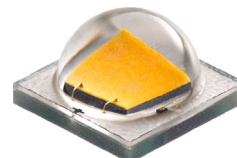
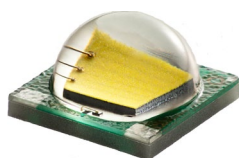


# Cree® XLamp® XM Family LEDs



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## INTRODUCTION

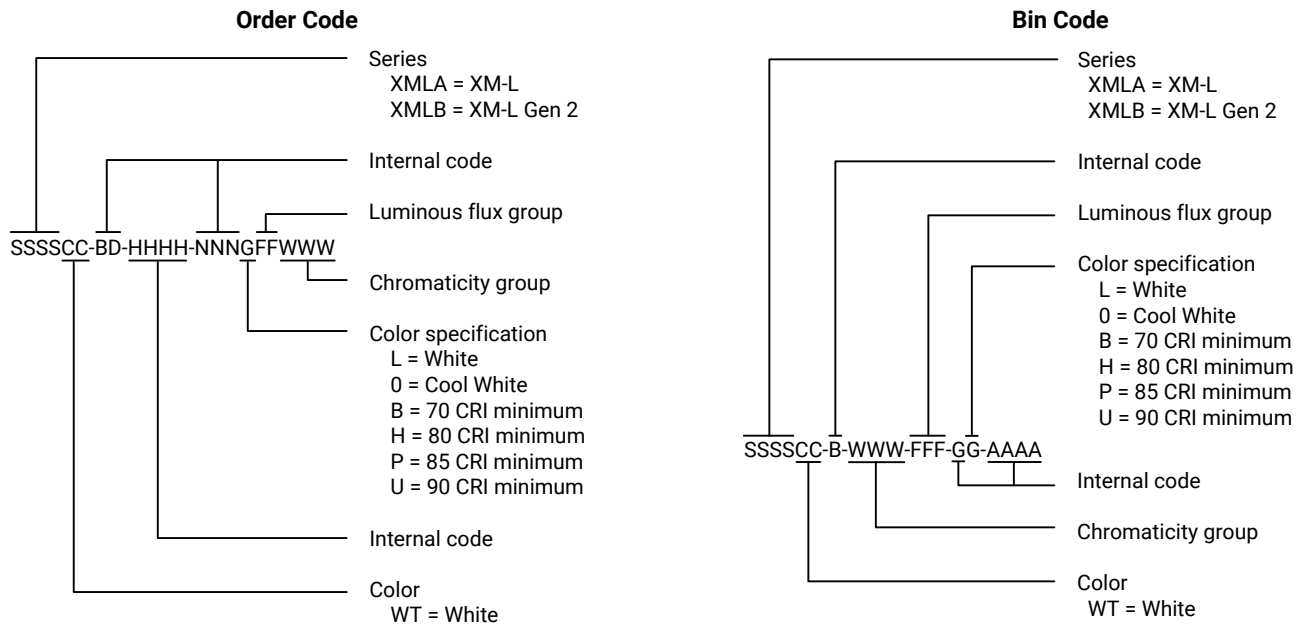
This document describes the product nomenclature required to select and order Cree’s XLamp® XM family of LEDs. XLamp XM family LEDs are tested and sorted into bins which are then combined into orderable kits identified by an order code.

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). High Voltage White XLamp LEDs are sorted by chromaticity, luminous flux and voltage. LEDs are shipped on reels containing LEDs from one bin and are always labeled with the appropriate bin code.

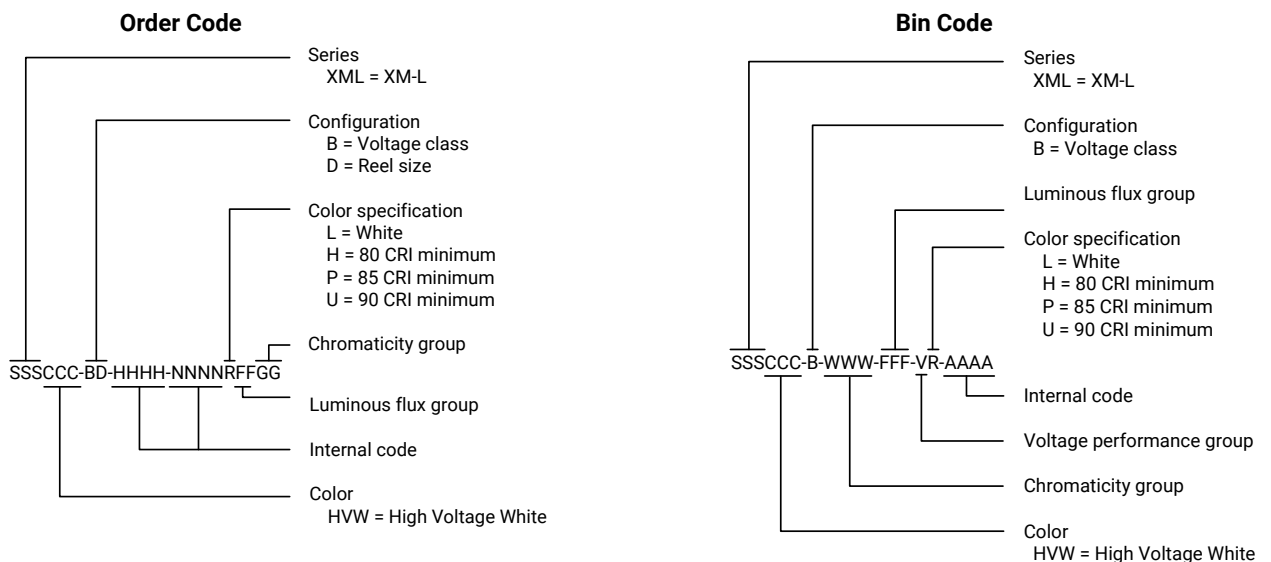
Kits contain LEDs from a number of similar bins and are fully defined by their order codes. A full explanation of the order codes for XLamp XM family LEDs, as well as a list of standard order codes, is provided in this document.

## BIN AND ORDER CODE FORMATS

Bin codes and order codes for XM-L and XM-L2 White LEDs are configured in the following manner:



Bin codes and order codes for XM-L High Voltage White LEDs are configured in the following manner:



## PERFORMANCE GROUPS – LUMINOUS FLUX

XLamp XM-L and XM-L2 White LEDs are tested for luminous flux and placed into one of the following luminous-flux groups:

| Group Code | Min. Luminous Flux<br>@ 700 mA (lm) | Max. Luminous Flux<br>@ 700 mA (lm) |
|------------|-------------------------------------|-------------------------------------|
| S2         | 148                                 | 156                                 |
| S3         | 156                                 | 164                                 |
| S4         | 164                                 | 172                                 |
| S5         | 172                                 | 182                                 |
| S6         | 182                                 | 200                                 |
| T2         | 200                                 | 220                                 |
| T3         | 220                                 | 240                                 |
| T4         | 240                                 | 260                                 |
| T5         | 260                                 | 280                                 |
| T6         | 280                                 | 300                                 |
| U2         | 300                                 | 320                                 |
| U3         | 320                                 | 340                                 |
| U4         | 340                                 | 360                                 |

XLamp XM-L High Voltage White LEDs are tested for luminous flux and placed into one of the following luminous-flux groups:

| Group Code | Min. Luminous Flux<br>@ 44 mA (lm) | Max. Luminous Flux<br>@ 44 mA (lm) |
|------------|------------------------------------|------------------------------------|
| R5         | 139                                | 148                                |
| S2         | 148                                | 156                                |
| S3         | 156                                | 164                                |
| S4         | 164                                | 172                                |
| S5         | 172                                | 182                                |
| S6         | 182                                | 200                                |
| T2         | 200                                | 220                                |
| T3         | 220                                | 240                                |
| T4         | 240                                | 260                                |
| T5         | 260                                | 280                                |
| T6         | 280                                | 300                                |

# 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 |
| 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 |
| 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 | 0.353  |
| 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 |

## PERFORMANCE GROUPS – CHROMATICITY (CONTINUED)

| Region | x      | y      | Region | x      | y      | Region | x      | y      | Region | x      | y      |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 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 |
| 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 |

