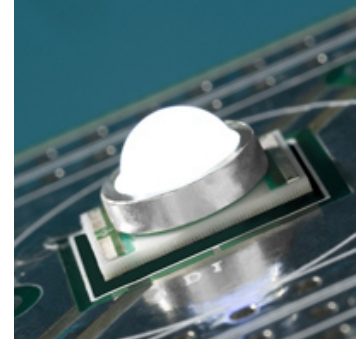


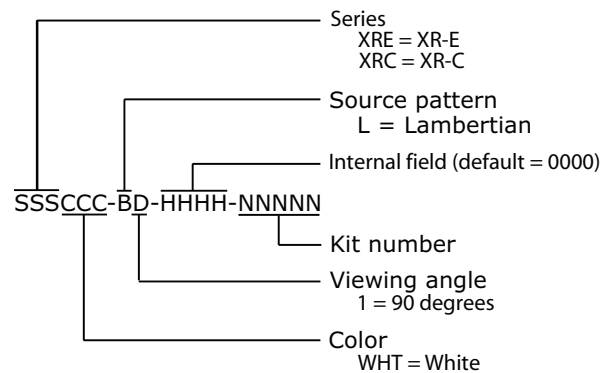
Cree® XLamp® XR-E and XR-C LED Binning and Labeling

Nomenclature

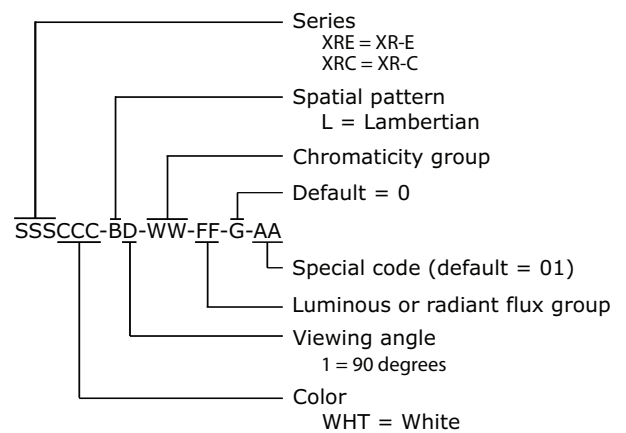
XLamp LEDs are tested and sorted into performance bins. A bin is specified by ranges of color and brightness. Sorted XLamp LEDs are packaged on reels. A reel contains lamps from one bin and is labeled with its bin code. For more information on packaging, see the appropriate XLamp data sheet.



XLamp LEDs are sold by order codes in combinations of bins called kits. Order codes are configured in the following manner:



Bin codes are configured in a similar manner:



Performance Groups – Brightness

XLamp LEDs that are tested for luminous flux are placed into one of the following tightly binned groups:

Group Code	Minimum Luminous Flux @350 mA (lm)	Maximum Luminous Flux @ 350 mA (lm)
M2	39.8	45.7
M3	45.7	51.7
N2	51.7	56.8
N3	56.8	62.0
N4	62.0	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	100.4

Performance Groups – Chromaticity

White XLamp LEDs are tested for chromaticity and placed into one of the regions defined by the bounding coordinates below.

