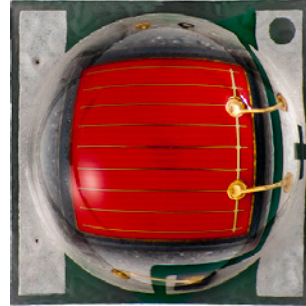
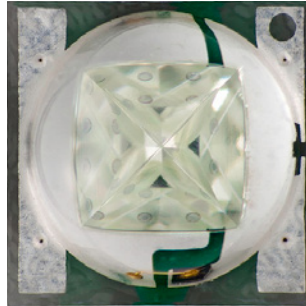
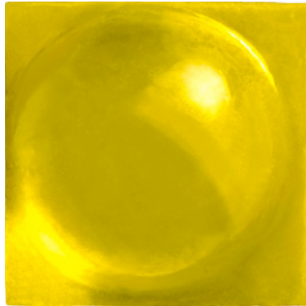


## Cree® XLamp® XB Family LEDs



### TABLE OF CONTENTS

|                                                                                                 |    |
|-------------------------------------------------------------------------------------------------|----|
| Bin and Order Code Format.....                                                                  | 2  |
| Performance Groups – Luminous or Radiant Flux.....                                              | 3  |
| Performance Groups – Dominant Wavelength .....                                                  | 4  |
| Performance Groups – Forward Voltage .....                                                      | 4  |
| Performance Groups – Chromaticity .....                                                         | 5  |
| Cree’s Standard Chromaticity Regions Plotted on the 1931 CIE Curve.....                         | 8  |
| Cree’s Standard Cool White Kits Plotted on ANSI Standard Chromaticity Regions.....              | 10 |
| Cree’s Outdoor White Kits Plotted on ANSI Standard Chromaticity Regions .....                   | 11 |
| Cree’s Standard Warm and Neutral White Kits Plotted on ANSI Standard Chromaticity Regions ..... | 12 |
| Cree’s Standard Chromaticity Kits.....                                                          | 13 |
| Standard Order Codes and Bins                                                                   |    |
| XB-D ANSI Cool White .....                                                                      | 14 |
| XB-D Neutral White .....                                                                        | 15 |
| XB-D Warm White .....                                                                           | 16 |
| XB-D Color .....                                                                                | 17 |
| XB-E HVW Neutral White .....                                                                    | 20 |
| XB-E HVW Warm White .....                                                                       | 20 |
| XB-G HVW Warm White.....                                                                        | 21 |

### INTRODUCTION

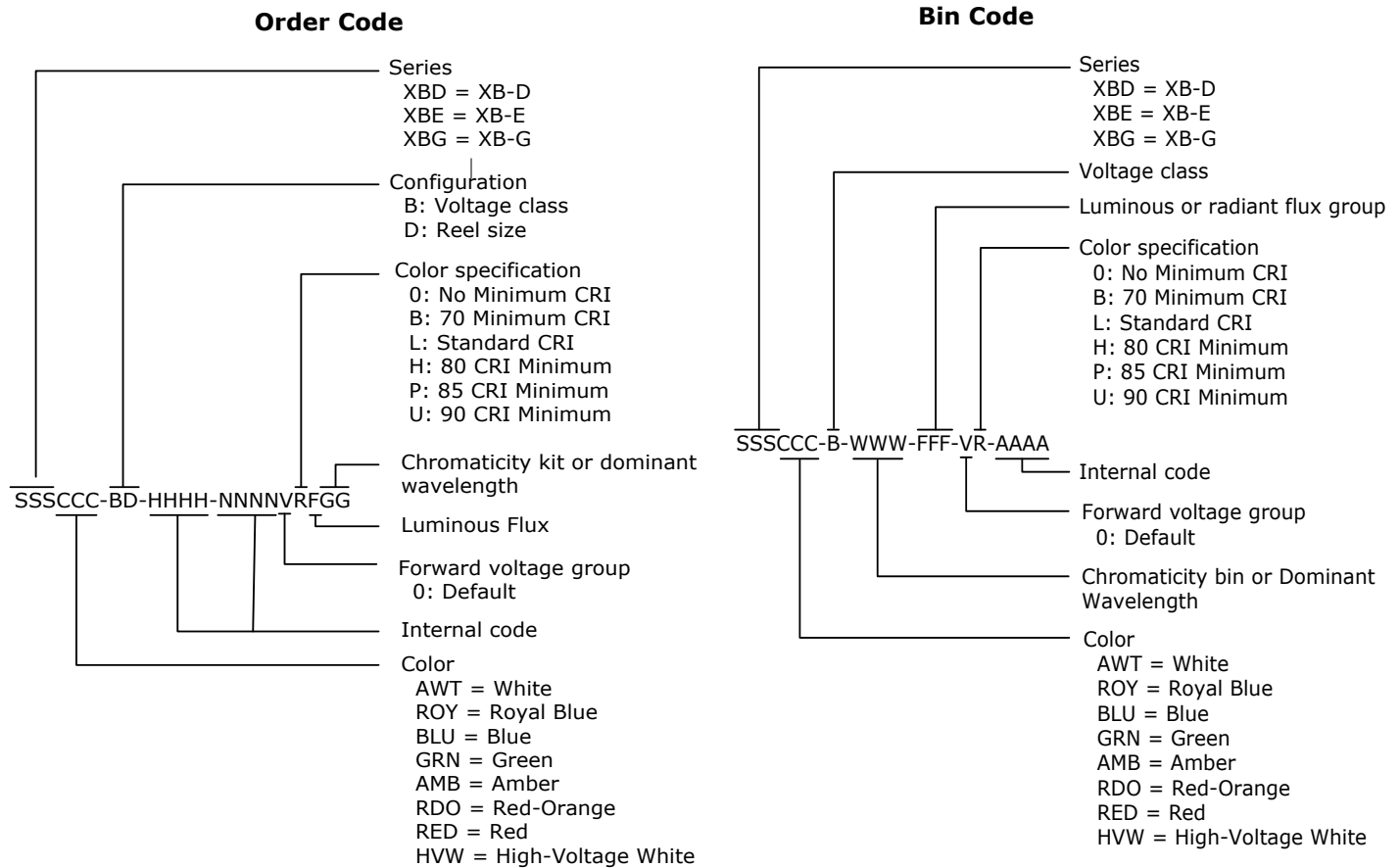
This document describes the product nomenclature required to select and order Cree’s XLamp XB Family LEDs. XLamp XB Family LEDs are tested and sorted into bins which are then combined into orderable kits, identified by an order code.

All XLamp LEDs are tested and sorted by color and brightness into a unique bin. Each bin contains LEDs from only one color and brightness group and is uniquely identified by a bin code. White XLamp LEDs are sorted by chromaticity (color) and luminous flux (brightness). Color XLamp LEDs are sorted by dominant wavelength (color) and luminous or radiant flux (brightness). LEDs are shipped in reels containing LEDs from a single bin and labeled with the corresponding bin code. XLamp LED packaging details are provided in product data sheets.

Kits contain LEDs from a number of similar bins and are fully defined by their order codes. A full explanation of the order codes for XLamp XB Family LEDs, as well as a list of standard order codes, is provided in this document.

## BIN AND ORDER CODE FORMAT

Bin codes and order codes for XB Family LEDs are configured in the following manner:



Example Order Code: XBDAWT-00-0000-00000HAE7

Example Bin Code: XBDAWT-0-7A3-Q20-0H-0001

## PERFORMANCE GROUPS – LUMINOUS OR RADIANT FLUX

XLamp XB Family LEDs, except Royal Blue, are tested for luminous flux and placed into one of the following luminous-flux groups. These groups, appended with a 0, are used in the Bin Code “Luminous or radiant flux group.”

| Group Code | Min. Luminous Flux<br>@ 350 mA (lm) | Max. Luminous Flux<br>@ 350 mA (lm) |
|------------|-------------------------------------|-------------------------------------|
| K2         | 30.6                                | 35.2                                |
| K3         | 35.2                                | 39.8                                |
| M2         | 39.8                                | 45.7                                |
| M3         | 45.7                                | 51.7                                |
| N2         | 51.7                                | 56.8                                |
| N3         | 56.8                                | 62                                  |
| N4         | 62                                  | 67.2                                |
| P2         | 67.2                                | 73.9                                |
| P3         | 73.9                                | 80.6                                |
| P4         | 80.6                                | 87.4                                |
| Q2         | 87.4                                | 93.9                                |
| Q3         | 93.9                                | 100                                 |
| Q4         | 100                                 | 107                                 |
| Q5         | 107                                 | 114                                 |
| R2         | 114                                 | 122                                 |
| R3         | 122                                 | 130                                 |
| R4         | 130                                 | 139                                 |
| R5         | 139                                 | 148                                 |
| S2         | 148                                 | 156                                 |

Royal-blue XLamp LEDs are tested for radiant flux and sorted into one of the following radiant-flux bins.

| Group | Min. Radiant Flux<br>(mW) @ 350 mA | Max. Radiant Flux<br>(mW) @ 350 mA |
|-------|------------------------------------|------------------------------------|
| 30    | 450                                | 475                                |
| 31    | 475                                | 500                                |
| 32    | 500                                | 525                                |
| 33    | 525                                | 550                                |
| 34    | 550                                | 575                                |
| 35    | 575                                | 600                                |
| 36    | 600                                | 625                                |
| 37    | 625                                | 650                                |
| 38    | 650                                | 675                                |
| 39    | 675                                | 700                                |
| 40    | 700                                | 725                                |

## PERFORMANCE GROUPS – DOMINANT WAVELENGTH

Color XLamp LEDs are tested for dominant wavelength (DWL) and sorted into one of the DWL bins defined below.

| Color      | DWL Group | Min. DWL (nm)<br>@ 350 mA | Max. DWL (nm)<br>@ 350 mA |
|------------|-----------|---------------------------|---------------------------|
| Royal Blue | D36       | 450                       | 452.5                     |
|            | D37       | 452.5                     | 455                       |
|            | D46       | 455                       | 457.5                     |
|            | D47       | 457.5                     | 460                       |
|            | D56       | 460                       | 462.5                     |
|            | D57       | 462.5                     | 465                       |
| Blue       | B3        | 465                       | 470                       |
|            | B4        | 470                       | 475                       |
|            | B5        | 475                       | 480                       |
|            | B6        | 480                       | 485                       |
| Green      | G2        | 520                       | 525                       |
|            | G3        | 525                       | 530                       |
|            | G4        | 530                       | 535                       |
| Amber      | A2        | 585                       | 590                       |
|            | A3        | 590                       | 595                       |
| Red-Orange | O3        | 610                       | 615                       |
|            | O4        | 615                       | 620                       |
| Red        | R2        | 620                       | 625                       |
|            | R3        | 625                       | 630                       |

## PERFORMANCE GROUPS – FORWARD VOLTAGE

Amber, red-orange, red and royal blue XLamp XB Family LEDs are tested for forward voltage and sorted into one of the forward voltage bins defined below.

