



**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.

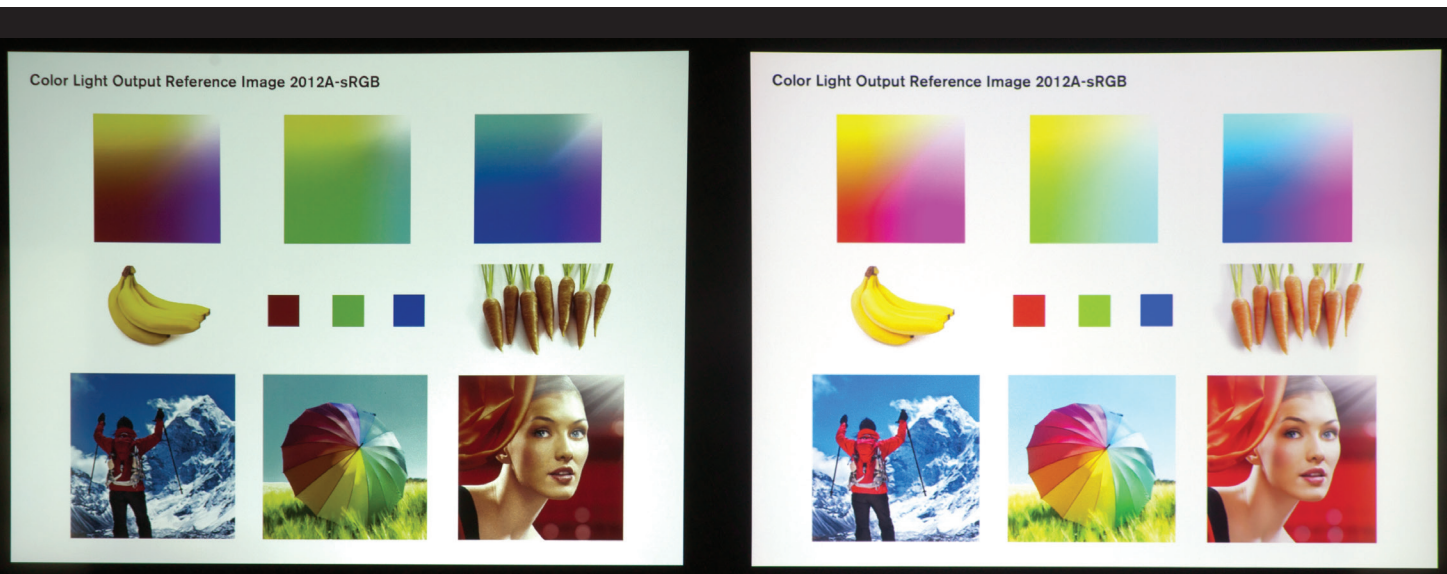
The projector on the left exhibits low Color Brightness; only a fraction of its white brightness. The one on the right shows equal amounts of Color and White Brightness. Colors on the right are much brighter, providing more impact.