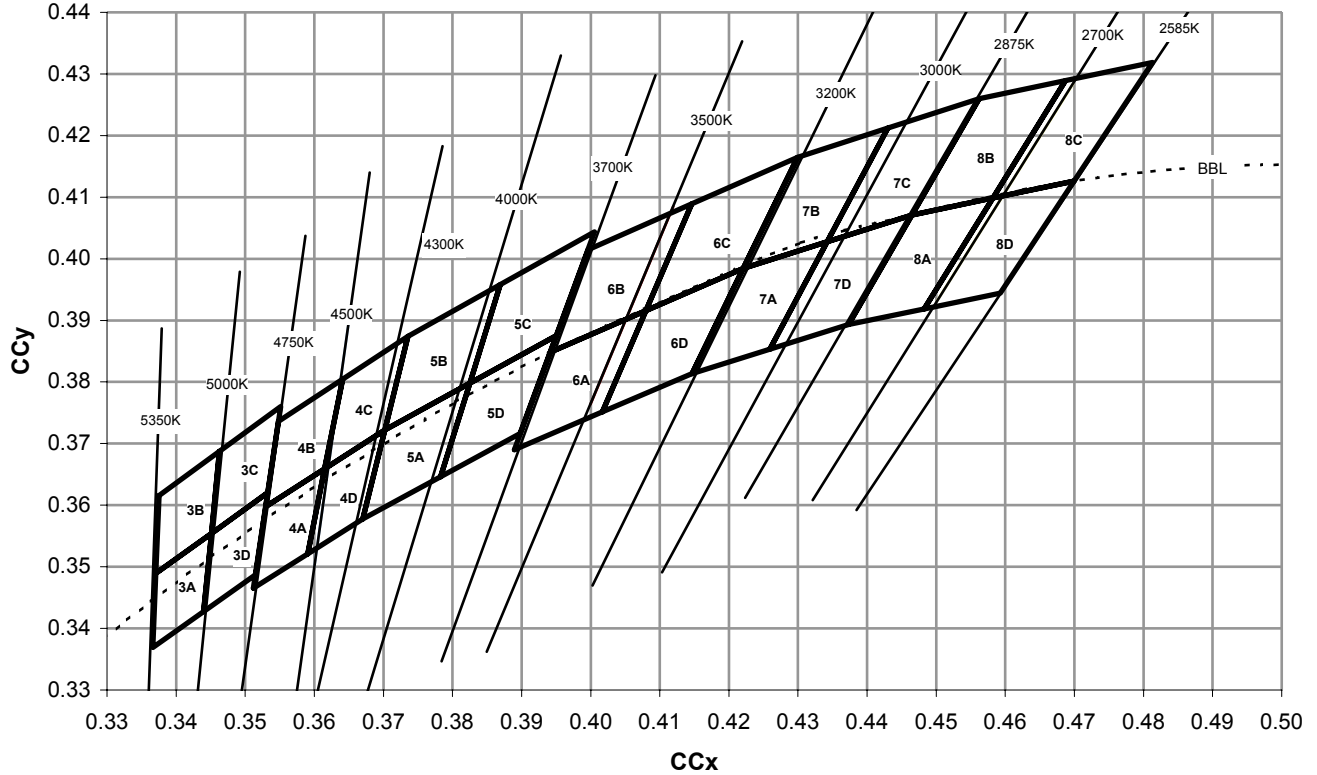
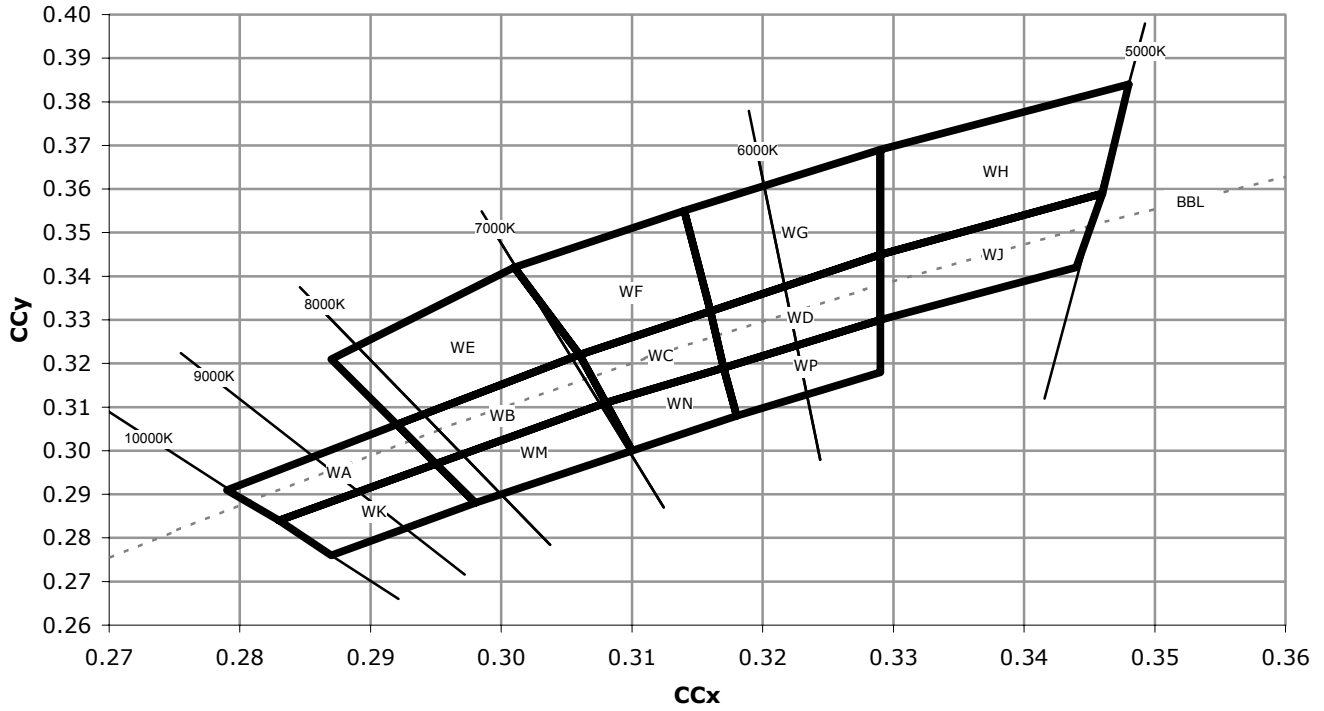
White Chromaticity Region Bounding Coordinates

