



**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.

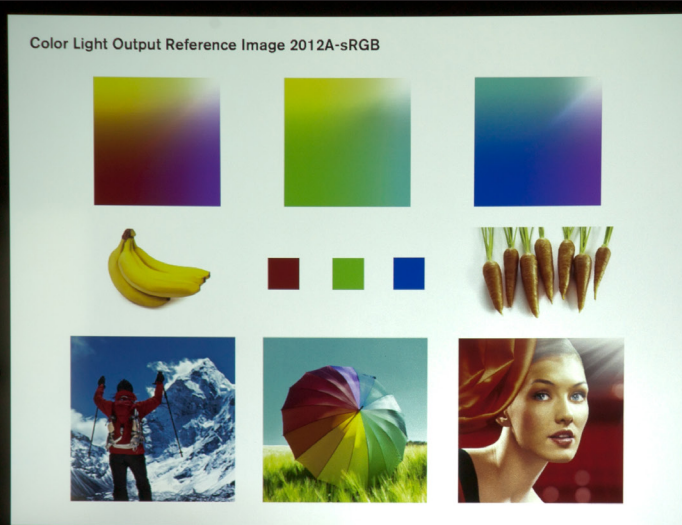
The photograph below shows two projectors setup side-by-side, set in their brightest mode. Both offer similar resolution, price and white brightness levels.

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.

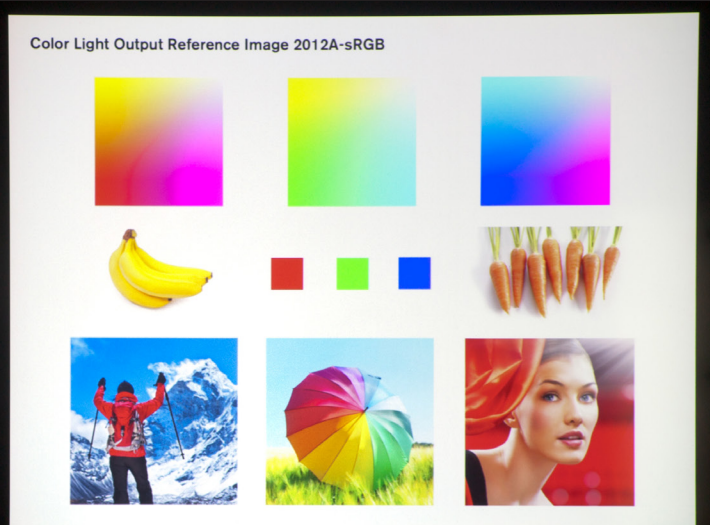
This document starts with a listing of projectors where the manufacturer specifies both White and Color Brightness. Second is a table containing projectors measured for their Color Brightness level by a 3rd party laboratory because the manufacturer did not specify the color brightness.