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>			PowerLite 1222	3000	3000	PowerLite 965H	3500	3500
ImagePro 8104	2500	2500	PowerLite 1261W	2800	2800	PowerLite 96W	2700	2700
ImagePro 8107	2500	2500	PowerLite 1262W	3000	3000	PowerLite 97	2700	2700
ImagePro 8112	3000	3000	PowerLite 1263W	3000	3000	PowerLite 97H	2700	2700
ImagePro 8755	2400	2400	PowerLite 1751	2600	2600	PowerLite 98	2700	2700
ImagePro 8928	2700	2700	PowerLite 1761W	2600	2600	PowerLite 98H	3000	3000
ImagePro 8930	3200	3200	PowerLite 1770W	3000	3000	PowerLite 99W	3000	3000
ImagePro 8931	3000	3000	PowerLite 1771W	3000	3000	PowerLite 99WH	3000	3000
ImagePro 8932	3200	3200	PowerLite 1776W	3000	3000	PowerLite D6150	3500	3500
ImagePro 8933	3000	3000	PowerLite 1835	3500	3500	PowerLite D6155W	3500	3500
ImagePro 8957	4000	4000	PowerLite 1850W	3700	3700	PowerLite D6250	4000	4000
ImagePro 8958	4000	4000	PowerLite 1880	4000	4000	PowerLite S11	2600	2600
ImagePro 8959	5000	5000	PowerLite 1930	4200	4200	PowerLite S17	2700	2700
ImagePro 8970	5000	5000	PowerLite 1940W	4200	4200	PowerLite S27	2700	2700
ImagePro 8971	6000	6000	PowerLite 1945W	4200	4200	PowerLite W16	3000	3000
ImagePro 8972	4000	4000	PowerLite 1955	4500	4500	PowerLite W16SK	6000	6000
ImagePro 8973	5500	5500	PowerLite 1960	5000	5000	PowerLite W17	2800	2800
ImagePro 8974	4200	4200	PowerLite 1965	5000	5000	PowerLite W29	3000	3000
ImagePro 8975	5000	5000	PowerLite 1975W	5000	5000	PowerLite X12	2800	2800
ImagePro 8977	7000	7000	PowerLite 1980WU	4400	4400	PowerLite X15	3000	3000
ImagePro 8979	6000	6000	PowerLite 1985WU	4800	4800	PowerLite X17	2700	2700
<b>Epson</b>			PowerLite 4100	4500	4500	PowerLite X27	2700	2700
BrightLink 436Wi	3000	3000	PowerLite 420	2500	2500	PL HC2000	1800	1800
BrightLink 475Wi	2600	2600	PowerLite 4200W	4500	4500	PL HC2030	2000	2000
BrightLink 485Wi	3100	3100	PowerLite 425W	2500	2500	PL HC3000	2300	2300
BrightLink 536Wi	3400	3400	PowerLite 430	3000	3000	PL HC3020	2300	2300
BrightLink 575Wi	2700	2700	PowerLite 4300	5200	5200	PL HC3020e	2300	2300
BrightLink 585Wi	3300	3300	PowerLite 435W	3000	3000	PL HC3500	2500	2500
BrightLink 595Wi	3300	3300	PowerLite 4650	5200	5200	PL HC500	2600	2600
BrightLink Pro 1410Wi	3100	3100	PowerLite 470	2600	2600	PL HC5020UB	2400	2400
BrightLink Pro 1420Wi	3300	3300	PowerLite 475W	2600	2600	PL HC5020UBe	2400	2400
BrightLink Pro 1430Wi	3300	3300	PowerLite 4750W	4200	4200	PL HC5030UB	2400	2400
EX3212	2800	2800	PowerLite 4770W	5000	5000	PL HC5030UBe	2400	2400
EX3220	3000	3000	PowerLite 480	3000	3000	PL HC707	2700	2700
EX3240	3200	3200	PowerLite 485W	3100	3100	PL HC725HD	2800	2800
EX5210	2800	2800	PowerLite 4855WU	4000	4000	PL HC730HD	3000	3000
EX5220	3000	3000	PowerLite 520	2700	2700	PL HC750HD	3000	3000
EX5230	3500	3500	PowerLite 525W	2800	2800	PL HC8345	1800	1800
EX5240	3200	3200	PowerLite 530	3200	3200	PL HC8350	2000	2000
EX5250	3600	3600	PowerLite 535W	3400	3400	PL Presenter	2500	2500
EX6210	2700	2700	PowerLite 570	2700	2700	PL Pro C4030	2000	2000
EX6220	3000	3000	PowerLite 575W	2700	2700	PL Pro C6020UB	2400	2400
EX7210	2800	2800	PowerLite 580	3200	3200	PL Pro C6030UB	2400	2400
EX7220	3000	3000	PowerLite 585W	3300	3300	PL Pro C9350	2000	2000
EX7230	3000	3000	PowerLite 905	3000	3000	PL Pro G5450WU	4000	4000
EX7235	3000	3000	PowerLite 915W	3200	3200	PL Pro G5550	4500	4500
EX7240	3200	3200	PowerLite 93+	2600	2600	PL Pro G5650W	4500	4500
EX9200	3200	3200	PowerLite 935W	3700	3700	PL Pro G6050W	5500	5500
MegaPlex MG-850HD	2800	2800	PowerLite 95	2600	2600	PL Pro G6070W	5500	5500
MovieMate 85HD	2500	2500	PowerLite 955WH	3200	3200	PL Pro G6150	6500	6500
PowerLite 1221	2800	2800	PowerLite 965	3500	3500	PL Pro G6170	6500	6500