| Forward Voltage Group | Min. Forward Voltage<br>@ 350 mA | Max. Forward Voltage<br>@ 350 mA |
|-----------------------|----------------------------------|----------------------------------|
| B                     | 1.75                             | 2.0                              |
| C                     | 2.0                              | 2.25                             |
| D                     | 2.25                             | 2.5                              |
| E                     | 2.5                              | 2.75                             |
| F                     | 2.75                             | 3.0                              |
| G                     | 3.0                              | 3.25                             |
| H                     | 3.25                             | 3.5                              |

**PERFORMANCE GROUPS – CHROMATICITY**

| Region | x      | y      | Region | x      | y      | Region | x      | y      | Region | x      | y      |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0A     | 0.2950 | 0.2970 | 0B     | 0.2920 | 0.3060 | 0C     | 0.2984 | 0.3133 | 0D     | 0.2984 | 0.3133 |
|        | 0.2920 | 0.3060 |        | 0.2895 | 0.3135 |        | 0.2962 | 0.3220 |        | 0.3048 | 0.3207 |
|        | 0.2984 | 0.3133 |        | 0.2962 | 0.3220 |        | 0.3028 | 0.3304 |        | 0.3068 | 0.3113 |
|        | 0.3009 | 0.3042 |        | 0.2984 | 0.3133 |        | 0.3048 | 0.3207 |        | 0.3009 | 0.3042 |
| 0R     | 0.2980 | 0.2880 | 0S     | 0.2895 | 0.3135 | 0T     | 0.2962 | 0.3220 | 0U     | 0.3037 | 0.2937 |
|        | 0.2950 | 0.2970 |        | 0.2870 | 0.3210 |        | 0.2937 | 0.3312 |        | 0.3009 | 0.3042 |
|        | 0.3009 | 0.3042 |        | 0.2937 | 0.3312 |        | 0.3005 | 0.3415 |        | 0.3068 | 0.3113 |
|        | 0.3037 | 0.2937 |        | 0.2962 | 0.3220 |        | 0.3028 | 0.3304 |        | 0.3093 | 0.2993 |
| 1A     | 0.3048 | 0.3207 | 1B     | 0.3028 | 0.3304 | 1C     | 0.3115 | 0.3391 | 1D     | 0.3130 | 0.3290 |
|        | 0.3130 | 0.3290 |        | 0.3115 | 0.3391 |        | 0.3205 | 0.3481 |        | 0.3213 | 0.3373 |
|        | 0.3144 | 0.3186 |        | 0.3130 | 0.3290 |        | 0.3213 | 0.3373 |        | 0.3221 | 0.3261 |
|        | 0.3068 | 0.3113 |        | 0.3048 | 0.3207 |        | 0.3130 | 0.3290 |        | 0.3144 | 0.3186 |
| 1R     | 0.3068 | 0.3113 | 1S     | 0.3005 | 0.3415 | 1T     | 0.3099 | 0.3509 | 1U     | 0.3144 | 0.3186 |
|        | 0.3144 | 0.3186 |        | 0.3099 | 0.3509 |        | 0.3196 | 0.3602 |        | 0.3221 | 0.3261 |
|        | 0.3161 | 0.3059 |        | 0.3115 | 0.3391 |        | 0.3205 | 0.3481 |        | 0.3231 | 0.3120 |
|        | 0.3093 | 0.2993 |        | 0.3028 | 0.3304 |        | 0.3115 | 0.3391 |        | 0.3161 | 0.3059 |
| 2A     | 0.3215 | 0.3350 | 2B     | 0.3207 | 0.3462 | 2C     | 0.3290 | 0.3538 | 2D     | 0.3290 | 0.3417 |
|        | 0.3290 | 0.3417 |        | 0.3290 | 0.3538 |        | 0.3376 | 0.3616 |        | 0.3371 | 0.3490 |
|        | 0.3290 | 0.3300 |        | 0.3290 | 0.3417 |        | 0.3371 | 0.3490 |        | 0.3366 | 0.3369 |
|        | 0.3222 | 0.3243 |        | 0.3215 | 0.3350 |        | 0.3290 | 0.3417 |        | 0.3290 | 0.3300 |
| 2R     | 0.3222 | 0.3243 | 2S     | 0.3196 | 0.3602 | 2T     | 0.3290 | 0.3690 | 2U     | 0.3290 | 0.3300 |
|        | 0.3290 | 0.3300 |        | 0.3290 | 0.3690 |        | 0.3381 | 0.3762 |        | 0.3366 | 0.3369 |
|        | 0.3290 | 0.3180 |        | 0.3290 | 0.3538 |        | 0.3376 | 0.3616 |        | 0.3361 | 0.3245 |
|        | 0.3231 | 0.3120 |        | 0.3207 | 0.3462 |        | 0.3290 | 0.3538 |        | 0.3290 | 0.3180 |
| 3A     | 0.3371 | 0.3490 | 3B     | 0.3376 | 0.3616 | 3C     | 0.3463 | 0.3687 | 3D     | 0.3451 | 0.3554 |
|        | 0.3451 | 0.3554 |        | 0.3463 | 0.3687 |        | 0.3551 | 0.3760 |        | 0.3533 | 0.3620 |
|        | 0.3440 | 0.3427 |        | 0.3451 | 0.3554 |        | 0.3533 | 0.3620 |        | 0.3515 | 0.3487 |
|        | 0.3366 | 0.3369 |        | 0.3371 | 0.3490 |        | 0.3451 | 0.3554 |        | 0.3440 | 0.3427 |
| 3R     | 0.3366 | 0.3369 | 3S     | 0.3381 | 0.3762 | 3T     | 0.3480 | 0.3840 | 3U     | 0.3440 | 0.3428 |
|        | 0.3440 | 0.3428 |        | 0.3480 | 0.3840 |        | 0.3571 | 0.3907 |        | 0.3515 | 0.3487 |
|        | 0.3429 | 0.3307 |        | 0.3463 | 0.3687 |        | 0.3551 | 0.3760 |        | 0.3495 | 0.3339 |
|        | 0.3361 | 0.3245 |        | 0.3376 | 0.3616 |        | 0.3463 | 0.3687 |        | 0.3429 | 0.3307 |
| 4A     | 0.3530 | 0.3597 | 4B     | 0.3548 | 0.3736 | 4C     | 0.3641 | 0.3804 | 4D     | 0.3615 | 0.3659 |
|        | 0.3615 | 0.3659 |        | 0.3641 | 0.3804 |        | 0.3736 | 0.3874 |        | 0.3702 | 0.3722 |
|        | 0.3590 | 0.3521 |        | 0.3615 | 0.3659 |        | 0.3702 | 0.3722 |        | 0.3670 | 0.3578 |
|        | 0.3512 | 0.3465 |        | 0.3530 | 0.3597 |        | 0.3615 | 0.3659 |        | 0.3590 | 0.3521 |
| 4R     | 0.3512 | 0.3465 | 4S     | 0.3571 | 0.3907 | 4T     | 0.3668 | 0.3957 | 4U     | 0.3590 | 0.3521 |
|        | 0.3590 | 0.3521 |        | 0.3668 | 0.3957 |        | 0.3771 | 0.4034 |        | 0.3670 | 0.3578 |
|        | 0.3567 | 0.3389 |        | 0.3641 | 0.3804 |        | 0.3736 | 0.3874 |        | 0.3640 | 0.3440 |
|        | 0.3495 | 0.3339 |        | 0.3548 | 0.3736 |        | 0.3641 | 0.3804 |        | 0.3567 | 0.3389 |

