



**BUYER BEWARE!**

All projectors are NOT created equal.

INSIST on High Color Brightness in every projector you buy.

# Projector Buyer's Guide to Color Brightness by Model

## Projector buyers should proceed with caution.

Derived when presentations consisted of a black font on a white background, the old lumens metric only measures white light. Lumens, or brightness, tells the projector buyer little about the brightness of colors in photos, videos or graphics.

Fortunately, a newer metric gives projector buyers a measurement for the brightness of colors. Color Light Output, or more simply Color Brightness, quantifies the brightness of Red, Green and Blue; the primary colors of light.

The photograph below shows two projectors setup side-by-side, set in their brightest mode. Both offer similar resolution, price and white brightness levels.

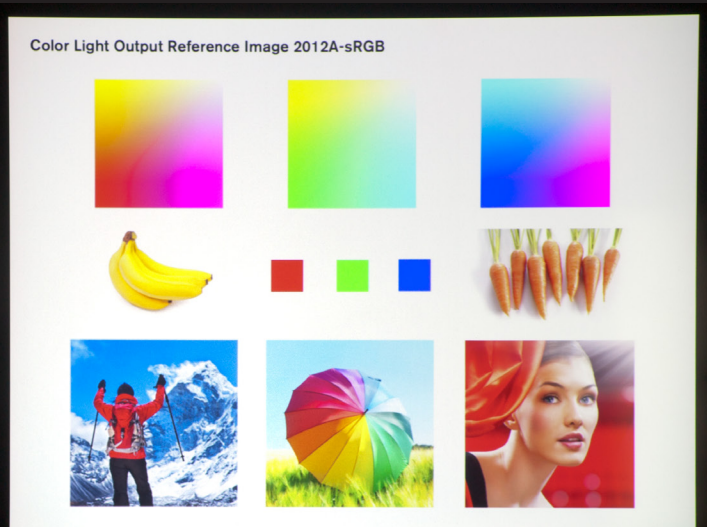
The projector on the left exhibits low Color Brightness; only a fraction of its white brightness. The one on the right shows equal amounts of Color and White Brightness. Colors on the right are much brighter, providing more impact.

This document starts with a listing of projectors where the manufacturer specifies both White and Color Brightness. Second is a table containing projectors measured for their Color Brightness level by a 3rd party laboratory because the manufacturer did not specify the color brightness.

Insist on brighter colors. When selecting a projector, consider both the brightness of White as well as the brightness of Color.

## Low Color Brightness<sup>1</sup>

## High Color Brightness



Actual photograph of side by side projected images from an identical signal source. Both projectors are set to their brightest mode. Testing and photography conducted by Lumita Inc.

# Table 1: Models with Manufacturer Specification for Color Brightness

Many manufacturers provide specifications for both White Light Output (White Brightness) and Color Light Output (Color Brightness). Manufacturers publish specifications on product performance and are responsible for their legitimacy and reliability. See manufacturer's websites or contact the manufacturer for details.