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

## Low Color Brightness



## 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>			EX6210	2700	2700	PowerLite 1955	4500	4500
ImagePro 8104	2500	2500	EX6220	3000	3000	PowerLite 1960	5000	5000
ImagePro 8107	2500	2500	EX7210	2800	2800	PowerLite 1965	5000	5000
ImagePro 8112	3000	3000	EX7220	3000	3000	PowerLite 1975W	5000	5000
ImagePro 8755	2400	2400	EX7230	3000	3000	PowerLite 1980WU	4400	4400
ImagePro 8928	2700	2700	EX7235	3000	3000	PowerLite 1985WU	4800	4800
ImagePro 8930	3200	3200	EX7240	3200	3200	PowerLite 2040	4200	4200
ImagePro 8931	3000	3000	EX7260	3600	3600	PowerLite 2042	4400	4400
ImagePro 8932	3200	3200	EX9200	3200	3200	PowerLite 2065	5500	5500
ImagePro 8933	3000	3000	EX9210	3400	3400	PowerLite 2140W	4200	4200
ImagePro 8957	4000	4000	EX9220	3600	3600	PowerLite 2142W	4200	4200
ImagePro 8958	4000	4000	EV-100/105	2000	2000	PowerLite 2155W	5000	5000
ImagePro 8959	5000	5000	HC 4010	2400	2400	PowerLite 2165W	5500	5500
ImagePro 8970	5000	5000	HC 5050UB	2600	2600	PowerLite 2245U	4200	4200
ImagePro 8971	6000	6000	MegaPlex MG-850HD	2800	2800	PowerLite 2247U	4200	4200
ImagePro 8972	4000	4000	MovieMate 85HD	2500	2500	PowerLite 2250U	5000	5000
ImagePro 8973	5500	5500	PC 4040	2200	2200	PowerLite 2255U	5000	5000
ImagePro 8974	4200	4200	PC 4050	2400	2400	PowerLite 2265U	5500	5500
ImagePro 8975	5000	5000	PC 6040UB	2500	2500	PowerLite 4100	4500	4500
ImagePro 8977	7000	7000	PC 6050UB	2600	2600	PowerLite 420	2500	2500
ImagePro 8979	6000	6000	PC LS10500	1500	1500	PowerLite 4200W	4500	4500
<b>Epson</b>			PowerLite 107	3500	3500	PowerLite 425W	2500	2500
BrightLink 436Wi	3000	3000	PowerLite 108	3700	3700	PowerLite 430	3000	3000
BrightLink 450Wi	2500	2500	PowerLite109W	4000	4000	PowerLite 4300	5200	5200
BrightLink 475Wi	2600	2600	PowerLite 1221	2800	2800	PowerLite 435W	3000	3000
BrightLink 485Wi	3100	3100	PowerLite 1222	3000	3000	PowerLite 4650	5200	5200
BrightLink 536Wi	3400	3400	PowerLite 1224	3200	3200	PowerLite 470	2600	2600
BrightLink 575Wi	2700	2700	PowerLite 1261W	2800	2800	PowerLite 475W	2600	2600
BrightLink 585Wi	3300	3300	PowerLite 1262W	3000	3000	PowerLite 4750W	4200	4200
BrightLink 595Wi	3300	3300	PowerLite 1263W	3000	3000	PowerLite 4770W	5000	5000
BrightLink 685Wi	3500	3500	PowerLite 1264	3200	3200	PowerLite 480	3000	3000
BrightLink 695Wi	3500	3500	PowerLite 1266	3600	3600	PowerLite 485W	3100	3100
BrightLink 696Ui	3800	3800	PowerLite 1284	3200	3200	PowerLite 4855WU	4000	4000
BrightLink 697Ui	4400	4400	PowerLite 1286	3600	3600	PowerLite 520	2700	2700
BrightLink 710Ui	4000	4000	PowerLite 1751	2600	2600	PowerLite 525W	2800	2800
BrightLink Pro 1410Wi	3100	3100	PowerLite 1761W	2600	2600	PowerLite 530	3200	3200
BrightLink Pro 1420Wi	3300	3300	PowerLite 1770W	3000	3000	PowerLite 535W	3400	3400
BrightLink Pro 1430Wi	3300	3300	PowerLite 1771W	3000	3000	PowerLite 5510	5500	5500
BrightLink Pro 1450Ui	3800	3800	PowerLite 1776W	3000	3000	PowerLite 5520W	5500	5500
BrightLink Pro 1460Ui	4400	4400	PowerLite 1780W	3000	3000	PowerLite 5530U	5500	5500
BrightLink Pro 1470Ui	4000	4000	PowerLite 1781W	3200	3200	PowerLite 5535U	5500	5500
EX3212	2800	2800	PowerLite 1785W	3200	3200	PowerLite 570	2700	2700
EX3220	3000	3000	PowerLite 1795F	3200	3200	PowerLite 575W	2700	2700
EX3240	3200	3200	PowerLite 1835	3500	3500	PowerLite 580	3200	3200
EX3260	3300	3300	PowerLite 1850W	3700	3700	PowerLite 585W	3300	3300
EX5210	2800	2800	PowerLite 1880	4000	4000	PowerLite 675W	3200	3200
EX5220	3000	3000	PowerLite 1925W	4000	4000	PowerLite 680	3500	3500
EX5230	3500	3500	PowerLite 1930	4200	4200	PowerLite 685W	3500	3500
EX5240	3200	3200	PowerLite 1940W	4200	4200	PowerLite 700U	4000	4000
EX5250	3600	3600	PowerLite 1945W	4200	4200	PowerLite 905	3000	3000
EX5260	3600	3600	PowerLite 1950	4500	4500	PowerLite 915W	3200	3200