**PERFORMANCE GROUPS – CHROMATICITY (CONTINUED)**

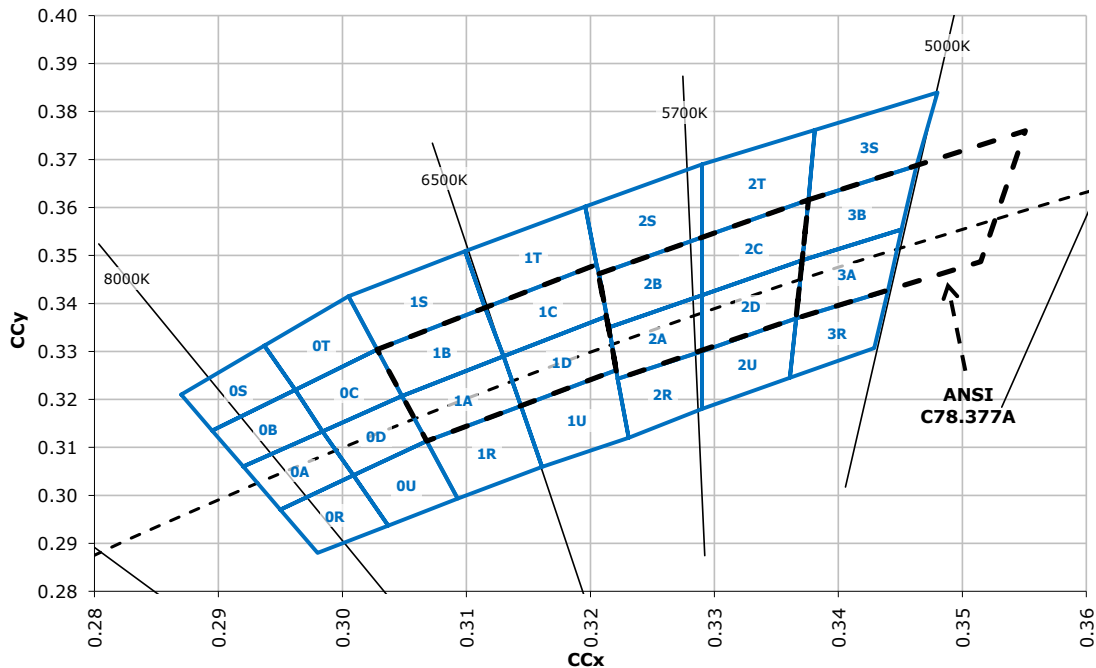
| Region | x      | y      | Region | x      | y      | Region | x      | y      | Region | x      | y      |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5A1    | 0.3670 | 0.3578 | 5A2    | 0.3686 | 0.3649 | 5A3    | 0.3744 | 0.3685 | 5A4    | 0.3726 | 0.3612 |
|        | 0.3686 | 0.3649 |        | 0.3702 | 0.3722 |        | 0.3763 | 0.3760 |        | 0.3744 | 0.3685 |
|        | 0.3744 | 0.3685 |        | 0.3763 | 0.3760 |        | 0.3825 | 0.3798 |        | 0.3804 | 0.3721 |
|        | 0.3726 | 0.3612 |        | 0.3744 | 0.3685 |        | 0.3804 | 0.3721 |        | 0.3783 | 0.3646 |
| 5B1    | 0.3702 | 0.3722 | 5B2    | 0.3719 | 0.3797 | 5B3    | 0.3782 | 0.3837 | 5B4    | 0.3763 | 0.3760 |
|        | 0.3719 | 0.3797 |        | 0.3736 | 0.3874 |        | 0.3802 | 0.3916 |        | 0.3782 | 0.3837 |
|        | 0.3782 | 0.3837 |        | 0.3802 | 0.3916 |        | 0.3869 | 0.3958 |        | 0.3847 | 0.3877 |
|        | 0.3763 | 0.3760 |        | 0.3782 | 0.3837 |        | 0.3847 | 0.3877 |        | 0.3825 | 0.3798 |
| 5C1    | 0.3825 | 0.3798 | 5C2    | 0.3847 | 0.3877 | 5C3    | 0.3912 | 0.3917 | 5C4    | 0.3887 | 0.3836 |
|        | 0.3847 | 0.3877 |        | 0.3869 | 0.3958 |        | 0.3937 | 0.4001 |        | 0.3912 | 0.3917 |
|        | 0.3912 | 0.3917 |        | 0.3937 | 0.4001 |        | 0.4006 | 0.4044 |        | 0.3978 | 0.3958 |
|        | 0.3887 | 0.3836 |        | 0.3912 | 0.3917 |        | 0.3978 | 0.3958 |        | 0.3950 | 0.3875 |
| 5D1    | 0.3783 | 0.3646 | 5D2    | 0.3804 | 0.3721 | 5D3    | 0.3863 | 0.3758 | 5D4    | 0.3840 | 0.3681 |
|        | 0.3804 | 0.3721 |        | 0.3825 | 0.3798 |        | 0.3887 | 0.3836 |        | 0.3863 | 0.3758 |
|        | 0.3863 | 0.3758 |        | 0.3887 | 0.3836 |        | 0.3950 | 0.3875 |        | 0.3924 | 0.3794 |
|        | 0.3840 | 0.3681 |        | 0.3863 | 0.3758 |        | 0.3924 | 0.3794 |        | 0.3898 | 0.3716 |
| 5R     | 0.3670 | 0.3578 | 5S     | 0.3771 | 0.4034 | 5T     | 0.3916 | 0.4127 | 5U     | 0.3783 | 0.3646 |
|        | 0.3783 | 0.3646 |        | 0.3916 | 0.4127 |        | 0.4064 | 0.4221 |        | 0.3898 | 0.3716 |
|        | 0.3743 | 0.3502 |        | 0.3869 | 0.3958 |        | 0.4006 | 0.4044 |        | 0.3848 | 0.3565 |
|        | 0.3640 | 0.3440 |        | 0.3736 | 0.3874 |        | 0.3869 | 0.3958 |        | 0.3743 | 0.3502 |
| 6A1    | 0.3889 | 0.3690 | 6A2    | 0.3915 | 0.3768 | 6A3    | 0.3981 | 0.3800 | 6A4    | 0.3953 | 0.3720 |
|        | 0.3915 | 0.3768 |        | 0.3941 | 0.3848 |        | 0.4010 | 0.3882 |        | 0.3981 | 0.3800 |
|        | 0.3981 | 0.3800 |        | 0.4010 | 0.3882 |        | 0.4080 | 0.3916 |        | 0.4048 | 0.3832 |
|        | 0.3953 | 0.3720 |        | 0.3981 | 0.3800 |        | 0.4048 | 0.3832 |        | 0.4017 | 0.3751 |
| 6B1    | 0.3941 | 0.3848 | 6B2    | 0.3968 | 0.3930 | 6B3    | 0.4040 | 0.3966 | 6B4    | 0.4010 | 0.3882 |
|        | 0.3968 | 0.3930 |        | 0.3996 | 0.4015 |        | 0.4071 | 0.4052 |        | 0.4040 | 0.3966 |
|        | 0.4040 | 0.3966 |        | 0.4071 | 0.4052 |        | 0.4146 | 0.4089 |        | 0.4113 | 0.4001 |
|        | 0.4010 | 0.3882 |        | 0.4040 | 0.3966 |        | 0.4113 | 0.4001 |        | 0.4080 | 0.3916 |
| 6C1    | 0.4080 | 0.3916 | 6C2    | 0.4113 | 0.4001 | 6C3    | 0.4186 | 0.4037 | 6C4    | 0.4150 | 0.3950 |
|        | 0.4113 | 0.4001 |        | 0.4146 | 0.4089 |        | 0.4222 | 0.4127 |        | 0.4186 | 0.4037 |
|        | 0.4186 | 0.4037 |        | 0.4222 | 0.4127 |        | 0.4299 | 0.4165 |        | 0.4259 | 0.4073 |
|        | 0.4150 | 0.3950 |        | 0.4186 | 0.4037 |        | 0.4259 | 0.4073 |        | 0.4221 | 0.3984 |
| 6D1    | 0.4017 | 0.3751 | 6D2    | 0.4048 | 0.3832 | 6D3    | 0.4116 | 0.3865 | 6D4    | 0.4082 | 0.3782 |
|        | 0.4048 | 0.3832 |        | 0.4080 | 0.3916 |        | 0.4150 | 0.3950 |        | 0.4116 | 0.3865 |
|        | 0.4116 | 0.3865 |        | 0.4150 | 0.3950 |        | 0.4221 | 0.3984 |        | 0.4183 | 0.3898 |
|        | 0.4082 | 0.3782 |        | 0.4116 | 0.3865 |        | 0.4183 | 0.3898 |        | 0.4147 | 0.3814 |
| 6R     | 0.3889 | 0.3690 | 6S     | 0.4054 | 0.4191 | 6T     | 0.4217 | 0.4273 | 6U     | 0.4017 | 0.3751 |
|        | 0.4017 | 0.3751 |        | 0.4217 | 0.4273 |        | 0.4382 | 0.4356 |        | 0.4147 | 0.3814 |
|        | 0.3957 | 0.3596 |        | 0.4146 | 0.4089 |        | 0.4299 | 0.4165 |        | 0.4077 | 0.3652 |
|        | 0.3840 | 0.3540 |        | 0.3996 | 0.4015 |        | 0.4146 | 0.4089 |        | 0.3957 | 0.3596 |

**PERFORMANCE GROUPS – CHROMATICITY (CONTINUED)**

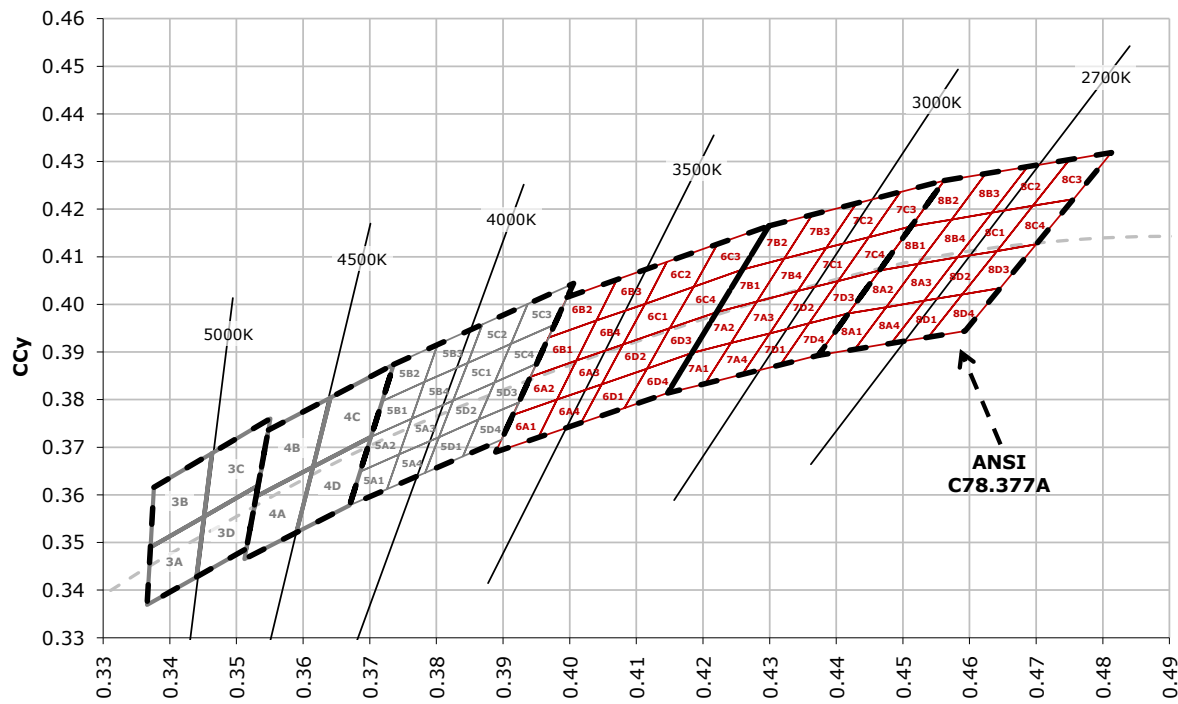
| Region | x      | y      | Region | x      | y      | Region | x      | y      | Region | x      | y      |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 7A     | 0.4221 | 0.3985 | 7B     | 0.4299 | 0.4165 | 7C     | 0.4430 | 0.4212 | 7D     | 0.4342 | 0.4028 |
|        | 0.4342 | 0.4028 |        | 0.4430 | 0.4212 |        | 0.4562 | 0.426  |        | 0.4465 | 0.4071 |
|        | 0.4260 | 0.3853 |        | 0.4342 | 0.4028 |        | 0.4465 | 0.4071 |        | 0.4373 | 0.3893 |
|        | 0.4147 | 0.3814 |        | 0.4221 | 0.3985 |        | 0.4342 | 0.4028 |        | 0.4260 | 0.3853 |
| 7A1    | 0.4147 | 0.3814 | 7A2    | 0.4183 | 0.3898 | 7A3    | 0.4242 | 0.3919 | 7A4    | 0.4203 | 0.3833 |
|        | 0.4183 | 0.3898 |        | 0.4221 | 0.3984 |        | 0.4281 | 0.4006 |        | 0.4242 | 0.3919 |
|        | 0.4242 | 0.3919 |        | 0.4281 | 0.4006 |        | 0.4342 | 0.4028 |        | 0.4300 | 0.3939 |
|        | 0.4203 | 0.3833 |        | 0.4242 | 0.3919 |        | 0.4300 | 0.3939 |        | 0.4259 | 0.3853 |
| 7B1    | 0.4221 | 0.3984 | 7B2    | 0.4259 | 0.4073 | 7B3    | 0.4322 | 0.4096 | 7B4    | 0.4281 | 0.4006 |
|        | 0.4259 | 0.4073 |        | 0.4299 | 0.4165 |        | 0.4364 | 0.4188 |        | 0.4322 | 0.4096 |
|        | 0.4322 | 0.4096 |        | 0.4364 | 0.4188 |        | 0.4430 | 0.4212 |        | 0.4385 | 0.4119 |
|        | 0.4281 | 0.4006 |        | 0.4322 | 0.4096 |        | 0.4385 | 0.4119 |        | 0.4342 | 0.4028 |
| 7C1    | 0.4342 | 0.4028 | 7C2    | 0.4385 | 0.4119 | 7C3    | 0.4449 | 0.4141 | 7C4    | 0.4403 | 0.4049 |
|        | 0.4385 | 0.4119 |        | 0.4430 | 0.4212 |        | 0.4496 | 0.4236 |        | 0.4449 | 0.4141 |
|        | 0.4449 | 0.4141 |        | 0.4496 | 0.4236 |        | 0.4562 | 0.4260 |        | 0.4513 | 0.4164 |
|        | 0.4403 | 0.4049 |        | 0.4449 | 0.4141 |        | 0.4513 | 0.4164 |        | 0.4465 | 0.4071 |
| 7D1    | 0.4259 | 0.3853 | 7D2    | 0.4300 | 0.3939 | 7D3    | 0.4359 | 0.3960 | 7D4    | 0.4316 | 0.3873 |
|        | 0.4300 | 0.3939 |        | 0.4342 | 0.4028 |        | 0.4403 | 0.4049 |        | 0.4359 | 0.3960 |
|        | 0.4359 | 0.3960 |        | 0.4403 | 0.4049 |        | 0.4465 | 0.4071 |        | 0.4418 | 0.3981 |
|        | 0.4316 | 0.3873 |        | 0.4359 | 0.3960 |        | 0.4418 | 0.3981 |        | 0.4373 | 0.3893 |
| 8A     | 0.4465 | 0.4071 | 8B     | 0.4562 | 0.4260 | 8C     | 0.4687 | 0.4289 | 8D     | 0.4582 | 0.4099 |
|        | 0.4582 | 0.4099 |        | 0.4687 | 0.4289 |        | 0.4813 | 0.4319 |        | 0.4700 | 0.4126 |
|        | 0.4483 | 0.3918 |        | 0.4582 | 0.4099 |        | 0.4700 | 0.4126 |        | 0.4593 | 0.3944 |
|        | 0.4373 | 0.3893 |        | 0.4465 | 0.4071 |        | 0.4582 | 0.4099 |        | 0.4483 | 0.3918 |
| 8A1    | 0.4373 | 0.3893 | 8A2    | 0.4418 | 0.3981 | 8A3    | 0.4475 | 0.3994 | 8A4    | 0.4428 | 0.3906 |
|        | 0.4418 | 0.3981 |        | 0.4465 | 0.4071 |        | 0.4523 | 0.4085 |        | 0.4475 | 0.3994 |
|        | 0.4475 | 0.3994 |        | 0.4523 | 0.4085 |        | 0.4582 | 0.4099 |        | 0.4532 | 0.4008 |
|        | 0.4428 | 0.3906 |        | 0.4475 | 0.3994 |        | 0.4532 | 0.4008 |        | 0.4483 | 0.3919 |
| 8B1    | 0.4465 | 0.4071 | 8B2    | 0.4513 | 0.4164 | 8B3    | 0.4573 | 0.4178 | 8B4    | 0.4523 | 0.4085 |
|        | 0.4513 | 0.4164 |        | 0.4562 | 0.4260 |        | 0.4624 | 0.4274 |        | 0.4573 | 0.4178 |
|        | 0.4573 | 0.4178 |        | 0.4624 | 0.4274 |        | 0.4687 | 0.4289 |        | 0.4634 | 0.4193 |
|        | 0.4523 | 0.4085 |        | 0.4573 | 0.4178 |        | 0.4634 | 0.4193 |        | 0.4582 | 0.4099 |
| 8C1    | 0.4582 | 0.4099 | 8C2    | 0.4634 | 0.4193 | 8C3    | 0.4695 | 0.4207 | 8C4    | 0.4641 | 0.4112 |
|        | 0.4634 | 0.4193 |        | 0.4687 | 0.4289 |        | 0.4750 | 0.4304 |        | 0.4695 | 0.4207 |
|        | 0.4695 | 0.4207 |        | 0.4750 | 0.4304 |        | 0.4813 | 0.4319 |        | 0.4756 | 0.4221 |
|        | 0.4641 | 0.4112 |        | 0.4695 | 0.4207 |        | 0.4756 | 0.4221 |        | 0.4700 | 0.4126 |
| 8D1    | 0.4483 | 0.3919 | 8D2    | 0.4532 | 0.4008 | 8D3    | 0.4589 | 0.4021 | 8D4    | 0.4538 | 0.3931 |
|        | 0.4532 | 0.4008 |        | 0.4582 | 0.4099 |        | 0.4641 | 0.4112 |        | 0.4589 | 0.4021 |
|        | 0.4589 | 0.4021 |        | 0.4641 | 0.4112 |        | 0.4700 | 0.4126 |        | 0.4646 | 0.4034 |
|        | 0.4538 | 0.3931 |        | 0.4589 | 0.4021 |        | 0.4646 | 0.4034 |        | 0.4593 | 0.3944 |