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Dukane</b>			EX7220	3000	3000	PowerLite 430	3000	3000
ImagePro 8104	2500	2500	EX7230	3000	3000	PowerLite 4300	5200	5200
ImagePro 8107	2500	2500	EX7235	3000	3000	PowerLite 435W	3000	3000
ImagePro 8112	3000	3000	EX7240	3200	3200	PowerLite 4650	5200	5200
ImagePro 8755	2400	2400	EX9200	3200	3200	PowerLite 470	2600	2600
ImagePro 8928	2700	2700	MegaPlex MG-850HD	2800	2800	PowerLite 475W	2600	2600
ImagePro 8930	3200	3200	MovieMate 85HD	2500	2500	PowerLite 4750W	4200	4200
ImagePro 8931	3000	3000	PowerLite 1221	2800	2800	PowerLite 4770W	5000	5000
ImagePro 8932	3200	3200	PowerLite 1222	3000	3000	PowerLite 480	3000	3000
ImagePro 8933	3000	3000	PowerLite 1224	3200	3200	PowerLite 485W	3100	3100
ImagePro 8957	4000	4000	PowerLite 1261W	2800	2800	PowerLite 4855WU	4000	4000
ImagePro 8958	4000	4000	PowerLite 1262W	3000	3000	PowerLite 520	2700	2700
ImagePro 8959	5000	5000	PowerLite 1263W	3000	3000	PowerLite 525W	2800	2800
ImagePro 8970	5000	5000	PowerLite 1264	3200	3200	PowerLite 530	3200	3200
ImagePro 8971	6000	6000	PowerLite 1284	3200	3200	PowerLite 535W	3400	3400
ImagePro 8972	4000	4000	PowerLite 1751	2600	2600	PowerLite 5510	5500	5500
ImagePro 8973	5500	5500	PowerLite 1761W	2600	2600	PowerLite 5520W	5500	5500
ImagePro 8974	4200	4200	PowerLite 1770W	3000	3000	PowerLite 5530U	5500	5500
ImagePro 8975	5000	5000	PowerLite 1771W	3000	3000	PowerLite 5535U	5500	5500
ImagePro 8977	7000	7000	PowerLite 1776W	3000	3000	PowerLite 570	2700	2700
ImagePro 8979	6000	6000	PowerLite 1780W	3000	3000	PowerLite 575W	2700	2700
<b>Epson</b>			PowerLite 1781W	3200	3200	PowerLite 580	3200	3200
BrightLink 436Wi	3000	3000	PowerLite 1785W	3200	3200	PowerLite 585W	3300	3300
BrightLink 450Wi	2500	2500	PowerLite 1795F	3200	3200	PowerLite 675W	3200	3200
BrightLink 475Wi	2600	2600	PowerLite 1835	3500	3500	PowerLite 680	3500	3500
BrightLink 485Wi	3100	3100	PowerLite 1850W	3700	3700	PowerLite 685W	3500	3500
BrightLink 536Wi	3400	3400	PowerLite 1880	4000	4000	PowerLite 700U	4000	4000
BrightLink 575Wi	2700	2700	PowerLite 1925W	4000	4000	PowerLite 905	3000	3000
BrightLink 585Wi	3300	3300	PowerLite 1930	4200	4200	PowerLite 915W	3200	3200
BrightLink 595Wi	3300	3300	PowerLite 1940W	4200	4200	PowerLite 93+	2600	2600
BrightLink 685Wi	3500	3500	PowerLite 1945W	4200	4200	PowerLite 935W	3700	3700
BrightLink 695Wi	3500	3500	PowerLite 1950	4500	4500	PowerLite 95	2600	2600
BrightLink 696Ui	3800	3800	PowerLite 1955	4500	4500	PowerLite 955WH	3200	3200
BrightLink 697Ui	4400	4400	PowerLite 1960	5000	5000	PowerLite 965	3500	3500
BrightLink 710Ui	4000	4000	PowerLite 1965	5000	5000	PowerLite 965H	3500	3500
BrightLink Pro 1410Wi	3100	3100	PowerLite 1975W	5000	5000	PowerLite 96W	2700	2700
BrightLink Pro 1420Wi	3300	3300	PowerLite 1980WU	4400	4400	PowerLite 97	2700	2700
BrightLink Pro 1430Wi	3300	3300	PowerLite 1985WU	4800	4800	PowerLite 97H	2700	2700
BrightLink Pro 1450Ui	3800	3800	PowerLite 2040	4200	4200	PowerLite 975W	3600	3600
BrightLink Pro 1460Ui	4400	4400	PowerLite 2065	5500	5500	PowerLite 98	2700	2700
EX3212	2800	2800	PowerLite 2140W	4200	4200	PowerLite 98H	3000	3000
EX3220	3000	3000	PowerLite 2155W	5000	5000	PowerLite 99W	3000	3000
EX3240	3200	3200	PowerLite 2165W	5500	5500	PowerLite 99WH	3000	3000
EX5210	2800	2800	PowerLite 2245U	4200	4200	PowerLite D6150	3500	3500
EX5220	3000	3000	PowerLite 2250U	5000	5000	PowerLite D6155W	3500	3500
EX5230	3500	3500	PowerLite 2255U	5000	5000	PowerLite D6250	4000	4000
EX5240	3200	3200	PowerLite 2265U	5500	5500	PowerLite S11	2600	2600
EX5250	3600	3600	PowerLite 4100	4500	4500	PowerLite S17	2700	2700
EX6210	2700	2700	PowerLite 420	2500	2500	PowerLite S27	2700	2700
EX6220	3000	3000	PowerLite 4200W	4500	4500	PowerLite W16	3000	3000
EX7210	2800	2800	PowerLite 425W	2500	2500	PowerLite W16SK	6000	6000