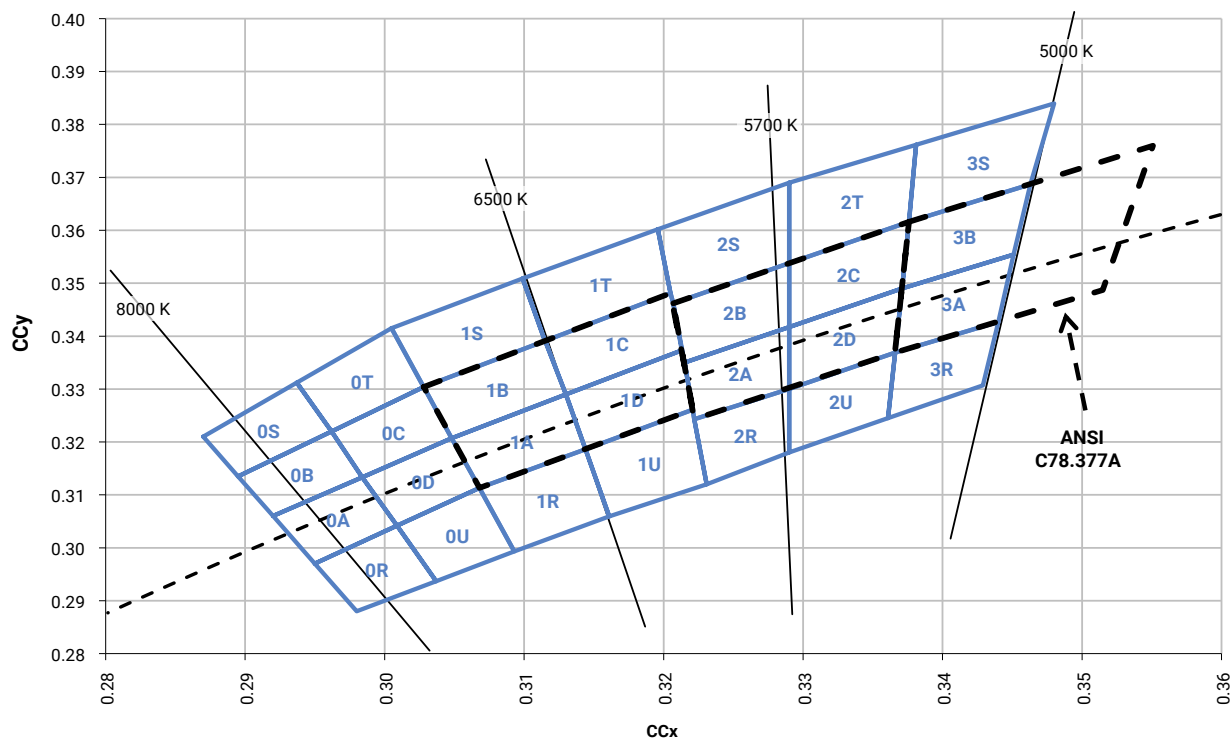
## PERFORMANCE GROUPS – VOLTAGE

XLamp XM-L High Voltage White LEDs are classified into one of the following voltage classes:

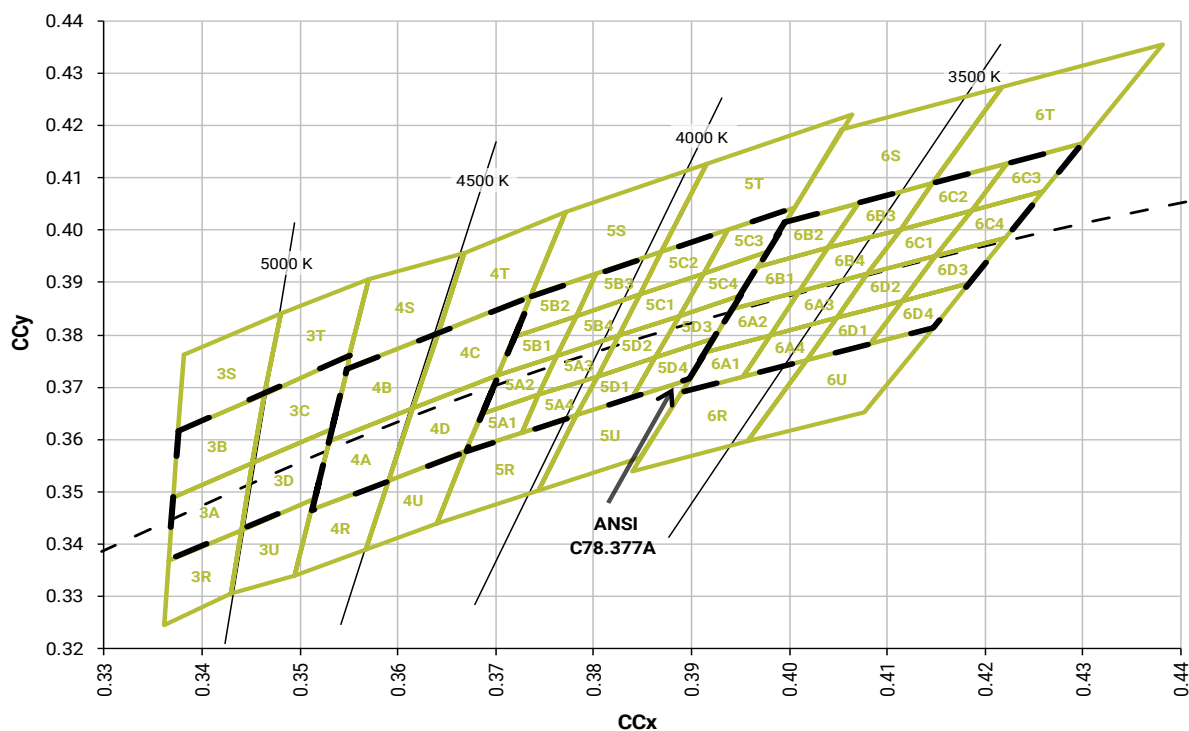
| Forward Voltage Class | Minimum Forward Voltage @ 44 mA (V)<br>Tj = 85 °C | Maximum Forward Voltage @ 44 mA (V)<br>Tj = 85 °C |
|-----------------------|---------------------------------------------------|---------------------------------------------------|
| 0                     | No voltage bin                                    |                                                   |
| 1                     | 40.0                                              | 42.5                                              |
| 2                     | 42.5                                              | 45.0                                              |
| 3                     | 45.0                                              | 47.5                                              |
| 4                     | 47.5                                              | 50.0                                              |
| 5                     | 50.0                                              | 52.5                                              |
| 6                     | 52.5                                              | 55.0                                              |