## CREE'S STANDARD CHROMATICITY REGIONS PLOTTED ON THE 1931 CIE CURVE

### ANSI Cool White - XB-D



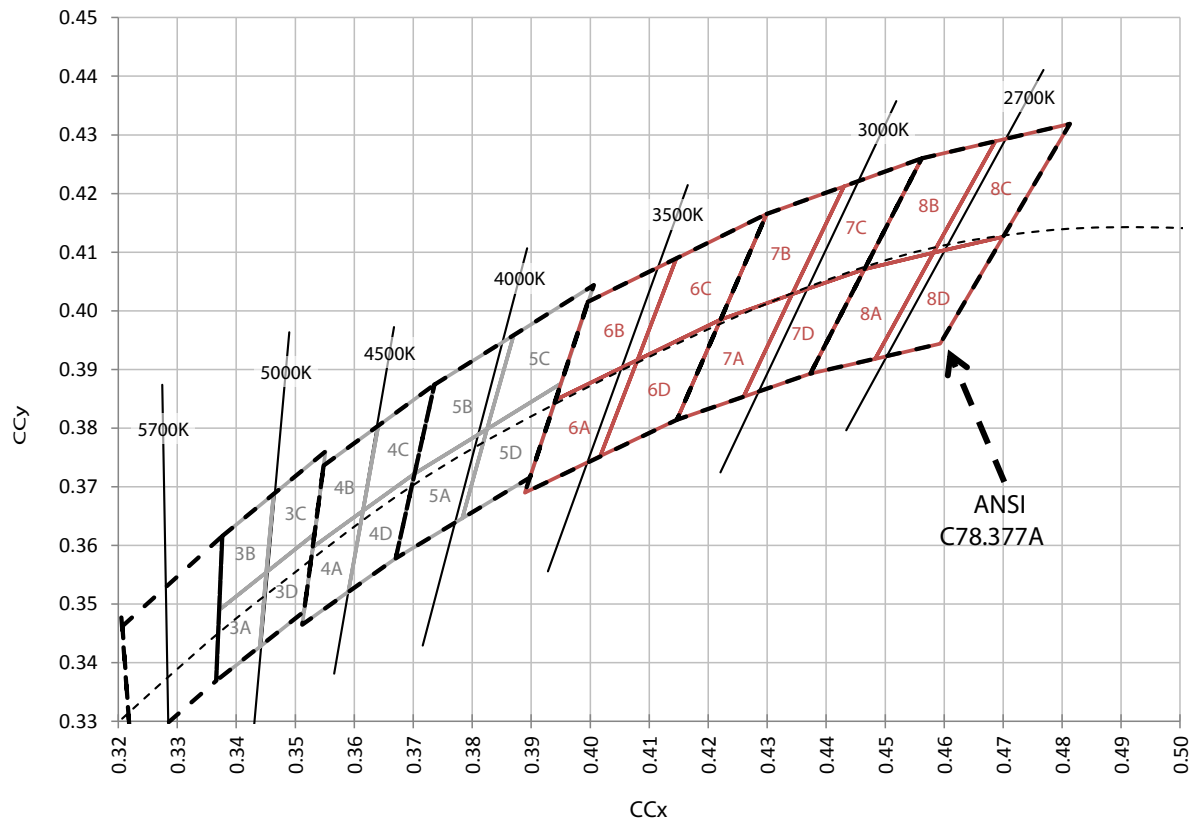
### ANSI Neutral White and ANSI Warm White - XB-D