# Table 1: Continued

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>			PL Pro G6550WU	5200	5200	EB-1430Wi	3300	3300
PowerLite W17	2800	2800	PL Pro G6570WU	5200	5200	EB-1440Ui	3800	3800
PowerLite W29	3000	3000	PL Pro G6750WU	6000	6000	EB-1450Ui	3800	3800
PowerLite X12	2800	2800	PL Pro G6770WU	6000	6000	EB-1460Ui	4400	4400
PowerLite X15	3000	3000	PL Pro G6800	7000	7000	EB-1751	2600	2600
PowerLite X17	2700	2700	PL Pro G6870	7000	7000	EB-1761W	2600	2600
PowerLite X27	2700	2700	PL Pro G6900WU	6000	6000	EB-1771W	3000	3000
PL HC 1040	3000	3000	PL Pro G6970WU	6000	6000	EB-1776W	3000	3000
PL HC 1440	4400	4400	PL Pro G7000W	6500	6500	EB-1780W	3000	3000
PL HC 1450	4200	4200	PL Pro G7100	6500	6500	EB-1781W	3200	3200
PL HC 2000	1800	1800	PL Pro G7200W	7500	7500	EB-1785W	3200	3200
PL HC 2030	2000	2000	PL Pro G7400U	5500	5500	EB-1795F	3200	3200
PL HC 2040	2200	2200	PL Pro G7500U	6500	6500	EB-1930	4200	4200
PL HC 2045	2200	2200	PL Pro G7805	8000	8000	EB-1935	4200	4200
PL HC 3000	2300	2300	PL Pro G7900U	7000	7000	EB-1940W	4200	4200
PL HC 3010e	2200	2200	PL Pro G7905U	7000	7000	EB-1945W	4200	4200
PL HC 3020	2300	2300	PL Pro L1100U	6000	6000	EB-1950	4500	4500
PL HC 3020e	2300	2300	PL Pro L1200U	7000	7000	EB-1955	4500	4500
PL HC 3100	2600	2600	PL Pro L1300U	8000	8000	EB-1960	5000	5000
PL HC 3500	2500	2500	PL Pro L1405U	8000	8000	EB-1965	5000	5000
PL HC 3600e	2500	2500	PL Pro L1500U	12000	12000	EB-1970W	5000	5000
PL HC 3700	3000	3000	PL Pro L1505U	12000	12000	EB-1975W	5000	5000
PL HC 3900	2700	2700	PL Pro L25000U	25000	25000	EB-1980WU	4400	4400
PL HC 500	2600	2600	PL Pro Z8000WUNL	6000	6000	EB-1985WU	4800	4800
PL HC 5010	2400	2400	PL Pro Z8050WNL	7000	7000	EB-2040	4200	4200
PL HC 5020UB	2400	2400	PL Pro Z8150NL	8000	8000	EB-2055	5000	5000
PL HC 5020UBe	2400	2400	PL Pro Z8250NL	10000	10000	EB-2065	5500	5500
PL HC 5030UB	2400	2400	PL Pro Z8255NL	10000	10000	EB-2140W	4200	4200
PL HC 5030UBe	2400	2400	PL Pro Z8350WNL	8500	8500	EB-2155W	5000	5000
PL HC 640	3200	3200	PL Pro Z8450WUNL	7000	7000	EB-2165W	5500	5500
PL HC 707	2700	2700	PL Pro Z8455WUNL	7000	7000	EB-2245U	4200	4200
PL HC 710HD	2800	2800	PL Pro Z9750UNL	7500	7500	EB-2250U	5000	5000
PL HC 725HD	2800	2800	PL Pro Z9800WNL	8300	8300	EB-2255U	5000	5000
PL HC 730HD	3000	3000	PL Pro Z9870NL	8700	8700	EB-2265U	5500	5500
PL HC 740HD	3000	3000	PL Pro Z9870UNL	8700	8700	EB-4550	4500	4500
PL HC 750HD	3000	3000	PL Pro Z9900WNL	9200	9200	EB-4650	5200	5200
PL HC 8345	1800	1800	PL Pro Z10000UNL	10000	10000	EB-4750W	4200	4200
PL HC 8350	2000	2000	PL Pro Z10005UNL	10000	10000	EB-4770W	5000	5000
PL Presenter	2500	2500	PL Pro Z11000WNL	11000	11000	EB-4850WU	4000	4000
PL Pro C4030	2000	2000	PL Pro Z11005NL	11000	11000	EB-4950WU	4500	4500
PL Pro C6020UB	2400	2400	VS210	2600	2600	EB-520	2700	2700
PL Pro C6030UB	2400	2400	VS220	2700	2700	EB-525W	2800	2800
PL Pro C9350	2000	2000	VS230	2800	2800	EB-530	3200	3200
PL Pro G5450WU	4000	4000	VS240	3000	3000	EB-535W	3400	3400
PL Pro G5550	4500	4500	VS315W	2600	2600	EB-536Wi	3400	3400
PL Pro G5650W	4500	4500	VS320	2700	2700	EB-536WT	3400	3400
PL Pro G6050W	5500	5500	VS330	2700	2700	EB-5510	5500	5500
PL Pro G6070W	5500	5500	VS335W	2700	2700	EB-5520W	5500	5500
PL Pro G6150	6500	6500	VS340	2800	2800	EB-5530U	5500	5500
PL Pro G6170	6500	6500	VS345	3000	3000	EB-570	2700	2700
PL Pro G6270W	6500	6500	VS350W	3700	3700	EB-575Wi	2700	2700
PL Pro G6450WU	4500	4500	VS410	4000	4000	EB-580	3200	3200
PL Pro G6470WU	4500	4500	EB-1420Wi	3300	3300	EB-585W	3300	3300

