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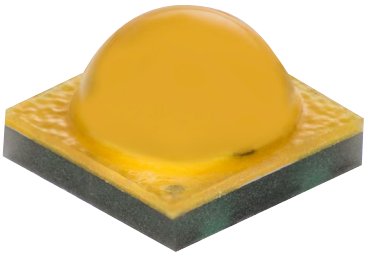
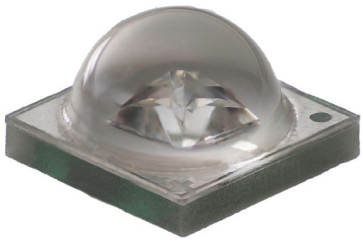
Cree® XLamp® XT-E LEDs



XT-E White



XT-E Royal Blue

PRODUCT DESCRIPTION

Optimized for directional, high-lumen applications, from indoor and outdoor to portable and lamp retrofits, the XLamp® XT-E LED delivers high performance and high reliability in the industry-standard XP/XT footprint. The XT-E LED offers the benefits of the XT/XP platform — compact and proven 3.45 mm x 3.45 mm package and established ecosystem — enabling lighting manufacturers to simplify the design process and shorten time to market.

The XT-E LED is available in royal blue and white. The XT-E White LED offers a high-efficacy option. In this document, the term White denotes the white XT-E LED without regard to its efficacy. The terms Standard and High Efficacy are used when necessary to differentiate the performace of the High Efficacy XT-E LED from the XT-E LED without the high-efficacy option.

FEATURES

- Maximum Vf for High Efficacy XT-E White: 2.85 V
- Available in 70-, 80- and 90-CRI minimum white
- Binned at 85 °C
- Available in 2200 K CCT
- Thermal resistance: 5 °C/W
- Wide viewing angle: 115°-140°
- Maximum drive current: White 1.5 A, Royal Blue 1.5 A
- Electrically neutral thermal path
- Vf binning supported for XT-E White and Royal Blue
- XT-E Royal Blue sorted into 2.5-nm-wavelength bins
- Unlimited floor life at ≤ 30 °C/85% RH
- Reflow solderable - JEDEC J-STD-020C compatible
- RoHS and REACh compliant
- UL® recognized component (E349212)

NOTE: For remote phosphor applications, a separate license to certain Cree patents is required.

Cree, Inc.
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Durham, NC 27703
USA Tel: +1.919.313.5300

TABLE OF CONTENTS

CHARACTERISTICS

Characteristics	Unit	Minimum	Typical	Maximum
Thermal resistance, junction to solder point	°C/W		5	
Viewing angle (FWHM) - white	degrees		115	
Viewing angle (FWHM) - royal blue	degrees		140	
Temperature coefficient of voltage	mV/°C		-2.5	
ESD withstand voltage (HBM per Mil-Std-883D)	V			8000
DC forward current - white	mA			1500
DC forward current - royal blue	mA			1500
Reverse voltage	V			5
Forward voltage - white - Standard, royal blue (@ 350 mA, 85 °C)	V		2.85	3.1
Forward voltage - white - High Efficacy (@ 350 mA, 85 °C)	V		2.77	2.85
LED junction temperature	°C			150

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C)

The following tables provide order codes for Standard XLamp XT-E White LEDs. For a complete description of the order code nomenclature, please see the Bin and Order Code Formats section (page 37). For definitions of the chromaticity kits, please see the Cree's Standard Chromaticity Kits section (page 36).

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
51	6200 K	S3	156	171	XTEAWT-00-0000-000000K51	XTEAWT-00-0000-00000BK51				
		S2	148	163	XTEAWT-00-0000-000000J51	XTEAWT-00-0000-00000BJ51				
		R5	139	153	XTEAWT-00-0000-000000H51	XTEAWT-00-0000-00000BH51		XTEAWT-00-0000-00000HH51		
		R4	130	143	XTEAWT-00-0000-000000G51	XTEAWT-00-0000-00000BG51		XTEAWT-00-0000-00000HG51		
		R3	122	134	XTEAWT-00-0000-000000F51	XTEAWT-00-0000-00000BF51		XTEAWT-00-0000-00000HF51		
		R2	114	125	XTEAWT-00-0000-000000E51	XTEAWT-00-0000-00000BE51		XTEAWT-00-0000-00000HE51		
		Q5	107	118				XTEAWT-00-0000-00000HD51		
53	6000 K	S3	156	171	XTEAWT-00-0000-000000K53	XTEAWT-00-0000-00000BK53				
		S2	148	163	XTEAWT-00-0000-000000J53	XTEAWT-00-0000-00000BJ53				
		R5	139	153	XTEAWT-00-0000-000000H53	XTEAWT-00-0000-00000BH53		XTEAWT-00-0000-00000HH53		
		R4	130	143	XTEAWT-00-0000-000000G53	XTEAWT-00-0000-00000BG53		XTEAWT-00-0000-00000HG53		
		R3	122	134	XTEAWT-00-0000-000000F53	XTEAWT-00-0000-00000BF53		XTEAWT-00-0000-00000HF53		
		R2	114	125	XTEAWT-00-0000-000000E53	XTEAWT-00-0000-00000BE53		XTEAWT-00-0000-00000HE53		
		Q5	107	118				XTEAWT-00-0000-00000HD53		

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
50	6200 K	S3	156	171	XTEAWT-00-0000-000000K50	XTEAWT-00-0000-00000BK50				
		S2	148	163	XTEAWT-00-0000-000000J50	XTEAWT-00-0000-00000BJ50				
		R5	139	153	XTEAWT-00-0000-000000H50	XTEAWT-00-0000-00000BH50		XTEAWT-00-0000-00000HH50		
		R4	130	143	XTEAWT-00-0000-000000G50	XTEAWT-00-0000-00000BG50		XTEAWT-00-0000-00000HG50		
		R3	122	134	XTEAWT-00-0000-000000F50	XTEAWT-00-0000-00000BF50		XTEAWT-00-0000-00000HF50		
		R2	114	125	XTEAWT-00-0000-000000E50	XTEAWT-00-0000-00000BE50		XTEAWT-00-0000-00000HE50		
		Q5	107	118				XTEAWT-00-0000-00000HD50		
E1	6500 K	S3	156	171	XTEAWT-00-0000-000000KE1	XTEAWT-00-0000-00000BKE1				
		S2	148	163	XTEAWT-00-0000-000000JE1	XTEAWT-00-0000-00000BJE1				
		R5	139	153	XTEAWT-00-0000-000000HE1	XTEAWT-00-0000-00000BHE1		XTEAWT-00-0000-00000HHE1		
		R4	130	143	XTEAWT-00-0000-000000GE1	XTEAWT-00-0000-00000BGE1		XTEAWT-00-0000-00000HGE1		
		R3	122	134	XTEAWT-00-0000-000000FE1	XTEAWT-00-0000-00000BFE1		XTEAWT-00-0000-00000HFE1		
		R2	114	125	XTEAWT-00-0000-000000EE1	XTEAWT-00-0000-00000BEE1		XTEAWT-00-0000-00000HEE1		
		Q5	107	118				XTEAWT-00-0000-00000HDE1		
E2	5700 K	S3	156	171	XTEAWT-00-0000-000000KE2	XTEAWT-00-0000-00000BKE2				
		S2	148	163	XTEAWT-00-0000-000000JE2	XTEAWT-00-0000-00000BJE2				
		R5	139	153	XTEAWT-00-0000-000000HE2	XTEAWT-00-0000-00000BHE2		XTEAWT-00-0000-00000HHE2		
		R4	130	143	XTEAWT-00-0000-000000GE2	XTEAWT-00-0000-00000BGE2		XTEAWT-00-0000-00000HGE2		
		R3	122	134	XTEAWT-00-0000-000000FE2	XTEAWT-00-0000-00000BFE2		XTEAWT-00-0000-00000HFE2		
		R2	114	125	XTEAWT-00-0000-000000EE2	XTEAWT-00-0000-00000BEE2		XTEAWT-00-0000-00000HEE2		
		Q5	107	118				XTEAWT-00-0000-00000HDE2		