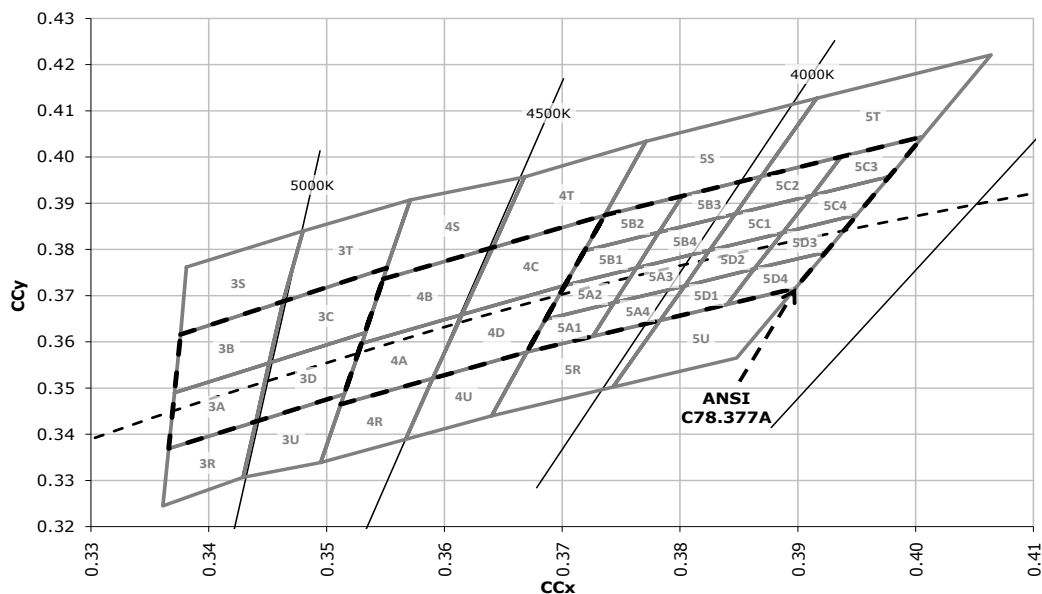


## CREE'S STANDARD CHROMATICITY REGIONS PLOTTED ON THE 1931 CIE CURVE (CONTINUED)

ANSI Neutral White and ANSI Warm White - XB-E HVW & XB-G HVW

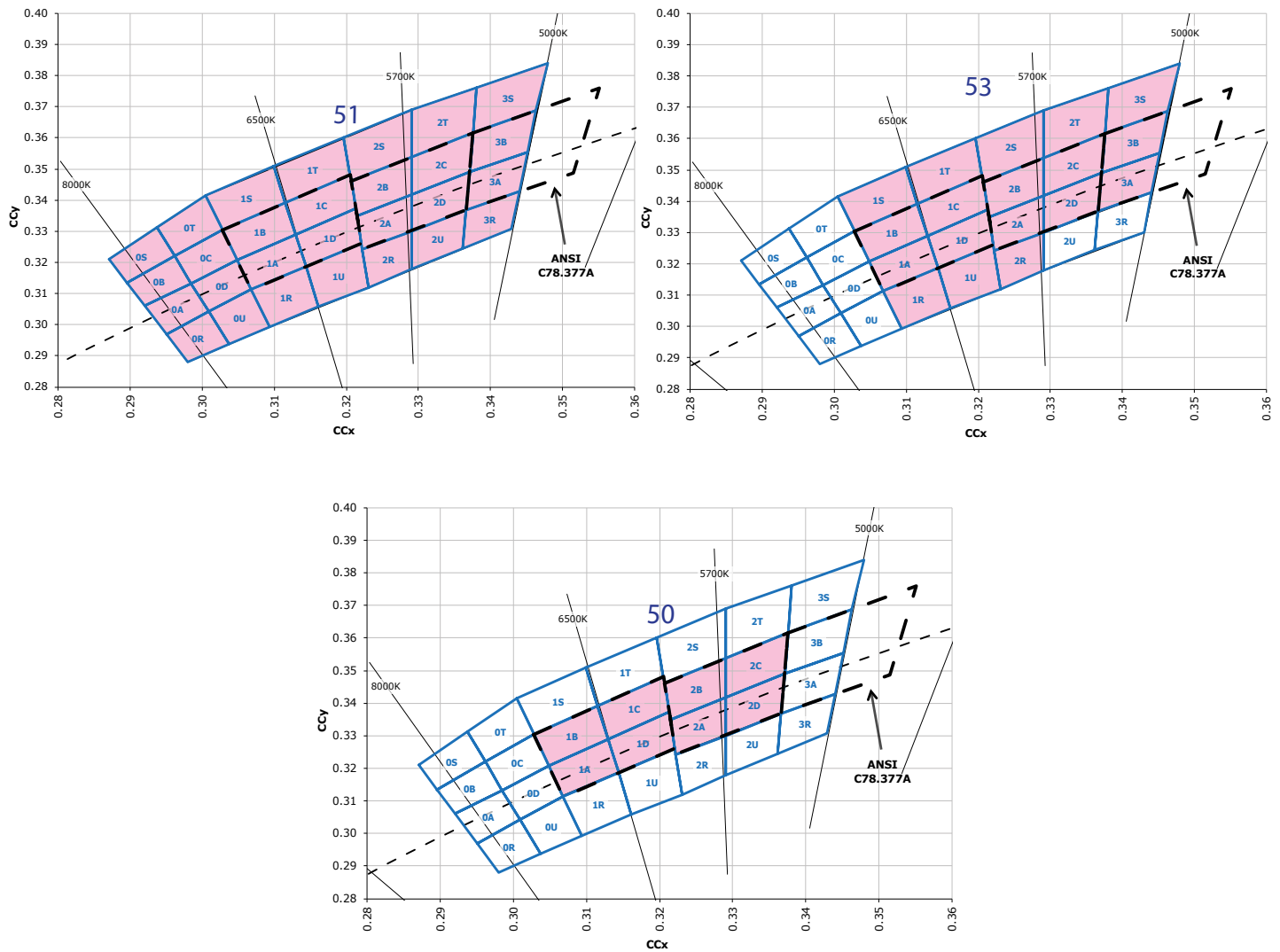


Outdoor White - XB-D

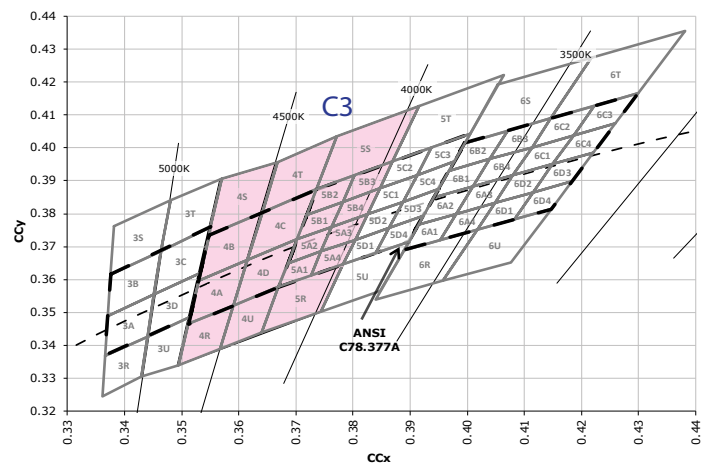
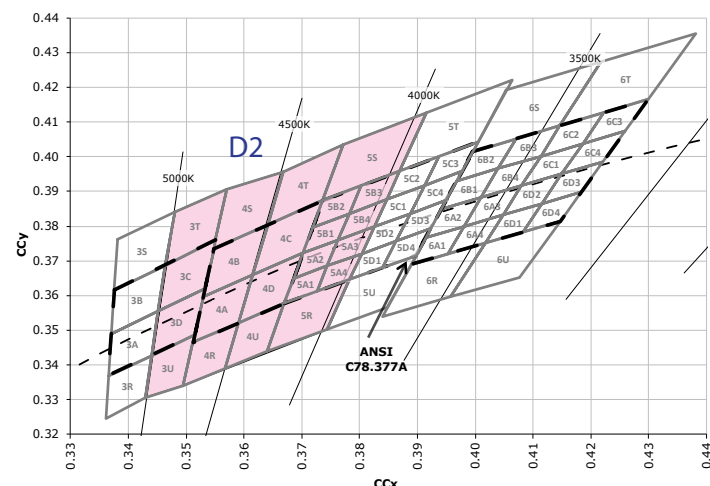
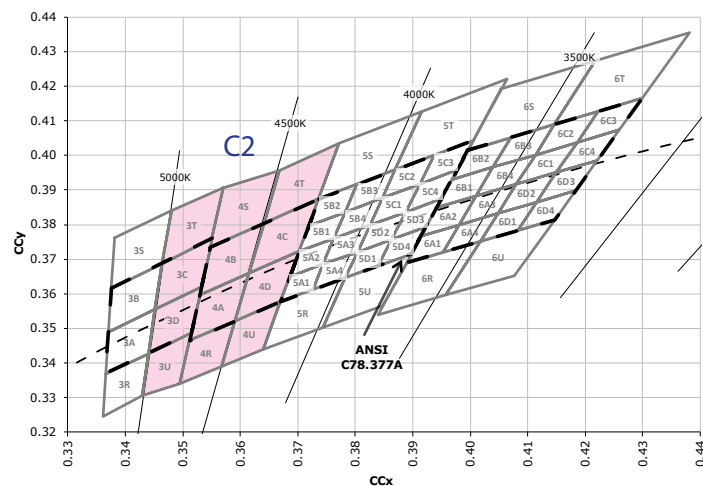
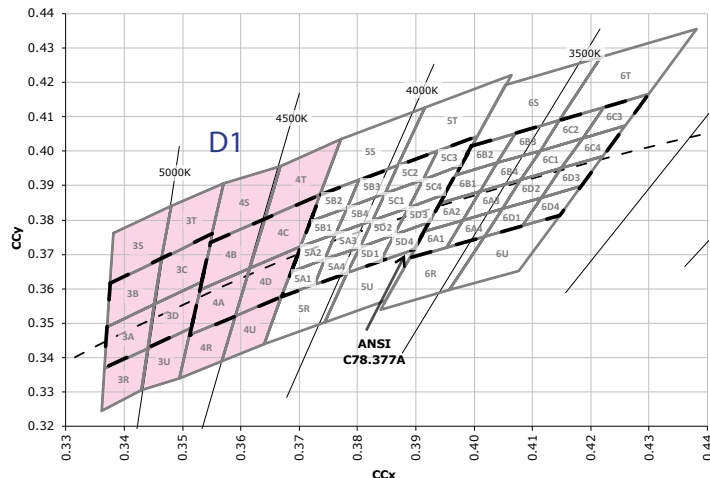


## CREE'S STANDARD COOL WHITE KITS PLOTTED ON ANSI STANDARD CHROMATICITY REGIONS

XB-D

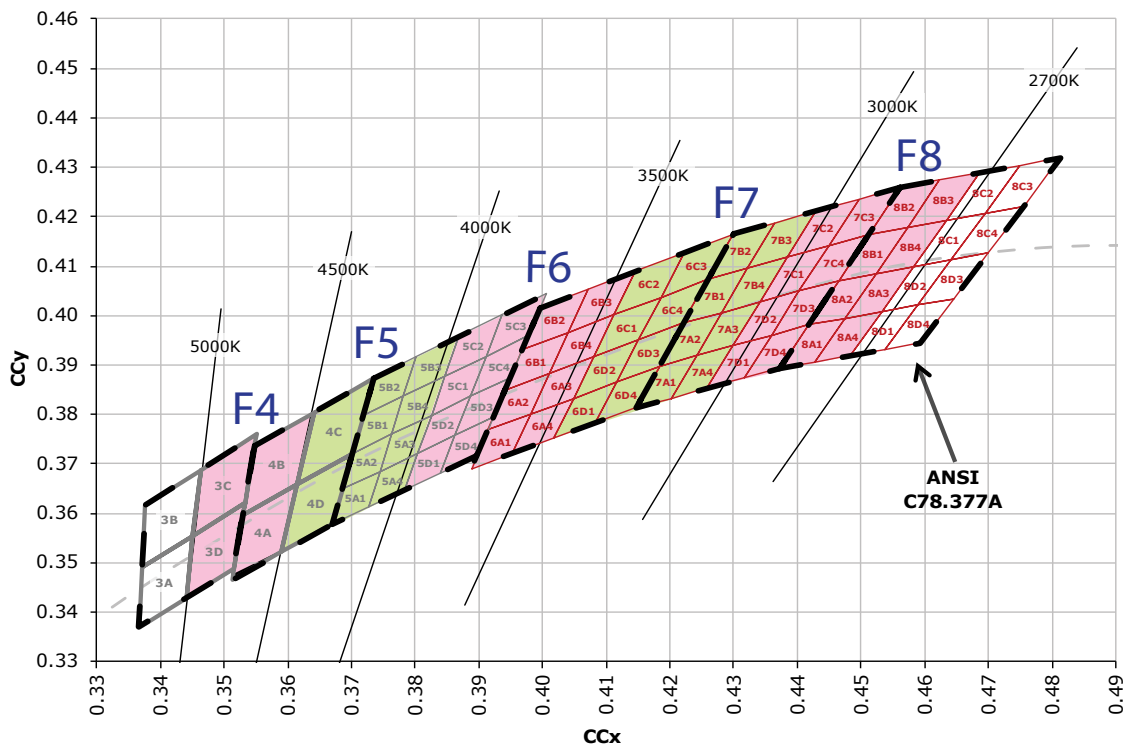
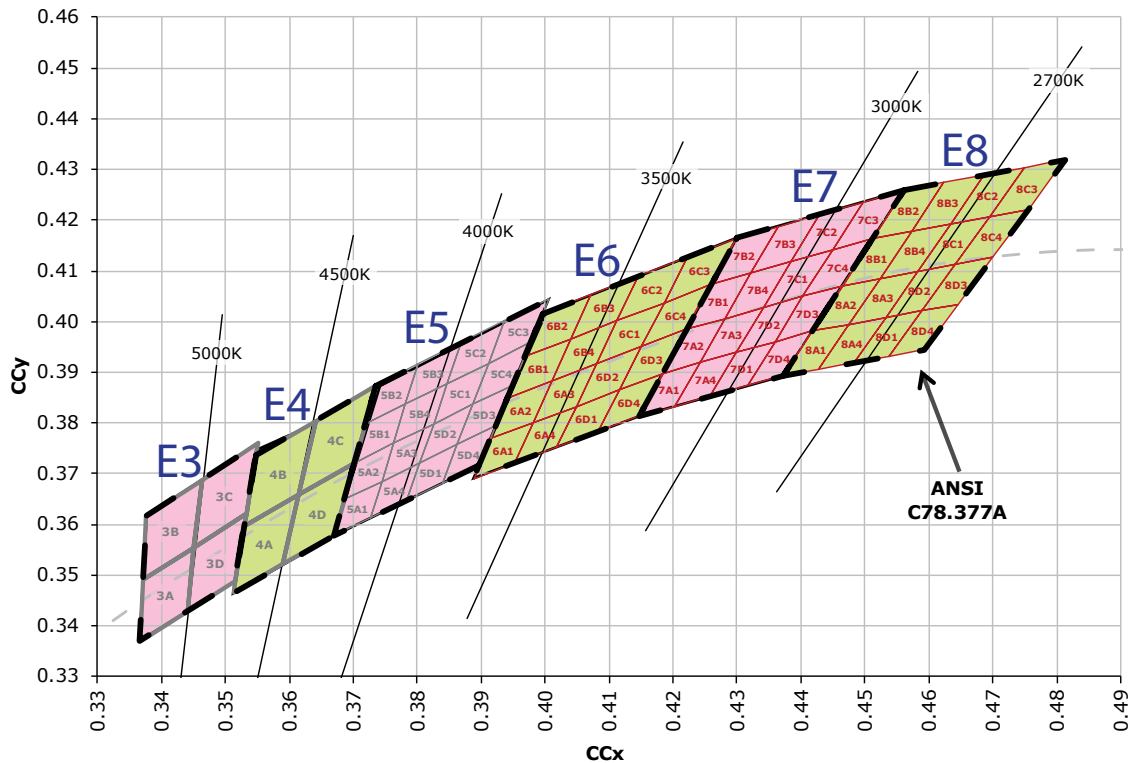