**Table 1: Continued**

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>			EB-1785W	3200	3200	EB-696Ui	3800	3800
PL Pro G6270W	6500	6500	EB-1795F	3200	3200	EB-935W	3700	3700
PL Pro G6450WU	4500	4500	EB-1930	4200	4200	EB-940H	3000	3000
PL Pro G6470WU	4500	4500	EB-1935	4200	4200	EB-945	3000	3000
PL Pro G6550WU	5200	5200	EB-1940W	4200	4200	EB-945H	3000	3000
PL Pro G6570WU	5200	5200	EB-1945W	4200	4200	EB-950WH	3000	3000
PL Pro G6750WU	6000	6000	EB-1950	4500	4500	EB-950WHV	3000	3000
PL Pro G6770WU	6000	6000	EB-1955	4500	4500	EB-955W	3000	3000
PL Pro G6800	7000	7000	EB-1960	5000	5000	EB-955WH	3200	3200
PL Pro G6870	7000	7000	EB-1965	5000	5000	EB-965	3500	3500
PL Pro G6900WU	6000	6000	EB-1970W	5000	5000	EB-965H	3500	3500
PL Pro G6970WU	6000	6000	EB-1975W	5000	5000	EB-97H	2700	2700
PL Pro G7900U	7000	7000	EB-1980WU	4400	4400	EB-98	3000	3000
PL Pro Z8000WUNL	6000	6000	EB-1985WU	4800	4800	EB-98H	3000	3000
PL Pro Z8050WNL	7000	7000	EB-2040	4200	4200	EB-99WH	3000	3000
PL Pro Z8150NL	8000	8000	EB-2055	5000	5000	EB-D6150	3500	3500
PL Pro Z8250NL	10000	10000	EB-2065	5500	5500	EB-D6155W	3500	3500
PL Pro Z8255NL	10000	10000	EB-2140W	4200	4200	EB-D6250	4000	4000
PL Pro Z8350WNL	8500	8500	EB-2155W	5000	5000	EB-G6050W	5500	5500
PL Pro Z8450WUNL	7000	7000	EB-2165W	5500	5500	EB-G6070W	5500	5500
PL Pro Z8455WUNL	7000	7000	EB-2245U	4200	4200	EB-G6150	6500	6500
PL Pro Z9750UNL	7500	7500	EB-2250U	5000	5000	EB-G6170	6500	6500
PL Pro Z9800WNL	8300	8300	EB-2255U	5000	5000	EB-G6250W	6500	6500
PL Pro Z9870NL	8700	8700	EB-2265U	5500	5500	EB-G6270W	6500	6500
PL Pro Z9870UNL	8700	8700	EB-4550	4500	4500	EB-G6350	7000	7000
PL Pro Z9900WNL	9200	9200	EB-4650	5200	5200	EB-G6370	7000	7000
PL Pro Z10000UNL	10000	10000	EB-4750W	4200	4200	EB-G6450WU	4500	4500
PL Pro Z10005UNL	10000	10000	EB-4770W	5000	5000	EB-G6470WU	4500	4500
PL Pro Z11000WNL	11000	11000	EB-4850WU	4000	4000	EB-G6550WU	5200	5200
PL Pro Z11005NL	11000	11000	EB-4950WU	4500	4500	EB-G6570WU	5200	5200
VS210	2600	2600	EB-520	2700	2700	EB-G6650WU	6000	6000
VS220	2700	2700	EB-525W	2800	2800	EB-G6750WU	6000	6000
VS230	2800	2800	EB-530	3200	3200	EB-G6770WU	6000	6000
VS240	3000	3000	EB-535W	3400	3400	EB-G6800	7000	7000
VS315W	2600	2600	EB-536Wi	3400	3400	EB-G6870	7000	7000
VS320	2700	2700	EB-536WT	3400	3400	EB-G6900WU	6000	6000
VS330	2700	2700	EB-5510	5500	5500	EB-G6970WU	6000	6000
VS335W	2700	2700	EB-5520W	5500	5500	EB-G7000W	6500	6500
VS340	2800	2800	EB-5530U	5500	5500	EB-G7100	6500	6500
VS345	3000	3000	EB-570	2700	2700	EB-G7200W	7500	7500
VS350W	3700	3700	EB-575Wi	2700	2700	EB-G7400U	5500	5500
VS410	4000	4000	EB-580	3200	3200	EB-G7500U	6500	6500
EB-1420Wi	3300	3300	EB-585W	3300	3300	EB-G7800	8000	8000
EB-1430Wi	3300	3300	EB-585Wi	3300	3300	EB-G7805	8000	8000
EB-1440Ui	3800	3800	EB-590WT	3300	3300	EB-G7900	7000	7000
EB-1450Ui	3800	3800	EB-595Wi	3300	3300	EB-G7900U	7000	7000
EB-1460Ui	4400	4400	EB-670	3100	3100	EB-G7905U	7000	7000
EB-1751	2600	2600	EB-675Wi	3200	3200	EB-L1100U	6000	6000
EB-1761W	2600	2600	EB-680	3500	3500	EB-L1105U	6000	6000
EB-1771W	3000	3000	EB-680Wi	3500	3500	EB-L1200U	7000	7000
EB-1776W	3000	3000	EB-685W	3500	3500	EB-L1300U	8000	8000
EB-1780W	3000	3000	EB-685Wi	3500	3500	EB-L1405U	8000	8000
EB-1781W	3200	3200	EB-695Wi	3500	3500	EB-L1500U	12000	12000