# Table 1: Continued

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>			PL HC 3010e	2200	2200	PL Pro G7100	6500	6500
PowerLite 93+	2600	2600	PL HC 3020	2300	2300	PL Pro G7200W	7500	7500
PowerLite 935W	3700	3700	PL HC 3020e	2300	2300	PL Pro G7400U	5500	5500
PowerLite 95	2600	2600	PL HC 3100	2600	2600	PL Pro G7500U	6500	6500
PowerLite 955WH	3200	3200	PL HC 3500	2500	2500	PL Pro G7805	8000	8000
PowerLite 965	3500	3500	PL HC 3600e	2500	2500	PL Pro G7900U	7000	7000
PowerLite 965H	3500	3500	PL HC 3700	3000	3000	PL Pro G7905U	7000	7000
PowerLite 96W	2700	2700	PL HC 3900	2700	2700	PL Pro L1100U	6000	6000
PowerLite 97	2700	2700	PL HC 4000	2200	2200	PL Pro L1200U	7000	7000
PowerLite 97H	2700	2700	PL HC 500	2600	2600	PL Pro L1300U	8000	8000
PowerLite 970	4000	4000	PL HC 5010	2400	2400	PL Pro L1405U	8000	8000
PowerLite 975W	3600	3600	PL HC 5020UB	2400	2400	PL Pro L1500U	12000	12000
PowerLite 98	2700	2700	PL HC 5020UBe	2400	2400	PL Pro L1505U	12000	12000
PowerLite 98H	3000	3000	PL HC 5030UB	2400	2400	PL Pro L1715S	15000	15000
PowerLite 980W	3800	3800	PL HC 5030UBe	2400	2400	PL Pro L1750U	15000	15000
PowerLite 99W	3000	3000	PL HC 5040UB	2500	2500	PL Pro L1755U	15000	15000
PowerLite 99WH	3000	3000	PL HC 5040UBe	2500	2500	PL Pro L25000U	25000	25000
PowerLite 990U	3800	3800	PL HC 640	3200	3200	PL Pro Z8000WUNL	6000	6000
PowerLite D6150	3500	3500	PL HC 660	3300	3300	PL Pro Z8050WNL	7000	7000
PowerLite D6155W	3500	3500	PL HC 707	2700	2700	PL Pro Z8150NL	8000	8000
PowerLite D6250	4000	4000	PL HC 710HD	2800	2800	PL Pro Z8250NL	10000	10000
PowerLite L400U	4500	4500	PL HC 725HD	2800	2800	PL Pro Z8255NL	10000	10000
PowerLite L500W	5000	5000	PL HC 730HD	3000	3000	PL Pro Z8350WNL	8500	8500
PowerLite L510U	5000	5000	PL HC 740HD	3000	3000	PL Pro Z8450WUNL	7000	7000
PowerLite L610	6000	6000	PL HC 750HD	3000	3000	PL Pro Z8455WUNL	7000	7000
PowerLite L610U	6000	6000	PL HC 760HD	3300	3300	PL Pro Z9750UNL	7500	7500
PowerLite L610W	6000	6000	PL HC 8345	1800	1800	PL Pro Z9800WNL	8300	8300
PowerLite L615U	6000	6000	PL HC 8350	2000	2000	PL Pro Z9870NL	8700	8700
PowerLite S11	2600	2600	PL HC LS100	4000	4000	PL Pro Z9870UNL	8700	8700
PowerLite S17	2700	2700	PL Presenter	2500	2500	PL Pro Z9900WNL	9200	9200
PowerLite S27	2700	2700	PL Pro C4030	2000	2000	PL Pro Z10000UNL	10000	10000
PowerLite S39	3300	3300	PL Pro C6020UB	2400	2400	PL Pro Z10005UNL	10000	10000
PowerLite W16	3000	3000	PL Pro C6030UB	2400	2400	PL Pro Z11000WNL	11000	11000
PowerLite W16SK	6000	6000	PL Pro C9350	2000	2000	PL Pro Z11005NL	11000	11000
PowerLite W17	2800	2800	PL Pro G5450WU	4000	4000	VS210	2600	2600
PowerLite W29	3000	3000	PL Pro G5550	4500	4500	VS220	2700	2700
PowerLite W39	3500	3500	PL Pro G5650W	4500	4500	VS230	2800	2800
PowerLite X12	2800	2800	PL Pro G6050W	5500	5500	VS240	3000	3000
PowerLite X15	3000	3000	PL Pro G6070W	5500	5500	VS250	3200	3200
PowerLite X17	2700	2700	PL Pro G6150	6500	6500	VS315W	2600	2600
PowerLite X27	2700	2700	PL Pro G6170	6500	6500	VS320	2700	2700
PowerLite X39	3500	3500	PL Pro G6270W	6500	6500	VS330	2700	2700
PL HC 1040	3000	3000	PL Pro G6450WU	4500	4500	VS335W	2700	2700
PL HC 1060	3200	3200	PL Pro G6470WU	4500	4500	VS340	2800	2800
PL HC 1440	4400	4400	PL Pro G6550WU	5200	5200	VS345	3000	3000
PL HC 1450	4200	4200	PL Pro G6570WU	5200	5200	VS350	3300	3300
PL HC 2000	1800	1800	PL Pro G6750WU	6000	6000	VS350W	3700	3700
PL HC 2030	2000	2000	PL Pro G6770WU	6000	6000	VS355	3300	3300
PL HC 2040	2200	2200	PL Pro G6800	7000	7000	VS410	4000	4000
PL HC 2045	2200	2200	PL Pro G6870	7000	7000	EB-107	3500	3500
PL HC 2100	2500	2500	PL Pro G6900WU	6000	6000	EB-108	3700	3700
PL HC 2150	2500	2500	PL Pro G6970WU	6000	6000	EB-109W	4000	4000
PL HC 3000	2300	2300	PL Pro G7000W	6500	6500	EB-1420Wi	3300	3300

