ATTACHMENT A
SOLE SOURCE FACILITY JUSTIFICATION TRANSMITTAL

Public Contract Code section 3400 provides, in pertinent part, that:

"(a) The Legislature finds and declares that it is the intent of this section to encourage contractors and manufacturers to develop and implement new and ingenious materials, products, and services that function as well, in all essential respects, as materials, products, and services that are required by a contract, but at a lower cost to taxpayers.

(b) No agency of the state, nor any political subdivision, municipal corporation, or district, nor any public officer or person charged with the letting of contracts for the construction, alteration, or repair of public works, shall draft or cause to be drafted specifications for bids, in connection with the construction, alteration, or repair of public works, (1) in a manner that limits the bidding, directly or indirectly, to any one specific concern, or (2) calling for a designated material, product, thing, or service by specific brand or trade name unless the specification is followed by the words "or equal" so that bidders may furnish any equal material, product, thing, or service. In applying this section, the specifying agency shall, if aware of an equal product manufactured in this state, name that product in the specification. Specifications shall provide a period of time prior to or after, or prior to and after, the award of the contract for submission of data substantiating a request for a substitution of "an equal" item. If no time period is specified, data may be submitted any time within 35 days after the award of the contract.

(c) Subdivision (b) is not applicable if the awarding authority, or its designee, makes a finding that is described in the invitation for bids or request for proposals that a particular material, product, thing, or service is designated by specific brand or trade name for any of the following purposes:

(2) In order to match other products in use on a particular public improvement either completed or in the course of completion."

CREE Exterior Parking & Street Lights

This is a sole source procurement because:

- ☑ This is a sole provider of items compatible with existing equipment or systems.
- ☐ This is a sole provider of factory-authorized warranty service.
- ☐ This is a sole provider of goods or services that perform a unique function in order to meet the specialized needs of the District. Please provide specific detail below.

The CREE Exterior Parking & Street Lights, Model LEDway STR-LWY are the District's current standard exterior parking and street light fixture.

- ☑ There are overriding circumstances upon with the Board can find that the exception found in Public Contract Code section 3400 (c) (2) applies to the identified product(s). Please provide specific detail below as to what those circumstances are, and why this sole source procurement would be in the best interest of the District.

For aesthetics and consistency of parts and pieces having standard light fixtures on all campuses is highly recommended. The District has standardized on these fixtures for the past four (4) years. Use of other fixtures would interrupt uniformity throughout all of the campuses.

This is a restricted brand or trade name, and no substitutions are allowed because:

☑ The requested product is an integral repair part or accessory compatible with existing equipment or systems.

Existing Equipment/System: Exterior Light Fixture
Manufacturer/Model Number: CREE LEDway STR-LWY

☑ The District has standardized on the requested product, and use of another brand/model would require considerable time and funding to evaluate or implement. Please provide additional detail below.

Over the last four (4) years, the District has standardized on these exterior parking and street lights at all three campuses. Any change will impact the overall aesthetics around each campus and require additional storage and repair parts needed for on-hand inventory.

Supplier or Contractor Information:

CREE Inc.
4600 Silicon Drive
Durham, North Carolina, 27703
(800)533-2583

RECOMMENDATION

Sufficient evidence has been provided upon which the Board can find that the exception found in Public Contract Code section 3400 (c) (2) applies to the identified product(s). Approve a finding to authorize use of the above stated exception for Exterior Parking & Street Lights in the MiraCosta Design Standards Manual for all the projects in the MM program. Require that said finding be included in all pertinent bid/proposal documents for those projects where such product(s) will be used.