# Table 1: Continued

	White Brightness	Color Brightness		White Brightness	Color Brightness		White Brightness	Color Brightness
<b>Epson (Continued)</b>			EH-TW570	3000	3000	VPL-DW120	2600	2600
EB-L1505U	12000	12000	EH-TW6100	2300	2300	VPL-DW126	2600	2600
EB-L25000U	25000	25000	EH-TW6300	2600	2600	VPL-DX120	2600	2600
EB-S03	2700	2700	EH-TW6600	2500	2500	VPL-DX140	3200	3200
EB-S04	3000	3000	EH-TW6600W	2500	2500	VPL-DX146	3200	3200
EB-S17	2700	2700	EH-TW6700	3000	3000	VPL-EW225	2600	2600
EB-S18	2900	2900	EH-TW6700W	3000	3000	VPL-EW246	3100	3100
EB-S27	2700	2700	EH-TW7200	2000	2000	VPL-EW276	3700	3700
EB-S29	3000	3000	EH-TW7300	2300	2300	VPL-EX225	2700	2700
EB-S31	3200	3200	EH-TW8200	2400	2400	VPL-EX246	3200	3200
EB-U04	3000	3000	EH-TW8200W	2400	2400	VPL-EX276	3700	3700
EB-U32	3200	3200	EH-TW8300	2500	2500	VPL-FH30	4300	4300
EB-W03	2700	2700	EH-TW8300W	2500	2500	VPL-FH31B	4300	4300
EB-W04	3000	3000	EH-TW9200	2400	2400	VPL-FH31W	4300	4300
EB-W8D	2500	2500	EH-TW9200W	2400	2400	VPL-FH36B	5200	5200
EB-W16	3000	3000	EH-TW9300	2500	2500	VPL-FH36W	5200	5200
EB-W16SK	6000	6000	EH-TW9300W	2500	2500	VPL-FH500L	7000	7000
EB-W22	3000	3000	<b>Hitachi</b>			VPL-FX30	4200	4200
EB-W28	3000	3000	CP-A222WN	2200	2200	VPL-FX35	5000	5000
EB-W29	3000	3000	CP-A352WN	3500	3500	VPL-FX37	6000	6000
EB-W31	3200	3200	CP-AW2519N	2500	2500	VPL-FX500L	7000	7000
EB-W32	3200	3200	CP-AW2519NM	2500	2500			
EB-W420	3000	3000	CP-AW252WN	2500	2500			
EB-X03	2700	2700	CP-AW312WN	3000	3000			
EB-X04	2800	2800	CP-D31N	3000	3000			
EB-X18	3000	3000	CP-D32WN	3200	3200			
EB-X20	2700	2700	CP-EW300	3000	3000			
EB-X24	3200	3200	CP-SX8350	5000	5000			
EB-X25	3500	3500	CP-WU8440	4200	4200			
EB-X27	2700	2700	CP-WU8450	5000	5000			
EB-X29	3000	3000	CP-WU8460	6000	6000			
EB-X30	3500	3500	CP-WUX8441	5000	5000			
EB-X31	3200	3200	CP-WUX8460	6000	6000			
EB-X36	3600	3600	CP-WX2515WN	2700	2700			
EB-Z9750U	7500	7500	CP-WX3015WN	3000	3000			
EB-Z9800W	8300	8300	CP-WX3030WN	3000	3000			
EB-Z9870U	8700	8700	CP-WX4022WN	4000	4000			
EB-Z9875U	8700	8700	CP-WX8240	4000	4000			
EB-Z9900W	9200	9200	CP-WX8240A	4000	4000			
EB-Z10000U	10000	10000	CP-WX8255A	5500	5500			
EB-Z10005U	10000	10000	CP-X2521WN	2700	2700			
EB-Z11000	11000	11000	CP-X2530WN	2700	2700			
EB-Z11000W	11000	11000	CP-X3021WN	3200	3200			
EB-Z11005	11000	11000	CP-X3030WN	3200	3200			
EH-LS10000	1500	1500	CP-X4015WN	4000	4000			
EH-LS10500	1500	1500	CP-X4022WN	4000	4000			
EH-TW490	3000	3000	CP-X5022WN	5000	5000			
EH-TW5100	1800	1800	CP-X8150	5000	5000			
EH-TW5200	2000	2000	CP-X8160	6000	6000			
EH-TW5210	2200	2200	CP-X8170	7000	7000			
EH-TW530	3000	3000	<b>Sony</b>					
EH-TW5300	2200	2200	VPL-CW275	5100	5100			
EH-TW5350	2200	2200	VPL-CX275	5200	5200			



