty, stainless steel setscrews.

GLOBE ASSEMBLY
The protective globe shall be molded of either; rippled polycarbonate Miles Makrolon GP/OP Thermoplastic Polymer, or equivalent, or rippled acrylic Acrylite Plus Acrylic Polymer, or equivalent, having a minimum thickness of 0.125".

The globe assembly is a self-contained unit consisting of the globe, rugged cast locking ring, and the LED light engine and optical control. The LED light engine is of a modular design, and is able to be quickly removed from the globe assembly. The globe assembly is secured to the main housing by means of a spring-tensioned, twist-locking Rotolock™ unit to allow tool-less removal of the globe, while maintaining a secure seal between the globe assembly and the main body of the luminaire, making the K199 California suitable for an outdoor environment.

High performance protection against water or dust particle ingress is available by means of a non-porous, closed-cell silicon rubber o-ring gasket which is highly efficient in sealing against particle ingress over a wide temperature range (-40°F to 310°F).

DRIVER
The LED universal dimmable driver will be class 2 and capable of 120 - 277V or 347 - 480V input voltage, greater than 0.9 power factor, less than 20% total harmonic distortion and features an ambient temperature range of -35°C up to 65°C. Each LED system comes with a standard surge protection designed to withstand up to 20kV/10kA of transient line surge as per IEEE C62.41.2 C High. An in-line ferrite choke is utilized to provide protection against EFT's. The driver assembly will be mounted on a heavy duty fabricated galvanized steel bracket to allow complete tool-less maintenance.

PHOTOMETRICS
Fixtures are tested to IESNA LM79 specifications. These reports are available upon request.

CHROMATICITY
High output LEDs come standard at 3000 & 4000K (+/- 300K) with a minimum nominal 70 CRI. Additional CCT emitters are available upon request.

LUMEN MAINTENANCE
Reported (TM21) and Calculated (L70) reports are available upon request with a minimum calculated value of 100,000 hrs.

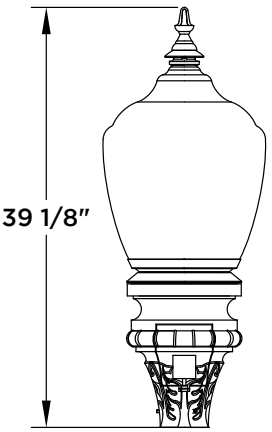
WIRING
All internal wiring and connections shall be completed so that it will be necessary only to attach the incoming supply connectors to Mate-N-Lok connectors or to a terminal block. Mate-N-Lok shall be certified for 600V operation. Internal wire connectors shall be crimp connector only and rated at 1000V and 150°C. All wiring to be CSA certified and/or UL listed, type SFF-2, SEWF-2, or SEW-2 No. 14 gauge, 150°C, 600V, and color coded for the required voltage.

THERMALS
Fixtures tested by a DOE sanctioned test facility to determine the maximum in-situ solder-point or junction-point temperatures of the LED emitters. This report is available upon request.

FINISH
Housing is finished with a 13 step KingCoat™ SuperDurable polyester TGIC powder coat. Standard colors include strobe white, brown metal, marina blue, gate gray, Chicago bronze, standard gold, standard black, federal green and rain forest. Please see our website for a complete list of colors. RAL and custom color matches are available.

MISCELLANEOUS
All exterior hardware and fasteners, wholly or partly exposed, shall be stainless steel alloy. All internal fasteners are stainless steel or zinc coated steel. All remaining internal hardware is stainless steel, aluminum alloy, or zinc coated steel.

WARRANTY
The K199 California LED luminaire comes with a 7 year limited warranty.



CERTIFICATION:
CSA US Listed
Suitable for wet locations
ISO 9001
IP66
ARRA Compliant
LM79 / LM80 Compliant

DRIVER INFO:
>0.9 Power Factor
<20% Total Harmonic Distortion
120 - 277V & 347 - 480V
-35°C Min. Case Temperature
65°C Max. Case Temperature
Surge Protection: ANSI C136.2
extreme level 20kV/10kA

EPA:
1.55 sq. ft.

FIXTURE WEIGHT:
36 lb

7-12-2017

POWER & LUMENS

Test Voltage: 120V
Nominal Color Temperature: 3000K & 4000K[1]
1036 Engine Series: 36 Emitters (40 - 75W)
1054 Engine Series: 54 Emitters (100W)
LED Engine + Driver Rated Life = 100,000 hrs[2]