SIGNATURE:

Tom Macias, Facilities Director — **Date** 9/14/18

Geoff Bachanas, PMO Director — **Date** 9/13/18

steinberg hart

ATTACHMENT B
SOLE SOURCE ARCHITECT/ENGINEERING JUSTIFICATION SUMMARY REPORT TRANSMITTAL

September 1, 2018

Re: CREE Exterior Parking & Street Lights

Within the Design & Construction Standards MiraCosta CCD has identified or designed various proprietary systems or products that meet specific District performance requirements, allow for seamless integration into existing systems, provide ease of maintenance, and afford a lower total cost of ownership. In these instances, the District is requesting that these systems and products shall be provided without substitution. The following Specification Section 26 56 00 is one that meets these special requirements.

Our experience working with other Colleges and Universities shows that single sources for some materials, products, equipment, and systems is a common approach to achieving best value.

We have reviewed the facility justification transmittal for the above-referenced item and believe that the District's sole-sourcing of this specification section meets the requirements for District's benefit as described above.

Sincerely,

Joe Sion
Associate Principal/Senior Manager

523 W 6th Street #245
Los Angeles CA 90014

MiraCosta College Design And Construction Standards

Item #2: CREE Roadway Light

LEDway® Series Street Lights

PROVEN PERFORMANCE, PROVEN VALUE.

Launched in 2008, LEDway® LED street lights are arguably the most successful street light in the world. Our LEDway street light has built a reputation based on performance and value. Available in 10-LED increments (20 to 120 LEDs), flexible drive currents and multiple optical distributions, the LEDway street light can be "right-sized" to provide exacting illumination performance that minimizes first cost while maximizing energy savings. While others can make performance promises, the LEDway street light has already delivered proven performance.

BENEFITS

- Improved illumination performance
- Significant energy and maintenance savings
- Eliminate the relamping cycle
- Standard 10-year limited warranty

FEATURES

- Minimum 70 CRI
- CCT: 4000K (+/-300K), 5700K (+/-500K)
- Patented NanoOptic® Technology
- Exclusive Colorfast DeltaGuard® Finish
- UL wet listed
- Meets CALTrans 611 Vibration Testing
- Certified to ANSI C136.31-2001, 3G Bridge and Overpass Vibration Standards
- 10K surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Field adjustable power conditions
- Remote monitoring compatibility
- Scalable design

APPLICATIONS

- Airports, auto dealerships, corporate & office, education, government & municipal, healthcare, pedestrian & recreation, petroleum & convenience store, restaurant & hospitality, retail & grocery, roadway

LEDway - HT Mount

Sole Source #4 - CREE Exterior Parking & Street Lights

CREE

LEDway® Series Street Lights

Ordering Information

Example: STR-LWY-4M-HT-06-E-UL-SV-700-IP

PRODUCT	OPTIC	MOUNTING	#OF LEDS (X10)	LED SERIES	VOLTAGE	COLOR OPTIONS	DRIVE CURRENT	FACTORY INSTALLED OPTIONS
STR-LWY	**2M** Type I Medium **2S** Type II Short **3M** Type III Medium **4M** Type IV Medium **5M** Type V Medium	**HT** Horizontal Tenon	**02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12**	**E**	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver	**525** 525mA **700** 700mA	**DIM** 0-10V Dimming **R** NEMA® Photocell Receptacle **40K** 4000K CCT **UTL** Utility

*Ordering information is for reference only. Some product configurations are not available. Please consult spec sheets for specific product availability and for further details.

Dimensions

LEDWAY® LED STREET LIGHT

HT MOUNT

Accessory Information

BIRD SPIKE OPTIONS

XA-BRDSPKHSG
(for use with LEDway® housings)
XA-BRDSPK30
(for use with 20 to 30 LED light engines)
XA-BRDSPK60
(for use with 40 to 60 LED light engines)
XA-BRDSPK90
(for use with 70 to 90 LED light engines)
XA-BRDSPK120
(for use with 100 to 120 LED light engines)

EXTERNAL BACKLIGHT SHIELD OPTIONS

XA-XSLBLS30
(for use with 20 to 30 LED luminaires)
XA-XSLBLS60
(for use with 40 to 60 LED luminaires)
XA-XSLBLS90
(for use with 70 to 90 LED luminaires)
XA-XSLBLS120
(for use with 100 to 120 LED luminaires)

Mounting Options

POLE SPECIFICATION

Consult factory for more information.