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
E3	5000 K	S3	156	171	XTEAWT-00-0000-000000KE3	XTEAWT-00-0000-00000BKE3				
		S2	148	163	XTEAWT-00-0000-000000JE3	XTEAWT-00-0000-00000BJE3	XTEAWT-00-0000-00000LJE3			
		R5	139	153	XTEAWT-00-0000-000000HE3	XTEAWT-00-0000-00000BHE3	XTEAWT-00-0000-00000LHE3	XTEAWT-00-0000-00000HHE3		
		R4	130	143	XTEAWT-00-0000-000000GE3	XTEAWT-00-0000-00000BGE3	XTEAWT-00-0000-00000LGE3	XTEAWT-00-0000-00000HGE3		
		R3	122	134	XTEAWT-00-0000-000000FE3	XTEAWT-00-0000-00000BFE3	XTEAWT-00-0000-00000LFE3	XTEAWT-00-0000-00000HFE3		
		R2	114	125	XTEAWT-00-0000-000000EE3	XTEAWT-00-0000-00000BEE3	XTEAWT-00-0000-00000LEE3	XTEAWT-00-0000-00000HEE3		
		Q5	107	118				XTEAWT-00-0000-00000HDE3	XTEAWT-00-0000-00000PDE3	XTEAWT-00-0000-00000UDE3
		Q4	100	110					XTEAWT-00-0000-00000PCE3	XTEAWT-00-0000-00000UCE3
		Q3	93.9	103					XTEAWT-00-0000-00000PBE3	XTEAWT-00-0000-00000UBE3
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAE3	XTEAWT-00-0000-00000UAE3
C1	5000 K	S3	156	171	XTEAWT-00-0000-000000KC1	XTEAWT-00-0000-00000BKC1				
		S2	148	163	XTEAWT-00-0000-000000JC1	XTEAWT-00-0000-00000BJC1	XTEAWT-00-0000-00000LJC1			
		R5	139	153	XTEAWT-00-0000-000000HC1	XTEAWT-00-0000-00000BHC1	XTEAWT-00-0000-00000LHC1			
		R4	130	143	XTEAWT-00-0000-000000GC1	XTEAWT-00-0000-00000BGC1	XTEAWT-00-0000-00000LGC1			
		R3	122	134	XTEAWT-00-0000-000000FC1	XTEAWT-00-0000-00000BFC1	XTEAWT-00-0000-00000LFC1			
		R2	114	125	XTEAWT-00-0000-000000EC1	XTEAWT-00-0000-00000BEC1	XTEAWT-00-0000-00000LEC1			

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
F4	4750 K	S3	156	171	XTEAWT-00-0000-000000KF4	XTEAWT-00-0000-00000BKF4				
		S2	148	163	XTEAWT-00-0000-000000JF4	XTEAWT-00-0000-00000BJF4	XTEAWT-00-0000-00000LJF4			
		R5	139	153	XTEAWT-00-0000-000000HF4	XTEAWT-00-0000-00000BHF4	XTEAWT-00-0000-00000LHF4	XTEAWT-00-0000-00000HHF4		
		R4	130	143	XTEAWT-00-0000-000000GF4	XTEAWT-00-0000-00000BGF4	XTEAWT-00-0000-00000LGF4	XTEAWT-00-0000-00000HGF4		
		R3	122	134	XTEAWT-00-0000-000000FF4	XTEAWT-00-0000-00000BFF4	XTEAWT-00-0000-00000LFF4	XTEAWT-00-0000-00000HFF4		
		R2	114	125	XTEAWT-00-0000-000000EF4	XTEAWT-00-0000-00000BEF4	XTEAWT-00-0000-00000LEF4	XTEAWT-00-0000-00000HEF4		
		Q5	107	118			XTEAWT-00-0000-00000LDF4	XTEAWT-00-0000-00000HDF4	XTEAWT-00-0000-00000PDF4	XTEAWT-00-0000-00000UDF4
		Q4	100	110					XTEAWT-00-0000-00000PCF4	XTEAWT-00-0000-00000UCF4
		Q3	93.9	103					XTEAWT-00-0000-00000PBF4	XTEAWT-00-0000-00000UBF4
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAF4	XTEAWT-00-0000-00000UAF4
D1	4750 K	S3	156	171	XTEAWT-00-0000-000000KD1	XTEAWT-00-0000-00000BKD1				
		S2	148	163	XTEAWT-00-0000-000000JD1	XTEAWT-00-0000-00000BJD1	XTEAWT-00-0000-00000LJD1			
		R5	139	153	XTEAWT-00-0000-000000HD1	XTEAWT-00-0000-00000BHD1	XTEAWT-00-0000-00000LHD1			
		R4	130	143	XTEAWT-00-0000-000000GD1	XTEAWT-00-0000-00000BGD1	XTEAWT-00-0000-00000LGD1			
		R3	122	134	XTEAWT-00-0000-000000FD1	XTEAWT-00-0000-00000BFD1	XTEAWT-00-0000-00000LFD1			
		R2	114	125	XTEAWT-00-0000-000000ED1	XTEAWT-00-0000-00000BED1	XTEAWT-00-0000-00000LED1			

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
E4	4500 K	S3	156	171	XTEAWT-00-0000-000000KE4	XTEAWT-00-0000-00000BKE4				
		S2	148	163	XTEAWT-00-0000-000000JE4	XTEAWT-00-0000-00000BJE4	XTEAWT-00-0000-00000LJE4			
		R5	139	153	XTEAWT-00-0000-000000HE4	XTEAWT-00-0000-00000BHE4	XTEAWT-00-0000-00000LHE4	XTEAWT-00-0000-00000HHE4		
		R4	130	143	XTEAWT-00-0000-000000GE4	XTEAWT-00-0000-00000BGE4	XTEAWT-00-0000-00000LGE4	XTEAWT-00-0000-00000HGE4		
		R3	122	134	XTEAWT-00-0000-000000FE4	XTEAWT-00-0000-00000BFE4	XTEAWT-00-0000-00000LFE4	XTEAWT-00-0000-00000HFE4		
		R2	114	125	XTEAWT-00-0000-000000EE4	XTEAWT-00-0000-00000BEE4	XTEAWT-00-0000-00000LEE4	XTEAWT-00-0000-00000HEE4		
		Q5	107	118			XTEAWT-00-0000-00000LDE4	XTEAWT-00-0000-00000HDE4	XTEAWT-00-0000-00000PDE4	XTEAWT-00-0000-00000UDE4
		Q4	100	110					XTEAWT-00-0000-00000PCE4	XTEAWT-00-0000-00000UCE4
		Q3	93.9	103					XTEAWT-00-0000-00000PBE4	XTEAWT-00-0000-00000UBE4
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAE4	XTEAWT-00-0000-00000UAE4
D2	4500 K	S3	156	171	XTEAWT-00-0000-000000KD2	XTEAWT-00-0000-00000BKD2				
		S2	148	163	XTEAWT-00-0000-000000JD2	XTEAWT-00-0000-00000BJD2				
		R5	139	153	XTEAWT-00-0000-000000HD2	XTEAWT-00-0000-00000BHD2	XTEAWT-00-0000-00000LHD2			
		R4	130	143	XTEAWT-00-0000-000000GD2	XTEAWT-00-0000-00000BGD2	XTEAWT-00-0000-00000LGD2			
		R3	122	134	XTEAWT-00-0000-000000FD2	XTEAWT-00-0000-00000BFD2	XTEAWT-00-0000-00000LFD2			
		R2	114	125	XTEAWT-00-0000-000000ED2	XTEAWT-00-0000-00000BED2	XTEAWT-00-0000-00000LED2			
		Q5	107	118			XTEAWT-00-0000-00000LDD2			

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
C2	4500 K	S3	156	171	XTEAWT-00-0000-000000KC2	XTEAWT-00-0000-00000BKC2				
		S2	148	163	XTEAWT-00-0000-000000JC2	XTEAWT-00-0000-00000BJC2	XTEAWT-00-0000-00000LJC2			
		R5	139	153	XTEAWT-00-0000-000000HC2	XTEAWT-00-0000-00000BHC2	XTEAWT-00-0000-00000LHC2			
		R4	130	143	XTEAWT-00-0000-000000GC2	XTEAWT-00-0000-00000BGC2	XTEAWT-00-0000-00000LGC2			
		R3	122	134	XTEAWT-00-0000-000000FC2	XTEAWT-00-0000-00000BFC2	XTEAWT-00-0000-00000LFC2			
		R2	114	125	XTEAWT-00-0000-000000EC2	XTEAWT-00-0000-00000BEC2	XTEAWT-00-0000-00000LEC2			
C3	4300 K	S3	156	171	XTEAWT-00-0000-000000KC3	XTEAWT-00-0000-00000BKC3				
		S2	148	163	XTEAWT-00-0000-000000JC3	XTEAWT-00-0000-00000BJC3	XTEAWT-00-0000-00000LJC3			
		R5	139	153	XTEAWT-00-0000-000000HC3	XTEAWT-00-0000-00000BHC3	XTEAWT-00-0000-00000LHC3			
		R4	130	143	XTEAWT-00-0000-000000GC3	XTEAWT-00-0000-00000BGC3	XTEAWT-00-0000-00000LGC3			
		R3	122	134	XTEAWT-00-0000-000000FC3	XTEAWT-00-0000-00000BFC3	XTEAWT-00-0000-00000LFC3			
		R2	114	125	XTEAWT-00-0000-000000EC3	XTEAWT-00-0000-00000BEC3	XTEAWT-00-0000-00000LEC3			