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

### ANSI Cool White

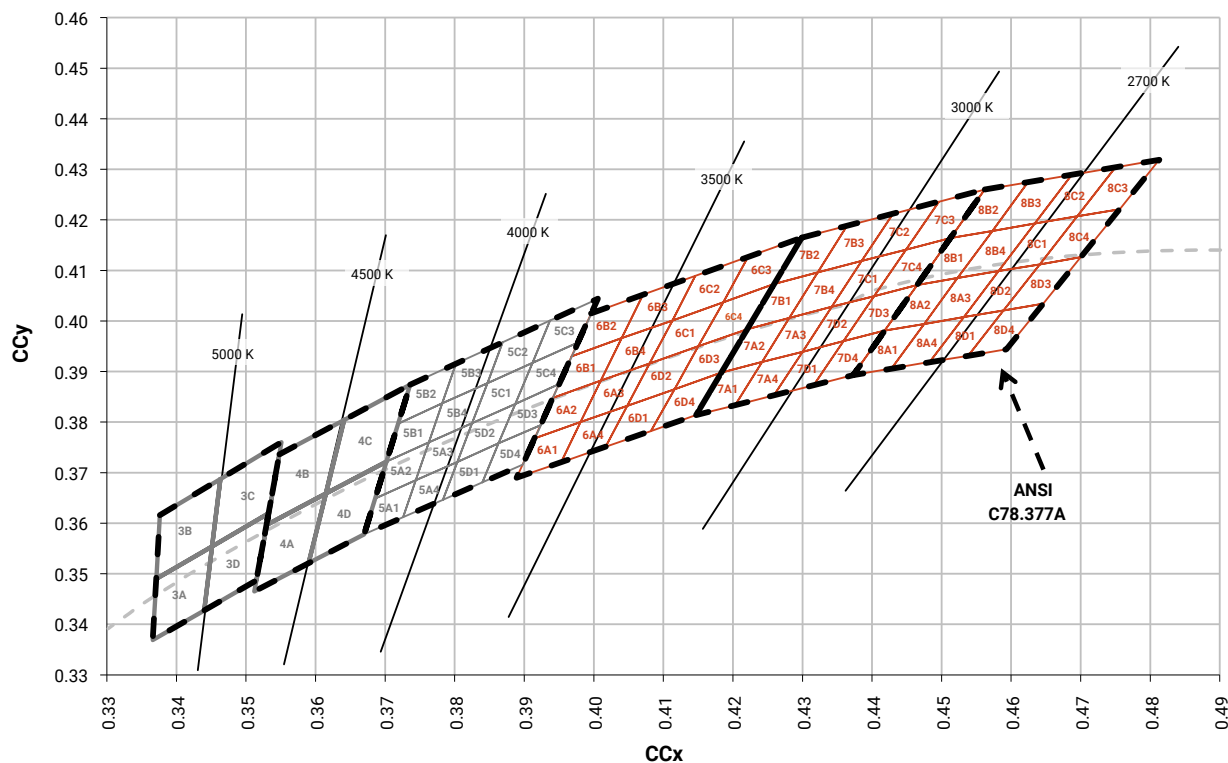


### Neutral White

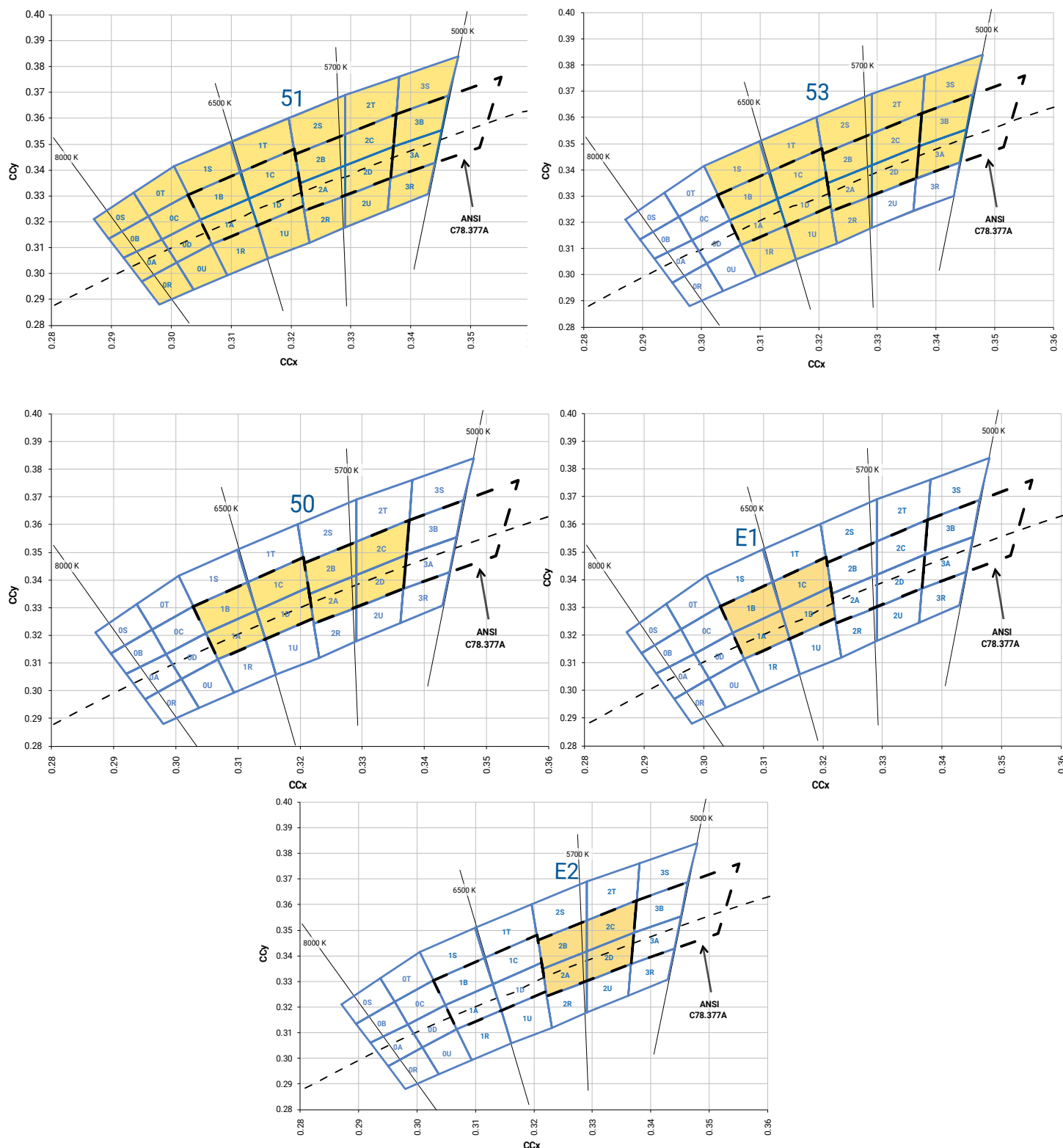


**CREE'S STANDARD CHROMATICITY REGIONS PLOTTED ON THE 1931 CIE CURVE - CONTINUED**

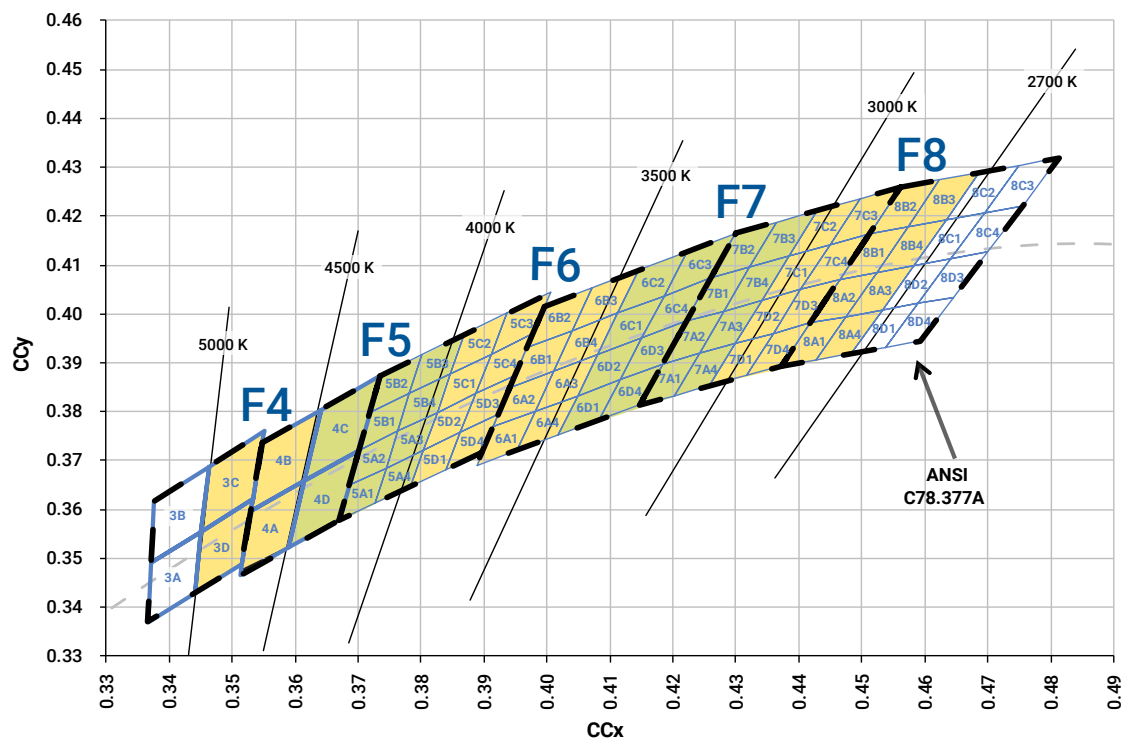
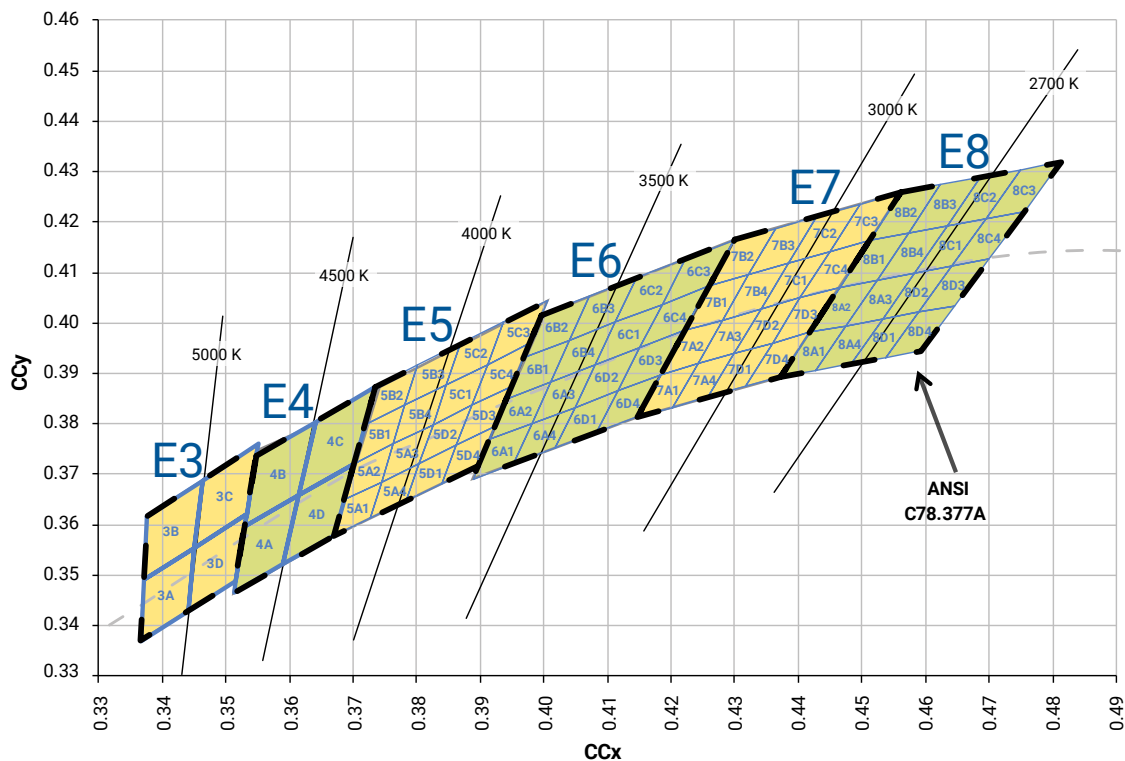
ANSI Neutral White and ANSI warm white