# Table 1: Continued

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>			EB-5530U	5500	5500	EB-G6800	7000	7000
EB-1430Wi	3300	3300	EB-570	2700	2700	EB-G6870	7000	7000
EB-1440Ui	3800	3800	EB-575Wi	2700	2700	EB-G6900WU	6000	6000
EB-1450Ui	3800	3800	EB-580	3200	3200	EB-G6970WU	6000	6000
EB-1460Ui	4400	4400	EB-585W	3300	3300	EB-G7000W	6500	6500
EB-1470Ui	4000	4000	EB-585Wi	3300	3300	EB-G7100	6500	6500
EB-1751	2600	2600	EB-590WT	3300	3300	EB-G7200W	7500	7500
EB-1761W	2600	2600	EB-595Wi	3300	3300	EB-G7400U	5500	5500
EB-1771W	3000	3000	EB-670	3100	3100	EB-G7500U	6500	6500
EB-1776W	3000	3000	EB-675Wi	3200	3200	EB-G7800	8000	8000
EB-1780W	3000	3000	EB-680	3500	3500	EB-G7805	8000	8000
EB-1781W	3200	3200	EB-680Wi	3500	3500	EB-G7900	7000	7000
EB-1785W	3200	3200	EB-685W	3500	3500	EB-G7900U	7000	7000
EB-1795F	3200	3200	EB-685Wi	3500	3500	EB-G7905U	7000	7000
EB-1930	4200	4200	EB-695Wi	3500	3500	EB-L1100U	6000	6000
EB-1935	4200	4200	EB-696Ui	3800	3800	EB-L1105U	6000	6000
EB-1940W	4200	4200	EB-700U	4000	4000	EB-L1200U	7000	7000
EB-1945W	4200	4200	EB-710Ui	4000	4000	EB-L1300U	8000	8000
EB-1950	4500	4500	EB-935W	3700	3700	EB-L1405U	8000	8000
EB-1955	4500	4500	EB-940H	3000	3000	EB-L1500U	12000	12000
EB-1960	5000	5000	EB-945	3000	3000	EB-L1500U	12000	12000
EB-1965	5000	5000	EB-945H	3000	3000	EB-L1505U	12000	12000
EB-1970W	5000	5000	EB-950WH	3000	3000	EB-L1510S	12000	12000
EB-1975W	5000	5000	EB-950WHV	3000	3000	EB-L1515S	12000	12000
EB-1980WU	4400	4400	EB-955W	3000	3000	EB-L1710S	15000	15000
EB-1985WU	4800	4800	EB-955WH	3200	3200	EB-L1715S	15000	15000
EB-2040	4200	4200	EB-965	3500	3500	EB-L1750U	15000	15000
EB-2042	4400	4400	EB-965H	3500	3500	EB-L1755U	15000	15000
EB-2055	5000	5000	EB-97H	2700	2700	EB-L2500U	25000	25000
EB-2065	5500	5500	EB-970	4000	4000	EB-L400U	4500	4500
EB-2140W	4200	4200	EB-98	3000	3000	EB-L500W	5000	5000
EB-2142W	4200	4200	EB-98H	3000	3000	EB-L510U	5000	5000
EB-2155W	5000	5000	EB-980W	3800	3800	EB-L610	6000	6000
EB-2165W	5500	5500	EB-99WH	3000	3000	EB-L610U	6000	6000
EB-2245U	4200	4200	EB-990U	3800	3800	EB-L610W	6000	6000
EB-2247U	4200	4200	EB-D6150	3500	3500	EB-L615U	6000	6000
EB-2250U	5000	5000	EB-D6155W	3500	3500	EB-S03	2700	2700
EB-2255U	5000	5000	EB-D6250	4000	4000	EB-S04	3000	3000
EB-2265U	5500	5500	EB-G6050W	5500	5500	EB-S05	3200	3200
EB-4550	4500	4500	EB-G6070W	5500	5500	EB-S17	2700	2700
EB-4650	5200	5200	EB-G6150	6500	6500	EB-S18	2900	2900
EB-4750W	4200	4200	EB-G6170	6500	6500	EB-S27	2700	2700
EB-4770W	5000	5000	EB-G6250W	6500	6500	EB-S29	3000	3000
EB-4850WU	4000	4000	EB-G6270W	6500	6500	EB-S31	3200	3200
EB-4950WU	4500	4500	EB-G6350	7000	7000	EB-S39	3300	3300
EB-520	2700	2700	EB-G6370	7000	7000	EB-S41	3300	3300
EB-525W	2800	2800	EB-G6450WU	4500	4500	EB-U04	3000	3000
EB-530	3200	3200	EB-G6470WU	4500	4500	EB-U05	3400	3400
EB-535W	3400	3400	EB-G6550WU	5200	5200	EB-U32	3200	3200
EB-536Wi	3400	3400	EB-G6570WU	5200	5200	EB-U42	3600	3600
EB-536WT	3400	3400	EB-G6650WU	6000	6000	EB-W03	2700	2700
EB-5510	5500	5500	EB-G6750WU	6000	6000	EB-W04	3000	3000
EB-5520W	5500	5500	EB-G6770WU	6000	6000	EB-W05	3300	3300