To learn more about the B3 Optic, please see the B3 Optic Information Sheet

Photometric Test Report Number	Decorative Option	Color Temperature	IES Distribution	Nominal Watts	Engine Series	Delivered Lumens[3]	Efficacy (LM/W)[3]	mA @ Emitter	Driver Output Current	BUG Rating	HID Equivalent[4]
100NB3AR404030	Open	3000	Type IV	40	1036	2376	58.5	333	2000	1-3-2	50-70
100NB3AR404040	Open	4000	Type IV	40	1036	3116	76.2	333	2000	1-3-2	50-70
100NB3AR504030	Open	3000	Type V	40	1036	2324	57.2	333	2000	2-3-2	50-70
100NB3AR504040	Open	4000	Type V	40	1036	2897	70	333	2000	2-3-2	50-70
100SB3AR404030	SST	3000	Type IV	40	1036	2176	54.1	333	2000	1-3-2	50-70
100SB3AR404040	SST	4000	Type IV	40	1036	2890	71.4	333	2000	1-3-2	50-70
100SB3AR504030	SST	3000	Type V	40	1036	2328	56.9	333	2000	2-3-2	50-70
100SB3AR504040	SST	4000	Type V	40	1036	2816	70.2	333	2000	2-3-2	50-70
100WB3AR504030	SST/Struts	3000	Type V	40	1036	2218	54.8	333	2000	2-3-2	50-70
In Testing	SST/Struts	4000	Type V	40	1036	N/A	N/A	333	2000	N/A	50-70
In Testing	SST/Struts	3000	Type IV	40	1036	N/A	N/A	333	2000	N/A	50-70
100WB3AR404040	SST/Struts	4000	Type IV	40	1036	2637	65.3	333	2000	1-3-2	50-70
100NB3AR406030	Open	3000	Type IV	60	1036	3318	54.2	500	3000	1-3-3	70-100
100NB3AR406040	Open	4000	Type IV	60	1036	4378	71.2	500	3000	1-3-3	70-100
100NB3AR506030	Open	3000	Type V	60	1036	3286	53.4	500	3000	2-3-2	70-100
100NB3AR506040	Open	4000	Type V	60	1036	4078	65.1	500	3000	2-3-2	70-100
100SB3AR406030	SST	3000	Type IV	60	1036	3064	50.2	500	3000	1-3-3	70-100
100SB3AR406040	SST	4000	Type IV	60	1036	4093	66.8	500	3000	1-3-3	70-100
100SB3AR506030	SST	3000	Type V	60	1036	3278	53.3	500	3000	2-2-2	70-100
100SB3AR506040	SST	4000	Type V	60	1036	4022	65.5	500	3000	2-3-2	70-100
100WB3AR506030	SST/Struts	3000	Type V	60	1036	3121	51.2	500	3000	2-3-2	70-100
In Testing	SST/Struts	4000	Type V	60	1036	N/A	N/A	500	3000	N/A	70-100
In Testing	SST/Struts	3000	Type IV	60	1036	N/A	N/A	500	3000	N/A	70-100
100WB3AR604040	SST/Struts	4000	Type IV	60	1036	3738	61.1	500	3000	1-3-3	70-100
100NB3AR407530	Open	3000	Type IV	75	1036	3835	50.9	667	4000	1-3-3	100-150
100NB3AR407540	Open	4000	Type IV	75	1036	5105	67.3	667	4000	1-3-3	100-150
100NB3AR507530	Open	3000	Type V	75	1036	3837	50.5	667	4000	2-3-2	100-150
100NB3AR507540	Open	4000	Type V	75	1036	4740	61.9	667	4000	3-3-2	100-150
In Testing	SST	3000	Type IV	75	1036	N/A	N/A	667	4000	N/A	100-150
100SB3AR407540	SST	4000	Type IV	75	1036	4796	63.3	667	4000	1-3-3	100-150
100SB3AR507530	SST	3000	Type V	75	1036	3802	50.1	667	4000	2-3-2	100-150
100SB3AR507540	SST	4000	Type V	75	1036	4746	62.6	667	4000	3-3-3	100-150
100WB3AR507530	SST/Struts	3000	Type V	75	1036	3624	48.3	667	4000	2-3-2	100-150
In Testing	SST/Struts	4000	Type V	75	1036	N/A	N/A	667	4000	N/A	100-150
In Testing	SST/Struts	3000	Type IV	75	1036	N/A	N/A	667	4000	N/A	100-150
100WB3AR407540	SST/Struts	4000	Type IV	75	1036	4391	58	667	4000	1-3-3	100-150
100NB3AR410030	Open	3000	Type IV	100	1054	5003	48.8	533	4800	1-3-3	150-200
100NB3AR410040H	Open	4000	Type IV	100	1054	8729	97	533	4800	1-3-4	150-200
In Testing	Open	3000	Type V	100	1054	N/A	N/A	533	4800	N/A	150-200
100NB3AR510040	Open	4000	Type V	100	1054	5936	57.5	533	4800	3-3-3	150-200
100SB3AR410030	SST	3000	Type IV	100	1054	4646	45.3	533	4800	1-3-3	150-200
100SB3AR410040	SST	4000	Type IV	100	1054	5904	57.1	533	4800	1-3-3	150-200
In Testing	SST	3000	Type V	100	1054	N/A	N/A	533	4800	N/A	150-200
100SB3AR510040	SST	4000	Type V	100	1054	6482	57.4	533	4800	3-3-3	150-200
100WB3AR410030	SST/Struts	3000	Type IV	100	1054	4224	41	533	4800	1-3-3	150-200
100WB3AR410040	SST/Struts	4000	Type IV	100	1054	5378	51.7	533	4800	1-3-3	150-200
In Testing	SST/Struts	3000	Type V	100	1054	N/A	N/A	533	4800	N/A	150-200
100WB3AR510040	SST/Struts	4000	Type V	100	1054	5344	53.2	533	4800	3-3-3	150-200