PS
Crown-Weld® Square Straight Steel Poles

PS5R
Round Steel Poles

PSRV
Round Tapered Steel Poles

TENONS & BRACKETS

PD-*H4
Square Internal Mount Horizontal Tenons (Steel) - Mounts to 4" (102mm) square aluminum or steel poles

PT-*H
Round External Mount Horizontal Tenons (Aluminum) - Mounts to 2.375"-3" (60-76mm) O.D. round aluminum or steel poles or tenons; Mounts to square pole with PB-1A* tenon

WM-2L
Extended Horizontal Wall Mount Bracket - Mounts to wall, roof or side of wood pole

XA-TMDA8
Direct Arm Pole Adaptor Bracket -
Mounts to 3 – 6" (76 – 152mm) round or square aluminum or steel poles

* Specify mounting configuration.

You May Also Be Interested In:

IG SERIES PARKING STRUCTURE
Parking Structure Solutions

DPT SERIES POST-TOP LUMINAIRE
Easily Convert Decorative Street Lights to LED

CREE EDGE™ TSP TRANSPORTATION MOUNT
Bridge, Overpass & Tunnel Lighting Solutions

LEDway® Series High Output Street Lights

MEETING DEMANDING ROADWAY APPLICATION REQUIREMENTS.

The LEDway® Series High Output street light with its unrivaled lumen output for roadway lighting expands the application range replacing up to 400W HPS. With industry-leading optimized optical control and adjustable output for versatility, the LEDway Series High Output street light significantly improves the economic value for the application.

BENEFITS

- Improved illumination performance
- Significant energy and maintenance savings
- Eliminate the relamping cycle
- Standard 10-year limited warranty

FEATURES

- Minimum 70 CRI
- CCT: 4000K (+/-300K), 5700K (+/-500K)
- Patented NanoOptic® Technology
- Exclusive Colorfast DeltaGuard® Finish
- UL wet listed
- Vibration standards
- 10K surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Optional field adjustable power conditions
- Remote monitoring compatibility
- Scalable design

APPLICATIONS

- Airports, auto dealerships, corporate & office, education, government & municipal, healthcare, pedestrian & recreation, petroleum & convenience store, restaurant & hospitality, retail & grocery, roadway

High Output - Single

High Output - Double

CREE

Sole Source #4 - CREE Exterior Parking & Street Lights

LEDway® Series High Output Street Lights

Ordering Information

Example: STR-LWY-2ME-HT-1-F-UL-SV-A-40K

PRODUCT	OPTIC	MOUNTING	MODULE	SERIES	VOLTAGE	COLOR OPTIONS	INPUT POWER DESIGNATOR	CCT	FACTORY INSTALLED OPTIONS
STR LWY	**2ME** Type II Medium **2LG** Type II Long **3ME** Type III Medium **4ME** Type IV Medium	**HT** Horizontal Tenon	**1** Single Module **2** Double Module	F	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**A** Single Module 136W Double Module 274W	**30K** 3000K **40K** 4000K **57K** 5700K	**DIM** 0-10V Dimming **F** Fuse **N** No Quick Disconnect Harness or Leveling Bubble **PD** Power Door **Q** Field Adjustable Output **R** NEMA®Photocell Receptacle **SC** Door Safety Tether **UTL** Utility

*Ordering information is for reference only. Some product configurations are not available. Please consult spec sheets for specific product availability and for further details.