# Table 1: Continued

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>			EB-G7800	8000	8000	EB-Z11005	11000	11000
EB-585Wi	3300	3300	EB-G7805	8000	8000	EH-LS10000	1500	1500
EB-590WT	3300	3300	EB-G7900	7000	7000	EH-LS10500	1500	1500
EB-595Wi	3300	3300	EB-G7900U	7000	7000	EH-TW490	3000	3000
EB-670	3100	3100	EB-G7905U	7000	7000	EH-TW5100	1800	1800
EB-675Wi	3200	3200	EB-L1100U	6000	6000	EH-TW5200	2000	2000
EB-680	3500	3500	EB-L1105U	6000	6000	EH-TW5210	2200	2200
EB-680Wi	3500	3500	EB-L1200U	7000	7000	EH-TW530	3000	3000
EB-685W	3500	3500	EB-L1300U	8000	8000	EH-TW5300	2200	2200
EB-685Wi	3500	3500	EB-L1405U	8000	8000	EH-TW5350	2200	2200
EB-695Wi	3500	3500	EB-L1500U	12000	12000	EH-TW570	3000	3000
EB-696Ui	3800	3800	EB-L1505U	12000	12000	EH-TW6100	2300	2300
EB-935W	3700	3700	EB-L25000U	25000	25000	EH-TW6300	2600	2600
EB-940H	3000	3000	EB-S03	2700	2700	EH-TW6600	2500	2500
EB-945	3000	3000	EB-S04	3000	3000	EH-TW6600W	2500	2500
EB-945H	3000	3000	EB-S17	2700	2700	EH-TW6700	3000	3000
EB-950WH	3000	3000	EB-S18	2900	2900	EH-TW6700W	3000	3000
EB-950WHV	3000	3000	EB-S27	2700	2700	EH-TW7200	2000	2000
EB-955W	3000	3000	EB-S29	3000	3000	EH-TW7300	2300	2300
EB-955WH	3200	3200	EB-S31	3200	3200	EH-TW8200	2400	2400
EB-965	3500	3500	EB-U04	3000	3000	EH-TW8200W	2400	2400
EB-965H	3500	3500	EB-U32	3200	3200	EH-TW8300	2500	2500
EB-97H	2700	2700	EB-W03	2700	2700	EH-TW8300W	2500	2500
EB-98	3000	3000	EB-W04	3000	3000	EH-TW9200	2400	2400
EB-98H	3000	3000	EB-W8D	2500	2500	EH-TW9200W	2400	2400
EB-99WH	3000	3000	EB-W16	3000	3000	EH-TW9300	2500	2500
EB-D6150	3500	3500	EB-W16SK	6000	6000	EH-TW9300W	2500	2500
EB-D6155W	3500	3500	EB-W22	3000	3000	<b>Hitachi</b>		
EB-D6250	4000	4000	EB-W28	3000	3000	CP-A222WN	2200	2200
EB-G6050W	5500	5500	EB-W29	3000	3000	CP-A352WN	3500	3500
EB-G6070W	5500	5500	EB-W31	3200	3200	CP-AW2519N	2500	2500
EB-G6150	6500	6500	EB-W32	3200	3200	CP-AW2519NM	2500	2500
EB-G6170	6500	6500	EB-W420	3000	3000	CP-AW252WN	2500	2500
EB-G6250W	6500	6500	EB-X03	2700	2700	CP-AW312WN	3000	3000
EB-G6270W	6500	6500	EB-X04	2800	2800	CP-D31N	3000	3000
EB-G6350	7000	7000	EB-X18	3000	3000	CP-D32WN	3200	3200
EB-G6370	7000	7000	EB-X20	2700	2700	CP-EW300	3000	3000
EB-G6450WU	4500	4500	EB-X24	3200	3200	CP-SX8350	5000	5000
EB-G6470WU	4500	4500	EB-X25	3500	3500	CP-WU8440	4200	4200
EB-G6550WU	5200	5200	EB-X27	2700	2700	CP-WU8450	5000	5000
EB-G6570WU	5200	5200	EB-X29	3000	3000	CP-WU8460	6000	6000
EB-G6650WU	6000	6000	EB-X30	3500	3500	CP-WUX8441	5000	5000
EB-G6750WU	6000	6000	EB-X31	3200	3200	CP-WUX8460	6000	6000
EB-G6770WU	6000	6000	EB-X36	3600	3600	CP-WX2515WN	2700	2700
EB-G6800	7000	7000	EB-Z9750WU	7500	7500	CP-WX3015WN	3000	3000
EB-G6870	7000	7000	EB-Z9800W	8300	8300	CP-WX3030WN	3000	3000
EB-G6900WU	6000	6000	EB-Z9870U	8700	8700	CP-WX4022WN	4000	4000
EB-G6970WU	6000	6000	EB-Z9875U	8700	8700	CP-WX8240	4000	4000
EB-G7000W	6500	6500	EB-Z9900W	9200	9200	CP-WX8240A	4000	4000
EB-G7100	6500	6500	EB-Z10000U	10000	10000	CP-WX8255A	5500	5500
EB-G7200W	7500	7500	EB-Z10005U	10000	10000	CP-X2521WN	2700	2700
EB-G7400U	5500	5500	EB-Z11000	11000	11000	CP-X2530WN	2700	2700
EB-G7500U	6500	6500	EB-Z11000W	11000	11000	CP-X3021WN	3200	3200

## Table 1: Continued

	White Brightness	Color Brightness
<b>Hitachi (Continued)</b>		
CP-X3030WN	3200	3200
CP-X4015WN	4000	4000
CP-X4022WN	4000	4000
CP-X5022WN	5000	5000
CP-X8150	5000	5000
CP-X8160	6000	6000
CP-X8170	7000	7000
<b>Sony</b>		
VPL-CW275	5100	5100
VPL-CX275	5200	5200
VPL-DW120	2600	2600
VPL-DW126	2600	2600
VPL-DX120	2600	2600
VPL-DX140	3200	3200
VPL-DX146	3200	3200
VPL-EW225	2600	2600
VPL-EW246	3100	3100
VPL-EW276	3700	3700
VPL-EX225	2700	2700
VPL-EX246	3200	3200
VPL-EX276	3700	3700
VPL-FH30	4300	4300
VPL-FH31B	4300	4300
VPL-FH31W	4300	4300
VPL-FH36B	5200	5200
VPL-FH36W	5200	5200
VPL-FH500L	7000	7000
VPL-FX30	4200	4200
VPL-FX35	5000	5000
VPL-FX37	6000	6000
VPL-FX500L	7000	7000

## Table 2: Models Tested by 3rd Party Laboratory for Color Brightness

The manufacturers in table two have not provided Color Light Output (Color Brightness) specifications. These models were tested by third party laboratories (Intertek, Lumita, & TPR) in accordance with IDMS 15.4 in order to provide critical information to buyers.