B3 = 3rd Generation Baffled Array
SST = Solid Spun Top SST/struts = Solid Spun Top + Rings and Struts Open = No Decorative Option

[1]Color temperature is nominal, please see test report for specific chromaticity information
[2]Contact factory for TM21 information/Driver specification
[3]Due to the continuous advancements in LED technology, luminaire delivered lumen and efficacy is subject to change without notice at the discretion of King Luminaire
[4]Equivalence should always be confirmed by performing a photometric layout, due to the variability of performance requirements and application criteria

POWER & LUMENS

Test Voltage: 120V
Nominal Color Temperature: 3000K & 4000K[1]
1042 Engine Series: 42 Emitters (40 - 75W)
1063 Engine Series: 63 Emitters (100 -120W)
LED Engine + Driver Rated Life = 100,000 hrs[2]

To learn more about the R1 Optic, please see the R1 Optic Information Sheet

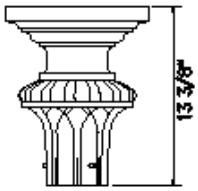
Photometric Test Report Number	Decorative Option	Color Temperature	IES Distribution	Nominal Watts	Engine Series	Delivered Lumens[3]	Efficacy (LM/W)[3]	mA @ Emitter	Driver Output Current	BUG Rating	HID Equivalent[4]
100NR1AR304030	Open	3000	Type III	40	1042	3003	76.4	278	1670	1-3-2	50-70
100NR1AR304040	Open	4000	Type III	40	1042	3676	91.2	278	1670	1-4-2	50-70
In Testing	Open	3000	Type V	40	1042	N/A	N/A	278	1670	N/A	50-70
100NR1AR504040	Open	4000	Type V	40	1042	3428	87	278	1670	2-4-2	50-70
100SR1AR304030	SST	3000	Type III	40	1042	2645	67.6	278	1670	1-3-2	50-70
100SR1AR304040	SST	4000	Type III	40	1042	3208	81.2	278	1670	1-3-2	50-70
In Testing	SST	3000	Type V	40	1042	N/A	N/A	278	1670	N/A	50-70
100SR1AR504040	SST	4000	Type V	40	1042	3110	78.3	278	1670	2-3-2	50-70
100WR1AR304030	SST/Struts	3000	Type III	40	1042	2270	57.8	278	1670	1-3-2	50-70
100WR1AR504040	SST/Struts	4000	Type V	40	1042	2630	66.4	278	1670	2-3-2	50-70
100NR1AR306030	Open	3000	Type III	60	1042	3934	72.6	417	2500	1-4-2	70-100
100NR1AR306040	Open	4000	Type III	60	1042	5526	85	417	2500	1-4-3	70-100
In Testing	Open	3000	Type V	60	1042	N/A	N/A	417	2500	N/A	70-100
100NR1AR506040	Open	4000	Type V	60	1042	5208	81.1	417	2500	2-4-2	70-100
100SR1AR306030	SST	3000	Type III	60	1042	3991	62.7	417	2500	1-3-2	70-100
100SR1AR306040	SST	4000	Type III	60	1042	4905	75.6	417	2500	1-2-3	70-100
In Testing	SST	3000	Type V	60	1042	N/A	N/A	417	2500	N/A	70-100
100SR1AR506040	SST	4000	Type V	60	1042	4683	72.8	417	2500	2-3-2	70-100
100WR1AR306030	SST/Struts	3000	Type III	60	1042	3401	53.2	417	2500	1-3-2	70-100
100WR1AR506040	SST/Struts	4000	Type V	60	1042	3978	61.7	417	2500	2-3-2	70-100
100NR1AR307530	Open	3000	Type III	75	1042	5258	66.5	566	3400	1-4-3	100-150
100NR1AR307540H	Open	4000	Type III	75	1042	7596	100	566	3400	2-5-4	100-150
In Testing	Open	3000	Type V	75	1042	N/A	N/A	566	3400	N/A	100-150
100NR1AR507540	Open	4000	Type V	75	1042	6127	77.2	566	3400	3-4-3	100-150
100SR1AR307530	SST	3000	Type III	75	1042	4672	59.3	566	3400	1-3-3	100-150
In Testing	SST	4000	Type III	75	1042	N/A	N/A	566	3400	N/A	100-150
In Testing	SST	4000	Type V	75	1042	N/A	N/A	566	3400	N/A	100-150
100SR1AR507540	SST	4000	Type V	75	1042	5503	69.3	566	3400	3-3-3	100-150
100WR1AR307530	SST/Struts	3000	Type III	75	1042	3981	50.4	566	3400	1-3-3	100-150
100WR1AR507540	SST/Struts	4000	Type V	75	1042	4661	58.6	566	3400	3-3-2	100-150
100NR1AR310030	Open	3000	Type III	100	1063	6887	68.5	444	4000	2-5-3	150-175
100NR1AR310040H	Open	4000	Type III	100	1063	9454	98	444	4000	2-5-4	150-175
In Testing	Open	3000	Type V	100	1063	N/A	N/A	444	4000	N/A	150-175
100NR1AR510040	Open	4000	Type V	100	1063	7861	76.8	444	4000	3-5-3	150-175
100SR1AR310030	SST	3000	Type III	100	1063	6096	60.5	444	4000	2-3-3	150-175
100SR1AR310040	SST	4000	Type III	100	1063	7064	68.8	444	4000	2-3-3	150-175
In Testing	SST	3000	Type V	100	1063	N/A	N/A	444	4000	N/A	150-175
In Testing	SST	4000	Type V	100	1063	N/A	N/A	444	4000	N/A	150-175
In Testing	SST/Struts	3000	Type III	100	1063	N/A	N/A	444	4000	N/A	150-175
100WR1AR510040	SST/Struts	4000	Type V	100	1063	6116	60	444	4000	3-3-3	150-175
In Testing	Open	3000	Type III	120	1063	N/A	N/A	555	5000	N/A	150-200
100NR1AR312040H	Open	4000	Type III	120	1063	11101	97	555	5000	3-5-4	150-200
In Testing	Open	3000	Type V	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	Open	4000	Type V	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	SST	3000	Type III	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	SST	4000	Type III	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	SST	3000	Type V	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	SST	4000	Type V	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	SST/Struts	4000	Type III	120	1063	N/A	N/A	555	5000	N/A	150-200
In Testing	SST/Struts	4000	Type V	120	1063	N/A	N/A	555	5000	N/A	150-200

