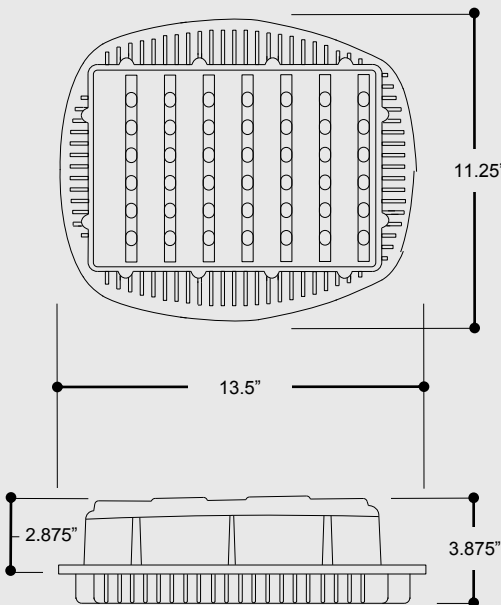


# DuraStreet® Series 42 LED Light Engine



Notes: Actual dimensions may differ slightly from those shown above depending on the size and shape requirements of the existing housing.

Product weight = 13 pounds.

## APPLICATIONS

- Solid-state light engine for use as a long-life, high-efficiency replacement module in existing 100-150/175 watt HID (high intensity discharge) roadway luminaires. Complete luminaires are also available.
- Light engines available for roadway housings made by all major manufacturers.
- Suitable for use in outdoor temperatures of -40°F (-40°C) to 140°F (60°C).
- Suitable for use with input voltages of 100-277VAC (50-60 Hz).

## SPECIFICATIONS

- **LEDs:** 42 Cree XLamp® X-PE white-phosphor LEDs.
- **Correlated Color Temperature (CCT):** Neutral (4600K nominal) is standard. Others CCTs by request.
- **Color Rendering Index (CRI):** ≥ 81.
- **Total System Efficacy:** Up to 65 lumens/watt (350mA drive current), and 57 lumens/watt (525mA).
- **Light Distribution:** IESNA roadway Type II/III or Type V.
- **Proprietary Optical Design:** Developed in partnership with Fraen Corporation, optics provide low BUG (backlight, uplight and glare) ratings and high FTE (Fitted Target Efficiency).
- **Low EPA (Effective Protected Area):** Low-profile inhibits lighting standard (pole) vibration.
- **Rugged Construction:** High-impact acrylic lens and heavy-duty die cast aluminum heatsink.
- **Installation:** Quick, trouble-free installation in existing luminaire door frame.
- **Environmental Impact:** Environmentally-friendly, mercury-free technology. Disposal of existing fixture is not required.
- **Safety Features:** A 24" safety cable (which is attached to the luminaire housing) is standard. Optional *LensLocks™* provide additional security for use with nonstandard lens opening shapes.
- **Over-Temperature Protection:** Automatically reduces power to 50% when predefined internal temperature limits are exceeded, as may occur with unintentional daytime operation.
- **Warranty:** Five years on LED arrays and power supplies, and ten years on chassis components.
- **Manufactured in the USA** : Meets ARRA (American Recovery and Reinvestment Act of 2009) *Buy American* requirements.

## INDEPENDENT PERFORMANCE TESTS

- **Photometric & Electrical Performance (LM79):** Verified by Independent Testing Laboratories, Inc. (ITL), in accordance with LM79 (IES-79-08).
- **LED Lumen Maintenance (LM80):** Verified by Cree to provide 70% of initial lumens for at least 50,000 hours ( $L_{70}$ ) in accordance with LM80 (IES-80-08). See reverse for detailed *Projected Life* data.
- **LED Junction Temperature ( $T_J$ ):** Verified by the Advanced Manufacturing Institute (AMI) at 60°C in outdoor temperatures of 77°F (25°C), and when operated at 350mA, providing 140,000 hours ( $L_{70}$ ) based on Cree's specifications. See reverse for  $T_J$  data at various outdoor temperatures.
- **Door Frame Load:** Cobra head door frames verified by AMI to withstand at least seven times the weight of a DuraStreet light engine.
- **Pole Vibration:** Verified by Quanta Laboratories to meet ANSI 3G vibration standards for bridge and overpass applications.
- **Ingress Protection:** Rated by Intertek at the IP66 level of dust and moisture protection.
- **Corrosion Protection:** Rated by Intertek to meet or exceed the ASTM B117 *Standard Practice for Operating Salt Spray (Fog) Apparatus*.
- **Surge Protection:** Rated by Intertek at the 10kV level.