## XB-D



## CREE'S STANDARD WARM AND NEUTRAL WHITE KITS PLOTTED ON ANSI STANDARD CHROMATICITY REGIONS

XB-D



## CREE'S STANDARD CHROMATICITY KITS

The following table provides the chromaticity bins associated with chromaticity kits, which are specified as part of the order code.

| Color         | Kit | Chromaticity Bins                                                                                              |
|---------------|-----|----------------------------------------------------------------------------------------------------------------|
| Cool White    | 51  | 0A, 0B, 0C, 0D, 0R, 0S, 0T, 0U, 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 2U, 3A, 3B, 3R, 3S |
|               | 53  | 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S                                         |
|               | 50  | 1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D                                                                                 |
| Neutral White | E3  | 3A, 3B, 3C, 3D                                                                                                 |
|               | C1  | 3A, 3B, 3C, 3D, 3R, 3S, 3T, 3U, 4A, 4B, 4R, 4S                                                                 |
|               | F4  | 3C, 3D, 4A, 4B                                                                                                 |
|               | D1  | 3A, 3B, 3C, 3D, 3R, 3S, 3T, 3U, 4A, 4B, 4C, 4D, 4R, 4S, 4T, 4U                                                 |
|               | E4  | 4A, 4B, 4C, 4D                                                                                                 |
|               | D2  | 3C, 3D, 3T, 3U, 4A, 4B, 4C, 4D, 4R, 4S, 4T, 4U, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5R, 5S                 |
|               | C2  | 3C, 3D, 3T, 3U, 4A, 4B, 4C, 4D, 4R, 4S, 4T, 4U                                                                 |
|               | C3  | 4A, 4B, 4C, 4D, 4R, 4S, 4T, 4U, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5R, 5S                                 |
|               | F5  | 4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4                                                                 |
|               | E5  | 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4                                 |
| Warm White    | F6  | 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4                                 |
|               | E6  | 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4                                 |
|               | F7  | 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4                                 |
|               | E7  | 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4                                 |
|               | F8  | 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4                                 |
|               | E8  | 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4                                 |

The following table provides the chromaticity bins associated with chromaticity kits for XB-E HVW LEDs.

| Color         | CCT    | Kit | Chromaticity Bins |
|---------------|--------|-----|-------------------|
| Neutral White | 5000 K | E3  | 3A, 3B, 3C, 3D    |
|               | 4750 K | F4  | 3C, 3D, 4A, 4B    |
| Warm White    | 3000 K | E7  | 7A, 7B, 7C, 7D    |
|               | 2850 K | F8  | 7C, 7D, 8A, 8B    |
|               | 2700 K | E8  | 8A, 8B, 8C, 8D    |

The following table provides the chromaticity bins associated with chromaticity kits for XB-G HVW LEDs.

| Color      | CCT    | Kit | Chromaticity Bins |
|------------|--------|-----|-------------------|
| Warm White | 3000 K | E7  | 7A, 7B, 7C, 7D    |
|            | 2850 K | F8  | 7C, 7D, 8A, 8B    |
|            | 2700 K | E8  | 8A, 8B, 8C, 8D    |

The following tables of order codes list flux minimums and chromaticity regions for the various categories of XLamp XB Family LEDs. For other flux and chromaticity combinations, contact Cree or an authorized distributor.

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-D ANSI COOL WHITE,  $T_j = 85\text{ }^{\circ}\text{C}$ )**

| XLamp XB-D Standard Kit Codes - White |        |                                      |           |                          |                          |                          |
|---------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|--------------------------|
| Chromaticity                          |        | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |                          |                          |
| Kit                                   | CCT    | Code                                 | Flux (lm) | No Minimum CRI           | 70 CRI Minimum           | 80 CRI Minimum           |
| ANSI Cool White (5000 K – 8300 K)     |        |                                      |           |                          |                          |                          |
| 51                                    | 6200 K | R3                                   | 122       | XBDAWT-00-0000-000000F51 | XBDAWT-00-0000-00000BF51 |                          |
|                                       |        | R2                                   | 114       | XBDAWT-00-0000-000000E51 | XBDAWT-00-0000-00000BE51 | XBDAWT-00-0000-00000HE51 |
|                                       |        | Q5                                   | 107       |                          |                          | XBDAWT-00-0000-00000HD51 |
| 53                                    | 6000 K | R3                                   | 122       | XBDAWT-00-0000-000000F53 | XBDAWT-00-0000-00000BF53 |                          |
|                                       |        | R2                                   | 114       | XBDAWT-00-0000-000000E53 | XBDAWT-00-0000-00000BE53 | XBDAWT-00-0000-00000HE53 |
|                                       |        | Q5                                   | 107       |                          |                          | XBDAWT-00-0000-00000HD53 |
| 50                                    | 6200 K | R3                                   | 122       | XBDAWT-00-0000-000000F50 | XBDAWT-00-0000-00000BF50 |                          |
|                                       |        | R2                                   | 114       | XBDAWT-00-0000-000000E50 | XBDAWT-00-0000-00000BE50 | XBDAWT-00-0000-00000HE50 |
|                                       |        | Q5                                   | 107       |                          |                          | XBDAWT-00-0000-00000HD50 |

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-D NEUTRAL WHITE,  $T_j = 85\text{ }^{\circ}\text{C}$ )**

| XLamp XB-D Standard Kit Codes - White |        |                                      |           |                          |                           |                           |                           |
|---------------------------------------|--------|--------------------------------------|-----------|--------------------------|---------------------------|---------------------------|---------------------------|
| Chromaticity                          |        | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |                           |                           |                           |
| Kit                                   | CCT    | Code                                 | Flux (lm) | No CRI Minimum           | 70 CRI Minimum            | Standard CRI              | 80 CRI Minimum            |
| ANSI Neutral White (3700 K – 5000 K)  |        |                                      |           |                          |                           |                           |                           |
| E3                                    | 5000 K | R2                                   | 114       | XBDAWT-00-0000-000000EE3 | XBDAWT-00-0000-000000BEE3 | XBDAWT-00-0000-000000LEE3 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DE3 | XBDAWT-00-0000-000000BDE3 | XBDAWT-00-0000-000000LDE3 | XBDAWT-00-0000-000000HDE3 |
|                                       |        | Q4                                   | 100       | XBDAWT-00-0000-000000CE3 |                           | XBDAWT-00-0000-000000LCE3 | XBDAWT-00-0000-000000HCE3 |
| C1                                    | 5000 K | R2                                   | 114       | XBDAWT-00-0000-000000EC1 | XBDAWT-00-0000-000000BEC1 | XBDAWT-00-0000-000000LEC1 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DC1 | XBDAWT-00-0000-000000BDC1 | XBDAWT-00-0000-000000LDC1 |                           |
|                                       |        | Q4                                   | 100       |                          |                           | XBDAWT-00-0000-000000LCC1 |                           |
| F4                                    | 4750 K | R2                                   | 114       | XBDAWT-00-0000-000000EF4 | XBDAWT-00-0000-000000BEF4 | XBDAWT-00-0000-000000LEF4 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DF4 | XBDAWT-00-0000-000000BDF4 | XBDAWT-00-0000-000000LDF4 | XBDAWT-00-0000-000000HDF4 |
|                                       |        | Q4                                   | 100       | XBDAWT-00-0000-000000CF4 |                           | XBDAWT-00-0000-000000LCF4 | XBDAWT-00-0000-000000HCF4 |
| D1                                    | 4750 K | R2                                   | 114       | XBDAWT-00-0000-000000ED1 | XBDAWT-00-0000-000000BED1 | XBDAWT-00-0000-000000LED1 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DD1 | XBDAWT-00-0000-000000BDD1 | XBDAWT-00-0000-000000LDD1 |                           |
|                                       |        | Q4                                   | 100       |                          |                           | XBDAWT-00-0000-000000LCD1 |                           |
| E4                                    | 4500 K | R2                                   | 114       | XBDAWT-00-0000-000000EE4 | XBDAWT-00-0000-000000BEE4 |                           |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DE4 | XBDAWT-00-0000-000000BDE4 | XBDAWT-00-0000-000000LDE4 | XBDAWT-00-0000-000000HDE4 |
|                                       |        | Q4                                   | 100       | XBDAWT-00-0000-000000CE4 |                           | XBDAWT-00-0000-000000LCE4 | XBDAWT-00-0000-000000HCE4 |
| D2                                    | 4500 K | R2                                   | 114       | XBDAWT-00-0000-000000ED2 | XBDAWT-00-0000-000000BED2 | XBDAWT-00-0000-000000LED2 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DD2 | XBDAWT-00-0000-000000BDD2 | XBDAWT-00-0000-000000LDD2 |                           |
|                                       |        | Q4                                   | 100       |                          |                           | XBDAWT-00-0000-000000LCD2 |                           |
| C2                                    | 4500 K | R2                                   | 114       | XBDAWT-00-0000-000000EC2 | XBDAWT-00-0000-000000BEC2 | XBDAWT-00-0000-000000LEC2 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DC2 | XBDAWT-00-0000-000000BDC2 | XBDAWT-00-0000-000000LDC2 |                           |
|                                       |        | Q4                                   | 100       |                          |                           | XBDAWT-00-0000-000000LCC2 |                           |
| C3                                    | 4300 K | R2                                   | 114       | XBDAWT-00-0000-000000EC3 | XBDAWT-00-0000-000000BEC3 | XBDAWT-00-0000-000000LEC3 |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DC3 | XBDAWT-00-0000-000000BDC3 | XBDAWT-00-0000-000000LDC3 |                           |
|                                       |        | Q4                                   | 100       |                          |                           | XBDAWT-00-0000-000000LCC3 |                           |
| F5                                    | 4250 K | R2                                   | 114       | XBDAWT-00-0000-000000EF5 | XBDAWT-00-0000-000000BEF5 |                           |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DF5 | XBDAWT-00-0000-000000BDF5 | XBDAWT-00-0000-000000LDF5 | XBDAWT-00-0000-000000HDF5 |
|                                       |        | Q4                                   | 100       | XBDAWT-00-0000-000000CF5 | XBDAWT-00-0000-000000BCF5 | XBDAWT-00-0000-000000LCF5 | XBDAWT-00-0000-000000HCF5 |
|                                       |        | Q3                                   | 93.9      | XBDAWT-00-0000-000000BF5 |                           | XBDAWT-00-0000-000000LBF5 | XBDAWT-00-0000-000000HBF5 |
| E5                                    | 4000 K | R2                                   | 114       | XBDAWT-00-0000-000000EE5 | XBDAWT-00-0000-000000BEE5 |                           |                           |
|                                       |        | Q5                                   | 107       | XBDAWT-00-0000-000000DE5 | XBDAWT-00-0000-000000BDE5 | XBDAWT-00-0000-000000LDE5 | XBDAWT-00-0000-000000HDE5 |
|                                       |        | Q4                                   | 100       | XBDAWT-00-0000-000000CE5 | XBDAWT-00-0000-000000BCE5 | XBDAWT-00-0000-000000LCE5 | XBDAWT-00-0000-000000HCE5 |
|                                       |        | Q3                                   | 93.9      | XBDAWT-00-0000-000000BE5 |                           | XBDAWT-00-0000-000000LBE5 | XBDAWT-00-0000-000000HBE5 |