Mounting Options

POLE SPECIFICATION

PS
Crown-Weld® Square Straight Steel Poles

PS5R
Round Steel Poles

PSRV
Round Tapered Steel Poles

TENONS & BRACKETS

PD-*H4
Square Internal Mount Horizontal Tenons (Steel) - Mounts to 4" (102mm) square aluminum or steel poles

PT-*H
Round External Mount Horizontal Tenons (Aluminum) - Mounts to 2.375"-3" (60-76mm) O.D. round aluminum or steel poles or tenons; Mounts to square pole with PB-1A* tenon

WM-2L
Extended Horizontal Wall Mount Bracket - Mounts to wall, roof or side of wood pole

XA-TMDAB
Direct Arm Pole Adaptor Bracket - Mounts to 3 – 6" (76 – 152mm) round or square aluminum or steel poles

* Specify mounting configuration.

Dimensions

LEDWAY SERIES HIGH OUTPUT STREET LIGHT

MODULES	DIMENSION	MEASUREMENTS
Single	"A"	23.5" (597mm)
Double	"A"	34.9" (886mm)

Accessory Information

BIRD SPIKE OPTIONS

XA-BRDSPKHSG
Bird Spikes for Housing

You May Also Be Interested In:

OSQ SERIES AREA
Low-Profile Area Lighting Solutions

XSP SERIES WALL PACK
Affordable Site Lighting Solutions

CREE EDGE™ TSP TRANSPORTATION MOUNT
Bridge, Overpass & Tunnel Lighting Solutions

LEDway® Series

LEDway® LED Street Light

Product Description

Luminaire housing is all aluminum construction. Standard luminaire utilizes terminal block for power input suitable for #2-#14 AWG wire. Luminaire is designed to mount on a 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon and/or a 1.25" (32mm) IP, 1.66" (42mm) O.D. horizontal tenon (minimum 8" (203mm) in length) and is adjustable +/- 5° to allow for luminaire leveling (two axis T-level included).
Applications: Roadway, parking lots, walkways and general area spaces

Performance Summary

Patented NanoOptic® Product Technology

Made in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

CCT: 4000K (+/- 300K), 5700K (+/- 500K) standard

Limited Warranty†: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

† See http://lighting.cree.com/warranty for warranty terms

LED Count (x10)	Dim. "A"	Weight
02	17.5" (443mm)	13.0 lbs. (5.9kg)
03	17.5" (443mm)	13.5 lbs. (6.1kg)
04	22.0" (559mm)	16.5 lbs. (7.5kg)
05	22.0" (559mm)	17.0 lbs. (7.7kg)
06	22.0" (559mm)	17.5 lbs. (7.9kg)
07	26.8" (681mm)	22.0 lbs. (10.0kg)
08	26.8" (681mm)	22.5 lbs. (10.2kg)
09	26.8" (681mm)	22.5 lbs. (10.2kg)
10	33.1" (842mm)	27.5 lbs. (12.5kg)
11	33.1" (842mm)	28.0 lbs. (12.7kg)
12	33.1" (842mm)	28.0 lbs. (12.7kg)

Accessories

Field-Installed

Bird Spikes for Light Engine	Bird Spikes for Housing	External Backlight Shield
XA-BRDSPK30 - 20-30 LED XA-BRDSPK60 - 40-60 LED XA-BRDSPK90 - 70-90 LED XA-BRDSPK120 - 100-120 LED	XA-BRDSPKHSG	XA-XSLBLS30 - 20-30 LED XA-XSLBLS60 - 40-60 LED XA-XSLBLS90 - 70-90 LED XA-XSLBLS120 - 100-120 LED

Ordering Information

Example: STR-LWY-2M-HT-02-E-UL-SV-700

STR-LWY		HT		E				
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Series**	**Voltage**	**Color Options***	**Drive Current**	**Options**
STR-LWY	**2M** Type II Medium **2S** Type II Short **3M** Type III Medium **4M** Type IV Medium **5M** Type V Medium	**HT** Horizontal Tenon	**02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12**	**E**	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver	**525** 525mA **700** 700mA	**DIM 0-10V Dimming** - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current **R NEMA® Photocell Receptacle** - 3-pin receptacle per ANSI C136.10 - Intended for downlight applications with maximum 45° tilt - Photocell and shorting cap by others **UTL Utility** - Includes exterior wattage label that reflects watts for the drive current selected. The ability to exceed selected drive current will be disabled **40K 4000K Color Temperature** - Minimum 70 CRI - Color temperature per luminaire