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

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FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
F5	4250 K	S3	156	171	XTEAWT-00-0000-000000KF5					
		S2	148	163	XTEAWT-00-0000-000000JF5	XTEAWT-00-0000-00000BJF5				
		R5	139	153	XTEAWT-00-0000-000000HF5	XTEAWT-00-0000-00000BHF5	XTEAWT-00-0000-00000LHF5			
		R4	130	143	XTEAWT-00-0000-000000GF5	XTEAWT-00-0000-00000BGF5	XTEAWT-00-0000-00000LGF5	XTEAWT-00-0000-00000HGF5		
		R3	122	134	XTEAWT-00-0000-000000FF5	XTEAWT-00-0000-00000BFF5	XTEAWT-00-0000-00000LFF5	XTEAWT-00-0000-00000HFF5		
		R2	114	125	XTEAWT-00-0000-000000EF5	XTEAWT-00-0000-00000BEF5	XTEAWT-00-0000-00000LEF5	XTEAWT-00-0000-00000HEF5		
		Q5	107	118	XTEAWT-00-0000-000000DF5	XTEAWT-00-0000-00000BDF5	XTEAWT-00-0000-00000LDF5	XTEAWT-00-0000-00000HDF5		
		Q4	100	110			XTEAWT-00-0000-00000LCF5	XTEAWT-00-0000-00000HCF5	XTEAWT-00-0000-00000PCF5	XTEAWT-00-0000-00000UCF5
		Q3	93.9	103					XTEAWT-00-0000-00000PBF5	XTEAWT-00-0000-00000UBF5
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAF5	XTEAWT-00-0000-00000UAF5
		P4	80.6	88.6					XTEAWT-00-0000-00000P9F5	XTEAWT-00-0000-00000U9F5

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	75 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
E5	4000 K	S3	156	171	XTEAWT-00-0000-000000KE5					
		S2	148	163	XTEAWT-00-0000-000000JE5	XTEAWT-00-0000-00000BJE5				
		R5	139	153	XTEAWT-00-0000-000000HE5	XTEAWT-00-0000-00000BHE5	XTEAWT-00-0000-00000LHE5			
		R4	130	143	XTEAWT-00-0000-000000GE5	XTEAWT-00-0000-00000BGE5	XTEAWT-00-0000-00000LGE5	XTEAWT-00-0000-00000HGE5		
		R3	122	134	XTEAWT-00-0000-000000FE5	XTEAWT-00-0000-00000BFE5	XTEAWT-00-0000-00000LFE5	XTEAWT-00-0000-00000HFE5		
		R2	114	125	XTEAWT-00-0000-000000EE5	XTEAWT-00-0000-00000BEE5	XTEAWT-00-0000-00000LEE5	XTEAWT-00-0000-00000HEE5		
		Q5	107	118	XTEAWT-00-0000-000000DE5	XTEAWT-00-0000-00000BDE5	XTEAWT-00-0000-00000LDE5	XTEAWT-00-0000-00000HDE5		
		Q4	100	110			XTEAWT-00-0000-00000LCE5	XTEAWT-00-0000-00000HCE5	XTEAWT-00-0000-00000PCE5	XTEAWT-00-0000-00000UCE5
		Q3	93.9	103					XTEAWT-00-0000-00000PBE5	XTEAWT-00-0000-00000UBE5
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAE5	XTEAWT-00-0000-00000UAE5
		P4	80.6	88.6					XTEAWT-00-0000-00000P9E5	XTEAWT-00-0000-00000U9E5

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
F6	3750 K	R5	139	153	XTEAWT-00-0000-000000HF6	XTEAWT-00-0000-00000BHF6	XTEAWT-00-0000-00000LHF6			
		R4	130	143	XTEAWT-00-0000-000000GF6	XTEAWT-00-0000-00000BGF6	XTEAWT-00-0000-00000LGF6			
		R3	122	134	XTEAWT-00-0000-000000FF6	XTEAWT-00-0000-00000BFF6	XTEAWT-00-0000-00000LFF6	XTEAWT-00-0000-00000HFF6		
		R2	114	125	XTEAWT-00-0000-000000EF6	XTEAWT-00-0000-00000BEF6	XTEAWT-00-0000-00000LEF6	XTEAWT-00-0000-00000HEF6		
		Q5	107	118	XTEAWT-00-0000-000000DF6	XTEAWT-00-0000-00000BDF6	XTEAWT-00-0000-00000LDF6	XTEAWT-00-0000-00000HDF6		
		Q4	100	110			XTEAWT-00-0000-00000LCF6	XTEAWT-00-0000-00000HCF6	XTEAWT-00-0000-00000PCF6	XTEAWT-00-0000-00000UCF6
		Q3	93.9	103					XTEAWT-00-0000-00000PBF6	XTEAWT-00-0000-00000UBF6
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAF6	XTEAWT-00-0000-00000UAF6
		P4	80.6	88.6					XTEAWT-00-0000-00000P9F6	XTEAWT-00-0000-00000U9F6
E6	3500 K	R5	139	153	XTEAWT-00-0000-000000HE6	XTEAWT-00-0000-00000BHE6	XTEAWT-00-0000-00000LHE6			
		R4	130	143	XTEAWT-00-0000-000000GE6	XTEAWT-00-0000-00000BGE6	XTEAWT-00-0000-00000LGE6			
		R3	122	134	XTEAWT-00-0000-000000FE6	XTEAWT-00-0000-00000BFE6	XTEAWT-00-0000-00000LFE6	XTEAWT-00-0000-00000HFE6		
		R2	114	125	XTEAWT-00-0000-000000EE6	XTEAWT-00-0000-00000BEE6	XTEAWT-00-0000-00000LEE6	XTEAWT-00-0000-00000HEE6		
		Q5	107	118	XTEAWT-00-0000-000000DE6	XTEAWT-00-0000-00000BDE6	XTEAWT-00-0000-00000LDE6	XTEAWT-00-0000-00000HDE6		
		Q4	100	110			XTEAWT-00-0000-00000LCE6	XTEAWT-00-0000-00000HCE6	XTEAWT-00-0000-00000PCE6	XTEAWT-00-0000-00000UCE6
		Q3	93.9	103					XTEAWT-00-0000-00000PBE6	XTEAWT-00-0000-00000UBE6
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAE6	XTEAWT-00-0000-00000UAE6
		P4	80.6	88.6					XTEAWT-00-0000-00000P9E6	XTEAWT-00-0000-00000U9E6

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, STANDARD (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes					
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Typical	80 CRI Minimum	85 CRI Minimum	90 CRI Minimum
F7	3250 K	R4	130	143	XTEAWT-00-0000-000000GF7	XTEAWT-00-0000-00000BGF7	XTEAWT-00-0000-00000LGF7			
		R3	122	134	XTEAWT-00-0000-000000FF7	XTEAWT-00-0000-00000BFF7	XTEAWT-00-0000-00000LFF7	XTEAWT-00-0000-00000HFF7		
		R2	114	125	XTEAWT-00-0000-000000EF7	XTEAWT-00-0000-00000BEF7	XTEAWT-00-0000-00000LEF7	XTEAWT-00-0000-00000HEF7		
		Q5	107	118	XTEAWT-00-0000-000000DF7	XTEAWT-00-0000-00000BDF7	XTEAWT-00-0000-00000LDF7	XTEAWT-00-0000-00000HDF7		
		Q4	100	110	XTEAWT-00-0000-000000CF7	XTEAWT-00-0000-00000BCF7	XTEAWT-00-0000-00000LCF7	XTEAWT-00-0000-00000HCF7		
		Q3	93.9	103			XTEAWT-00-0000-00000LBF7	XTEAWT-00-0000-00000HBF7	XTEAWT-00-0000-00000PBF7	XTEAWT-00-0000-00000UBF7
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAF7	XTEAWT-00-0000-00000UAF7
		P4	80.6	88.6					XTEAWT-00-0000-00000P9F7	XTEAWT-00-0000-00000U9F7
		P3	73.9	81.2					XTEAWT-00-0000-00000P8F7	XTEAWT-00-0000-00000U8F7
E7	3000 K	R4	130	143	XTEAWT-00-0000-000000GE7	XTEAWT-00-0000-00000BGE7	XTEAWT-00-0000-00000LGE7			
		R3	122	134	XTEAWT-00-0000-000000FE7	XTEAWT-00-0000-00000BFE7	XTEAWT-00-0000-00000LFE7	XTEAWT-00-0000-00000HFE7		
		R2	114	125	XTEAWT-00-0000-000000EE7	XTEAWT-00-0000-00000BEE7	XTEAWT-00-0000-00000LEE7	XTEAWT-00-0000-00000HEE7		
		Q5	107	118	XTEAWT-00-0000-000000DE7	XTEAWT-00-0000-00000BDE7	XTEAWT-00-0000-00000LDE7	XTEAWT-00-0000-00000HDE7		
		Q4	100	110	XTEAWT-00-0000-000000CE7	XTEAWT-00-0000-00000BCE7	XTEAWT-00-0000-00000LCE7	XTEAWT-00-0000-00000HCE7		
		Q3	93.9	103			XTEAWT-00-0000-00000LBE7	XTEAWT-00-0000-00000HBE7	XTEAWT-00-0000-00000PBE7	XTEAWT-00-0000-00000UBE7
		Q2	87.4	96.1					XTEAWT-00-0000-00000PAE7	XTEAWT-00-0000-00000UAE7
		P4	80.6	88.6					XTEAWT-00-0000-00000P9E7	XTEAWT-00-0000-00000U9E7
		P3	73.9	81.2					XTEAWT-00-0000-00000P8E7	XTEAWT-00-0000-00000U8E7