- Typical (Standard) CRI for Neutral White, 3700 K - 5000 K CCT is 75

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-D WARM WHITE,  $T_j = 85^\circ\text{C}$ )**

| XLamp XB-D Standard Kit Codes - White |        |                                      |           |                                             |                |                |                |                |                |
|---------------------------------------|--------|--------------------------------------|-----------|---------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Chromaticity                          |        | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes: XBDWT-00- (+ extensions below) |                |                |                |                |                |
| Kit                                   | CCT    | Code                                 | Flux (lm) | No CRI Minimum                              | 70 CRI Minimum | Standard CRI   | 80 CRI Minimum | 85 CRI Minimum | 90 CRI Minimum |
| ANSI Warm White (2700 K - 3750 K)     |        |                                      |           |                                             |                |                |                |                |                |
| F6                                    | 3750 K | Q5                                   | 107       | 0000-000000DF6                              | 0000-00000BDF6 | 0000-00000LDF6 | 0000-00000HDF6 |                |                |
|                                       |        | Q4                                   | 100       | 0000-000000CF6                              | 0000-00000BCF6 | 0000-00000LCF6 | 0000-00000HCF6 |                |                |
|                                       |        | Q3                                   | 93.9      | 0000-000000BF6                              |                | 0000-00000LBF6 | 0000-00000HBF6 |                |                |
|                                       |        | Q2                                   | 87.4      | 0000-000000AF6                              |                |                |                |                |                |
| E6                                    | 3500 K | Q5                                   | 107       | 0000-000000DE6                              | 0000-00000BDE6 | 0000-00000LDE6 | 0000-00000HDE6 |                |                |
|                                       |        | Q4                                   | 100       | 0000-000000CE6                              | 0000-00000BCE6 | 0000-00000LCE6 | 0000-00000HCE6 |                |                |
|                                       |        | Q3                                   | 93.9      | 0000-000000BE6                              |                | 0000-00000LBE6 | 0000-00000HBE6 |                |                |
|                                       |        | Q2                                   | 87.4      | 0000-000000AE6                              |                |                |                |                |                |
| F7                                    | 3250 K | Q5                                   | 107       | 0000-000000DF7                              | 0000-00000BDF7 |                |                |                |                |
|                                       |        | Q4                                   | 100       | 0000-000000CF7                              | 0000-00000BCF7 | 0000-00000LCF7 | 0000-00000HCF7 |                |                |
|                                       |        | Q3                                   | 93.9      | 0000-000000BF7                              | 0000-00000BBF7 | 0000-00000LBF7 | 0000-00000HBF7 |                |                |
|                                       |        | Q2                                   | 87.4      | 0000-000000AF7                              |                | 0000-00000LAF7 | 0000-00000HAF7 |                |                |
|                                       |        | P4                                   | 80.6      |                                             |                |                |                | 0000-00000P9F7 | 0000-00000U9F7 |
|                                       |        | P3                                   | 73.9      |                                             |                |                |                | 0000-00000P8F7 | 0000-00000U8F7 |
|                                       |        | P2                                   | 67.2      |                                             |                |                |                | 0000-00000P7F7 | 0000-00000U7F7 |
| E7                                    | 3000 K | Q5                                   | 107       | 0000-000000DE7                              | 0000-00000BDE7 |                |                |                |                |
|                                       |        | Q4                                   | 100       | 0000-000000CE7                              | 0000-00000BCE7 | 0000-00000LCE7 | 0000-00000HCE7 |                |                |
|                                       |        | Q3                                   | 93.9      | 0000-000000BE7                              | 0000-00000BBE7 | 0000-00000LBE7 | 0000-00000HBE7 |                |                |
|                                       |        | Q2                                   | 87.4      | 0000-000000AE7                              |                | 0000-00000LAE7 | 0000-00000HAE7 |                |                |
|                                       |        | P4                                   | 80.6      |                                             |                |                |                | 0000-00000P9E7 | 0000-00000U9E7 |
|                                       |        | P3                                   | 73.9      |                                             |                |                |                | 0000-00000P8E7 | 0000-00000U8E7 |
|                                       |        | P2                                   | 67.2      |                                             |                |                |                | 0000-00000P7E7 | 0000-00000U7E7 |
| F8                                    | 2850 K | Q4                                   | 100       | 0000-000000CF8                              | 0000-00000BCF8 |                |                |                |                |
|                                       |        | Q3                                   | 93.9      | 0000-000000BF8                              | 0000-00000BBF8 | 0000-00000LBF8 | 0000-00000HBF8 |                |                |
|                                       |        | Q2                                   | 87.4      | 0000-000000AF8                              | 0000-00000BAF8 | 0000-00000LAF8 | 0000-00000HAF8 |                |                |
|                                       |        | P4                                   | 80.6      |                                             |                | 0000-00000L9F8 | 0000-00000H9F8 |                |                |
|                                       |        | P3                                   | 73.9      |                                             |                |                |                | 0000-00000P8F8 | 0000-00000U8F8 |
|                                       |        | P2                                   | 67.2      |                                             |                |                |                | 0000-00000P7F8 | 0000-00000U7F8 |
| E8                                    | 2700 K | Q4                                   | 100       | 0000-000000CE8                              | 0000-00000BCE8 |                |                |                |                |
|                                       |        | Q3                                   | 93.9      | 0000-000000BE8                              | 0000-00000BBE8 | 0000-00000LBE8 | 0000-00000HBE8 |                |                |
|                                       |        | Q2                                   | 87.4      | 0000-000000AE8                              | 0000-00000BAE8 | 0000-00000LAE8 | 0000-00000HAE8 |                |                |
|                                       |        | P4                                   | 80.6      |                                             |                | 0000-00000L9E8 | 0000-00000H9E8 |                |                |
|                                       |        | P3                                   | 73.9      |                                             |                |                |                | 0000-00000P8E8 | 0000-00000U8E8 |
|                                       |        | P2                                   | 67.2      |                                             |                |                |                | 0000-00000P7E8 | 0000-00000U7E8 |

- Typical (Standard) CRI for Warm White, 2600 K - 3700 K CCT is 80.

\* Cree XLamp XB Family 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.



**STANDARD ORDER CODES AND BINS (XB-D COLOR, T<sub>j</sub> = 25 °C)**

| XLamp XB-D Standard Kit Codes - Royal Blue |                          |                                    |           |                          |
|--------------------------------------------|--------------------------|------------------------------------|-----------|--------------------------|
| Royal Blue                                 |                          | Minimum Rdiant Flux (mW) @ 350 mA* |           | Order Codes              |
| Kit                                        | Dominant Wavelength (nm) | Code                               | Flux (mW) |                          |
| 01                                         | 450 - 465                | 34                                 | 550       | XBDROY-00-0000-000000N01 |
|                                            |                          | 33                                 | 525       | XBDROY-00-0000-000000M01 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L01 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K01 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J01 |
| 02                                         | 450 - 460                | 34                                 | 550       | XBDROY-00-0000-000000N02 |
|                                            |                          | 33                                 | 525       | XBDROY-00-0000-000000M02 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L02 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K02 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J02 |
| 03                                         | 455 - 465                | 33                                 | 525       | XBDROY-00-0000-000000M03 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L03 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K03 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J03 |
| 04                                         | 450 - 455                | 34                                 | 550       | XBDROY-00-0000-000000N04 |
|                                            |                          | 33                                 | 525       | XBDROY-00-0000-000000M04 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L04 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K04 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J04 |
| 05                                         | 455 - 460                | 33                                 | 525       | XBDROY-00-0000-000000M05 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L05 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K05 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J05 |
| 06                                         | 460 - 465                | 32                                 | 500       | XBDROY-00-0000-000000L06 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K06 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J06 |
| 07                                         | 452.5 - 457.5            | 33                                 | 525       | XBDROY-00-0000-000000M07 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L07 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K07 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J07 |
| 08                                         | 457.5 - 462.5            | 32                                 | 500       | XBDROY-00-0000-000000L08 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K08 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J08 |
| 09                                         | 452.5 - 462.5            | 33                                 | 525       | XBDROY-00-0000-000000M09 |
|                                            |                          | 32                                 | 500       | XBDROY-00-0000-000000L09 |
|                                            |                          | 31                                 | 475       | XBDROY-00-0000-000000K09 |
|                                            |                          | 30                                 | 450       | XBDROY-00-0000-000000J09 |