	White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness
<b>3M</b>			HT2150ST	2200	1280	MW727	4200	830
MP225A	32	30	HT2550	2200	1200	MW769	4200	950
<b>AAXA</b>			HT3050	2000	1130	MW814ST	2500	770
M6	1200	610	HT4050	2000	1230	MW824ST	3200	590
MP-300-03	550	150	HT8050	2200	1500	MW843UST	3000	560
P2 Jr.	55	30	Joybee GP2	200	30	MW851UST	2500	460
P3	50	20	LU9715	8000	2900	MW853UST	3200	860
P300	300	140	LW61ST	2000	550	MW855UST	3500	1050
P4-X	95	40	MH530	3200	670	MW860USTi	3000	480
P450	450	190	MH530FHD	3300	600	MW870UST	3000	530
<b>Acer</b>			MH630	3000	770	MW883UST	3300	700
C120	100	90	MH680	3000	700	MX503	2700	830
H5360	2500	600	MH740	4000	730	MX505	3000	640
H5370BD	2500	570	MH741	4000	810	MX511	2700	700
H5380BD	3000	660	MH750	4500	820	MX518	2800	720
H6500	2100	720	MH760	5000	1050	MX520	3000	610
H6502BD	3400	650	MH856UST	3500	1200	MX522	3000	430
H6510BD	3000	580	MP512	2200	610	MX525	3200	430
H7850	3000	870	MP515	2500	750	MX525A	3300	560
K132	500	130	MP522	2000	540	MX570	3200	380
P1173	3000	590	MP522ST	2000	590	MX613ST	2500	660
P1185	3200	750	MP525P	2500	840	MX620ST	3000	630
P1273	3000	710	MP622	2700	1090	MX632ST	3200	490
P1283	3000	650	MP622C	2200	1010	MX660P	3000	790
P1383W	3100	660	MP780ST	2500	600	MX661	3000	680
P1387W	4500	850	MS502	2700	760	MX711	3200	770
P1500	3000	530	MS504	3000	700	MX723	3700	660
P5271	3100	700	MS510	2700	730	MX726	4000	870
P5515	4000	720	MS513	2700	700	MX763	3700	830
P7505	5000	980	MS514H	3200	740	MX764	4200	980
X110P	2700	700	MS517	2800	700	MX806PST	3000	560
X113PH	3000	710	MS521	3000	460	MX810ST	2500	490
X1161P	2700	720	MS524	3200	670	MX815ST	2700	720
X1163	3000	720	MS524A	3300	720	MX816ST	3000	640
X117H	3600	750	MS524ae	3300	600	MX819ST	3000	520
X1211K	2500	670	MS612ST	2500	710	MX850UST	2500	400
X123PH	3000	670	MS614	2700	710	PU9530	6000	2000
X1240	2700	650	MU686	3500	650	SH915	4000	780
X1261P	2700	640	MU706	4000	720	SH940	4000	1160
X1373WH	3000	560	MW516	2800	670	SP840	4000	480
<b>Acto</b>			MW519	2800	700	SU917	5000	900
DX221ST	3200	470	MW523	3000	430	SU922	5000	1280
<b>ASUS</b>			MW526	3200	620	SX920	5000	1150
S1	200	120	MW526A	3300	660	TH670	3000	610
<b>BenQ</b>			MW526ae	3300	700	TH671ST	3000	700
CH100	1000	800	MW529E	3300	720	TH681	3000	840
HC1200	2800	1740	MW571	3200	670	TH530	3200	680
HT1070	2000	1200	MW612	4000	740	TH683	3200	620
HT1070A	2200	900	MW621ST	3000	530	TK800	3000	550
HT1075	2200	1390	MW632ST	3200	600	W1070	2000	1570
HT1085ST	2200	1390	MW665	3200	650	W1080ST	2000	1470
HT2050	2200	1450	MW705	4000	840	W1090	2000	1500
			MW721	3500	810	W1500	2200	1440