# Table 1: Continued

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>								
EB-W8D	2500	2500	EH-TW650	3200	3200	VPL-DW126	2600	2600
EB-W16	3000	3000	EH-TW6600	2500	2500	VPL-DX120	2600	2600
EB-W16SK	6000	6000	EH-TW6600W	2500	2500	VPL-DX140	3200	3200
EB-W22	3000	3000	EH-TW6700	3000	3000	VPL-DX146	3200	3200
EB-W28	3000	3000	EH-TW6700W	3000	3000	VPL-EW225	2600	2600
EB-W29	3000	3000	EH-TW6800	2800	2800	VPL-EW246	3100	3100
EB-W31	3200	3200	EH-TW7200	2000	2000	VPL-EW276	3700	3700
EB-W32	3200	3200	EH-TW7300	2300	2300	VPL-EX225	2700	2700
EB-W39	3500	3500	EH-TW8200	2400	2400	VPL-EX246	3200	3200
EB-W42	3600	3600	EH-TW8200W	2400	2400	VPL-EX276	3700	3700
EB-W420	3000	3000	EH-TW8300	2500	2500	VPL-FH30	4300	4300
EB-X03	2700	2700	EH-TW8300W	2500	2500	VPL-FH31B	4300	4300
EB-X04	2800	2800	EH-TW9200	2400	2400	VPL-FH31W	4300	4300
EB-X05	3300	3300	EH-TW9200W	2400	2400	VPL-FH36B	5200	5200
EB-X18	3000	3000	EH-TW9300	2500	2500	VPL-FH36W	5200	5200
EB-X20	2700	2700	EH-TW9300W	2500	2500	VPL-FH500L	7000	7000
EB-X24	3200	3200	<b>Hitachi</b>			VPL-FX30	4200	4200
EB-X25	3500	3500	CP-A222WN	2200	2200	VPL-FX35	5000	5000
EB-X27	2700	2700	CP-A352WN	3500	3500	VPL-FX37	6000	6000
EB-X29	3000	3000	CP-AW2519N	2500	2500	VPL-FX500L	7000	7000
EB-X30	3500	3500	CP-AW2519NM	2500	2500			
EB-X31	3200	3200	CP-AW252WN	2500	2500			
EB-X39	3500	3500	CP-AW312WN	3000	3000			
EB-X36	3600	3600	CP-D31N	3000	3000			
EB-X41	3600	3600	CP-D32WN	3200	3200			
EB-Z9750WU	7500	7500	CP-EW300	3000	3000			
EB-Z9800W	8300	8300	CP-SX8350	5000	5000			
EB-Z9870U	8700	8700	CP-WU8440	4200	4200			
EB-Z9875U	8700	8700	CP-WU8450	5000	5000			
EB-Z9900W	9200	9200	CP-WU8460	6000	6000			
EB-Z10000U	10000	10000	CP-WUX8441	5000	5000			
EB-Z10005U	10000	10000	CP-WUX8460	6000	6000			
EB-Z11000	11000	11000	CP-WX2515WN	2700	2700			
EB-Z11000W	11000	11000	CP-WX3015WN	3000	3000			
EB-Z11005	11000	11000	CP-WX3030WN	3000	3000			
EH-5600	2500	2500	CP-WX4022WN	4000	4000			
EH-5650	2500	2500	CP-WX8240	4000	4000			
EH-LS100	4000	4000	CP-WX8240A	4000	4000			
EH-LS10000	1500	1500	CP-WX8255A	5500	5500			
EH-LS10500	1500	1500	CP-X2521WN	2700	2700			
EH-TW490	3000	3000	CP-X2530WN	2700	2700			
EH-TW5100	1800	1800	CP-X3021WN	3200	3200			
EH-TW5200	2000	2000	CP-X3030WN	3200	3200			
EH-TW5210	2200	2200	CP-X4015WN	4000	4000			
EH-TW530	3000	3000	CP-X4022WN	4000	4000			
EH-TW5300	2200	2200	CP-X5022WN	5000	5000			
EH-TW5350	2200	2200	CP-X8150	5000	5000			
EH-TW570	3000	3000	CP-X8160	6000	6000			
EH-TW6100	2300	2300	CP-X8170	7000	7000			
EH-TW630	3300	3300	<b>Sony</b>					
EH-TW6300	2600	2600	VPL-CW275	5100	5100			
EH-TW640	3300	3300	VPL-CX275	5200	5200			
			VPL-DW120	2600	2600			

## 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>			HT1085ST	2200	1390	MW526A	3300	660
MP225A	32	30	HT2050	2200	1450	MW526AE	3300	700
<b>AAXA</b>			HT2050A	2200	1450	MW529E	3300	720
M6	1200	610	HT2150ST	2200	1280	MW535A	3600	650
MP-300-03	550	150	HT2550	2200	1200	MW571	3200	670
P2 Jr.	55	30	HT3050	2000	1130	MW612	4000	740
P3	50	20	HT3550	2000	1000	MW621ST	3000	530
P300	300	140	HT4050	2000	1230	MW632ST	3200	600
P4-X	95	40	HT5550	1800	975	MW665	3200	650
P450	450	190	HT8050	2200	1500	MW705	4000	840
<b>Acer</b>			Joybee GP2	200	30	MW721	3500	810
C120	100	90	LU950	5000	1600	MW727	4200	830
H5360	2500	600	LU951ST	5000	1500	MW732	4000	850
H5370BD	2500	570	LU9715	8000	2900	MW769	4200	950
H5380BD	3000	660	LW61ST	2000	550	MW814ST	2500	770
H6500	2100	720	MH530	3200	670	MW824ST	3200	590
H6502BD	3400	650	MH530FHD	3300	600	MW843UST	3000	560
H6510BD	3000	580	MH535A	3600	650	MW851UST	2500	460
H6810	3500	720	MH630	3000	770	MW853UST	3200	860
H7850	3000	870	MH680	3000	700	MW855UST	3500	1050
K132	500	130	MH733	4000	730	MW860USTi	3000	480
P1173	3000	590	MH740	4000	730	MW870UST	3000	530
P1185	3200	750	MH741	4000	810	MW883UST	3300	700
P1273	3000	710	MH750	4500	820	MX503	2700	830
P1283	3000	650	MH760	5000	1050	MX505	3000	640
P1383W	3100	660	MH856UST	3500	1200	MX511	2700	700
P1387W	4500	850	MP512	2200	610	MX518	2800	720
P1500	3000	530	MP515	2500	750	MX520	3000	610
P5271	3100	700	MP522	2000	540	MX522	3000	430
P5515	4000	720	MP522ST	2000	590	MX525	3200	430
P7505	5000	980	MP525P	2500	840	MX525A	3300	560
S1386WHN	3600	750	MP622	2700	1090	MX570	3200	380
X110P	2700	700	MP622C	2200	1010	MX613ST	2500	660
X113PH	3000	710	MP780ST	2500	600	MX620ST	3000	630
X1161P	2700	720	MS502	2700	760	MX632ST	3200	490
X1163	3000	720	MS504	3000	700	MX660P	3000	790
X117H	3600	750	MS510	2700	730	MX661	3000	680
X118H	3600	500	MS513	2700	700	MX711	3200	770
X1211K	2500	670	MS514H	3200	740	MX723	3700	660
X123PH	3000	670	MS517	2800	700	MX726	4000	870
X1240	2700	650	MS521	3000	460	MX731	4000	600
X1261P	2700	640	MS524	3200	670	MX763	3700	830
X1373WH	3000	560	MS524A	3300	720	MX764	4200	980
<b>Acto</b>			MS524AE	3300	600	MX806PST	3000	560
DX221ST	3200	470	MS535A	3600	550	MX810ST	2500	490
<b>ASUS</b>			MS612ST	2500	710	MX815ST	2700	720
S1	200	120	MS614	2700	710	MX816ST	3000	640
<b>BenQ</b>			MU686	3500	650	MX819ST	3000	520
CH100	1000	800	MU706	4000	720	MX850UST	2500	400
HC1200	2800	1740	MW516	2800	670	PU9530	6000	2000
HT1070	2000	1200	MW519	2800	700	SH915	4000	780
HT1070A	2200	900	MW523	3000	430	SH940	4000	1160
HT1075	2200	1390	MW526	3200	620	SP840	4000	480