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, HIGH EFFICACY (T_J = 85 °C)

The following tables provide order codes for XLamp High Efficacy XT-E White LEDs. For a complete description of the order code nomenclature, please see the Bin and Order Code Formats section (page 37). For definitions of the chromaticity kits, please see the Cree's Standard Chromaticity Kits section (page 36).

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes			
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Minimum	90 CRI Minimum
51	6200 K	S4	164	180	XTEAWT-E0-0000-000000L51	XTEAWT-E0-0000-00000BL51		
		S3	156	171	XTEAWT-E0-0000-000000K51	XTEAWT-E0-0000-00000BK51		
		S2	148	163	XTEAWT-E0-0000-000000J51	XTEAWT-E0-0000-00000BJ51		
		R5	139	153	XTEAWT-E0-0000-000000H51	XTEAWT-E0-0000-00000BH51	XTEAWT-E0-0000-00000HH51	
		R4	130	143	XTEAWT-E0-0000-000000G51	XTEAWT-E0-0000-00000BG51	XTEAWT-E0-0000-00000HG51	
		R3	122	134			XTEAWT-E0-0000-00000HF51	
		R2	114	125			XTEAWT-E0-0000-00000HE51	
53	6000 K	S4	164	180	XTEAWT-E0-0000-000000L53	XTEAWT-E0-0000-00000BL53		
		S3	156	171	XTEAWT-E0-0000-000000K53	XTEAWT-E0-0000-00000BK53		
		S2	148	163	XTEAWT-E0-0000-000000J53	XTEAWT-E0-0000-00000BJ53		
		R5	139	153	XTEAWT-E0-0000-000000H53	XTEAWT-E0-0000-00000BH53	XTEAWT-E0-0000-00000HH53	
		R4	130	143	XTEAWT-E0-0000-000000G53	XTEAWT-E0-0000-00000BG53	XTEAWT-E0-0000-00000HG53	
		R3	122	134			XTEAWT-E0-0000-00000HF53	
		R2	114	125			XTEAWT-E0-0000-00000HE53	
50	6200 K	S4	164	180	XTEAWT-E0-0000-000000L50	XTEAWT-E0-0000-00000BL50		
		S3	156	171	XTEAWT-E0-0000-000000K50	XTEAWT-E0-0000-00000BK50		
		S2	148	163	XTEAWT-E0-0000-000000J50	XTEAWT-E0-0000-00000BJ50		
		R5	139	153	XTEAWT-E0-0000-000000H50	XTEAWT-E0-0000-00000BH50	XTEAWT-E0-0000-00000HH50	
		R4	130	143	XTEAWT-E0-0000-000000G50	XTEAWT-E0-0000-00000BG50	XTEAWT-E0-0000-00000HG50	
		R3	122	134			XTEAWT-E0-0000-00000HF50	
		R2	114	125			XTEAWT-E0-0000-00000HE50	
E1	6500 K	S3	156	171	XTEAWT-E0-0000-000000KE1	XTEAWT-E0-0000-00000BKE1		
		S2	148	163	XTEAWT-E0-0000-000000JE1	XTEAWT-E0-0000-00000BJE1		
		R5	139	153	XTEAWT-E0-0000-000000HE1	XTEAWT-E0-0000-00000BHE1	XTEAWT-E0-0000-00000HHE1	
		R4	130	143	XTEAWT-E0-0000-000000GE1	XTEAWT-E0-0000-00000BGE1	XTEAWT-E0-0000-00000HGE1	
		R3	122	134			XTEAWT-E0-0000-00000HFE1	
		R2	114	125			XTEAWT-E0-0000-00000HEE1	

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, HIGH EFFICACY (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes			
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Minimum	90 CRI Minimum
E2	5700 K	S4	164	180	XTEAWT-E0-0000-000000LE2	XTEAWT-E0-0000-00000BLE2		
		S3	156	171	XTEAWT-E0-0000-000000KE2	XTEAWT-E0-0000-00000BKE2		
		S2	148	163	XTEAWT-E0-0000-000000JE2	XTEAWT-E0-0000-00000BJE2		
		R5	139	153	XTEAWT-E0-0000-000000HE2	XTEAWT-E0-0000-00000BHE2	XTEAWT-E0-0000-00000HHE2	
		R4	130	143	XTEAWT-E0-0000-000000GE2	XTEAWT-E0-0000-00000BGE2	XTEAWT-E0-0000-00000HGE2	
		R3	122	134			XTEAWT-E0-0000-00000HFE2	
		R2	114	125			XTEAWT-E0-0000-00000HEE2	
E3	5000 K	S4	164	180	XTEAWT-E0-0000-000000LE3	XTEAWT-E0-0000-00000BLE3		
		S3	156	171	XTEAWT-E0-0000-000000KE3	XTEAWT-E0-0000-00000BKE3		
		S2	148	163	XTEAWT-E0-0000-000000JE3	XTEAWT-E0-0000-00000BJE3		
		R5	139	153	XTEAWT-E0-0000-000000HE3	XTEAWT-E0-0000-00000BHE3	XTEAWT-E0-0000-00000HHE3	
		R4	130	143	XTEAWT-E0-0000-000000GE3	XTEAWT-E0-0000-00000BGE3	XTEAWT-E0-0000-00000HGE3	XTEAWT-E0-0000-00000UGE3
		R3	122	134			XTEAWT-E0-0000-00000HFE3	XTEAWT-E0-0000-00000UFE3
		R2	114	125			XTEAWT-E0-0000-00000HEE3	XTEAWT-E0-0000-00000UEE3
		Q5	107	118				XTEAWT-E0-0000-00000UDE3
		Q4	100	110				XTEAWT-E0-0000-00000UCE3
		Q3	93.9	103				XTEAWT-E0-0000-00000UBE3
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAE3
F4	4750 K	R5	139	153			XTEAWT-E0-0000-00000HHF4	
		R4	130	143			XTEAWT-E0-0000-00000HGF4	XTEAWT-E0-0000-00000UGF4
		R3	122	134			XTEAWT-E0-0000-00000HFF4	XTEAWT-E0-0000-00000UFF4
		R2	114	125			XTEAWT-E0-0000-00000HEF4	XTEAWT-E0-0000-00000UEF4
		Q5	107	118				XTEAWT-E0-0000-00000UDF4
		Q4	100	110				XTEAWT-E0-0000-00000UCF4
		Q3	93.9	103				XTEAWT-E0-0000-00000UBF4
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAF4