**Table 2: Continued**

	White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness
<b>BenQ (Continued)</b>			LP-WU6500	5000	1800	IN3124	4800	1050
W7000	2000	1500	LP-WU9750B	8000	2300	IN3126	4000	760
W770ST	2500	680	<b>InFocus</b>			IN3128HD	4000	590
<b>Canon</b>			IN102	2500	740	IN3138HD	4000	720
LV-S300	3000	620	IN1110	2100	530	IN3138HDa	4000	600
LV-WX300	3000	700	IN1110a	2100	550	IN35	2500	840
LV-X300	3000	630	IN1112	2200	590	IN37	3000	970
LX-MU800Z	8000	2900	IN1112a	2200	530	IN3914	2700	730
<b>Casio</b>			IN1116	2400	550	IN5312	4500	1190
XJ-A130	2000	540	IN1116LC	2400	460	Work Big IN24+	2400	720
XJ-A141	2500	1200	IN1118HD	2400	470	Work Big IN26+	2400	640
XJ-A246	2500	1340	IN112	2700	640	Work Big IN32	2000	940
XJ-A252	3000	1170	IN112a	3000	700	Work Big IN34	2500	670
XJ-A256	3000	1370	IN112x	3200	670	Work Big IN36	3000	870
XJ-F10X	3300	1740	IN112xa	3500	600	<b>LG</b>		
XJ-F100W	3500	1230	IN112xv	3400	680	BS-275	2700	700
XJ-F20XN	3300	1580	IN114	2700	660	HF80JA	2000	530
XJ-F210WN	3500	1420	IN114a	3000	670	PA75U	700	230
XJ-H1700	4000	770	IN114ST	2700	560	PA77U	700	300
XJ-M140	2500	1440	IN114x	3200	640	PB63U	500	220
XJ-M151	3000	1640	IN114xa	3500	500	PF1000U	1000	250
XJ-M240	2500	1280	IN114xv	3400	500	PF1500	1400	400
XJ-M245	2500	1160	IN1146	1000	250	PH300W	300	200
XJ-M251	3000	1650	IN116	2700	630	PH550	550	300
XJ-ST145	2500	510	IN116a	3000	660	PW800	800	340
XJ-UT310WN	3100	1890	IN116x	3200	630	<b>Mimio</b>		
XJ-UT351W	3500	2180	IN116xa	3500	600	mimioProjector	2800	550
XJ-V1	2700	1360	IN116xv	3400	700	<b>Miroir</b>		
XJ-V10X	3300	1790	IN118HDa	3000	400	M300A	400	200
XJ-V100W	3000	1580	IN119HDx	3200	590	<b>Mitsubishi</b>		
XJ-V110W	3500	1990	IN122	3200	760	EX240U	2500	510
XJ-V2	3000	1670	IN122a	3500	800	HC1500	1600	720
<b>Christie</b>			IN124	3200	840	HC4000	1300	400
D13WU-HS	13500	6000	IN124a	3500	710	HC7800D	1500	1090
DHD400S	3500	940	IN124ST	3000	690	HD4000U	2000	690
DHD800	8000	2000	IN124x	4000	830	WD380U-EST	2800	660
<b>Dell</b>			IN126	3200	810	XD211U	2200	660
1220	2700	550	IN126ST	3000	630	XD221U	2300	810
1409X	2500	820	IN126STa	3300	700	XD221U-ST	2000	650
1450	3000	640	IN128HDx	4000	670	XD250U	2700	1050
1510X	3500	770	IN1338HD	4000	690	XD3500U	5000	940
1610HD	3500	910	IN2102	2500	760	XD360U-EST	2500	350
2400MP	3000	710	IN2104	2500	650	XD460U	2600	850
4320	4300	1080	IN2112	3000	750	XD490U	3000	780
M110	300	80	IN2114	3000	760	XD500U	2200	640
M115HD	450	120	IN2116	3000	730	XD700U	5000	850
M900HD	900	180	IN2124	3200	800	<b>NEC</b>		
S300wi	2200	480	IN2124a	3500	820	NP110	2200	640
S500wi	3200	880	IN2124x	4200	760	NP200	2100	480
S560	3400	800	IN2126	3200	840	NP40	2200	830
<b>Hitachi</b>			IN2128HDa	3500	740	NP4001	4500	1640
CP-DX250	2500	480	IN3102	3000	840	NP4100	6200	1950
CP-DX300	3000	650	IN3104	3500	1010	NP50	2600	740
LP-WU3500	3500	1200	IN3114	3500	910	NP60	3000	790
			IN3116	3500	930			

## Table 2: Continued

	White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness
<b>NEC (Continued)</b>			DX550	2600	640	HD33	1800	940
NP61	3000	700	EH200ST	3000	500	HD37	2600	1980
NP-M282X	2800	810	EH320USTi	4000	660	HD39Darbee	3500	1100
NP-M283X	2800	780	EH331	3300	640	HD65	1600	650
NP-M322W	3200	810	EH341	3500	680	HD66	2500	710
NP-M322X	3200	870	EH345	3200	670	ML300	300	130
NP-M323W	3200	950	EH400+	4000	900	ML500	500	140
NP-M323X	3200	910	EH415	4200	800	ML550	500	150
NP-M333XS	3300	920	EH415ST	3500	800	ML750	700	110
NP-M352WS	3500	1020	EH416	4200	620	ML1000P	1000	170
NP-M353WS	3500	900	EH500	4700	1000	PK320	100	60
NP-M363W	3600	950	EH501	5000	430	PRO150S	2800	810
NP-M363X	3600	890	EH503	5000	1190	PRO160S	3000	810
NP-M402H	4000	1060	EH504	5000	1050	PRO250X	2800	740
NP-M402X	4000	1030	EH7700	7000	1900	PRO260X	3000	770
NP-M403H	4000	770	EP1691	2500	820	PRO360W	3000	820
NP-M403X	4000	1000	EP716	1800	510	PT100	50	10
NP-P502H	5000	1300	EP719	2000	600	PT110	100	20
NP-PE401H	4000	1020	EP721	2200	550	S303	3000	670
NP-PX750U	7500	1250	EP727	2200	590	S310e	3200	730
NP-PX750U+	7500	660	EP728	2700	810	S316	3200	710
NP-PX800X	8000	1890	EP771	3000	930	S321	3200	570
NP-U260W	2600	540	ES522	2800	660	S341	3500	620
NP-U300X	3000	770	EW1691e	3000	770	TS526	2800	700
NP-U310W	3100	690	EW536	2800	700	TS551	2800	640
NP-U321H	3200	650	EW695UT	3500	780	TW766W	4000	800
NP-V260	2600	620	EX525ST	2500	570	TX536	2800	670
NP-V260W	2600	620	EX530	2600	650	TX542	2800	680
NP-V260X	2600	640	EX532	2800	650	TX631-3D	3500	850
NP-V300W	3000	740	EX551	2800	640	UHD50	2400	1000
NP-V300X	3000	740	EX685UT	3000	620	UHD60	3000	1000
NP-V302H	3000	530	EX765	4000	810	UHD65	2200	1200
NP-V332W	3300	620	EX784	5000	1060	W303	3200	500
NP-V332X	3300	580	EX785	5000	1300	W304M	3100	780
NP-VE281	2800	590	GT1080	2800	500	W305ST	3200	490
NP-VE281X	2800	700	GT5500	3500	690	W306ST	3500	730
NP-VE303	3000	700	GT750e	3000	950	W307UST	3500	660
NP-VE303X	3000	630	GT760	3400	600	W311	3200	490
P502HL	5000	2000	H180X	3000	660	W312	3200	710
PX-602UL	6000	2200	H181X	3200	580	W316	3400	660
PX-750U2	7500	2200	H182X	3200	760	W316ST	3400	640
PX-803UL	8000	2900	HD131Xe	2500	480	W331	3200	620
V311W	3100	690	HD131Xw	2500	650	W341	3600	780
V311X	3100	720	HD141X	3000	700	W345	3300	710
<b>Optoma</b>			HD142X	3000	700	W351	3800	810
DH1009	3200	590	HD143X	3000	560	W355	3600	720
DH1011	3000	640	HD20	1700	1020	W400	4000	900
DH1012	3200	780	HD23	2500	680	W415	4500	800
DS331	3200	500	HD25E	2800	420	W416	4500	650
DS339	2600	760	HD25-LV	3500	670	WU334	3600	700
DS550	2600	650	HD26	3200	670	WU416	4200	630
DU380	3800	630	HD27	3200	600	WU515	6000	1300
DW326e	3000	710	HD27e	3400	560	X303	3000	410
DX326	2800	710	HD28DSE	3000	630	X304M	3000	620
DX346	3000	690	HD29Darbee	3200	630	X305ST	3000	540