**Table 2: Continued**

	White Brightness	Tested Color Brightness
<b>BenQ (Continued)</b>		
SU917	5000	900
SU922	5000	1280
SX920	5000	1150
TH530	3200	680
TH670	3000	610
TH671ST	3000	700
TH681	3000	840
TH683	3200	620
TK800	3000	550
W1070	2000	1570
W1080ST	2000	1470
W1090	2000	1500
W1500	2200	1440
W7000	2000	1500
W770ST	2500	680
<b>Canon</b>		
LV-S300	3000	620
LV-WX300	3000	700
LV-X300	3000	630
LX-MU500Z	5000	1750
LX-MH502Z	5000	1800
LX-MU800Z	8000	2900
<b>Casio</b>		
XJ-A130	2000	540
XJ-A141	2500	1200
XJ-A246	2500	1340
XJ-A252	3000	1170
XJ-A256	3000	1370
XJ-A257	3000	1400
XJ-F10X	3300	1740
XJ-F100W	3500	1230
XJ-F101W	3500	1400
XJ-F11X	3300	1200
XJ-F20XN	3300	1580
XJ-F21XN	3300	1100
XJ-F210WN	3500	1420
XJ-F211WN	3500	1400
XJ-H1700	4000	770
XJ-M140	2500	1440
XJ-M151	3000	1640
XJ-M240	2500	1280
XJ-M245	2500	1160
XJ-M251	3000	1650
XJ-ST145	2500	510
XJ-UT310WN	3100	1890
XJ-UT351W	3500	2180
XJ-V1	2700	1360
XJ-V10X	3300	1790
XJ-V100W	3000	1580
XJ-V110W	3500	1990
XJ-V2	3000	1670
<b>Christie</b>		
D13WU-HS	13500	6000

	White Brightness	Tested Color Brightness
DHD400S	3500	940
DHD800	8000	2000
<b>Dell</b>		
1220	2700	550
1409X	2500	820
1450	3000	640
1510X	3500	770
1610HD	3500	910
2400MP	3000	710
4320	4300	1080
M110	300	80
M115HD	450	120
M900HD	900	180
S300wi	2200	480
S500wi	3200	880
S560	3400	800
<b>Hitachi</b>		
CP-DX250	2500	480
CP-DX300	3000	650
LP-WU3500	3500	1200
LP-WU6500	5000	1800
LP-WU9750B	8000	2300
<b>InFocus</b>		
IN102	2500	740
IN1110	2100	530
IN1110a	2100	550
IN1112	2200	590
IN1112a	2200	530
IN1116	2400	550
IN1116LC	2400	460
IN1118HD	2400	470
IN112	2700	640
IN112a	3000	700
IN112x	3200	670
IN112xa	3500	600
IN112xv	3400	680
IN114	2700	660
IN114a	3000	670
IN114ST	2700	560
IN114x	3200	640
IN114xa	3500	500
IN114xv	3400	500
IN1146	1000	250
IN116	2700	630
IN116a	3000	660
IN116x	3200	630
IN116xa	3500	600
IN116xv	3400	700
IN118HDa	3000	400
IN119HDx	3200	590
IN122	3200	760
IN122a	3500	800
IN124	3200	840
IN124a	3500	710