## APPROVALS



U.S. Patents D611647, D611648. Other U.S. and International patents pending.

PART 15, CLASS B

## ORDERING INFORMATION

D	AE115	2/3	120/240	350	CXPE	42	4600	HSG
<b>Product Series</b>	<b>Existing Housing</b>	<b>Distribution</b>	<b>Input Voltage</b>	<b>LED Drive Current</b>	<b>LED Supplier</b>	<b>LED Quantity</b>	<b>LED Color Temperature</b>	<b>Cobra Head Housing</b>
D = DuraStreet	AE115 = Amer. Electric 115 AE125 = Amer. Electric 125* AE315 = Amer. Electric 315 AE325 = Amer. Electric 325* AE327 = Amer. Electric 327* COVD/FY = Cooper OVD/OVF/OVY* COVG/H = Cooper OVG/OVH COVX = Cooper OVX COVZ = Cooper OVZ GEM250 = G.E. M-250A2/R2 GEM400 = G.E. M-400* GEM400A = G.E. M-400A* GEM400A2 = G.E. M-400A2* GEM400R2 = G.E. M-400R2*	2/3 = Type II/III 5 = Type V	120-240 = Universal (120-240 VAC) 277 = 277 VAC	350 = 350mA 525 = 525mA	CXPE = Cree X-PE	42 = 42 LEDs	4600 = 4600K (Neutral) Nominal  Other color temperatures available by request.**	HSG = Housing

\* Requires adapter plate. Please contact your EcoFit representative for more information.

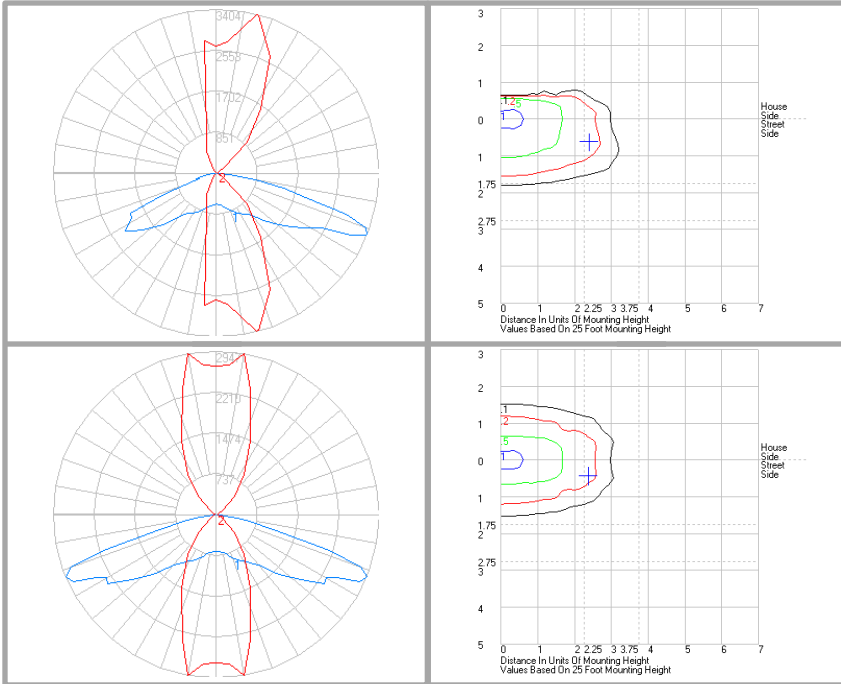
\*\* Please contact your EcoFit representative regarding availability of other configurations and options.

# DuraStreet® Series 42 LED Light Engine

## PHOTOMETRICS

### TYPE II/III

Source:  
ITL Report 65044  
• 42 Cree X-PE LED  
• 525mA drive current  
• 4,145 lumens



### TYPE V

Source:  
ITL Report 65045  
• 42 Cree X-PE LEDs  
• 525mA drive current  
• 4,192 lumens

## lighting facts<sup>CM</sup>

A Program of the U.S. DOE

**Light Output (Lumens)** 3144  
**Watts** 48.2  
**Lumens per Watt (Efficacy)** 65

**Color Accuracy** 81  
Color Rendering Index (CRI)

**Light Color** 4600 (Daylight)  
Correlated Color Temperature (CCT)



All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: HY1E-L2ZNCB

Model Number: DuraStreet 42 Series 350-2/3

Type: Outdoor area/roadway fixture

**Candlepower Distribution Curves**  
Plot 1: Vertical Plane Through Horizontal Angles  
Plot 2: Horizontal Cone Through Vertical Angle

**Isofootcandle Plots**  
Initial footcandles at grade

See [www.EcoFitLighting.com](http://www.EcoFitLighting.com) for ITL reports, .ies files, photometric data, and lighting facts<sup>CM</sup> labels for other models.