**Table 2: Continued**

	White Brightness	Tested Color Brightness
<b>Optoma (Continued)</b>		
X306ST	3200	680
X312	3200	610
X313	3000	710
X316	3200	590
X341	3300	560
X345	3200	670
X351	3600	700
X355	3500	680
X400+	4000	780
X416	4300	800
X600	6000	1070
X605	6000	1500
ZH510T	5000	1200
ZU510T	5300	1100
ZU510T-W	5500	1700
ZW210ST	2000	410
ZW212ST	2500	390
ZX210ST	2000	360
ZX212ST	2500	280

<b>Panasonic</b>		
PT-CW230EA	2500	550
PT-D5700U	6000	3050
PT-DW830UW	8500	3400
PT-DZ570U	4000	2240
PT-DZ6710	6000	2990
PT-DZ770UK	7000	2340
PT-DZ780B	7000	3200
PT-DZ870UK	8500	3700
PT-JW130H	1000	600
PT-JX200HWU	2000	1200
PT-LS26U	2600	670
PT-RW330U	3500	750
PT-RW430UK	3500	800
PT-RZ370U	3500	840
PT-RZ470UW	3500	830
PT-RZ570	5200	2700
PT-RZ570BU	5400	2050
PT-RZ670U	6500	3700
PT-RZ970	9400	5200
PT-SD2600C	2600	670

<b>Philips</b>		
PicoPix PPX2340	40	30

<b>Promethean</b>		
PRM-35	2500	600

<b>Ricoh</b>		
PJ HD5450	3500	730
PJ S2240	3000	710
PJ WX2240	3100	700
PJ WX4240N	3000	540
PJ X2240	3000	690

<b>Sharp</b>		
PG-F212X	2300	860
PG-LW2000	2800	770

	White Brightness	Tested Color Brightness
PG-LW3000	3000	870
PG-LX2000	2800	790
XR-30X	2300	740
XR-32X	2500	750
XR-41X	2600	660

<b>Smart</b>		
LightRaise 40Wi	2500	750
LightRaise 60Wi	2500	620
SLR60Wi2	3000	670
UX60	2000	730

<b>Toshiba</b>		
TDP-T45U	2500	670

<b>ViewSonic</b>		
LS820	3500	1460
PA502S	3500	750
PA502X	3500	780
PA503S	3600	790
PA503W	3600	760
PA503X	3600	770
PG703W	4000	910
PG703X	4000	850
PG705HD	4000	710
PJ506D	2000	630
PJD5123	2700	730
PJD5132	2800	730
PJD5133	2700	700
PJD5134	3000	670
PJD5153	3200	770
PJD5155	3300	900
PJD5223	2700	680
PJD5232	2800	580
PJD5233	2700	640
PJD5234	2800	640
PJD5234L	3000	690
PJD5255	3300	940
PJD5255L	3300	850
PJD5353LS	3200	830
PJD5523W	2700	620
PJD5533W	2800	740
PJD5553LWS	3200	840
PJD5555W	3300	860
PJD6220	2300	640
PJD6252L	3300	650
PJD6350	3300	730
PJD6352LS	3200	850
PJD6383S	3000	720
PJD6531W	3000	940
PJD6544W	3500	750
PJD6552LWS	3200	890
PJD6553W	3500	870
PJD6683WS	3000	830
PJD7525W	4000	1020
PJD7533W	4000	710
PJD7583W	3000	730
PJD7720HD	3200	730

	White Brightness	Tested Color Brightness
PJD7820HD	3000	830
PJD7822HDL	3200	750
PJD7828HDL	3200	770
PLED-W500	500	120
PLED-W600	600	250
PLED-W800	800	250
Pro7827HD	2200	1310
Pro8200	2000	780
Pro8300	3000	720
Pro8400	4000	1030
Pro8450W	4500	980
Pro8500	5000	1300
Pro8520HD	5000	780
PX747-4K	3500	730