* Light engine portion of extrusion is not painted and will remain natural aluminum regardless of color selection

Product Specifications

CONSTRUCTION & MATERIALS

- Housing is all aluminum construction
- Terminal block for power input suitable for #2-#14 AWG wire
- HT Mount is designed to mount on a 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon and/or a 1.25" (32mm) IP, 1.66" (42mm) O.D. horizontal tenon (minimum 8" [203mm] in length) and is adjustable +/- 5° to allow for luminaire leveling (two axis T-level included)
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze, and silver are available
- **Weight:** See Dimensions and Weight chart on page 1

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Quick disconnect harness suitable for mate and break under load provided on power feed to driver for ease of maintenance
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used
- **10V Source Current:** 20-60 LED: 0.15mA; 80-120 LED: 0.30mA

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Meets CALTrans 611 Vibration testing and GR-63-CORE Section 4.4.1/5.4.2 Earthquake Zone 4
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10K surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog as defined in ASTM Standard B 117
- Meets Buy American requirements within ARRA
- Meets FCC Part 15 standards for conducted and radiated emissions

Electrical Data*

LED Count (x10)	System Watts 120-277V	System Watts 347-480V	Total Current (A)					
			120V	208V	240V	277V	347V	480V
525mA								
02	35	39	0.30	0.18	0.16	0.15	0.12	0.10
03	53	55	0.45	0.26	0.23	0.21	0.16	0.13
04	66	71	0.56	0.33	0.29	0.26	0.21	0.16
05	86	87	0.72	0.42	0.37	0.33	0.25	0.19
06	100	103	0.84	0.49	0.43	0.38	0.30	0.22
07	120	124	1.01	0.60	0.54	0.49	0.37	0.28
08	139	140	1.17	0.69	0.62	0.56	0.41	0.31
09	149	156	1.26	0.74	0.66	0.59	0.46	0.34
10	167	172	1.41	0.83	0.73	0.65	0.50	0.38
11	182	188	1.54	0.89	0.79	0.70	0.55	0.41
12	197	204	1.67	0.96	0.85	0.75	0.59	0.44
700mA								
02	47	51	0.39	0.23	0.21	0.19	0.15	0.12
03	70	73	0.59	0.34	0.30	0.27	0.21	0.16
04	91	93	0.77	0.45	0.39	0.35	0.27	0.20
05	113	115	0.96	0.55	0.48	0.43	0.33	0.25
06	134	135	1.13	0.65	0.57	0.50	0.39	0.29
07	163	165	1.37	0.80	0.71	0.63	0.48	0.36
08	182	186	1.54	0.90	0.79	0.70	0.54	0.40
09	203	207	1.72	0.99	0.87	0.78	0.60	0.45
10	227	229	1.92	1.11	0.97	0.86	0.67	0.49
11	248	250	2.10	1.21	1.05	0.93	0.73	0.53
12	267	274	2.26	1.30	1.13	1.00	0.80	0.58

* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-480V +/-10%

Cree LEDway® Ambient Adjusted Lumen Maintenance[1]

Ambient	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5°C (41°F)	1.04	1.01	0.99	0.98	0.96
10°C (50°F)	1.03	1.00	0.98	0.97	0.95
15°C (59°F)	1.02	0.99	0.97	0.96	0.94
20°C (68°F)	1.01	0.98	0.96	0.95	0.93
25°C (77°F)	1.00	0.97	0.95	0.94	0.92

[1] Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip)

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/street-and-roadway/ledway-series

2M

CESTL Test Report #: 2015-0025
STR-LWY-2M-**-06-E-UL-700-40K
Initial Delivered Lumens: 10,706

STR-LWY-2M-**-03-E-UL-700-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 5,688
Initial FC at grade