R1 = 1st Generation Refractive Array
SST = Solid Spun Top SST/struts = Solid Spun Top + Rings and Struts Open = No Decorative Option

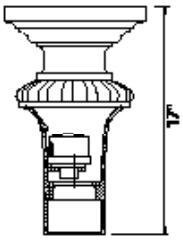
FIXTURE OPTIONS

Capital Options

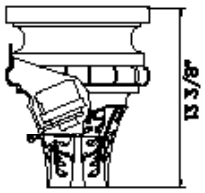
K16



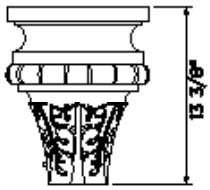
K18



K14 C/W PR



K13



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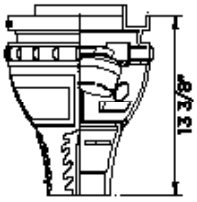

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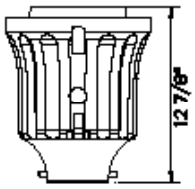
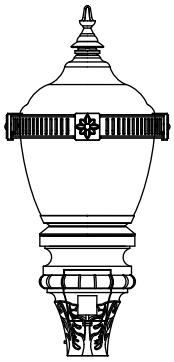
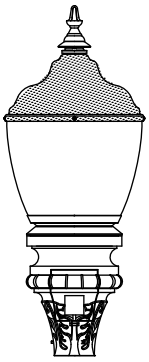


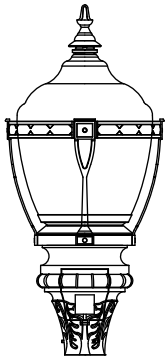
Decorative Options:



GE Globe Ring



Solid Spun Top



BELL Ring & Struts

Finial Options:

#1

#2

#3

HOW TO ORDER

LUMINAIRE STYLE
K199R - California

IES LIGHTING CLASSIFICATION
III - Type 3 (B2, R1)
IV - Type 4 (B3)
V - Type 5 (B3, R1)

SOURCE
SSL - Solid State

SERIES
1036 (40 - 75W B3)
1042 (40 - 75W B2, R1)
1054 (100W B3)
1063 (100 - 120W B2, R1)

LINE VOLTAGE
120V (120-277)
480V (347-480)*

*Select wattages available within this range, contact King Luminaire

CAPITAL
K13, K14, K16
K18, K24, K23

*Additional options available on website

CCT
3K - 3000K
4K - 4000K

DECORATIVE OPTIONS
GE - GE Ring
SST - Solid Spun Top
BRS - BELL Ring & Struts

PAINT COLOR
GN - Federal Green
BE - Blue
GY - Gray
BN - Brown
BK - Black
BZ - Bronze

*Additional options available on website

K199R - [ ] - [ ] - [ ] (SSL) [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

WATTAGE
40, 60, 75, 100, 120
*120 only available in R1

OPTICAL OPTIONS
B2 - B2 Optic (Baffled Array)
B3 - B3 Optic (Baffled Array)
R1 - R1 Optic (Refractive Array)