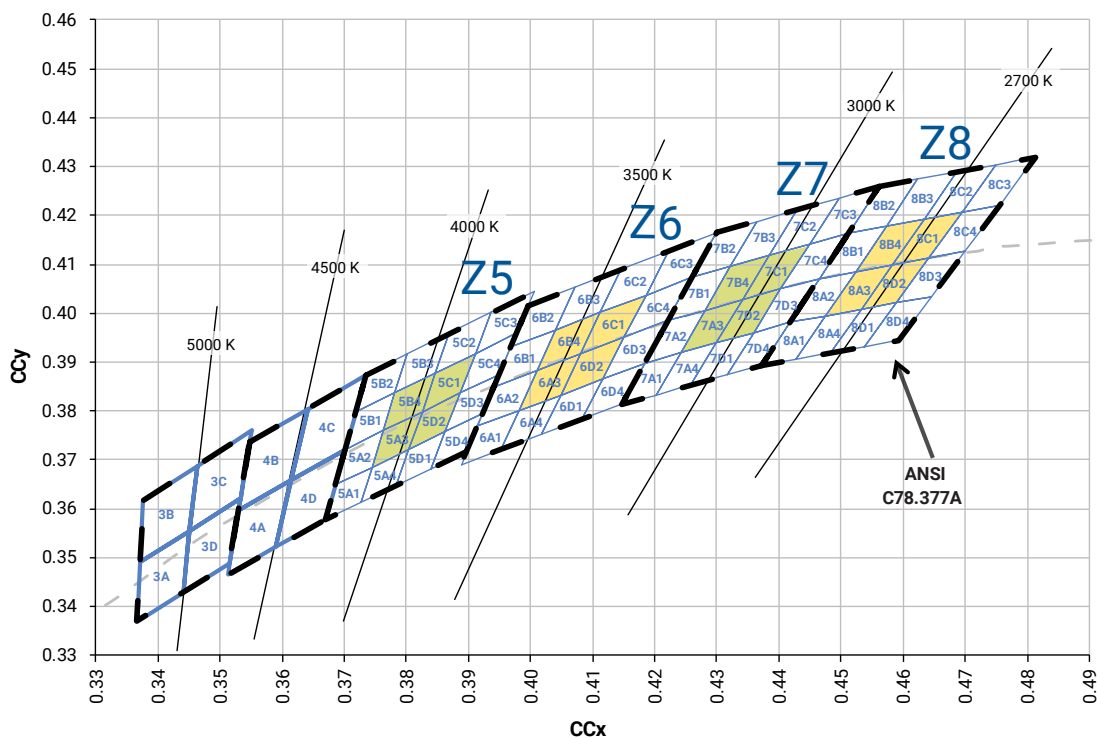
## CREE'S STANDARD COOL WHITE KITS PLOTTED ON ANSI STANDARD CHROMATICITY REGIONS



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



**CREE'S STANDARD WARM AND NEUTRAL WHITE KITS PLOTTED ON ANSI STANDARD CHROMATICITY REGIONS - CONTINUED**



## CREE'S STANDARD CHROMATICITY KITS

The following table provides the chromaticity bins associated with chromaticity kits.

| Color         | CCT    | Kit | Chromaticity Bins                                                                                              |
|---------------|--------|-----|----------------------------------------------------------------------------------------------------------------|
| Cool White    | 6200 K | S1  | 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 |
|               | 6000 K | S3  | 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S                                         |
|               | 6200 K | S0  | 1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D                                                                                 |
|               | 6500 K | E1  | 1A, 1B, 1C, 1D                                                                                                 |
|               | 5700 K | E2  | 2A, 2B, 2C, 2D                                                                                                 |
| Neutral White | 5000 K | E3  | 3A, 3B, 3C, 3D                                                                                                 |
|               | 4750 K | F4  | 3C, 3D, 4A, 4B                                                                                                 |
|               | 4500 K | E4  | 4A, 4B, 4C, 4D                                                                                                 |
|               | 4250 K | F5  | 4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4                                                                 |
|               | 4000 K | E5  | 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4                                 |
|               | 4000 K | Z5  | 5A3, 5B4, 5C1, 5D2                                                                                             |
| Warm White    | 3750 K | F6  | 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4                                 |
|               | 3500 K | E6  | 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4                                 |
|               | 3500 K | Z6  | 6A3, 6B4, 6C1, 6D2                                                                                             |
|               | 3250 K | F7  | 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4                                 |
|               | 3000 K | E7  | 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4                                 |
|               | 3000 K | Z7  | 7A3, 7B4, 7C1, 7D2                                                                                             |
|               | 2850 K | F8  | 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4                                 |
|               | 2700 K | E8  | 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4                                 |
|               | 2700 K | Z8  | 8A3, 8B4, 8C1, 8D2                                                                                             |

\* Cree XLamp XM Family 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.

The following tables of order codes list flux minimums and chromaticity regions for XLamp XM family LEDs. For other flux and chromaticity combinations, contact Cree or an authorized distributor.