Type II Medium Distribution

LED Count (x10)	4000K Initial Delivered Lumens*	4000K BUG Ratings** Per TM-15-11	5700K Initial Delivered Lumens*	5700K BUG Ratings** Per TM-15-11
525mA				
02	3,064	B1 U0 G1	3,182	B1 U0 G1
03	4,550	B1 U0 G1	4,725	B1 U0 G1
04	6,079	B2 U0 G2	6,313	B2 U0 G2
05	7,549	B2 U0 G2	7,839	B2 U0 G2
06	9,000	B2 U0 G2	9,346	B2 U0 G2
07	10,532	B2 U0 G2	10,937	B2 U0 G2
08	11,982	B3 U0 G3	12,443	B3 U0 G3
09	13,419	B3 U0 G3	13,935	B3 U0 G3
10	14,994	B3 U0 G3	15,571	B3 U0 G3
11	16,440	B3 U0 G3	17,072	B3 U0 G3
12	17,880	B3 U0 G3	18,568	B3 U0 G3
700mA				
02	3,830	B1 U0 G1	3,977	B1 U0 G1
03	5,688	B2 U0 G2	5,907	B2 U0 G2
04	7,598	B2 U0 G2	7,891	B2 U0 G2
05	9,436	B2 U0 G2	9,799	B2 U0 G2
06	11,250	B3 U0 G3	11,683	B3 U0 G3
07	13,165	B3 U0 G3	13,671	B3 U0 G3
08	14,978	B3 U0 G3	15,554	B3 U0 G3
09	16,774	B3 U0 G3	17,419	B3 U0 G3
10	18,742	B3 U0 G3	19,463	B3 U0 G3
11	20,550	B3 U0 G3	21,340	B3 U0 G3
12	22,351	B3 U0 G3	23,210	B3 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf.

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/street-and-roadway/ledway-series

2S

CESTL Test Report #: 2013-0072
STR-LWY-2S-**-06-E-UL-700-40K
Initial Delivered Lumens: 12,087

STR-LWY-2S-**-03-E-UL-700
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 6,290
Initial FC at grade

Type II Short Distribution

LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
525mA				
02	3,263	B1 U0 G1	3,388	B1 U0 G1
03	4,846	B2 U0 G2	5,032	B2 U0 G2
04	6,473	B2 U0 G2	6,722	B2 U0 G2
05	8,039	B2 U0 G2	8,348	B2 U0 G2
06	9,585	B3 U0 G3	9,953	B3 U0 G3
07	11,216	B3 U0 G3	11,647	B3 U0 G3
08	12,760	B3 U0 G3	13,251	B3 U0 G3
09	14,290	B3 U0 G3	14,840	B3 U0 G3
10	15,967	B3 U0 G3	16,582	B3 U0 G3
11	17,508	B3 U0 G3	18,181	B3 U0 G3
12	19,042	B3 U0 G3	19,774	B3 U0 G3
700mA				
02	4,079	B1 U0 G1	4,235	B1 U0 G1
03	6,057	B2 U0 G2	6,290	B2 U0 G2
04	8,092	B2 U0 G2	8,403	B2 U0 G2
05	10,048	B3 U0 G3	10,435	B3 U0 G3
06	11,981	B3 U0 G3	12,442	B3 U0 G3
07	14,020	B3 U0 G3	14,559	B3 U0 G3
08	15,950	B3 U0 G3	16,564	B3 U0 G3
09	17,863	B3 U0 G3	18,550	B3 U0 G3
10	19,959	B3 U0 G3	20,727	B3 U0 G3
11	21,884	B3 U0 G3	22,726	B3 U0 G3
12	23,802	B3 U0 G3	24,717	B4 U0 G4

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf.