## 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>			MH740	4000	730	MX660P	3000	790
MP225A	32	30	MH741	4000	810	MX661	3000	680
<b>AAXA</b>			MP512	2200	610	MX711	3200	770
MP-300-03	550	150	MP515	2500	750	MX723	3700	660
P2 Jr.	55	30	MP522	2000	540	MX726	4000	870
P3	50	20	MP522ST	2000	590	MX763	3700	830
P300	300	140	MP525P	2500	840	MX764	4200	980
P4-X	95	40	MP622	2700	1090	MX806PST	3000	560
P450	450	190	MP622C	2200	1010	MX810ST	2500	490
<b>Acer</b>			MP780ST	2500	600	MX815ST	2700	720
C120	100	90	MS502	2700	760	MX816ST	3000	640
H5360	2500	600	MS504	3000	700	MX819ST	3000	520
H5370BD	2500	570	MS510	2700	730	MX850UST	2500	400
H5380BD	3000	660	MS513	2700	700	PU9530	6000	2000
H6500	2100	720	MS514H	3200	740	SH915	4000	780
H6502BD	3400	650	MS517	2800	700	SH940	4000	1160
H6510BD	3000	580	MS521	3000	460	SP840	4000	480
K132	500	130	MS524	3200	670	SU917	5000	900
P1173	3000	590	MS524a	3300	720	SU922	5000	1280
P1185	3200	750	MS612ST	2500	710	SX920	5000	1150
P1273	3000	710	MS614	2700	710	TH670	3000	610
P1283	3000	650	MW516	2800	670	TH681	3000	840
P1383W	3100	660	MW519	2800	700	W1070	2000	1570
P1500	3000	530	MW523	3000	430	W1080ST	2000	1470
P5271	3100	700	MW526	3200	620	W1500	2200	1440
P7505	5000	980	MW526a	3300	660	W7000	2000	1500
X110P	2700	700	MW571	3200	670	W770ST	2500	680
X113PH	3000	710	MW621ST	3000	530	<b>Canon</b>		
X1161P	2700	720	MW632ST	3200	600	LV-S300	3000	620
X1163	3000	720	MW665	3200	650	LV-WX300	3000	700
X1211K	2500	670	MW705	4000	840	LV-X300	3000	630
X123PH	3000	670	MW721	3500	810	LX-MU800Z	8000	2900
X1240	2700	650	MW727	4200	830	<b>Casio</b>		
X1261P	2700	640	MW769	4200	950	XJ-A130	2000	540
X1373WH	3000	560	MW814ST	2500	770	XJ-A141	2500	1200
<b>Acto</b>			MW824ST	3200	590	XJ-A246	2500	1340
DX221ST	3200	470	MW843UST	3000	560	XJ-A252	3000	1170
<b>ASUS</b>			MW851UST	2500	460	XJ-A256	3000	1370
S1	200	120	MW853UST	3200	860	XJ-F100W	3500	1230
<b>BenQ</b>			MW860USTi	3000	480	XJ-F10X	3300	1740
HC1200	2800	1740	MW870UST	3000	530	XJ-F20XN	3300	1580
HT1075	2200	1390	MW883UST	3300	700	XJ-F210WN	3500	1420
HT1085ST	2200	1390	MX503	2700	830	XJ-H1700	4000	770
HT2050	2200	1450	MX505	3000	640	XJ-M140	2500	1440
HT3050	2000	1130	MX511	2700	700	XJ-M151	3000	1640
HT4050	2000	1230	MX518	2800	720	XJ-M240	2500	1280
Joybee GP2	200	30	MX520	3000	610	XJ-M245	2500	1160
LU9715	8000	2900	MX522	3000	430	XJ-M251	3000	1650
LW61ST	2000	550	MX525	3200	430	XJ-ST145	2500	510
MH530	3200	670	MX525a	3300	560	XJ-UT310WN	3100	1890
MH630	3000	770	MX570	3200	380	XJ-UT351W	3500	2180
MH680	3000	700	MX613ST	2500	660	XJ-V1	2700	1360
			MX620ST	3000	630	XJ-V10X	3300	1790