### STANDARD ORDER CODES AND BINS (XM-L ANSI COOL WHITE, $T_J = 25\text{ }^{\circ}\text{C}$ )

| XLamp XM-L LED Standard Order Codes - White |        |                                      |           |                          |
|---------------------------------------------|--------|--------------------------------------|-----------|--------------------------|
| Chromaticity                                |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |
| Kit                                         | CCT    | Code                                 | Flux (lm) | 65 CRI Typical           |
| ANSI Cool White (5000 K – 8300 K)           |        |                                      |           |                          |
| 51                                          | 6200 K | U2                                   | 300       | XMLAWT-00-0000-0000U2051 |
|                                             |        | T6                                   | 280       | XMLAWT-00-0000-0000T6051 |
|                                             |        | T5                                   | 260       | XMLAWT-00-0000-0000T5051 |
| 53                                          | 6000 K | U2                                   | 300       | XMLAWT-00-0000-0000U2053 |
|                                             |        | T6                                   | 280       | XMLAWT-00-0000-0000T6053 |
|                                             |        | T5                                   | 260       | XMLAWT-00-0000-0000T5053 |
| 50                                          | 6200 K | U2                                   | 300       | XMLAWT-00-0000-0000U2050 |
|                                             |        | T6                                   | 280       | XMLAWT-00-0000-0000T6050 |
|                                             |        | T5                                   | 260       | XMLAWT-00-0000-0000T5050 |
| E1                                          | 6500 K | U2                                   | 300       | XMLAWT-00-0000-0000U20E1 |
|                                             |        | T6                                   | 280       | XMLAWT-00-0000-0000T60E1 |
|                                             |        | T5                                   | 260       | XMLAWT-00-0000-0000T50E1 |
| E2                                          | 5700 K | U2                                   | 300       | XMLAWT-00-0000-0000U20E2 |
|                                             |        | T6                                   | 280       | XMLAWT-00-0000-0000T60E2 |
|                                             |        | T5                                   | 260       | XMLAWT-00-0000-0000T50E2 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L ANSI NEUTRAL WHITE, T<sub>j</sub> = 25 °C)

| XLamp XM-L LED Standard Kit Codes - White |        |                                      |           |                          |                          |
|-------------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|
| Chromaticity                              |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |                          |
| Kit                                       | CCT    | Code                                 | Flux (lm) | 75 CRI Typical           | 80 CRI Minimum           |
| ANSI Neutral White (3700 K – 5000 K)      |        |                                      |           |                          |                          |
| E3                                        | 5000 K | T6                                   | 280       | XMLAWT-00-0000-000LT60E3 |                          |
|                                           |        | T5                                   | 260       | XMLAWT-00-0000-000LT50E3 |                          |
|                                           |        | T4                                   | 240       | XMLAWT-00-0000-000LT40E3 |                          |
| F4                                        | 4750 K | T5                                   | 260       | XMLAWT-00-0000-000LT50F4 |                          |
|                                           |        | T4                                   | 240       | XMLAWT-00-0000-000LT40F4 |                          |
| E4                                        | 4500 K | T5                                   | 260       | XMLAWT-00-0000-000LT50E4 |                          |
|                                           |        | T4                                   | 240       | XMLAWT-00-0000-000LT40E4 |                          |
| F5                                        | 4250 K | T5                                   | 260       | XMLAWT-00-0000-000LT50F5 |                          |
|                                           |        | T4                                   | 240       | XMLAWT-00-0000-000LT40F5 |                          |
| E5                                        | 4000 K | T5                                   | 260       | XMLAWT-00-0000-000LT50E5 |                          |
|                                           |        | T4                                   | 240       | XMLAWT-00-0000-000LT40E5 | XMLAWT-00-0000-000HT40E5 |
|                                           |        | T3                                   | 220       | XMLAWT-00-0000-000LT30E5 | XMLAWT-00-0000-000HT30E5 |
| Z5                                        | 4000 K | T4                                   | 240       | XMLAWT-00-0000-000LT40Z5 |                          |
|                                           |        | T3                                   | 220       | XMLAWT-00-0000-000LT30Z5 | XMLAWT-00-0000-000HT30Z5 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L ANSI WARM WHITE, T<sub>J</sub> = 25 °C)

| XLamp XM-L LED Standard Kit Codes - White |        |                                      |           |                          |                          |                          |                          |
|-------------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| Chromaticity                              |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |                          |                          |                          |
| Kit                                       | CCT    | Code                                 | Flux (lm) | 80 CRI Typical           | 80 CRI Minimum           | 85 CRI Minimum           | 90 CRI Minimum           |
| ANSI Warm White (2700 K - 3750 K)         |        |                                      |           |                          |                          |                          |                          |
| F6                                        | 3750 K | T4                                   | 240       | XMLAWT-00-0000-000LT40F6 | XMLAWT-00-0000-000HT40F6 |                          |                          |
|                                           |        | T3                                   | 220       | XMLAWT-00-0000-000LT30F6 | XMLAWT-00-0000-000HT30F6 |                          |                          |
|                                           |        | T2                                   | 200       | XMLAWT-00-0000-000LT20F6 | XMLAWT-00-0000-000HT20F6 |                          |                          |
| E6                                        | 3500 K | T4                                   | 240       | XMLAWT-00-0000-000LT40E6 | XMLAWT-00-0000-000HT40E6 |                          |                          |
|                                           |        | T3                                   | 220       | XMLAWT-00-0000-000LT30E6 | XMLAWT-00-0000-000HT30E6 |                          |                          |
|                                           |        | T2                                   | 200       | XMLAWT-00-0000-000LT20E6 | XMLAWT-00-0000-000HT20E6 |                          |                          |
| Z6                                        | 3500 K | T3                                   | 220       | XMLAWT-00-0000-000LT30Z6 | XMLAWT-00-0000-000HT30Z6 |                          |                          |
|                                           |        | T2                                   | 200       | XMLAWT-00-0000-000LT20Z6 | XMLAWT-00-0000-000HT20Z6 |                          |                          |
| F7                                        | 3250 K | T3                                   | 220       | XMLAWT-00-0000-000LT30F7 | XMLAWT-00-0000-000HT30F7 |                          |                          |
|                                           |        | T2                                   | 200       | XMLAWT-00-0000-000LT20F7 | XMLAWT-00-0000-000HT20F7 |                          |                          |
| E7                                        | 3000 K | T3                                   | 220       | XMLAWT-00-0000-000LT30E7 | XMLAWT-00-0000-000HT30E7 |                          |                          |
|                                           |        | T2                                   | 200       | XMLAWT-00-0000-000LT20E7 | XMLAWT-00-0000-000HT20E7 |                          |                          |
|                                           |        | S6                                   | 182       |                          |                          | XMLAWT-00-0000-000PS60E7 | XMLAWT-00-0000-000US60E7 |
|                                           |        | S5                                   | 172       |                          |                          | XMLAWT-00-0000-000PS50E7 | XMLAWT-00-0000-000US50E7 |
|                                           |        | S4                                   | 164       |                          |                          | XMLAWT-00-0000-000PS40E7 | XMLAWT-00-0000-000US40E7 |
| Z7                                        | 3000 K | T3                                   | 220       | XMLAWT-00-0000-000LT30Z7 | XMLAWT-00-0000-000HT30Z7 |                          |                          |
|                                           |        | T2                                   | 200       | XMLAWT-00-0000-000LT20Z7 | XMLAWT-00-0000-000HT20Z7 |                          |                          |
|                                           |        | S6                                   | 182       |                          |                          |                          |                          |
|                                           |        | S5                                   | 172       |                          |                          | XMLAWT-00-0000-000PS50Z7 | XMLAWT-00-0000-000US50Z7 |
|                                           |        | S4                                   | 164       |                          |                          | XMLAWT-00-0000-000PS40Z7 | XMLAWT-00-0000-000US40Z7 |
| F8                                        | 2850 K | T2                                   | 200       | XMLAWT-00-0000-000LT20F8 | XMLAWT-00-0000-000HT20F8 |                          |                          |
|                                           |        | S6                                   | 182       | XMLAWT-00-0000-000LS60F8 | XMLAWT-00-0000-000HS60F8 |                          |                          |
|                                           |        | S5                                   | 172       |                          |                          | XMLAWT-00-0000-000PS50F8 | XMLAWT-00-0000-000US50F8 |
|                                           |        | S4                                   | 164       |                          |                          | XMLAWT-00-0000-000PS40F8 | XMLAWT-00-0000-000US40F8 |
|                                           |        | S3                                   | 156       |                          |                          | XMLAWT-00-0000-000PS30F8 | XMLAWT-00-0000-000US30F8 |
| E8                                        | 2700 K | T2                                   | 200       | XMLAWT-00-0000-000LT20E8 | XMLAWT-00-0000-000HT20E8 |                          |                          |
|                                           |        | S6                                   | 182       | XMLAWT-00-0000-000LS60E8 | XMLAWT-00-0000-000HS60E8 |                          |                          |
|                                           |        | S5                                   | 172       |                          |                          | XMLAWT-00-0000-000PS50E8 | XMLAWT-00-0000-000US50E8 |
|                                           |        | S4                                   | 164       |                          |                          | XMLAWT-00-0000-000PS40E8 | XMLAWT-00-0000-000US40E8 |
|                                           |        | S3                                   | 156       |                          |                          | XMLAWT-00-0000-000PS30E8 | XMLAWT-00-0000-000US30E8 |
| Z8                                        | 2700 K | T2                                   | 200       | XMLAWT-00-0000-000LT20Z8 | XMLAWT-00-0000-000HT20Z8 |                          |                          |
|                                           |        | S6                                   | 182       | XMLAWT-00-0000-000LS60Z8 | XMLAWT-00-0000-000HS60Z8 |                          |                          |
|                                           |        | S5                                   | 172       |                          |                          |                          |                          |
|                                           |        | S4                                   | 164       |                          |                          | XMLAWT-00-0000-000PS40Z8 | XMLAWT-00-0000-000US40Z8 |
|                                           |        | S3                                   | 156       |                          |                          | XMLAWT-00-0000-000PS30Z8 | XMLAWT-00-0000-000US30Z8 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L2 ANSI COOL WHITE, T<sub>j</sub> = 85 °C)