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, HIGH EFFICACY (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes			
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Minimum	90 CRI Minimum
E4	4500 K	S3	156	171	XTEAWT-E0-0000-000000KE4	XTEAWT-E0-0000-00000BKE4		
		S2	148	163	XTEAWT-E0-0000-000000JE4	XTEAWT-E0-0000-00000BJE4		
		R5	139	153	XTEAWT-E0-0000-000000HE4	XTEAWT-E0-0000-00000BHE4	XTEAWT-E0-0000-00000HHE4	
		R4	130	143	XTEAWT-E0-0000-000000GE4	XTEAWT-E0-0000-00000BGE4	XTEAWT-E0-0000-00000HGE4	XTEAWT-E0-0000-00000UGE4
		R3	122	134			XTEAWT-E0-0000-00000HFE4	XTEAWT-E0-0000-00000UFE4
		R2	114	125			XTEAWT-E0-0000-00000HEE4	XTEAWT-E0-0000-00000UEE4
		Q5	107	118				XTEAWT-E0-0000-00000UDE4
		Q4	100	110				XTEAWT-E0-0000-00000UCE4
		Q3	93.9	103				XTEAWT-E0-0000-00000UBE4
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAE4
F5	4250 K	S3	156	171	XTEAWT-E0-0000-000000KF5	XTEAWT-E0-0000-00000BKF5		
		S2	148	163	XTEAWT-E0-0000-000000JF5	XTEAWT-E0-0000-00000BJF5		
		R5	139	153	XTEAWT-E0-0000-000000HF5	XTEAWT-E0-0000-00000BHF5		
		R4	130	143	XTEAWT-E0-0000-000000GF5	XTEAWT-E0-0000-00000BGF5	XTEAWT-E0-0000-00000HGF5	
		R3	122	134			XTEAWT-E0-0000-00000HFF5	XTEAWT-E0-0000-00000UFF5
		R2	114	125			XTEAWT-E0-0000-00000HEF5	XTEAWT-E0-0000-00000UEF5
		Q5	107	118			XTEAWT-E0-0000-00000HDF5	XTEAWT-E0-0000-00000UDF5
		Q4	100	110				XTEAWT-E0-0000-00000UCF5
		Q3	93.9	103				XTEAWT-E0-0000-00000UBF5
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAF5
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9F5
E5	4000 K	S3	156	171	XTEAWT-E0-0000-000000KE5	XTEAWT-E0-0000-00000BKE5		
		S2	148	163	XTEAWT-E0-0000-000000JE5	XTEAWT-E0-0000-00000BJE5		
		R5	139	153	XTEAWT-E0-0000-000000HE5	XTEAWT-E0-0000-00000BHE5		
		R4	130	143	XTEAWT-E0-0000-000000GE5	XTEAWT-E0-0000-00000BGE5	XTEAWT-E0-0000-00000HGE5	
		R3	122	134			XTEAWT-E0-0000-00000HFE5	XTEAWT-E0-0000-00000UFE5
		R2	114	125			XTEAWT-E0-0000-00000HEE5	XTEAWT-E0-0000-00000UEE5
		Q5	107	118			XTEAWT-E0-0000-00000HDE5	XTEAWT-E0-0000-00000UDE5
		Q4	100	110				XTEAWT-E0-0000-00000UCE5
		Q3	93.9	103				XTEAWT-E0-0000-00000UBE5
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAE5
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9E5

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, HIGH EFFICACY (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes			
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Minimum	90 CRI Minimum
F6	3750 K	R5	139	153	XTEAWT-E0-0000-000000HF6	XTEAWT-E0-0000-00000BHF6		
		R4	130	143	XTEAWT-E0-0000-000000GF6	XTEAWT-E0-0000-00000BGF6		
		R3	122	134	XTEAWT-E0-0000-000000FF6	XTEAWT-E0-0000-00000BFF6	XTEAWT-E0-0000-00000HFF6	
		R2	114	125	XTEAWT-E0-0000-000000EF6	XTEAWT-E0-0000-00000BEF6	XTEAWT-E0-0000-00000HEF6	XTEAWT-E0-0000-00000UEF6
		Q5	107	118			XTEAWT-E0-0000-00000HDF6	XTEAWT-E0-0000-00000UDF6
		Q4	100	110			XTEAWT-E0-0000-00000HCF6	XTEAWT-E0-0000-00000UCF6
		Q3	93.9	103				XTEAWT-E0-0000-00000UBF6
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAF6
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9F6
E6	3500 K	R5	139	153	XTEAWT-E0-0000-000000HE6	XTEAWT-E0-0000-00000BHE6		
		R4	130	143	XTEAWT-E0-0000-000000GE6	XTEAWT-E0-0000-00000BGE6		
		R3	122	134	XTEAWT-E0-0000-000000FE6	XTEAWT-E0-0000-00000BFE6	XTEAWT-E0-0000-00000HFE6	
		R2	114	125	XTEAWT-E0-0000-000000EE6	XTEAWT-E0-0000-00000BEE6	XTEAWT-E0-0000-00000HEE6	XTEAWT-E0-0000-00000UEE6
		Q5	107	118			XTEAWT-E0-0000-00000HDE6	XTEAWT-E0-0000-00000UDE6
		Q4	100	110			XTEAWT-E0-0000-00000HCE6	XTEAWT-E0-0000-00000UCE6
		Q3	93.9	103				XTEAWT-E0-0000-00000UBE6
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAE6
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9E6
F7	3250 K	R4	130	143	XTEAWT-E0-0000-000000GF7	XTEAWT-E0-0000-00000BGF7		
		R3	122	134	XTEAWT-E0-0000-000000FF7	XTEAWT-E0-0000-00000BFF7	XTEAWT-E0-0000-00000HFF7	
		R2	114	125	XTEAWT-E0-0000-000000EF7	XTEAWT-E0-0000-00000BEF7	XTEAWT-E0-0000-00000HEF7	XTEAWT-E0-0000-00000UEF7
		Q5	107	118	XTEAWT-E0-0000-000000DF7	XTEAWT-E0-0000-00000BDF7	XTEAWT-E0-0000-00000HDF7	XTEAWT-E0-0000-00000UDF7
		Q4	100	110			XTEAWT-E0-0000-00000HCF7	XTEAWT-E0-0000-00000UCF7
		Q3	93.9	103				XTEAWT-E0-0000-00000UBF7
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAF7
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9F7
		P3	73.9	81.2				XTEAWT-E0-0000-00000U8F7

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - WHITE, HIGH EFFICACY (T_J = 85 °C) - CONTINUED

Chromaticity		Minimum Luminous Flux (lm) @ 350 mA			Order Codes			
Kit	CCT	Code	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	No Minimum CRI	70 CRI Minimum	80 CRI Minimum	90 CRI Minimum
E7	3000 K	R4	130	143	XTEAWT-E0-0000-000000GE7	XTEAWT-E0-0000-00000BGE7		
		R3	122	134	XTEAWT-E0-0000-000000FE7	XTEAWT-E0-0000-00000BFE7	XTEAWT-E0-0000-00000HFE7	
		R2	114	125	XTEAWT-E0-0000-000000EE7	XTEAWT-E0-0000-00000BEE7	XTEAWT-E0-0000-00000HEE7	XTEAWT-E0-0000-00000UEE7
		Q5	107	118	XTEAWT-E0-0000-000000DE7	XTEAWT-E0-0000-00000BDE7	XTEAWT-E0-0000-00000HDE7	XTEAWT-E0-0000-00000UDE7
		Q4	100	110			XTEAWT-E0-0000-00000HCE7	XTEAWT-E0-0000-00000UCE7
		Q3	93.9	103				XTEAWT-E0-0000-00000UBE7
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAE7
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9E7
		P3	73.9	81.2				XTEAWT-E0-0000-00000U8E7
F8	2850 K	R3	122	134	XTEAWT-E0-0000-000000FF8	XTEAWT-E0-0000-00000BFF8		
		R2	114	125	XTEAWT-E0-0000-000000EF8	XTEAWT-E0-0000-00000BEF8	XTEAWT-E0-0000-00000HEF8	
		Q5	107	118	XTEAWT-E0-0000-000000DF8	XTEAWT-E0-0000-00000BDF8	XTEAWT-E0-0000-00000HDF8	XTEAWT-E0-0000-00000UDF8
		Q4	100	110	XTEAWT-E0-0000-000000CF8	XTEAWT-E0-0000-00000BCF8	XTEAWT-E0-0000-00000HCF8	XTEAWT-E0-0000-00000UCF8
		Q3	93.9	103			XTEAWT-E0-0000-00000HBF8	XTEAWT-E0-0000-00000UBF8
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAF8
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9F8
		P3	73.9	81.2				XTEAWT-E0-0000-00000U8F8
E8	2700 K	R3	122	134	XTEAWT-E0-0000-000000FE8	XTEAWT-E0-0000-00000BFE8		
		R2	114	125	XTEAWT-E0-0000-000000EE8	XTEAWT-E0-0000-00000BEE8	XTEAWT-E0-0000-00000HEE8	
		Q5	107	118	XTEAWT-E0-0000-000000DE8	XTEAWT-E0-0000-00000BDE8	XTEAWT-E0-0000-00000HDE8	XTEAWT-E0-0000-00000UDE8
		Q4	100	110	XTEAWT-E0-0000-000000CE8	XTEAWT-E0-0000-00000BCE8	XTEAWT-E0-0000-00000HCE8	XTEAWT-E0-0000-00000UCE8
		Q3	93.9	103			XTEAWT-E0-0000-00000HBE8	XTEAWT-E0-0000-00000UBE8
		Q2	87.4	96.1				XTEAWT-E0-0000-00000UAE8
		P4	80.6	88.6				XTEAWT-E0-0000-00000U9E8
		P3	73.9	81.2				XTEAWT-E0-0000-00000U8E8
EA	2200 K	Q4	100	110		XTEAWT-E0-0000-00000BCEA		
		Q3	93.9	103		XTEAWT-E0-0000-00000BBEA	XTEAWT-E0-0000-00000HBEA	
		Q2	87.4	96.1		XTEAWT-E0-0000-00000BAEA	XTEAWT-E0-0000-00000HAEA	
		P4	80.6	88.6		XTEAWT-E0-0000-00000B9EA	XTEAWT-E0-0000-00000H9EA	
		P3	73.9	81.2			XTEAWT-E0-0000-00000H8EA	