**Table 2: Continued**

	White Brightness	Tested Color Brightness
<b>Casio (Continued)</b>		
XJ-V100W	3000	1580
XJ-V110W	3500	1990
XJ-V2	3000	1670
<b>Christie</b>		
D13WU-HS	13500	6000
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
<b>Hitachi</b>		
CP-DX250	2500	480
CP-DX300	3000	650
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
IN1118HD	2400	470
IN112	2700	640
IN112a	3000	700
IN112x	3200	670
IN114	2700	660
IN114a	3000	670
IN114ST	2700	560
IN114x	3200	640
IN1146	1000	250
IN116	2700	630
IN116a	3000	660
IN116x	3200	630
IN118HDa	3000	400
IN119HDx	3200	590
IN122	3200	760
IN122a	3500	800
IN124	3200	840
IN124a	3500	710
IN124ST	3000	690
IN124x	4000	830
IN126	3200	810
IN126ST	3000	630

	White Brightness	Tested Color Brightness
IN126STa	3300	700
IN1338HD	4000	690
IN2102	2500	760
IN2104	2500	650
IN2112	3000	750
IN2114	3000	760
IN2116	3000	730
IN2124	3200	800
IN2124a	3500	820
IN2126	3200	840
IN2128HDa	3500	740
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
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
PA75U	700	230
PA77U	700	300
PB63U	500	220
PF1000U	1000	250
PF1500	1400	400
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
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

	White Brightness	Tested Color Brightness
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-PE401H	4000	1020
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
PX-602UL	6000	2200
PX-750U2	7500	2200
PX-803UL	8000	2900