LENS OPTIONS
AR - Acrylic Rippled
PR - Polycarbonate Rippled

PHOTO CONTROL OPTION
PR - Photo Receptacle c/w cover and PR. Available with K14, K18, K24 & K23

PE - Photo Receptacle c/w cover, PR and Photo Eye. Available with K14, K18, K24 & K23

PEBC - Photo Electric Buttoncell

*leave blank if no photo control required

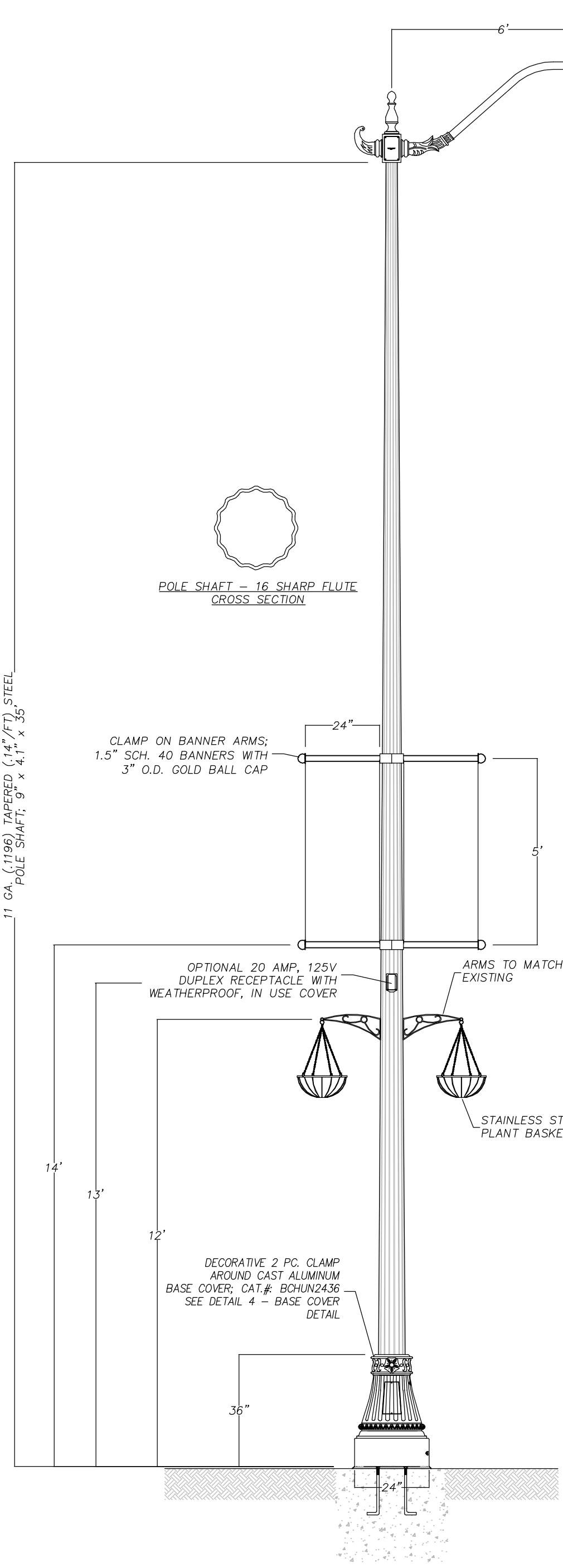
CONNECTION
TB - Terminal Block

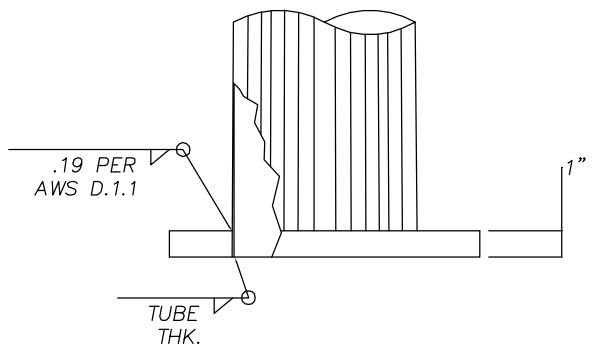
FINIAL OPTIONS
#1, #2, #3

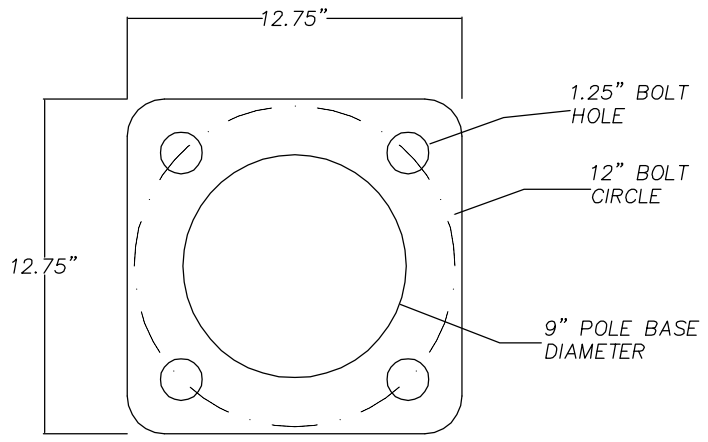
*Additional options available on website