| XLamp XM-L2 LED Standard Order Codes - White |        |                                      |           |                          |                          |
|----------------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|
| Chromaticity                                 |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |                          |
| Kit                                          | CCT    | Code                                 | Flux (lm) | 65 CRI Typical           | 85 CRI Minimum           |
| ANSI Cool White (5000 K – 8300 K)            |        |                                      |           |                          |                          |
| 51                                           | 6200 K | U3                                   | 320       | XMLBWT-00-0000-0000U3051 |                          |
|                                              |        | U2                                   | 300       | XMLBWT-00-0000-0000U2051 |                          |
|                                              |        | T6                                   | 280       | XMLBWT-00-0000-0000T6051 |                          |
|                                              |        | T5                                   | 260       | XMLBWT-00-0000-0000T5051 |                          |
|                                              |        | T4                                   | 240       |                          | XMLBWT-00-0000-000PT4051 |
|                                              |        | T3                                   | 220       |                          | XMLBWT-00-0000-000PT3051 |
|                                              |        | T2                                   | 200       |                          | XMLBWT-00-0000-000PT2051 |
| 53                                           | 6000 K | U3                                   | 320       | XMLBWT-00-0000-0000U3053 |                          |
|                                              |        | U2                                   | 300       | XMLBWT-00-0000-0000U2053 |                          |
|                                              |        | T6                                   | 280       | XMLBWT-00-0000-0000T6053 |                          |
|                                              |        | T5                                   | 260       | XMLBWT-00-0000-0000T5053 |                          |
|                                              |        | T4                                   | 240       |                          | XMLBWT-00-0000-000PT4053 |
|                                              |        | T3                                   | 220       |                          | XMLBWT-00-0000-000PT3053 |
|                                              |        | T2                                   | 200       |                          | XMLBWT-00-0000-000PT2053 |
| 50                                           | 6200 K | U3                                   | 320       | XMLBWT-00-0000-0000U3050 |                          |
|                                              |        | U2                                   | 300       | XMLBWT-00-0000-0000U2050 |                          |
|                                              |        | T6                                   | 280       | XMLBWT-00-0000-0000T6050 |                          |
|                                              |        | T5                                   | 260       | XMLBWT-00-0000-0000T5050 |                          |
|                                              |        | T4                                   | 240       |                          | XMLBWT-00-0000-000PT4050 |
|                                              |        | T3                                   | 220       |                          | XMLBWT-00-0000-000PT3050 |
|                                              |        | T2                                   | 200       |                          | XMLBWT-00-0000-000PT2050 |
| E1                                           | 6500 K | U3                                   | 320       | XMLBWT-00-0000-0000U30E1 |                          |
|                                              |        | U2                                   | 300       | XMLBWT-00-0000-0000U20E1 |                          |
|                                              |        | T6                                   | 280       | XMLBWT-00-0000-0000T60E1 |                          |
|                                              |        | T5                                   | 260       | XMLBWT-00-0000-0000T50E1 |                          |
|                                              |        | T4                                   | 240       |                          | XMLBWT-00-0000-000PT40E1 |
|                                              |        | T3                                   | 220       |                          | XMLBWT-00-0000-000PT30E1 |
|                                              |        | T2                                   | 200       |                          | XMLBWT-00-0000-000PT20E1 |
| E2                                           | 5700 K | U3                                   | 320       | XMLBWT-00-0000-0000U30E2 |                          |
|                                              |        | U2                                   | 300       | XMLBWT-00-0000-0000U20E2 |                          |
|                                              |        | T6                                   | 280       | XMLBWT-00-0000-0000T60E2 |                          |
|                                              |        | T5                                   | 260       | XMLBWT-00-0000-0000T50E2 |                          |
|                                              |        | T4                                   | 240       |                          | XMLBWT-00-0000-000PT40E2 |
|                                              |        | T3                                   | 220       |                          | XMLBWT-00-0000-000PT30E2 |
|                                              |        | T2                                   | 200       |                          | XMLBWT-00-0000-000PT20E2 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L2 ANSI NEUTRAL WHITE, T<sub>j</sub> = 85 °C)

| XLamp XM-L2 LED Standard Kit Codes - White |        |                                      |           |                          |                          |                          |
|--------------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|--------------------------|
| Chromaticity                               |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |                          |                          |
| Kit                                        | CCT    | Code                                 | Flux (lm) | 70 CRI Minimum           | 75 CRI Typical           | 80 CRI Minimum           |
| ANSI Neutral White (3700 K – 5000 K)       |        |                                      |           |                          |                          |                          |
| E3                                         | 5000 K | U3                                   | 320       | XMLBWT-00-0000-000BU30E3 |                          |                          |
|                                            |        | U2                                   | 300       | XMLBWT-00-0000-000BU20E3 | XMLBWT-00-0000-000LU20E3 |                          |
|                                            |        | T6                                   | 280       | XMLBWT-00-0000-000BT60E3 | XMLBWT-00-0000-000LT60E3 |                          |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000BT50E3 | XMLBWT-00-0000-000LT50E3 |                          |
|                                            |        | T4                                   | 240       |                          | XMLBWT-00-0000-000LT40E3 |                          |
| F4                                         | 4750 K | U3                                   | 320       | XMLBWT-00-0000-000BU30F4 |                          |                          |
|                                            |        | U2                                   | 300       | XMLBWT-00-0000-000BU20F4 | XMLBWT-00-0000-000LU20F4 |                          |
|                                            |        | T6                                   | 280       | XMLBWT-00-0000-000BT60F4 | XMLBWT-00-0000-000LT60F4 |                          |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000BT50F4 | XMLBWT-00-0000-000LT50F4 |                          |
|                                            |        | T4                                   | 240       |                          | XMLBWT-00-0000-000LT40F4 |                          |
| E4                                         | 4500 K | U3                                   | 320       | XMLBWT-00-0000-000BU30E4 |                          |                          |
|                                            |        | U2                                   | 300       | XMLBWT-00-0000-000BU20E4 | XMLBWT-00-0000-000LU20E4 |                          |
|                                            |        | T6                                   | 280       | XMLBWT-00-0000-000BT60E4 | XMLBWT-00-0000-000LT60E4 |                          |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000BT50E4 | XMLBWT-00-0000-000LT50E4 |                          |
|                                            |        | T4                                   | 240       |                          | XMLBWT-00-0000-000LT40E4 |                          |
| F5                                         | 4250 K | U2                                   | 300       | XMLBWT-00-0000-000BU20F5 |                          |                          |
|                                            |        | T6                                   | 280       | XMLBWT-00-0000-000BT60F5 | XMLBWT-00-0000-000LT60F5 |                          |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000BT50F5 | XMLBWT-00-0000-000LT50F5 |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000BT40F5 | XMLBWT-00-0000-000LT40F5 |                          |
| E5                                         | 4000 K | U2                                   | 300       | XMLBWT-00-0000-000BU20E5 |                          |                          |
|                                            |        | T6                                   | 280       | XMLBWT-00-0000-000BT60E5 | XMLBWT-00-0000-000LT60E5 | XMLBWT-00-0000-000HT60E5 |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000BT50E5 | XMLBWT-00-0000-000LT50E5 | XMLBWT-00-0000-000HT50E5 |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000BT40E5 | XMLBWT-00-0000-000LT40E5 | XMLBWT-00-0000-000HT40E5 |
|                                            |        | T3                                   | 220       |                          | XMLBWT-00-0000-000LT30E5 | XMLBWT-00-0000-000HT30E5 |
| Z5                                         | 4000 K | T5                                   | 260       |                          | XMLBWT-00-0000-000LT50Z5 | XMLBWT-00-0000-000HT50Z5 |
|                                            |        | T4                                   | 240       |                          | XMLBWT-00-0000-000LT40Z5 | XMLBWT-00-0000-000HT40Z5 |
|                                            |        | T3                                   | 220       |                          | XMLBWT-00-0000-000LT30Z5 | XMLBWT-00-0000-000HT30Z5 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L2 ANSI WARM WHITE, T<sub>j</sub> = 85 °C)