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/street-and-roadway/ledway-series

3M

CESTL Test Report #: 2013-0068
STR-LWY-3M-**-06-E-UL-700-40K
Initial Delivered Lumens: 10,430

STR-LWY-3M-**-03-E-UL-700
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 5,600
Initial FC at grade

Type III Medium Distribution

LED Count (x10)	4000K Initial Delivered Lumens*	4000K BUG Ratings** Per TM-15-11	5700K Initial Delivered Lumens*	5700K BUG Ratings** Per TM-15-11
525mA				
02	2,905	B1 U0 G1	3,016	B1 U0 G1
03	4,314	B1 U0 G1	4,480	B1 U0 G1
04	5,763	B2 U0 G2	5,985	B2 U0 G2
05	7,156	B2 U0 G2	7,432	B2 U0 G2
06	8,533	B2 U0 G2	8,861	B2 U0 G2
07	9,985	B3 U0 G3	10,369	B3 U0 G3
08	11,360	B3 U0 G3	11,797	B3 U0 G3
09	12,722	B3 U0 G3	13,211	B3 U0 G3
10	14,215	B3 U0 G3	14,762	B3 U0 G3
11	15,586	B3 U0 G3	16,185	B3 U0 G3
12	16,952	B3 U0 G3	17,604	B3 U0 G3
700mA				
02	3,631	B1 U0 G1	3,771	B1 U0 G1
03	5,392	B2 U0 G2	5,600	B2 U0 G2
04	7,204	B2 U0 G2	7,481	B2 U0 G2
05	8,945	B2 U0 G2	9,290	B3 U0 G3
06	10,666	B3 U0 G3	11,076	B3 U0 G3
07	12,481	B3 U0 G3	12,961	B3 U0 G3
08	14,200	B3 U0 G3	14,746	B3 U0 G3
09	15,902	B3 U0 G3	16,514	B3 U0 G3
10	17,769	B3 U0 G3	18,452	B3 U0 G3
11	19,483	B3 U0 G3	20,232	B3 U0 G3
12	21,190	B3 U0 G3	22,004	B3 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf.

Photometry

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4M

CESTL Test Report #: 2013-0028
STR-LWY-4M-**-06-E-UL-700-40K
Initial Delivered Lumens: 11,036

STR-LWY-4M-**-03-E-UL-700
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 5,907
Initial FC at grade

Type IV Medium Distribution

LED Count (x10)	4000K Initial Delivered Lumens*	4000K BUG Ratings** Per TM-15-11	5700K Initial Delivered Lumens*	5700K BUG Ratings** Per TM-15-11
525mA				
02	3,064	B1 U0 G1	3,182	B1 U0 G1
03	4,550	B2 U0 G1	4,725	B2 U0 G1
04	6,079	B2 U0 G1	6,313	B2 U0 G1
05	7,549	B2 U0 G2	7,839	B2 U0 G2
06	9,000	B2 U0 G2	9,346	B2 U0 G2
07	10,532	B2 U0 G2	10,937	B2 U0 G2
08	11,982	B3 U0 G2	12,443	B3 U0 G2
09	13,419	B3 U0 G3	13,935	B3 U0 G3
10	14,994	B3 U0 G3	15,571	B3 U0 G3
11	16,440	B3 U0 G3	17,072	B3 U0 G3
12	17,880	B3 U0 G3	18,568	B3 U0 G3
700mA				
02	3,830	B1 U0 G1	3,977	B1 U0 G1
03	5,688	B2 U0 G1	5,907	B2 U0 G1
04	7,598	B2 U0 G2	7,891	B2 U0 G2
05	9,436	B2 U0 G2	9,799	B2 U0 G2
06	11,250	B2 U0 G2	11,683	B3 U0 G2
07	13,165	B3 U0 G3	13,671	B3 U0 G3
08	14,978	B3 U0 G3	15,554	B3 U0 G3
09	16,774	B3 U0 G3	17,419	B3 U0 G3
10	18,742	B3 U0 G3	19,463	B3 U0 G3
11	20,550	B3 U0 G3	21,340	B3 U0 G3
12	22,351	B3 U0 G3	23,210	B4 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf.