## LED & ELECTRICAL PERFORMANCE <sup>1</sup>

LED Quantity	IES Type	BUG <sup>2</sup> Rating	Energy Star FTE <sup>3</sup>	LED Drive Current (mA)	Input Power (W)	Photopic <sup>6</sup>		Scotopic <sup>6</sup>		Input Current (A)		
						Total Delivered Lumens <sup>4</sup>	Total System Efficacy (Lm/W) <sup>5</sup>	Total Delivered Lumens	Total System Efficacy (Lm/W)	@120V	@240V	@277V
42	II/III	B1-U1-G1	50	350	48	3,144	65	5,030	104	0.40	0.20	0.17
42	II/III	B1-U1-G1	53	525	73	4,145	57	6,632	91	0.61	0.30	0.26
42	V	B2-U1-G1	44	350	49	3,180	65	5,088	104	0.41	0.20	0.18
42	V	B2-U1-G1	45	525	74	4,192	56	6,707	90	0.62	0.31	0.27

<sup>1</sup> Standard CRI is  $\geq 80$ . Universal input voltage (120-240 VAC) drivers, operating on 50-60 Hz, are standard (277 VAC also available). All models feature THD < 20% and power factor > 90%.

<sup>2</sup> BUG is an acronym for **backlight**, **uplight**, and **glare**.

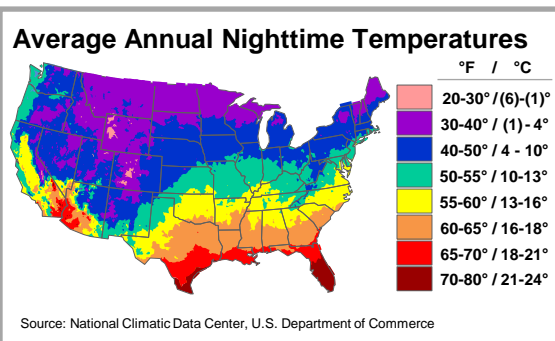
<sup>3</sup> FTE is an acronym for **fitted target efficiency**.

<sup>4</sup> Based on actual output of test luminaire (see ITL test reports 65042, 65043, 65044 & 65045).

<sup>5</sup> Total system efficacy equals total delivered lumens divided by input power.

<sup>6</sup> Based on a scotopic/photopic adjustment factor of 1.6 @ 4100K. Source: Berman, S.M., (1995), *The Reengineering of Lighting Photometry*, Lawrence Berkeley National Laboratory. Photopic lumens are the standard basis for most IES guidelines. However, Dr. Sam Berman and his colleagues have suggested that scotopic lumens are a more reliable measure of night vision.

## LED JUNCTION TEMPERATURE (T<sub>J</sub>) & PROJECTED L<sub>70</sub> LIFE



Source: National Climatic Data Center, U.S. Department of Commerce

Average Outdoor Temperature (°F/°C)	LED Junction Temperature (T <sub>J</sub> ) @ 350mA (°C) <sup>1</sup>	Projected L <sub>70</sub> Life <sup>2</sup> (Hours) @ 350mA	LED Junction Temperature (T <sub>J</sub> ) @ 525mA (°C) <sup>1</sup>	Projected L <sub>70</sub> Life <sup>2</sup> (Hours) @ 525mA
32 / 0	36	>150,000	56	>105,000
41 / 5	41	>150,000	61	>105,000
50 / 10	46	>150,000	65	>105,000
59 / 15	51	>150,000	70	>100,000
68 / 20	55	>150,000	74	> 95,000
77 / 25	60	>140,000	79	> 80,000
86 / 30	64	>120,000	83	> 80,000

<sup>1</sup> See [www.EcoFitLighting.com](http://www.EcoFitLighting.com) for independent test results showing T<sub>J</sub> at various outdoor temperatures.

<sup>2</sup> L<sub>70</sub> life projections provided by Cree are based on LED junction temperature levels after reaching thermal equilibrium.



Specifications subject to change without notice.  
U.S. Patents D611647, D611648. Other U.S. and International patents pending.

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