| XLamp XM-L2 LED Standard Kit Codes - White |        |                                      |           |                          |                          |                          |                          |
|--------------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| Chromaticity                               |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |                          |                          |                          |
| Kit                                        | CCT    | Code                                 | Flux (lm) | 80 CRI Typical           | 80 CRI Minimum           | 85 CRI Minimum           | 90 CRI Minimum           |
| ANSI Warm White (2700 K - 3750 K)          |        |                                      |           |                          |                          |                          |                          |
| F6                                         | 3750 K | T6                                   | 280       | XMLBWT-00-0000-000LT60F6 | XMLBWT-00-0000-000HT60F6 |                          |                          |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000LT50F6 | XMLBWT-00-0000-000HT50F6 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40F6 | XMLBWT-00-0000-000HT40F6 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30F6 | XMLBWT-00-0000-000HT30F6 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20F6 | XMLBWT-00-0000-000HT20F6 |                          |                          |
| E6                                         | 3500 K | T6                                   | 280       | XMLBWT-00-0000-000LT60E6 | XMLBWT-00-0000-000HT60E6 |                          |                          |
|                                            |        | T5                                   | 260       | XMLBWT-00-0000-000LT50E6 | XMLBWT-00-0000-000HT50E6 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40E6 | XMLBWT-00-0000-000HT40E6 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30E6 | XMLBWT-00-0000-000HT30E6 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20E6 | XMLBWT-00-0000-000HT20E6 |                          |                          |
| Z6                                         | 3500 K | T5                                   | 260       | XMLBWT-00-0000-000LT50Z6 | XMLBWT-00-0000-000HT50Z6 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40Z6 | XMLBWT-00-0000-000HT40Z6 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30Z6 | XMLBWT-00-0000-000HT30Z6 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20Z6 | XMLBWT-00-0000-000HT20Z6 |                          |                          |
| F7                                         | 3250 K | T5                                   | 260       | XMLBWT-00-0000-000LT50F7 | XMLBWT-00-0000-000HT50F7 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40F7 | XMLBWT-00-0000-000HT40F7 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30F7 | XMLBWT-00-0000-000HT30F7 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20F7 | XMLBWT-00-0000-000HT20F7 |                          |                          |
| E7                                         | 3000 K | T5                                   | 260       | XMLBWT-00-0000-000LT50E7 | XMLBWT-00-0000-000HT50E7 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40E7 | XMLBWT-00-0000-000HT40E7 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30E7 | XMLBWT-00-0000-000HT30E7 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20E7 | XMLBWT-00-0000-000HT20E7 | XMLBWT-00-0000-000PT20E7 | XMLBWT-00-0000-000UT20E7 |
|                                            |        | S6                                   | 182       |                          |                          | XMLBWT-00-0000-000PS60E7 | XMLBWT-00-0000-000US60E7 |
|                                            |        | S5                                   | 172       |                          |                          | XMLBWT-00-0000-000PS50E7 | XMLBWT-00-0000-000US50E7 |
|                                            |        | S4                                   | 164       |                          |                          | XMLBWT-00-0000-000PS40E7 | XMLBWT-00-0000-000US40E7 |
| Z7                                         | 3000 K | T4                                   | 240       | XMLBWT-00-0000-000LT40Z7 | XMLBWT-00-0000-000HT40Z7 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30Z7 | XMLBWT-00-0000-000HT30Z7 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20Z7 | XMLBWT-00-0000-000HT20Z7 |                          |                          |
|                                            |        | S6                                   | 182       |                          |                          | XMLBWT-00-0000-000PS60Z7 | XMLBWT-00-0000-000US60Z7 |
|                                            |        | S5                                   | 172       |                          |                          | XMLBWT-00-0000-000PS50Z7 | XMLBWT-00-0000-000US50Z7 |
|                                            |        | S4                                   | 164       |                          |                          | XMLBWT-00-0000-000PS40Z7 | XMLBWT-00-0000-000US40Z7 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L2 ANSI WARM WHITE, $T_j = 85^\circ\text{C}$ ) - CONTINUED

| XLamp XM-L2 LED Standard Kit Codes - White |        |                                      |           |                          |                          |                          |                          |
|--------------------------------------------|--------|--------------------------------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| Chromaticity                               |        | Minimum Luminous Flux (lm) @ 700 mA* |           | Order Codes              |                          |                          |                          |
| Kit                                        | CCT    | Code                                 | Flux (lm) | 80 CRI Typical           | 80 CRI Minimum           | 85 CRI Minimum           | 90 CRI Minimum           |
| ANSI Warm White (2700 K - 3750 K)          |        |                                      |           |                          |                          |                          |                          |
| F8                                         | 2850 K | T5                                   | 260       | XMLBWT-00-0000-000LT50F8 | XMLBWT-00-0000-000HT50F8 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40F8 | XMLBWT-00-0000-000HT40F8 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30F8 | XMLBWT-00-0000-000LT30F8 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20F8 | XMLBWT-00-0000-000HT20F8 |                          |                          |
|                                            |        | S6                                   | 182       | XMLBWT-00-0000-000LS60F8 | XMLBWT-00-0000-000HS60F8 | XMLBWT-00-0000-000PS60F8 | XMLBWT-00-0000-000US60F8 |
|                                            |        | S5                                   | 172       |                          |                          | XMLBWT-00-0000-000PS50F8 | XMLBWT-00-0000-000US50F8 |
|                                            |        | S4                                   | 164       |                          |                          | XMLBWT-00-0000-000PS40F8 | XMLBWT-00-0000-000US40F8 |
|                                            |        | S3                                   | 156       |                          |                          | XMLBWT-00-0000-000PS30F8 | XMLBWT-00-0000-000US30F8 |
| E8                                         | 2700 K | T5                                   | 260       | XMLBWT-00-0000-000LT50E8 | XMLBWT-00-0000-000HT50E8 |                          |                          |
|                                            |        | T4                                   | 240       | XMLBWT-00-0000-000LT40E8 | XMLBWT-00-0000-000HT40E8 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30E8 | XMLBWT-00-0000-000HT30E8 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20E8 | XMLBWT-00-0000-000HT20E8 |                          |                          |
|                                            |        | S6                                   | 182       | XMLBWT-00-0000-000LS60E8 | XMLBWT-00-0000-000HS60E8 | XMLBWT-00-0000-000PS60E8 | XMLBWT-00-0000-000US60E8 |
|                                            |        | S5                                   | 172       |                          |                          | XMLBWT-00-0000-000PS50E8 | XMLBWT-00-0000-000US50E8 |
|                                            |        | S4                                   | 164       |                          |                          | XMLBWT-00-0000-000PS40E8 | XMLBWT-00-0000-000US40E8 |
|                                            |        | S3                                   | 156       |                          |                          | XMLBWT-00-0000-000PS30E8 | XMLBWT-00-0000-000US30E8 |
| Z8                                         | 2700 K | T4                                   | 240       | XMLBWT-00-0000-000LT40Z8 | XMLBWT-00-0000-000HT40Z8 |                          |                          |
|                                            |        | T3                                   | 220       | XMLBWT-00-0000-000LT30Z8 | XMLBWT-00-0000-000HT30Z8 |                          |                          |
|                                            |        | T2                                   | 200       | XMLBWT-00-0000-000LT20Z8 | XMLBWT-00-0000-000HT20Z8 |                          |                          |
|                                            |        | S6                                   | 182       | XMLBWT-00-0000-000LS60Z8 | XMLBWT-00-0000-000HS60Z8 |                          |                          |
|                                            |        | S5                                   | 172       |                          |                          | XMLBWT-00-0000-000PS50Z8 | XMLBWT-00-0000-000US50Z8 |
|                                            |        | S4                                   | 164       |                          |                          | XMLBWT-00-0000-000PS40Z8 | XMLBWT-00-0000-000US40Z8 |
|                                            |        | S3                                   | 156       |                          |                          | XMLBWT-00-0000-000PS30Z8 | XMLBWT-00-0000-000US30Z8 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI COOL WHITE, $T_j = 85\text{ }^{\circ}\text{C}$ )