Region	x	y	Region	x	y
WK	.283	.284	WF	.314	.355
	.295	.297		.316	.332
	.298	.288		.306	.322
	.287	.276		.301	.342
WA	.292	.306	WP	.317	.319
	.295	.297		.329	.330
	.283	.284		.329	.318
	.279	.291		.318	.308
WM	.295	.297	WD	.329	.345
	.308	.311		.329	.330
	.310	.300		.317	.319
	.298	.288		.316	.332
WB	.306	.322	WG	.329	.369
	.308	.311		.329	.345
	.295	.297		.316	.332
	.292	.306		.314	.355
WE	.301	.342	WJ	.329	.330
	.306	.322		.329	.345
	.292	.306		.346	.359
	.287	.321		.344	.342
WN	.308	.311	WH	.348	.384
	.317	.319		.346	.359
	.318	.308		.329	.345
	.310	.300		.329	.369
WC	.316	.332			
	.317	.319			
	.308	.311			
	.306	.322			

Performance Groups – Chromaticity (continued)

Region	x	y	Region	x	y	Region	x	y	Region	x	y
3A	.3371	.3490	3B	.3376	.3616	3C	.3463	.3687	3D	.3451	.3554
	.3451	.3554		.3463	.3687		.3551	.3760		.3533	.3620
	.3440	.3428		.3451	.3554		.3533	.3620		.3515	.3487
	.3366	.3369		.3371	.3490		.3451	.3554		.3440	.3428
4A	.3512	.3465	4B	.3529	.3597	4C	.3615	.3659	4D	.3590	.3521
	.3529	.3597		.3548	.3736		.3641	.3804		.3615	.3659
	.3615	.3659		.3641	.3804		.3736	.3874		.3702	.3722
	.3590	.3521		.3615	.3659		.3702	.3722		.3670	.3578
5A	.3670	.3578	5B	.3702	.3722	5C	.3825	.3798	5D	.3783	.3646
	.3702	.3722		.3736	.3874		.3869	.3958		.3825	.3798
	.3825	.3798		.3869	.3958		.4006	.4044		.3950	.3875
	.3783	.3646		.3825	.3798		.3950	.3875		.3898	.3716
6A	.3889	.3690	5B	.3941	.3848	6C	.4080	.3916	6D	.4017	.3751
	.3941	.3848		.3996	.4015		.4146	.4089		.4080	.3916
	.4080	.3916		.4146	.4089		.4299	.4165		.4221	.3984
	.4017	.3751		.4080	.3916		.4221	.3984		.4147	.3814
7A	.4147	.3814	7B	.4221	.3984	7C	.4342	.4028	7D	.4259	.3853
	.4221	.3984		.4299	.4165		.4430	.4212		.4342	.4028
	.4342	.4028		.4430	.4212		.4562	.4260		.4465	.4071
	.4259	.3853		.4342	.4028		.4465	.4071		.4373	.3893
8A	.4373	.3893	8B	.4465	.4071	8C	.4582	.4099	8D	.4483	.3919
	.4465	.4071		.4562	.4260		.4687	.4289		.4582	.4099
	.4582	.4099		.4687	.4289		.4813	.4319		.4700	.4126
	.4483	.3919		.4582	.4099		.4700	.4126		.4593	.3944