	White Brightness	Tested Color Brightness
IN124ST	3000	690
IN124x	4000	830
IN126	3200	810
IN126ST	3000	630
IN126STa	3300	700
IN128HDx	4000	670
IN1338HD	4000	690
IN134	4000	760
IN136	4000	760
IN138HD	4000	760
IN2102	2500	760
IN2104	2500	650
IN2112	3000	750
IN2114	3000	760
IN2116	3000	730
IN2124	3200	800
IN2124a	3500	820
IN2124x	4200	760
IN2126	3200	840
IN2128HDa	3500	740
IN2134	4500	790
IN2136	4500	750
IN2138HD	4500	1000
IN3102	3000	840
IN3104	3500	1010
IN3114	3500	910
IN3116	3500	930
IN3124	4800	1050
IN3126	4000	760
IN3128HD	4000	590
IN3138HD	4000	720
IN3138HDa	4000	600
IN3144	5000	850
IN3148HD	5000	1100
IN35	2500	840
IN37	3000	970
IN3914	2700	730
IN5312	4500	1190
Work Big IN24+	2400	720
Work Big IN26+	2400	640
Work Big IN32	2000	940
Work Big IN34	2500	670
Work Big IN36	3000	870
<b>LG</b>		
BS-275	2700	700
HF80JA	2000	530
HF85JA	1500	400
HU80KA	2500	650
PA75U	700	230
PA77U	700	300
PB63U	500	220
PF1000U	1000	250
PF1500	1400	400

## Table 2: Continued

	White Brightness	Tested Color Brightness
<b>LG (Continued)</b>		
PF50KA	600	200
PH300W	300	200
PH550	550	300
PW800	800	340
<b>Mimio</b>		
mimioProjector	2800	550
<b>Miroir</b>		
M300A	400	200
<b>Mitsubishi</b>		
EX240U	2500	510
<b>Mitsubishi</b>		
HC1500	1600	720
HC4000	1300	400
HC7800D	1500	1090
HD4000U	2000	690
WD380U-EST	2800	660
XD211U	2200	660
XD221U	2300	810
XD221U-ST	2000	650
XD250U	2700	1050
XD3500U	5000	940
XD360U-EST	2500	350
XD460U	2600	850
XD490U	3000	780
XD500U	2200	640
XD700U	5000	850
<b>NEC</b>		
NP110	2200	640
NP200	2100	480
NP40	2200	830
NP4001	4500	1640
NP4100	6200	1950
NP50	2600	740
NP60	3000	790
NP61	3000	700
NP-M282X	2800	810
NP-M283X	2800	780
NP-M322W	3200	810
NP-M322X	3200	870
NP-M323W	3200	950
NP-M323X	3200	910
NP-M333XS	3300	920
NP-M352WS	3500	1020
NP-M353WS	3500	900
NP-M363W	3600	950
NP-M363X	3600	890
NP-M402H	4000	1060
NP-M402X	4000	1030
NP-M403H	4000	770
NP-M403X	4000	1000
NP-P502H	5000	1300
NP-P502WL	5000	1200
NP-PE401H	4000	1020

	White Brightness	Tested Color Brightness
NP-PX750U	7500	1250
NP-PX750U+	7500	660
NP-PX800X	8000	1890
NP-U260W	2600	540
NP-U300X	3000	770
NP-U310W	3100	690
NP-U321H	3200	650
NP-V260	2600	620
NP-V260W	2600	620
NP-V260X	2600	640
NP-V300W	3000	740
NP-V300X	3000	740
NP-V302H	3000	530
NP-V332W	3300	620
NP-V332X	3300	580
NP-VE281	2800	590
NP-VE281X	2800	700
NP-VE303	3000	700
NP-VE303X	3000	630
P502HL	5000	2000
P502HL-2	5000	1250
PX-602UL	6000	2200
PX-750U2	7500	2200
PX-803UL	8000	2900
V311W	3100	690
V311X	3100	720
<b>Optoma</b>		
4K550ST	4500	1200
DH1009	3200	590
DH1011	3000	640
DH1012	3200	780
DS331	3200	500
DS339	2600	760
DS550	2600	650
DU380	3800	630
DW326e	3000	710
DX326	2800	710
DX346	3000	690
DX550	2600	640
EH200ST	3000	500
EH320USTi	4000	660
EH330UST	3600	950
EH331	3300	640
EH341	3500	680
EH345	3200	670
EH400+	4000	900
EH415	4200	800
EH415ST	3500	800
EH416	4200	620
EH500	4700	1000
EH501	5000	430
EH503	5000	1190
EH504	5000	1050
EH512	5000	1500
EH615T	6200	750

	White Brightness	Tested Color Brightness
EH7700	7000	1900
EP1691	2500	820
EP716	1800	510
EP719	2000	600
EP721	2200	550
EP727	2200	590
EP728	2700	810
EP771	3000	930
ES522	2800	660
EW1691e	3000	770
EW536	2800	700
EW695UT	3500	780
EX525ST	2500	570
EX530	2600	650
EX532	2800	650
EX551	2800	640
EX685UT	3000	620
EX765	4000	810
EX784	5000	1060
EX785	5000	1300
GT1080	2800	500
GT5500	3500	690
GT5600	3600	730
GT750e	3000	950
GT760	3400	600
H180X	3000	660
H181X	3200	580
H182X	3200	760
HD131Xe	2500	480
HD131Xw	2500	650
HD141X	3000	700
HD142X	3000	700
HD143X	3000	560
HD20	1700	1020
HD23	2500	680
HD25E	2800	420
HD25-LV	3500	670
HD26	3200	670
HD27	3200	600
HD27e	3400	560
HD27HDR	3400	760
HD28DSE	3000	630
HD29Darbee	3200	630
HD33	1800	940
HD37	2600	1980
HD39Darbee	3500	1100
HD65	1600	650
HD66	2500	710
ML300	300	130
ML500	500	140
ML550	500	150
ML750	700	110
ML1000P	1000	170
PK320	100	60
PRO150S	2800	810