KING LED TECHNOLOGY
A Member of The StressCrete Group of Companies
www.stresscretegroup.com
KING LUMINAIRE 1153 State Route 46N Jefferson, OH 44047 Phone: 1.800.268.7809 www.kingluminaire.com

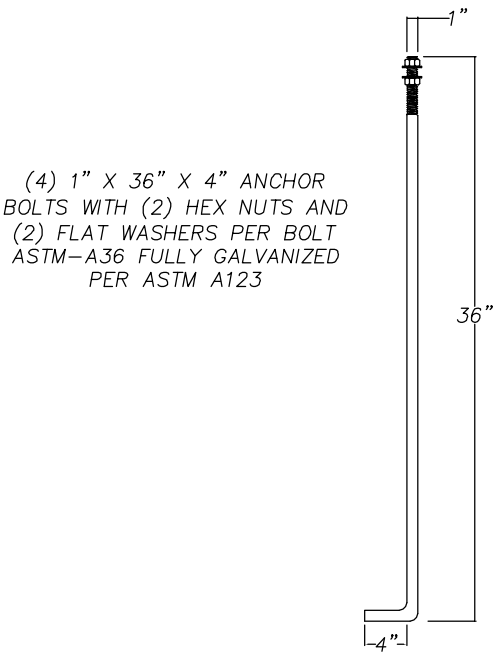
REV.	REV. #	REVISION NOTE	DATE	CHECKED BY







DETAIL 8 – BASE PLATE



DETAIL 8 – BASE PLATE

* ALL COMPONENTS POWDER COATED TO MATCH EXISTING

FINISHING SPECIFICATIONS

TWELVE FIFTY FOUR INDUSTRIES

1254 INDUSTRIES
VOICE - 760.798.8531 / FAX - 760.798.8535
SALES@1254INDUSTRIES.COM / WWW.1254INDUSTRIES.COM

DRAWN BY:	CHECKED BY:	APPROVED BY:	CATALOG #:	DATE:
R.R.	__	__	12-BCHUN2436/900A350/CA-ALH-6(MOD)-LED	1.2.18

CUSTOMER:	PROJECT NAME:	
C.O. ARLINGTON, WA.	VALLEY RD & AIRPORT RD.	
	DRAWING NUMBER: R-1254010218-2A	SHEET NUMBER: 1 OF 2

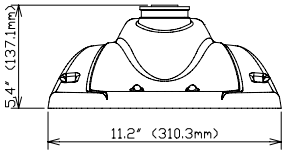
LEOTEK®
LITE-ON GROUP

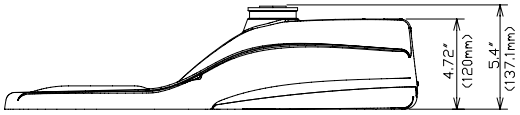
Project
Type
Catalog No.

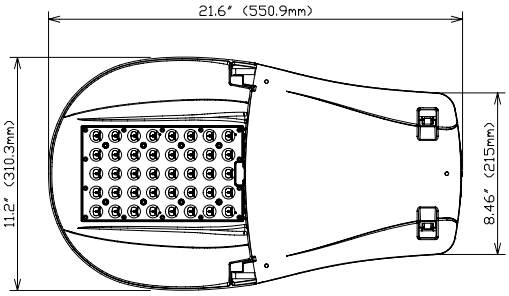
GreenCobra™ Midsize LED Street Light
GCM H-Series Specification Data Sheet

Luminaire Data

Weight 10 lbs [4.6 kg]
EPA 0.44 ft²







Ordering Information

Sample Catalog No. GCM2 30H MV NW 2R GY 700 PCR7 WL

Product	LED Code	Voltage	Color Temperature	Distribution	Finish[1]	30H Drive Current Code[2]	Options
GCM2	**30H**	**MV** 120-277V **HV** 347-480V	**WW** 3000K **NW** 4000K **CW** 5000K	**2S** Type 2 Short **2R** Type 2 Medium **3R** Type 3 Medium **4** Type 4 **5** Type 5	**GY** Gray **DB** Dark Bronze **BK** Black	**530** **610** **700** **850** **1A**	**FDC**[3] Fixed Drive Current **FFA**[4] Full field Adjustability **LPCR** Less Photocontrol Receptacle **PCR7**[5] ANSI 7-wire Photo-control Receptacle **PCR7-CR**[6] Control Ready 7-wire PC Receptacle **WL** Utility Wattage Label **4B** 4-Bolt Mounting Bracket **RWG** Rubber Wildlife Guard **SWTB** Straight Wire Terminal Block **BBL** Bubble Level
GCM2	**40H**					**40H Drive Current Code**[2] **575** **700** **850** **950** **1A**	

Notes:

1 Gray, Black, and Dark Bronze standard. Consult factory for other finishes.

2 Specified drive current code is the factory set maximum drive current. Field adjustable current selector enables standard dimming to lower wattage drive currents only. Consult factory if wattage limits require a special drive current.