| XLamp XM-L HVW LED Standard Order Codes - White |        |                                     |           |                          |
|-------------------------------------------------|--------|-------------------------------------|-----------|--------------------------|
| Chromaticity                                    |        | Minimum Luminous Flux (lm) @ 44 mA* |           | Order Codes              |
| Kit                                             | CCT    | Code                                | Flux (lm) | 65 CRI Typical           |
| ANSI Cool White (5000 K – 8300 K)               |        |                                     |           |                          |
| 51                                              | 6200 K | T5                                  | 260       | XMLHVW-Q0-0000-0000LT551 |
|                                                 |        | T4                                  | 240       | XMLHVW-Q0-0000-0000LT451 |
|                                                 |        | T3                                  | 220       | XMLHVW-Q0-0000-0000LT351 |
|                                                 |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT251 |
| 53                                              | 6000 K | T5                                  | 260       | XMLHVW-Q0-0000-0000LT553 |
|                                                 |        | T4                                  | 240       | XMLHVW-Q0-0000-0000LT453 |
|                                                 |        | T3                                  | 220       | XMLHVW-Q0-0000-0000LT353 |
|                                                 |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT253 |
| 50                                              | 6200 K | T5                                  | 260       | XMLHVW-Q0-0000-0000LT550 |
|                                                 |        | T4                                  | 240       | XMLHVW-Q0-0000-0000LT450 |
|                                                 |        | T3                                  | 220       | XMLHVW-Q0-0000-0000LT350 |
|                                                 |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT250 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI NEUTRAL WHITE, T<sub>J</sub> = 85 °C)

| XLamp XM-L HVW LED Standard Kit Codes - White |        |                                     |           |                          |                          |
|-----------------------------------------------|--------|-------------------------------------|-----------|--------------------------|--------------------------|
| Chromaticity                                  |        | Minimum Luminous Flux (lm) @ 44 mA* |           | Order Codes              |                          |
| Kit                                           | CCT    | Code                                | Flux (lm) | 75 CRI Typical           | 80 CRI Minimum           |
| ANSI Neutral White (3700 K – 5000 K)          |        |                                     |           |                          |                          |
| E3                                            | 5000 K | T5                                  | 260       | XMLHVW-Q0-0000-0000LT5E3 |                          |
|                                               |        | T4                                  | 240       | XMLHVW-Q0-0000-0000LT4E3 |                          |
|                                               |        | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3E3 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2E3 |                          |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6E3 |                          |
| F4                                            | 4750 K | T5                                  | 260       | XMLHVW-Q0-0000-0000LT5F4 |                          |
|                                               |        | T4                                  | 240       | XMLHVW-Q0-0000-0000LT4F4 |                          |
|                                               |        | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3F4 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2F4 |                          |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6F4 |                          |
| E4                                            | 4500 K | T5                                  | 260       | XMLHVW-Q0-0000-0000LT5E4 |                          |
|                                               |        | T4                                  | 240       | XMLHVW-Q0-0000-0000LT4E4 |                          |
|                                               |        | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3E4 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2E4 |                          |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6E4 |                          |
| F5                                            | 4250 K | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3F5 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2F5 | XMLHVW-Q0-0000-0000HT2F5 |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6F5 | XMLHVW-Q0-0000-0000HS6F5 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5F5 | XMLHVW-Q0-0000-0000HS5F5 |
| E5                                            | 4000 K | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3E5 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2E5 | XMLHVW-Q0-0000-0000HT2E5 |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6E5 | XMLHVW-Q0-0000-0000HS6E5 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5E5 | XMLHVW-Q0-0000-0000HS5E5 |

\* Cree XLamp XM Family 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.

# STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI WARM WHITE, T<sub>J</sub> = 85 °C)

| XLamp XM-L HVW LED Standard Kit Codes - White |        |                                     |           |                          |                          |
|-----------------------------------------------|--------|-------------------------------------|-----------|--------------------------|--------------------------|
| Chromaticity                                  |        | Minimum Luminous Flux (lm) @ 44 mA* |           | Order Codes              |                          |
| Kit                                           | CCT    | Code                                | Flux (lm) | 80 CRI Typical           | 80 CRI Minimum           |
| ANSI Warm White (2700 K - 3750 K)             |        |                                     |           |                          |                          |
| F6                                            | 3750 K | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3F6 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2F6 | XMLHVW-Q0-0000-0000HT2F6 |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6F6 | XMLHVW-Q0-0000-0000HS6F6 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5F6 | XMLHVW-Q0-0000-0000HS5F6 |
|                                               |        | S4                                  | 164       | XMLHVW-Q0-0000-0000LS4F6 | XMLHVW-Q0-0000-0000HS4F6 |
| E6                                            | 3500 K | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3E6 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2E6 | XMLHVW-Q0-0000-0000HT2E6 |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6E6 | XMLHVW-Q0-0000-0000HS6E6 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5E6 | XMLHVW-Q0-0000-0000HS5E6 |
|                                               |        | S4                                  | 164       | XMLHVW-Q0-0000-0000LS4E6 | XMLHVW-Q0-0000-0000HS4E6 |
| F7                                            | 3250 K | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3F7 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2F7 | XMLHVW-Q0-0000-0000HT2F7 |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6F7 | XMLHVW-Q0-0000-0000HS6F7 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5F7 | XMLHVW-Q0-0000-0000HS5F7 |
|                                               |        | S4                                  | 164       | XMLHVW-Q0-0000-0000LS4F7 | XMLHVW-Q0-0000-0000HS4F7 |
|                                               |        | S3                                  | 156       | XMLHVW-Q0-0000-0000LS3F7 | XMLHVW-Q0-0000-0000HS3F7 |
| E7                                            | 3000 K | T3                                  | 220       | XMLHVW-Q0-0000-0000LT3E7 |                          |
|                                               |        | T2                                  | 200       | XMLHVW-Q0-0000-0000LT2E7 | XMLHVW-Q0-0000-0000HT2E7 |
|                                               |        | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6E7 | XMLHVW-Q0-0000-0000HS6E7 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5E7 | XMLHVW-Q0-0000-0000HS5E7 |
|                                               |        | S4                                  | 164       | XMLHVW-Q0-0000-0000LS4E7 | XMLHVW-Q0-0000-0000HS4E7 |
|                                               |        | S3                                  | 156       | XMLHVW-Q0-0000-0000LS3E7 | XMLHVW-Q0-0000-0000HS3E7 |
| F8                                            | 2850 K | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6F8 | XMLHVW-Q0-0000-0000HS6F8 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5F8 | XMLHVW-Q0-0000-0000HS5F8 |
|                                               |        | S4                                  | 164       | XMLHVW-Q0-0000-0000LS4F8 | XMLHVW-Q0-0000-0000HS4F8 |
|                                               |        | S3                                  | 156       | XMLHVW-Q0-0000-0000LS3F8 | XMLHVW-Q0-0000-0000HS3F8 |
|                                               |        | S2                                  | 148       | XMLHVW-Q0-0000-0000LS2F8 | XMLHVW-Q0-0000-0000HS2F8 |
| E8                                            | 2700 K | S6                                  | 182       | XMLHVW-Q0-0000-0000LS6E8 | XMLHVW-Q0-0000-0000HS6E8 |
|                                               |        | S5                                  | 172       | XMLHVW-Q0-0000-0000LS5E8 | XMLHVW-Q0-0000-0000HS5E8 |
|                                               |        | S4                                  | 164       | XMLHVW-Q0-0000-0000LS4E8 | XMLHVW-Q0-0000-0000HS4E8 |
|                                               |        | S3                                  | 156       | XMLHVW-Q0-0000-0000LS3E8 | XMLHVW-Q0-0000-0000HS3E8 |
|                                               |        | S2                                  | 148       | XMLHVW-Q0-0000-0000LS2E8 | XMLHVW-Q0-0000-0000HS2E8 |

\* Cree XLamp XM Family 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.