<b>Vivitek</b>		
D512-3D	2600	560
D5280	4500	900
D530	3200	790
D535	3200	620
D536-3D	3200	610
D537W	3200	720
D538W-3D	3200	680
D554	3000	650
D555	3000	670
D557WH	3000	640
D791ST	3000	340
D795WT	3000	320
D803W-3D	3600	680
D832MX	3200	780
D865W	4000	670
D910HD	3000	710
D940VX	4300	930
D966HD	4500	910
DH758USTiR	3500	700
DW868	4500	760
H1180HD	2000	880
H1186	2000	1490
HK2288	2000	930
Qumi Q2	300	50
Qumi Q3 Plus	500	200
Qumi Q5	500	80
Qumi Q6	800	130
Qumi Q7	800	130

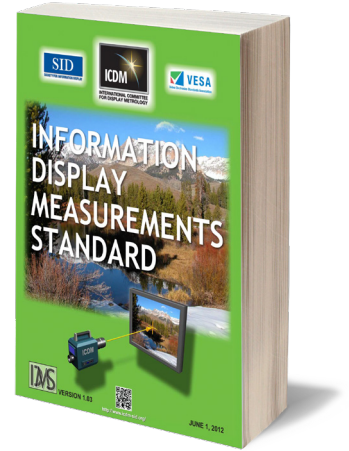
<b>ZTE</b>		
Spro 2	200	190

## What's behind this new Color Brightness standard?

Color Light Output, or simply Color Brightness, measures the illuminance of the color primaries Red, Green and Blue. The technical details of this measurement methodology are defined in the newly available Information Display Measurements Standard published by the Society for Information Displays.

The authors of this important standards document were volunteers from all corners of the display industry. These experts carefully examined each of the nearly 200 display metrics in the document to make sure each was relevant, scientifically valid, and worth including in the document.

The Society for Information Displays (SID) is a globally recognized organization working to help educate technical members of the display industry. SID was founded as a Professional Society back in 1962. SID is made up today of about 5,000 display professionals.



More information about this document can be found at: <http://www.icdm-sid.org/>

## Why does the standard only measure Red, Green and Blue? What about all the other colors?

Computers and media players define colors as relative levels of Red, Green and Blue. For example, yellow is stored inside the computer as bright red, bright green and no blue.

Regardless of how the projector may create its image, the standard input signal is based on Red, Green and Blue and therefore it's important to measure these standard color primaries.

## What does the Brightness metric we've used for years represent?

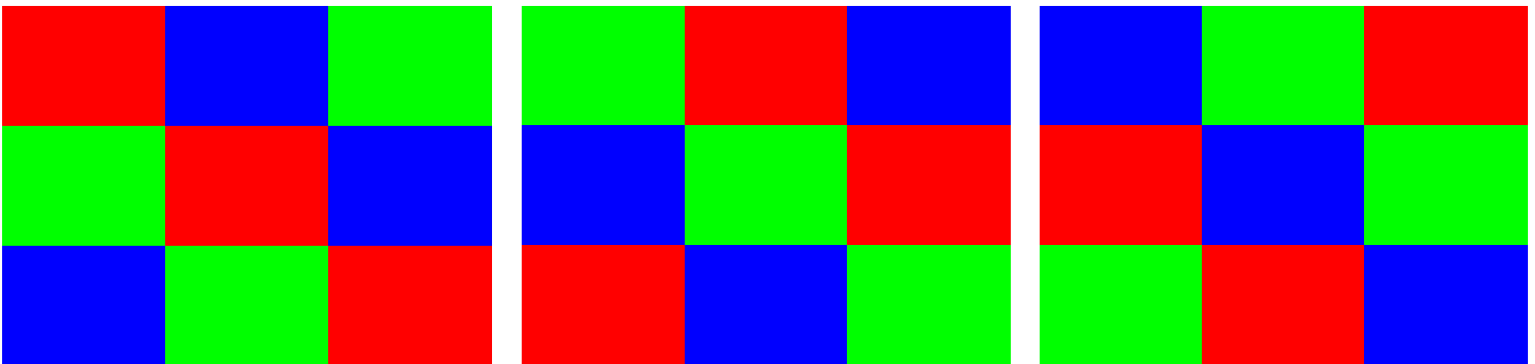
Brightness, or technically Light Output, is only a measurement of white light. To measure brightness, projector makers will take nine brightness readings across the entire image. The average of the nine measurements is multiplied by the screen area in square meters to determine the projector's lumen output.

## How is Color Brightness measured?

Color Light Output is measured almost exactly the same way as "Brightness" or white light output...but instead of measuring white light, the primary colors are measured.

Instead of just nine measurements, there are total of 27 measurements taken, with the three sample images below.

The brightness of Red, Green and Blue are averaged, summed and multiplied by the screen area to determine the total amount of Color Brightness.



<sup>1</sup> Actual photographs of images produced by two competing projectors set to the brightest mode. Price and resolution are the same for both projectors. Projector on the left is a 1-Chip DLP rated by the manufacturer at 2700 lumens of White Brightness; it measured 700 lumens of Color Brightness. The projector on the right is a 3LCD projector rated at 2600 lumens (Color Brightness) and 2600 lumens (White Brightness).

<sup>2</sup> The data in Table 1 was obtained from Projector Central based on information available from these manufacturers.

<sup>3</sup> The White Brightness data in Table 2 was obtained through Projector Central, as specified by the manufacturers. These manufacturers do not provide Color Brightness (Color Light Output) data. Color Brightness was determined in compliance with IDMS 15.4 by 3rd party laboratory testing of a single unit of each model. Serial numbers available upon request.