3 Non-field adjustable, fixed drive current. Specify required drive current. Not available with PCR7-CR option.

4 The FFA option enables full field adjustability from the specified drive current code to all drive currents available. This option is not DLC qualified.

5 Field adjustable current selector included to enable standard dimming to lower wattage drive currents only. Field changeable connectors included to enable connection to PCR7 (wireless node dimming is disabled by default).

6 Control-ready wired at factory for wireless node dimming. Supplied at maximum drive current. If a lower drive current is required, consult factory.

7 Flush mounted house side shield. Shield cuts light off at 1/2 mounting height behind luminaire.

8 Flush mounted cul-de-sac shield. Shield cuts light off at 1/2 mounting height behind luminaire and 1-1/2 mounting height on either side of luminaire.

9 Specify Color (GY, DB, BK)

10 Specify MV (120-277V) or HV (347V-480V)

Accessories*	
HSSGCM[7]	House Side Shield, Snap-On*
CSSGCM[8]	Cul-De-Sac Side Shield, Snap-On*
SPB[9]	Square Pole Horizontal Arm Bracket
RPB[9]	Round Pole Horizontal Arm Bracket
PTB[9]	Pole Top Tenon Horizontal Arm Bracket
PTB2[9]	Pole Top Tenon Horizontal Arm Bracket (2@180°)
WB[9]	Wall Horizontal Arm Bracket
BSK	Bird Deterrent Spider Kit
PC[10]	Twist Lock Photocontrol
LLPC[10]	Long-Life Twist Lock Photocontrol
SC	Twist Lock Shorting Cap

*Accessories are ordered separately and not to be included in the catalog number. For factory installed HSS, CSS consult factory.

GreenCobra™ Midsize LED Street Light
GCM H-Series Specification Data Sheet

Luminaire Specifications

Housing
Die cast aluminum housing with universal two-bolt slip fitter mounts to 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter mast arm. One-piece aluminum housing provides passive heat-sinking of the LEDs and has upper surfaces that shed precipitation. Four-bolt mounting bracket is available. Mounting provisions meet 3G vibration per ANSI C136.31-2010 Normal Application, Bridge & Overpass. Mounting has leveling adjustment from ± 5° in 2.5° steps. Electrical components are accessed without tools via a high-strength, non-conductive polycarbonate door with quick-release latches. Polycarbonate material meets UL 746C for outdoor usage. Available rubber wildlife guard (RWG option) conforms to mast arm with no gaps.

Light Emitting Diodes
High-flux/High-power white LEDs produce a minimum of 90% of initial intensity over 75,000 hours of life based on IES TM-21 (L90 ≥ 75k hours). LEDs are tested in accordance with IES LM-80 testing procedures. LEDs have correlated color temperature of 3000K (WW), 4000K (NW), or 5000K (CW) and 70 CRI minimum. LEDs are 100% mercury and lead free.

Field Adjustability
LED drive current can be changed in the field to adjust light output for local conditions (not available with PCR7-CR option). The specified drive current code will be the factory set maximum drive current and field adjustments can only be made to available lower wattage drive currents. Select the FFA option if full field adjustability to all available drive currents (1A max) is desired. The FFA option is not DLC qualified.

Quality Control
Every luminaire is performance tested before and after a 2-hour burn-in period. Assembled in the USA.

Optical Systems
Micro-lens optical systems produce IESNA Type 2, Type 3, Type 4, or Type 5 distributions and are fully sealed to maintain an IP66 rating. Luminaire produces 0% total lumens above 90^0 (BUG Rating, U=0). Optional house side shield cuts light off at 1/2 mounting height behind luminaire. Cul-de-sac shield provides back and side light control for end of cul-de-sac applications. Both shields are field installable without tools.

Electrical
Rated life of electrical components is 100,000 hours. Uses isolated power supply that is 1-10V dimmable. Power supply is wired with quick-disconnect terminals. Power supply features a minimum power factor of .90 and <20% Total Harmonic Distortion (THD). EMC meets or exceeds FCC CFR Part 15. Terminal block accommodates 6 to 14 gauge wire. Surge protection complies with IEEE/ANSI C62.41 Category C High, 20kV/10kA and ANSI C136.2-2015, 20kV/10kA.

Controls
3-Wire photocontrol receptacle is standard. ANSI C136.41 7-wire (PCR7) photocontrol receptacle is available. All photocontrol receptacles have tool-less rotatable bases. Wireless control module is provided by others.

Finish
Housing receives a durable, fade-resistant polyester powder coat finish with 3.0 mil nominal thickness. Finish tested to withstand 5000 hours in salt spray exposure per ASTM B117. Finish meets scribe creepage rating 8 per ASTM D1654. Finish tested 500 hours in UV exposure per ASTM G154 and meets ASTM D523 gloss retention.