**Table 2: Continued**

	White Brightness	Tested Color Brightness
<b>Optoma (Continued)</b>		
PRO160S	3000	810
PRO250X	2800	740
PRO260X	3000	770
PRO360W	3000	820
PT100	50	10
PT110	100	20
S303	3000	670
S310e	3200	730
S316	3200	710
S321	3200	570
S341	3500	620
S343	3600	750
S365	3600	700
TS526	2800	700
TS551	2800	640
TW766W	4000	800
TX536	2800	670
TX542	2800	680
TX631-3D	3500	850
UHD50	2400	1000
UHD51A	2400	1000
UHD60	3000	1000
UHD65	2200	1200
W303	3200	500
W304M	3100	780
W305ST	3200	490
W306ST	3500	730
W307UST	3500	660
W311	3200	490
W312	3200	710
W316	3400	660
W316ST	3400	640
W318ST	3500	840
W331	3200	620
W335	3800	650
W341	3600	780
W345	3300	710
W351	3800	810
W355	3600	720
W400	4000	900
W415	4500	800
W416	4500	650
W512	5500	1400
WU334	3600	700
WU336	3400	550
WU416	4200	630
WU465	4800	960
WU515	6000	1300
X303	3000	410
X304M	3000	620
X305ST	3000	540
X306ST	3200	680
X312	3200	610
X313	3000	710

	White Brightness	Tested Color Brightness
X316	3200	590
X318ST	3300	600
X341	3300	560
X343	3600	650
X345	3200	670
X351	3600	700
X355	3500	680
X400+	4000	780
X416	4300	800
X600	6000	1070
X605	6000	1500
ZH500T	5000	940
ZH510T	5000	1200
ZU500TST	5000	1700
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-RZ120	16000	7200
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

	White Brightness	Tested Color Brightness
PG-LW2000	2800	770
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
PG800HD	5000	1100
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

**Table 2: Continued**

	White Brightness	Tested Color Brightness
<b>ViewSonic (Continued)</b>		
PJD7583W	3000	730
PJD7720HD	3200	730
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
Pro9510L	6200	870
PS501X	870	550
PS600W	3500	600
PS750HD	3000	600
PX700HD	3500	520
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

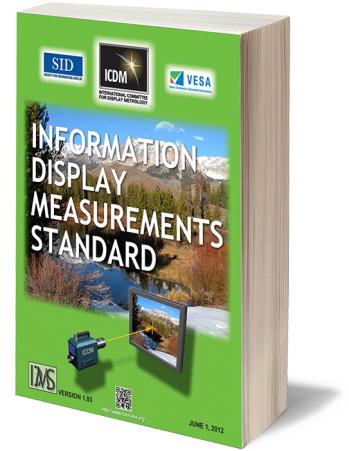
	White Brightness	Tested Color Brightness
<b>XGIMI</b>		
H2	1350	800
Z6	500	400
<b>ZTE</b>		
Spro 2	200	190

### ***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?***

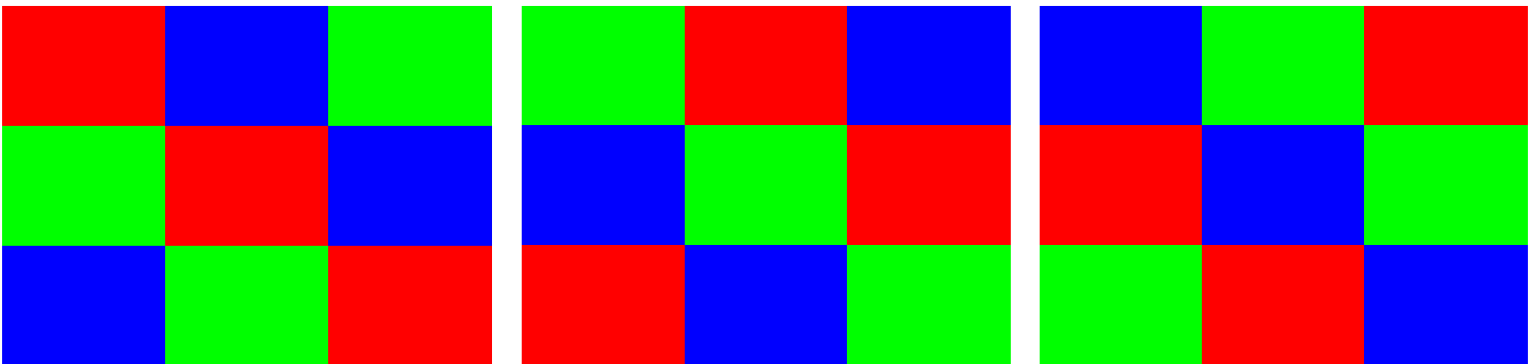
Brightness, or technically Light Output, is only a measurement of white light. To measure brightness, projector makers will take nine brightness readings across the entire image. The average of the nine measurements is multiplied by the screen area in square meters to determine the projector's lumen 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> The data in Table 1 was obtained from Projector Central based on information available from these manufacturers.

<sup>2</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.