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-D COLOR,  $T_j = 25\text{ }^{\circ}\text{C}$ , CONTINUED)**

| XLamp XB-D Standard Kit Codes - Blue |                          |                                      |           |                          |
|--------------------------------------|--------------------------|--------------------------------------|-----------|--------------------------|
| Blue                                 |                          | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |
| Kit                                  | Dominant Wavelength (nm) | Code                                 | Flux (lm) |                          |
| 01                                   | 465 - 485                | M2                                   | 39.8      | XBDBLU-00-0000-000000201 |
|                                      |                          | K3                                   | 35.2      | XBDBLU-00-0000-000000Z01 |
|                                      |                          | K2                                   | 30.6      | XBDBLU-00-0000-000000Y01 |
| 02                                   | 465 - 480                | M2                                   | 39.8      | XBDBLU-00-0000-000000202 |
|                                      |                          | K3                                   | 35.2      | XBDBLU-00-0000-000000Z02 |
|                                      |                          | K2                                   | 30.6      | XBDBLU-00-0000-000000Y02 |
| 05                                   | 470 - 480                | M2                                   | 39.8      | XBDBLU-00-0000-000000205 |
|                                      |                          | K3                                   | 35.2      | XBDBLU-00-0000-000000Z05 |
|                                      |                          | K2                                   | 30.6      | XBDBLU-00-0000-000000Y05 |

| XLamp XB-D Standard Kit Codes - Green |                          |                                      |           |                          |
|---------------------------------------|--------------------------|--------------------------------------|-----------|--------------------------|
| Green                                 |                          | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |
| Kit                                   | Dominant Wavelength (nm) | Code                                 | Flux (lm) |                          |
| 01                                    | 520 - 535                | Q5                                   | 107       | XBDGRN-00-0000-000000D01 |
|                                       |                          | Q4                                   | 100       | XBDGRN-00-0000-000000C01 |
|                                       |                          | Q3                                   | 93.9      | XBDGRN-00-0000-000000B01 |
|                                       |                          | Q2                                   | 87.4      | XBDGRN-00-0000-000000A01 |
| 02                                    | 520 - 530                | Q5                                   | 107       | XBDGRN-00-0000-000000D02 |
|                                       |                          | Q4                                   | 100       | XBDGRN-00-0000-000000C02 |
|                                       |                          | Q3                                   | 93.9      | XBDGRN-00-0000-000000B02 |
|                                       |                          | Q2                                   | 87.4      | XBDGRN-00-0000-000000A02 |
| 03                                    | 525 - 535                | Q5                                   | 107       | XBDGRN-00-0000-000000D03 |
|                                       |                          | Q4                                   | 100       | XBDGRN-00-0000-000000C03 |
|                                       |                          | Q3                                   | 93.9      | XBDGRN-00-0000-000000B03 |
|                                       |                          | Q2                                   | 87.4      | XBDGRN-00-0000-000000A03 |

| XLamp XB-D Standard Kit Codes - Amber |                          |                                      |           |                          |
|---------------------------------------|--------------------------|--------------------------------------|-----------|--------------------------|
| Amber                                 |                          | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |
| Kit                                   | Dominant Wavelength (nm) | Code                                 | Flux (lm) |                          |
| 01                                    | 585 - 595                | P3                                   | 73.9      | XBDAMB-00-0000-000000801 |
|                                       |                          | P2                                   | 67.2      | XBDAMB-00-0000-000000701 |
|                                       |                          | N4                                   | 62        | XBDAMB-00-0000-000000601 |
|                                       |                          | N3                                   | 56.8      | XBDAMB-00-0000-000000501 |
| 03                                    | 590 - 595                | P3                                   | 73.9      | XBDAMB-00-0000-000000803 |
|                                       |                          | P2                                   | 67.2      | XBDAMB-00-0000-000000703 |
|                                       |                          | N4                                   | 62        | XBDAMB-00-0000-000000603 |
|                                       |                          | N3                                   | 56.8      | XBDAMB-00-0000-000000503 |

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-D COLOR, T<sub>j</sub> = 25 °C, CONTINUED)**

| XLamp XB-D Standard Kit Codes - Red-Orange |                          |                                      |           |                          |
|--------------------------------------------|--------------------------|--------------------------------------|-----------|--------------------------|
| Red-Orange                                 |                          | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |
| Kit                                        | Dominant Wavelength (nm) | Code                                 | Flux (lm) |                          |
| 01                                         | 610 - 620                | Q4                                   | 100       | XBDRDO-00-0000-000000C01 |
|                                            |                          | Q3                                   | 93.9      | XBDRDO-00-0000-000000B01 |
|                                            |                          | Q2                                   | 87.4      | XBDRDO-00-0000-000000A01 |
|                                            |                          | P4                                   | 80.6      | XBDRDO-00-0000-000000901 |
|                                            |                          | P3                                   | 73.9      | XBDRDO-00-0000-000000801 |
| 02                                         | 610 - 615                | Q4                                   | 100       | XBDRDO-00-0000-000000C02 |
|                                            |                          | Q3                                   | 93.9      | XBDRDO-00-0000-000000B02 |
|                                            |                          | Q2                                   | 87.4      | XBDRDO-00-0000-000000A02 |
|                                            |                          | P4                                   | 80.6      | XBDRDO-00-0000-000000902 |
|                                            |                          | P3                                   | 73.9      | XBDRDO-00-0000-000000802 |
| 03                                         | 615 - 620                | Q4                                   | 100       | XBDRDO-00-0000-000000C03 |
|                                            |                          | Q3                                   | 93.9      | XBDRDO-00-0000-000000B03 |
|                                            |                          | Q2                                   | 87.4      | XBDRDO-00-0000-000000A03 |
|                                            |                          | P4                                   | 80.6      | XBDRDO-00-0000-000000903 |
|                                            |                          | P3                                   | 73.9      | XBDRDO-00-0000-000000803 |

| XLamp XB-D Standard Kit Codes - Red |                          |                                      |           |                          |
|-------------------------------------|--------------------------|--------------------------------------|-----------|--------------------------|
| Red                                 |                          | Minimum Luminous Flux (lm) @ 350 mA* |           | Order Codes              |
| Kit                                 | Dominant Wavelength (nm) | Code                                 | Flux (lm) |                          |
| 01                                  | 620 - 630                | P2                                   | 67.2      | XBDRED-00-0000-000000701 |
|                                     |                          | N4                                   | 62        | XBDRED-00-0000-000000601 |
|                                     |                          | N3                                   | 56.8      | XBDRED-00-0000-000000501 |
| 02                                  | 620 - 625                | P2                                   | 67.2      | XBDRED-00-0000-000000702 |
|                                     |                          | N4                                   | 62        | XBDRED-00-0000-000000602 |
|                                     |                          | N3                                   | 56.8      | XBDRED-00-0000-000000502 |

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-E HVW NEUTRAL WHITE,  $T_j = 85^\circ\text{C}$ )**

| XLamp XB-E HVW Standard Kit Codes - White |        |                                     |           |                          |
|-------------------------------------------|--------|-------------------------------------|-----------|--------------------------|
| Chromaticity                              |        | Minimum Luminous Flux (lm) @ 44 mA* |           | Order Codes              |
| Kit                                       | CCT    | Code                                | Flux (lm) | 80 CRI Minimum           |
| ANSI Neutral White (3700 K – 5000 K)      |        |                                     |           |                          |
| E3                                        | 5000 K | R3                                  | 122       | XBEHVW-H0-0000-00000HFE3 |
|                                           |        | R2                                  | 114       | XBEHVW-H0-0000-00000HEE3 |
|                                           |        | Q5                                  | 107       | XBEHVW-H0-0000-00000HDE3 |
| F4                                        | 4750 K | R3                                  | 122       | XBEHVW-H0-0000-00000HFF4 |
|                                           |        | R2                                  | 114       | XBEHVW-H0-0000-00000HEF4 |
|                                           |        | Q5                                  | 107       | XBEHVW-H0-0000-00000HDF4 |

**STANDARD ORDER CODES AND BINS (XB-E HVW WARM WHITE,  $T_j = 85^\circ\text{C}$ )**

| XLamp XB-E HVW Standard Kit Codes - White |        |                                     |           |                          |
|-------------------------------------------|--------|-------------------------------------|-----------|--------------------------|
| Chromaticity                              |        | Minimum Luminous Flux (lm) @ 44 mA* |           | Order Codes              |
| Kit                                       | CCT    | Code                                | Flux (lm) | 80 CRI Minimum           |
| ANSI Warm White (2700 K - 3750 K)         |        |                                     |           |                          |
| E7                                        | 3000 K | Q4                                  | 100       | XBEHVW-H0-0000-00000HCE7 |
|                                           |        | Q3                                  | 93.9      | XBEHVW-H0-0000-00000HBE7 |
|                                           |        | Q2                                  | 87.4      | XBEHVW-H0-0000-00000HAE7 |
| F8                                        | 2850 K | Q4                                  | 100       | XBEHVW-H0-0000-00000HCF8 |
|                                           |        | Q3                                  | 93.9      | XBEHVW-H0-0000-00000HBF8 |
|                                           |        | Q2                                  | 87.4      | XBEHVW-H0-0000-00000HAF8 |
| E8                                        | 2700 K | Q4                                  | 100       | XBEHVW-H0-0000-00000HCE8 |
|                                           |        | Q3                                  | 93.9      | XBEHVW-H0-0000-00000HBE8 |
|                                           |        | Q2                                  | 87.4      | XBEHVW-H0-0000-00000HAE8 |

\* Cree XLamp XB Family 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.

**STANDARD ORDER CODES AND BINS (XB-G HVW WARM WHITE,  $T_j = 85\text{ }^{\circ}\text{C}$ )**

| XLamp XB-G HVW Standard Kit Codes - White |        |                                     |           |                          |
|-------------------------------------------|--------|-------------------------------------|-----------|--------------------------|
| Chromaticity                              |        | Minimum Luminous Flux (lm) @ 44 mA* |           | Order Codes              |
| Kit                                       | CCT    | Code                                | Flux (lm) | 80 CRI Minimum           |
| ANSI Warm White (2700 K - 3750 K)         |        |                                     |           |                          |
| E7                                        | 3000 K | Q5                                  | 107       | XBGHVW-H0-0000-00000HDE7 |
|                                           |        | Q4                                  | 100       | XBGHVW-H0-0000-00000HCE7 |
|                                           |        | Q3                                  | 93.9      | XBGHVW-H0-0000-00000HBE7 |
| F8                                        | 2850 K | Q5                                  | 107       | XBGHVW-H0-0000-00000HDF8 |
|                                           |        | Q4                                  | 100       | XBGHVW-H0-0000-00000HCF8 |
|                                           |        | Q3                                  | 93.9      | XBGHVW-H0-0000-00000HBF8 |
| E8                                        | 2700 K | Q5                                  | 107       | XBGHVW-H0-0000-00000HDE8 |
|                                           |        | Q4                                  | 100       | XBGHVW-H0-0000-00000HCE8 |
|                                           |        | Q3                                  | 93.9      | XBGHVW-H0-0000-00000HBE8 |

\* Cree XLamp XB Family 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.