Listings/Ratings/Labels
Luminaires are UL listed for use in wet locations in the United States and Canada. DesignLights Consortium™ qualified product. Consult DLC QPL for Standard and Premium Classification Listings. International Dark Sky Association listed. Luminaire is qualified to operate at ambient temperatures of -40°C to 40°C.

Photometry
Luminaires photometrics are tested by certified independent testing laboratories in accordance with IES LM-79 testing procedures.

Warranty
10-year limited warranty is standard on luminaire and components.

Vandal Resistance
Housing and optics rated to IK10

Standards
Luminaire complies with:
ANSI: C136.2, C136.3, C136.10, C136.13, C136.15, C136.22, C136.31, C136.35, C136.37, C136.41, C62.41, C78.377, C82.77
Other: FCC 47 CFR, IEC 60598, ROHS II, UL 1449, UL 1598

GreenCobra™ Midsize LED Street Light
GCM H-Series Specification Data Sheet

Performance Data: 3000K (WW)
All data nominal. IES files for all CCTs available at leotek.com.

Product	LED Code	Drive Current Code	System Wattage (W)	Delivered Lumens (Lm) [1]	Efficacy (Lm/W)
GCM2	30H	530	48	5770	120
		610	58	6700	116
		700	68	7620	112
		850	82	8800	107
		1A	101	10480	104
	40H	575	73	8780	120
		700	88	10230	116
		850	107	11960	112
		950	121	13040	108
		1A	135	14080	104

Notes:
1 Nominal lumens. Normal tolerance ± 10% due to factors including distribution type, LED bin variance, and ambient temperatures.

Performance Data: 4000K (NW) and 5000K (CW)
All data nominal. IES files for all CCTs available at leotek.com.

Product	LED Code	Drive Current Code	System Wattage (W)	Delivered Lumens (Lm) [1]	Efficacy (Lm/W)
GCM2	30H	530	48	6330	132
		610	58	7440	128
		700	68	8550	126
		850	82	9830	120
		1A	101	11720	116
	40H	575	73	9590	131
		700	88	11260	128
		850	107	13270	124
		950	121	14390	119
		1A	135	15430	114

Notes:
1 Nominal lumens. Normal tolerance ± 10% due to factors including distribution type, LED bin variance, and ambient temperatures.

BUG Ratings

3000K (WW)

			Type 2S	Type 2R	Type 3R	Type 4	Type 5
Product	**LED Code**	**Drive Current Code**	**BUG Rating**	**BUG Rating**	**BUG Rating**	**BUG Rating**	**BUG Rating**
GCM2	30H	530	B2 U0 G1	B1 U0 G1	B2 U0 G2	B2 U0 G1	B3 U0 G1
		610	B2 U0 G1	B1 U0 G1	B2 U0 G2	B2 U0 G2	B3 U0 G1
		700	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G1
		850	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		1A	B2 U0 G2	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	40H	575	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		700	B2 U0 G2	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		850	B2 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B3 U0 G2
		950	B3 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B4 U0 G2
		1A	B2 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B4 U0 G2

4000K (NW)

			Type 2S	Type 2R	Type 3R	Type 4	Type 5
Product	**LED Code**	**Drive Current Code**	**BUG Rating**	**BUG Rating**	**BUG Rating**	**BUG Rating**	**BUG Rating**
GCM2	30H	530	B2 U0 G1	B1 U0 G1	B2 U0 G2	B2 U0 G1	B3 U0 G1
		610	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G1
		700	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		850	B2 U0 G2	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		1A	B3 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2	B3 U0 G2
	40H	575	B2 U0 G2	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		700	B2 U0 G2	B2 U0 G2	B3 U0 G3	B2 U0 G2	B3 U0 G2
		850	B3 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B4 U0 G2
		950	B3 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B4 U0 G2
		1A	B3 U0 G2	B3 U0 G3	B3 U0 G3	B3 U0 G3	B4 U0 G2

5000K (CW)

			Type 2S	Type 2R	Type 3R	Type 4	Type 5
Product	**LED Code**	**Drive Current Code**	**BUG Rating**	**BUG Rating**	**BUG Rating**	**BUG Rating**	**BUG Rating**
GCM2	30H	530	B2 U0 G1	B1 U0 G1	B2 U0 G2	B2 U0 G1	B3 U0 G1
		610	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G1
		700	B2 U0 G1	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		850	B2 U0 G2	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		1A	B2 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B3 U0 G2
	40H	575	B2 U0 G2	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
		700	B2 U0 G2	B2 U0 G2	B3 U0 G3	B2 U0 G2	B3 U0 G2
		850	B3 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B4 U0 G2
		950	B3 U0 G2	B2 U0 G2	B3 U0 G3	B3 U0 G2	B4 U0 G2
		1A	B3 U0 G2	B3 U0 G3	B3 U0 G3	B3 U0 G3	B4 U0 G2