Notes:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and ±2 on CRI measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS - ROYAL BLUE (T_J = 85 °C)

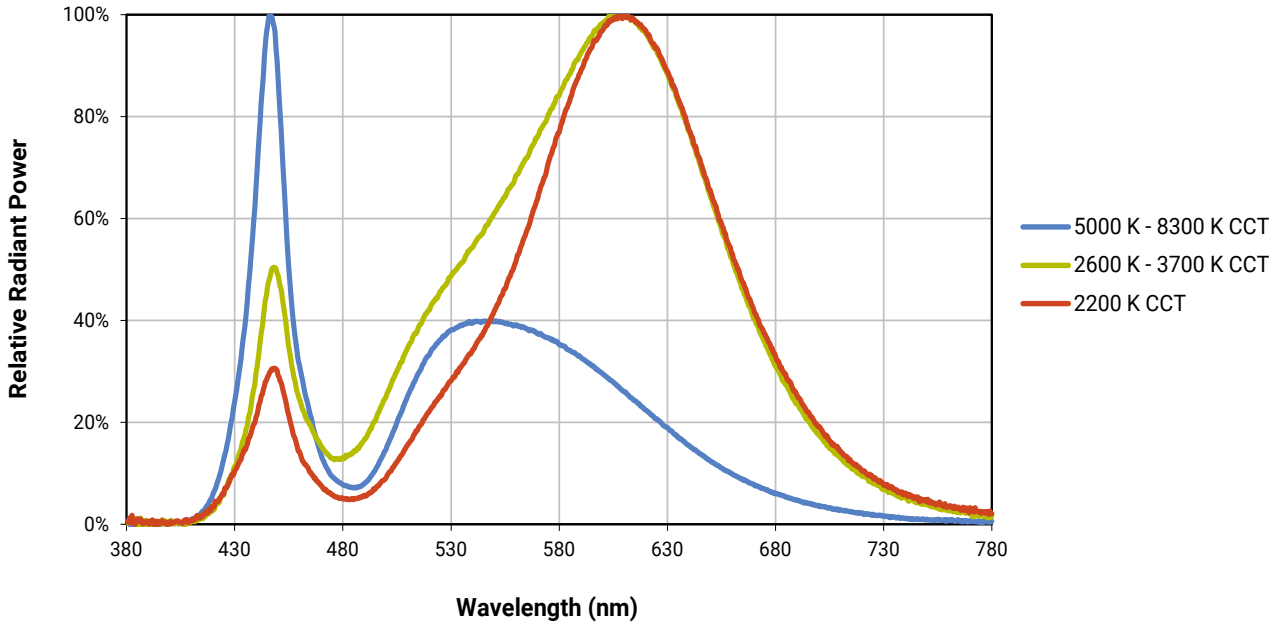
The following tables provide order codes for XLamp XT-E Royal Blue LEDs. For a complete description of the order code nomenclature, please see the Bin and Order Code Formats section (page 37).

DWL Kit Codes	Dominant Wavelength Range				Order Codes, Minimum Radiant Flux @ 350 mA, T_j=85 °C					
	Minimum		Maximum							
	Group	DWL (nm)	Group	DWL (nm)	475 mW - Radiant Flux Group Code 31(K)	500 mW - Radiant Flux Group Code 32(L)	525 mW - Radiant Flux Group Code 33(M)	550 mW - Radiant Flux Group Code 34(N)	575 mW - Radiant Flux Group Code 35(P)	600 mW - Radiant Flux Group Code 36(Q)
					Calculated PPF (µmol/s) = 1.80	Calculated PPF (µmol/s) = 1.90	Calculated PPF (µmol/s) = 1.99	Calculated PPF (µmol/s) = 2.08	Calculated PPF (µmol/s) = 2.18	Calculated PPF (µmol/s) = 2.27
01	D36	450	D57	465	XTEARY-00-0000-000000K01	XTEARY-00-0000-000000L01	XTEARY-00-0000-000000M01	XTEARY-00-0000-000000N01	XTEARY-00-0000-000000P01	XTEARY-00-0000-000000Q01
02	D36	450	D47	460	XTEARY-00-0000-000000K02	XTEARY-00-0000-000000L02	XTEARY-00-0000-000000M02	XTEARY-00-0000-000000N02	XTEARY-00-0000-000000P02	XTEARY-00-0000-000000Q02
03	D46	455	D57	465	XTEARY-00-0000-000000K03	XTEARY-00-0000-000000L03	XTEARY-00-0000-000000M03	XTEARY-00-0000-000000N03	XTEARY-00-0000-000000P03	
04	D36	450	D37	455	XTEARY-00-0000-000000K04	XTEARY-00-0000-000000L04	XTEARY-00-0000-000000M04	XTEARY-00-0000-000000N04	XTEARY-00-0000-000000P04	XTEARY-00-0000-000000Q04
05	D46	455	D47	460	XTEARY-00-0000-000000K05	XTEARY-00-0000-000000L05	XTEARY-00-0000-000000M05	XTEARY-00-0000-000000N05	XTEARY-00-0000-000000P05	
06	D56	460	D57	465	XTEARY-00-0000-000000K06	XTEARY-00-0000-000000L06	XTEARY-00-0000-000000M06	XTEARY-00-0000-000000N06		
07	D37	452.5	D46	457.5	XTEARY-00-0000-000000K07	XTEARY-00-0000-000000L07	XTEARY-00-0000-000000M07	XTEARY-00-0000-000000N07	XTEARY-00-0000-000000P07	
08	D47	457.5	D56	462.5	XTEARY-00-0000-000000K08	XTEARY-00-0000-000000L08	XTEARY-00-0000-000000M08	XTEARY-00-0000-000000N08		
09	D37	452.5	D56	462.5	XTEARY-00-0000-000000K09	XTEARY-00-0000-000000L09	XTEARY-00-0000-000000M09	XTEARY-00-0000-000000N09	XTEARY-00-0000-000000P09	

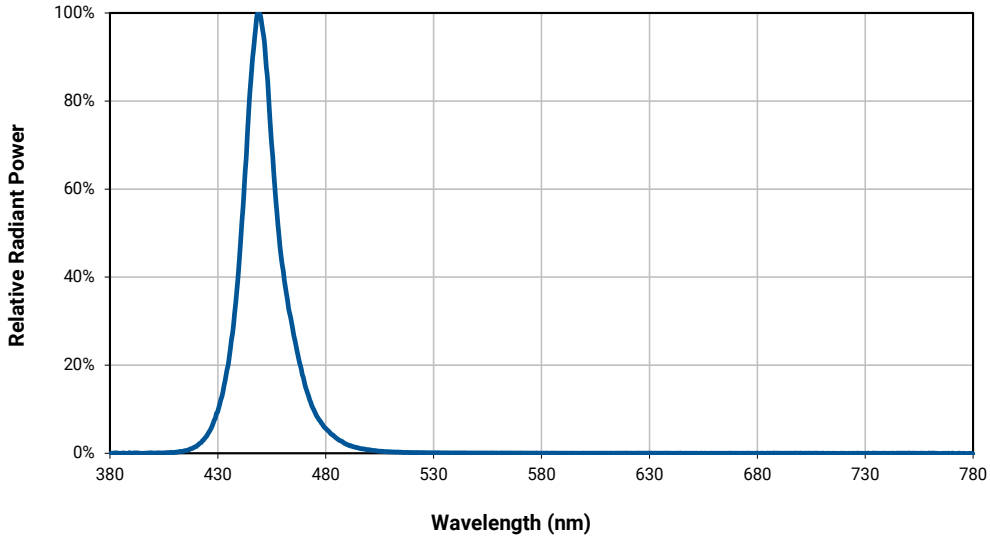
Note:

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements, ±2 on CRI measurements and ±1 nm on dominant wavelength measurements.See the Measurements section (page 39).
- Cree XLamp XT-E LED order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity or DWL bin restrictions specified by the order code.
- Calculated Photosynthetic Photon Flux (PPF) values are for reference only.