Cree's Standard Chromaticity Regions Plotted on the 1931 CIE Curve



Standard Order Codes and Bins

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

XLamp XR-C LED Standard Order Codes – White		
Kit Number	Chromaticity Regions	Luminous Flux (lm) @ 350 mA
		Min.
00301	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	45.7
00302	WC, WD, WF, WG	45.7
00303	WC, WD, WF, WG, WH, WJ, WN, WP	45.7
00401	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	51.7
00402	WC, WD, WF, WG	51.7
00403	WC, WD, WF, WG, WH, WJ, WN, WP	51.7
00501	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	56.8
00502	WC, WD, WF, WG	56.8
00503	WC, WD, WF, WG, WH, WJ, WN, WP	56.8
002E6	6A, 6B, 6C, 6D	39.8
002E7	7A, 7B, 7C, 7D	39.8
002E8	8A, 8B, 8C, 8D	39.8
002F7	6C, 6D, 7A, 7B	39.8
002F8	7C, 7D, 8A, 8B	39.8
003E3	3A, 3B, 3C, 3D	45.7
003E4	4A, 4B, 4C, 4D	45.7
003E5	5A, 5B, 5C, 5D	45.7
003F4	3C, 3D, 4A, 4B	45.7
003F5	4C, 4D, 5A, 5B	45.7
003F6	5C, 5D, 6A, 6B	45.7
004E6	6A, 6B, 6C, 6D	51.7
004E7	7A, 7B, 7C, 7D	51.7
004E8	8A, 8B, 8C, 8D	51.7
004F7	6C, 6D, 7A, 7B	51.7
004F8	7C, 7D, 8A, 8B	51.7
005E3	3A, 3B, 3C, 3D	56.8
005E4	4A, 4B, 4C, 4D	56.8
005E5	5A, 5B, 5C, 5D	56.8
005F4	3C, 3D, 4A, 4B	56.8
005F5	4C, 4D, 5A, 5B	56.8
005F6	5C, 5D, 6A, 6B	56.8

XLamp XR-E LED Standard Order Codes – White		
Kit Number	Chromaticity Regions	Luminous Flux (lm) @ 350 mA
		Min.
00601	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	62.0
00602	WC, WD, WF, WG	62.0
00603	WC, WD, WF, WG, WH, WJ, WN, WP	62.0
00701	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	67.2
00702	WC, WD, WF, WG	67.2
00703	WC, WD, WF, WG, WH, WJ, WN, WP	67.2
00801	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	73.9
00802	WC, WD, WF, WG	73.9
00803	WC, WD, WF, WG, WH, WJ, WN, WP	73.9
005E6	6A, 6B, 6C, 6D	56.8
005E7	7A, 7B, 7C, 7D	56.8
005E8	8A, 8B, 8C, 8D	56.8
005F7	6C, 6D, 7A, 7B	56.8
005F8	7C, 7D, 8A, 8B	56.8
006E3	3A, 3B, 3C, 3D	62.0
006E4	4A, 4B, 4C, 4D	62.0
006E5	5A, 5B, 5C, 5D	62.0
006E6	6A, 6B, 6C, 6D	62.0
006E7	7A, 7B, 7C, 7D	62.0
006E8	8A, 8B, 8C, 8D	62.0
006F4	3C, 3D, 4A, 4B	62.0
006F5	4C, 4D, 5A, 5B	62.0
006F6	5C, 5D, 6A, 6B	62.0
006F7	6C, 6D, 7A, 7B	62.0
006F8	7C, 7D, 8A, 8B	62.0
007E3	3A, 3B, 3C, 3D	67.2
007E4	4A, 4B, 4C, 4D	67.2
007E5	5A, 5B, 5C, 5D	67.2
007F4	3C, 3D, 4A, 4B	67.2
007F5	4C, 4D, 5A, 5B	67.2
007F6	5C, 5D, 6A, 6B	67.2