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/street-and-roadway/ledway-series

5M

CESTL Test Report #: 2013-0019
STR-LWY-5M-**-06-E-UL-700-40K
Initial Delivered Lumens: 11,633

STR-LWY-5M-**-03-E-UL-700
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 6,214
Initial FC at grade

Type V Medium Distribution

LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
525mA				
02	3,223	B2 U0 G1	3,347	B2 U0 G1
03	4,787	B3 U0 G1	4,971	B3 U0 G1
04	6,395	B3 U0 G2	6,640	B3 U0 G2
05	7,941	B3 U0 G2	8,246	B3 U0 G2
06	9,468	B3 U0 G2	9,832	B3 U0 G2
07	11,079	B4 U0 G2	11,505	B4 U0 G2
08	12,605	B4 U0 G2	13,089	B4 U0 G2
09	14,116	B4 U0 G3	14,659	B4 U0 G3
10	15,773	B4 U0 G3	16,379	B4 U0 G3
11	17,294	B4 U0 G3	17,959	B4 U0 G3
12	18,809	B4 U0 G3	19,533	B4 U0 G3
700mA				
02	4,029	B2 U0 G1	4,184	B2 U0 G1
03	5,983	B3 U0 G2	6,214	B3 U0 G2
04	7,993	B3 U0 G2	8,301	B3 U0 G2
05	9,926	B3 U0 G2	10,308	B3 U0 G2
06	11,835	B4 U0 G2	12,290	B4 U0 G2
07	13,849	B4 U0 G3	14,381	B4 U0 G3
08	15,756	B4 U0 G3	16,362	B4 U0 G3
09	17,645	B4 U0 G3	18,324	B4 U0 G3
10	19,716	B4 U0 G3	20,474	B4 U0 G3
11	21,618	B4 U0 G3	22,449	B5 U0 G3
12	23,512	B5 U0 G3	24,416	B5 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
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Luminaire EPA

Horizontal Tenon Mount							
LED Count (x10)	1 Luminaire	Single	2 @ 90°	2 @ 180°	3 @ 90°	3 @ 120°	4 @ 90°
	Horizontal Tenon Mount	Round External Mount / Square Internal Mount Horizontal Tenons with Luminaires					
		PT-1H/PD-1H4	PT-2H(90)/ PD-2H4(90)	PT-2H(180)/ PD-2H4(180)	PT-3H(90)/ PD-3H4(90)	PT-3H(120)	PT-4H(90)/ PD-4H4(90)
20-30	0.57	0.79	1.02	1.35	1.53	1.38	1.94
40-60	0.69	0.91	1.19	1.59	1.774	1.59	2.18
70-90	0.71	0.93	1.27	1.75	1.93	0.71	2.34
100-120	0.80	1.04	1.38	1.86	2.04	1.82	2.45

Tenon EPA

Part Number	EPA
PD Series Tenons	0.09
PT Series Tenons	0.10
WM-2L	0.13
XA-TMDA8	0.07

Tenons and Brackets* (must specify color)

Square Internal Mount Horizontal Tenons (Aluminum)
- Mounts to 4" (102mm) square aluminum or steel poles

PD-1H4 – Single
PD-2H4(90) – 90° Twin
PD-2H4(180) – 180° Twin
PD-3H4(90) – 90° Triple
PD-4H4(90) – 90° Quad

Round External Mount Horizontal Tenons (Aluminum)
- Mounts to 2.375" (60mm) O.D. round aluminum or steel poles or tenons

PT-1H – Single
PT-2H(90) – 90° Twin
PT-2H(180) – 180° Twin
PT-3H(90) – 90° Triple
PT-4H(90) – 90° Quad

Wall Mount Brackets
- Mounts to wall or roof

WM-2L – Standard

Direct Arm Pole Adaptor Bracket
- Mounts to 3-6" (76-152mm) round or square aluminum or steel poles

XA-TMDA8

* Refer to the Bracket and Tenons spec sheet for more details

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