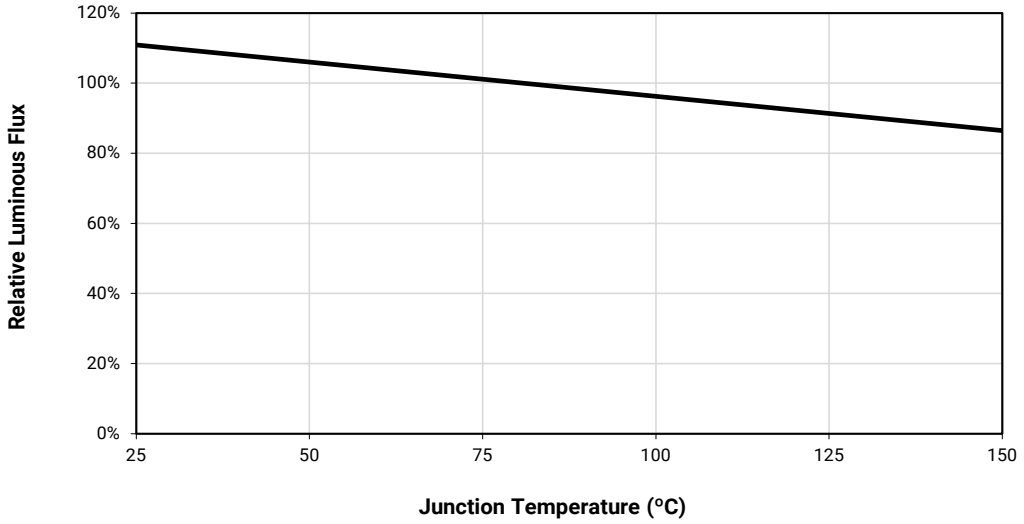
RELATIVE SPECTRAL POWER DISTRIBUTION - WHITE



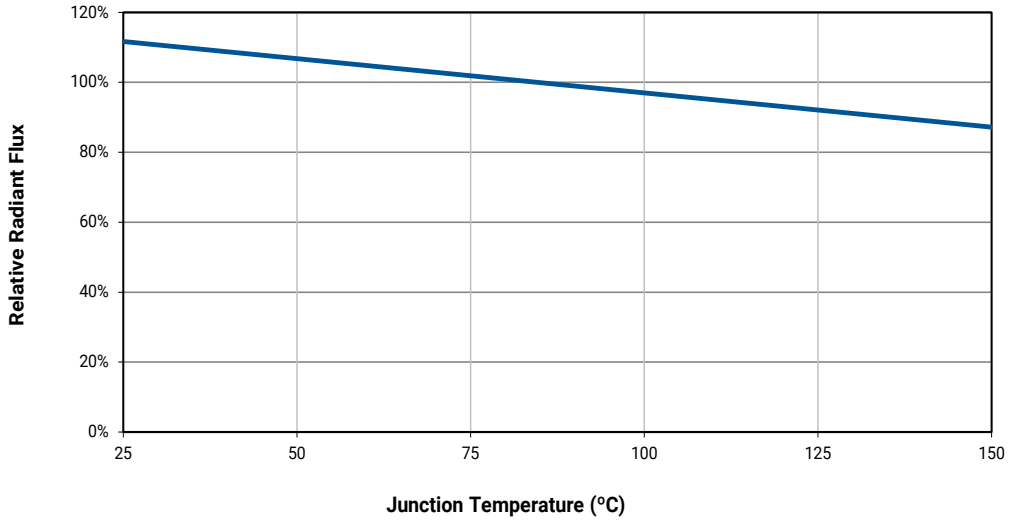
RELATIVE SPECTRAL POWER DISTRIBUTION - ROYAL BLUE



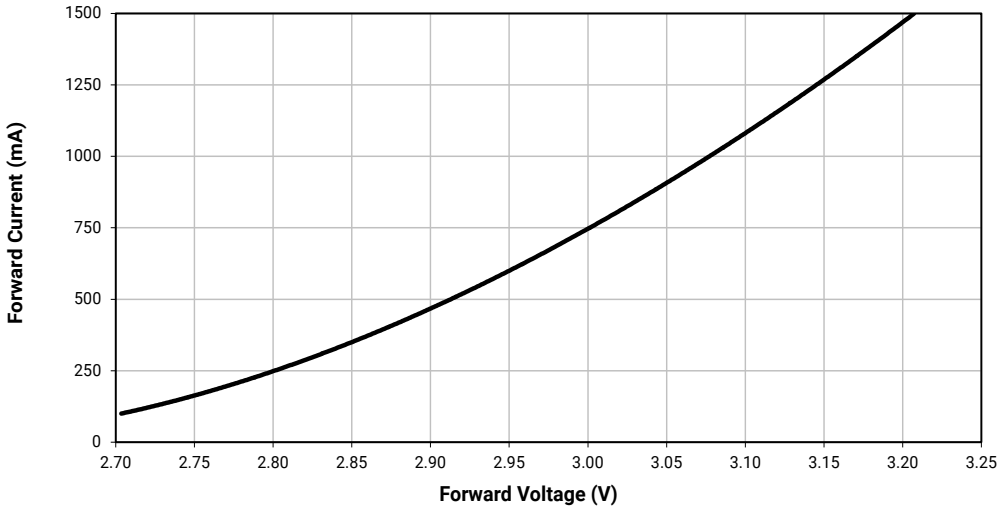
RELATIVE LUMINOUS FLUX VS. JUNCTION TEMPERATURE - WHITE (I_F = 350 mA)



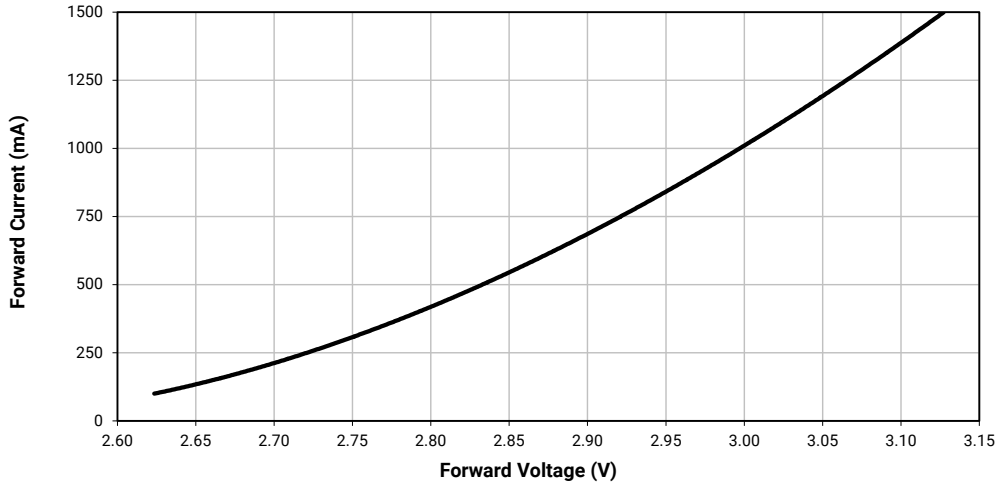
RELATIVE RADIANT FLUX VS. JUNCTION TEMPERATURE - ROYAL BLUE (I_F = 350 mA)



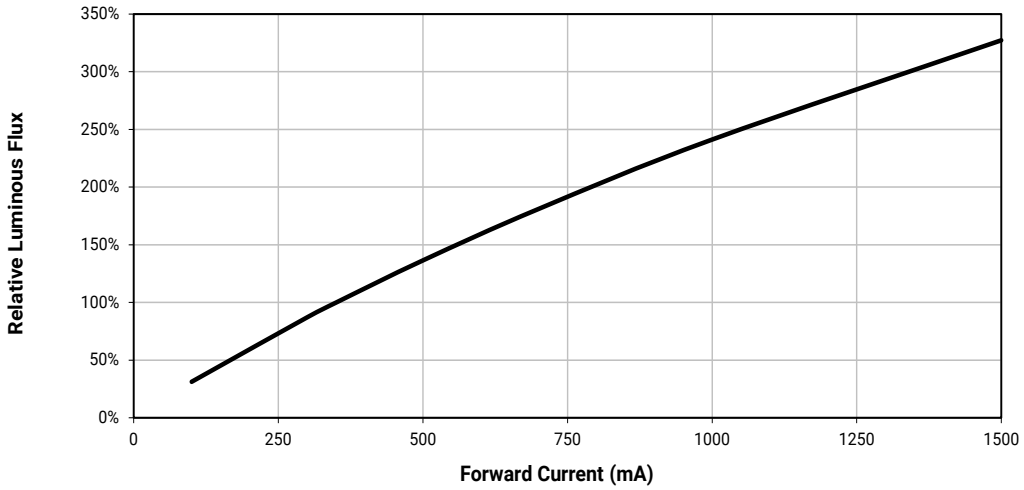
ELECTRICAL CHARACTERISTICS - WHITE, STANDARD, ROYAL BLUE (T_J = 85 °C)



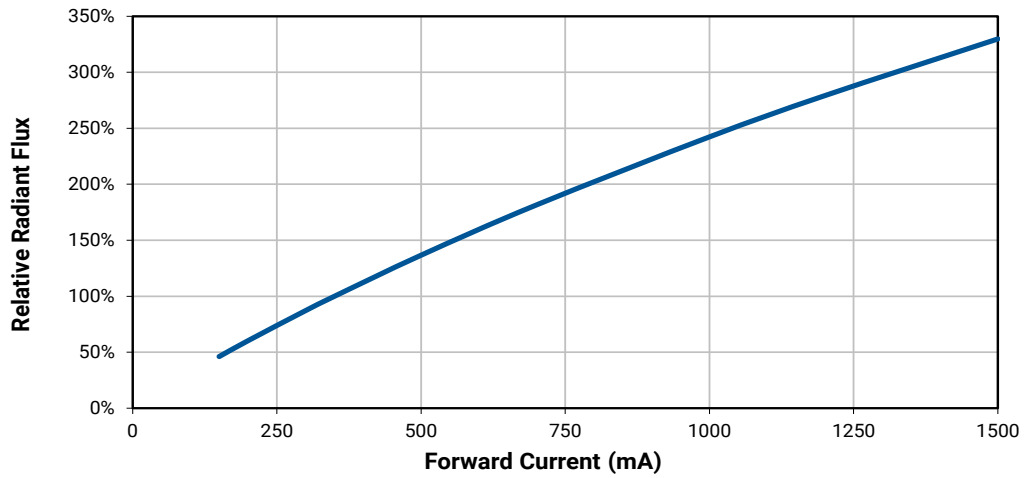
ELECTRICAL CHARACTERISTICS - WHITE, HIGH EFFICACY (T_J = 85 °C)



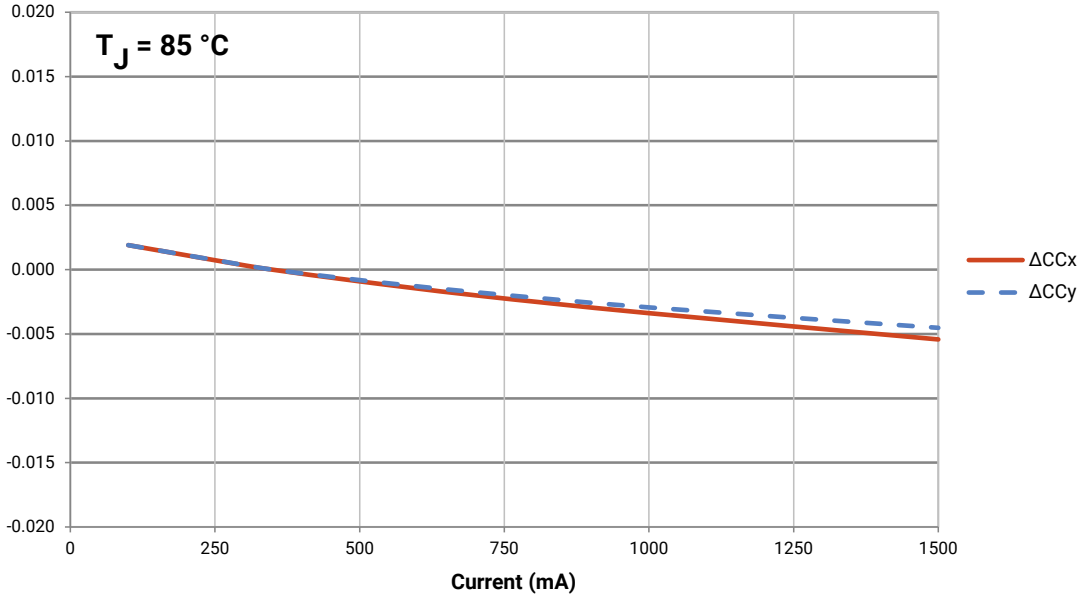
RELATIVE LUMINOUS FLUX VS. CURRENT - WHITE (T_J = 85 °C)

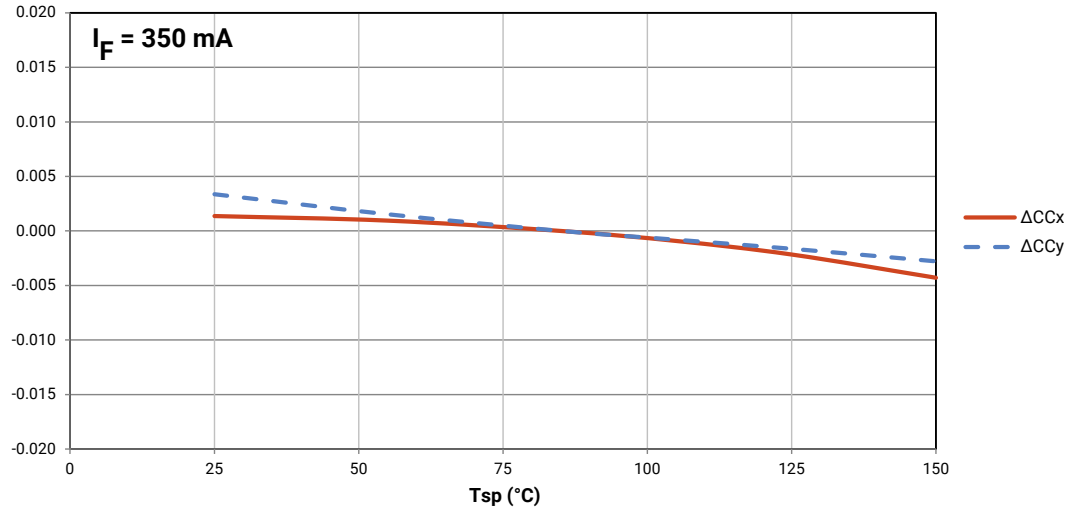


RELATIVE RADIANT FLUX VS. CURRENT - ROYAL BLUE (T_J = 85 °C)

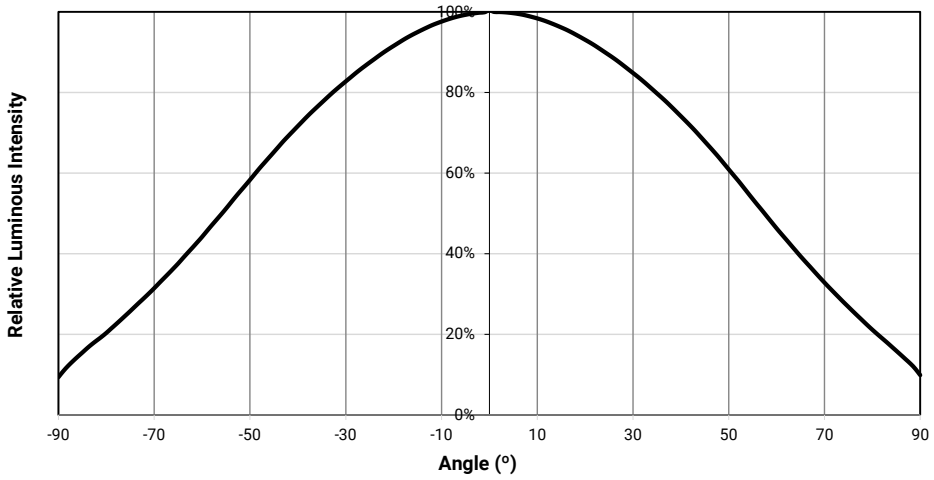


RELATIVE CHROMATICITY VS. CURRENT AND TEMPERATURE - WARM WHITE





TYPICAL SPATIAL DISTRIBUTION - WHITE



TYPICAL SPATIAL DISTRIBUTION - ROYAL BLUE