## Table 2: Continued

	White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness		White Brightness	Tested Color Brightness
<b>NEC (Continued)</b>								
V311W	3100	690	HD141X	3000	700	X303	3000	410
V311X	3100	720	HD142X	3000	700	X304M	3000	620
<b>Optoma</b>			HD20	1700	1020	X305ST	3000	540
DH1009	3200	590	HD23	2500	680	X306ST	3200	680
DH1011	3000	640	HD25E	2800	420	X312	3200	610
DH1012	3200	780	HD25-LV	3500	670	X313	3000	710
DS331	3200	500	HD26	3200	670	X316	3200	590
DS339	2600	760	HD27	3200	600	X341	3300	560
DS550	2600	650	HD28DSE	3000	630	X345	3200	670
DU380	3800	630	HD33	1800	940	X351	3600	700
DW326e	3000	710	HD37	2600	1980	X355	3500	680
DX326	2800	710	HD65	1600	650	X416	4300	800
DX346	3000	690	HD66	2500	710	X600	6000	1070
DX550	2600	640	ML300	300	130	X605	6000	1500
EH200ST	3000	500	ML500	500	140	ZW210ST	2000	410
EH320USTi	4000	660	ML550	500	150	ZW212ST	2500	390
EH331	3300	640	ML750	700	110	ZX210ST	2000	360
EH341	3500	680	ML1000P	1000	170	ZX212ST	2500	280
EH345	3200	670	PK320	100	60	<b>Panasonic</b>		
EH415	4200	800	PRO150S	2800	810	PT-CW230EA	2500	550
EH416	4200	620	PRO160S	3000	810	PT-D5700U	6000	3050
EH500	4700	1000	PRO250X	2800	740	PT-DW830UW	8500	3400
EH501	5000	430	PRO260X	3000	770	PT-DZ570U	4000	2240
EH503	5000	1190	PRO360W	3000	820	PT-DZ6710	6000	2990
EH504	5000	1050	PT100	50	10	PT-DZ770UK	7000	2340
EH7700	7000	1900	PT110	100	20	PT-DZ780B	7000	3200
EP1691	2500	820	S303	3000	670	PT-DZ870UK	8500	3700
EP716	1800	510	S310e	3200	730	PT-LS26U	2600	670
EP719	2000	600	S316	3200	710	PT-RW430UK	3500	800
EP721	2200	550	S321	3200	570	PT-RZ370U	3500	840
EP727	2200	590	S341	3500	620	PT-RZ470UW	3500	830
EP728	2700	810	TS526	2800	700	PT-RZ570	5200	2700
EP771	3000	930	TS551	2800	640	PT-RZ670U	6500	3700
ES522	2800	660	TW766W	4000	800	PT-RZ970	9400	5200
EW1691e	3000	770	TX536	2800	670	PT-SD2600C	2600	670
EW536	2800	700	TX542	2800	680	<b>Philips</b>		
EW695UT	3500	780	TX631-3D	3500	850	PicoPix PPX2340	40	30
EX525ST	2500	570	W303	3200	500	<b>Promethean</b>		
EX530	2600	650	W304M	3100	780	PRM-35	2500	600
EX532	2800	650	W305ST	3200	490	<b>Ricoh</b>		
EX551	2800	640	W306ST	3500	730	PJ HD5450	3500	730
EX685UT	3000	620	W307UST	3500	660	PJ S2240	3000	710
EX765	4000	810	W311	3200	490	PJ WX2240	3100	700
EX784	5000	1060	W312	3200	710	PJ WX4240N	3000	540
EX785	5000	1300	W316	3400	660	PJ X2240	3000	690
GT1088	2800	500	W316ST	3400	640	<b>Sharp</b>		
GT5500	3500	690	W331	3200	620	PG-F212X	2300	860
GT750e	3000	950	W341	3600	780	PG-LW2000	2800	770
GT760	3400	600	W345	3300	710	PG-LW3000	3000	870
H180X	3000	660	W351	3800	810	PG-LX2000	2800	790
H181X	3200	580	W355	3600	720	XR-30X	2300	740
H182X	3200	760	W415	4500	800	XR-32X	2500	750
HD131Xe	2500	480	W416	4500	650	XR-41X	2600	660
HD131Xw	2500	650	WU416	4200	630			
			WU515	6000	1300			

## Table 2: Continued

	White Brightness	Tested Color Brightness
<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>		
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
PJD5523W	2700	620
PJD5533W	2800	740
PJD5553LWS	3200	840
PJD5555W	3300	860
PJD6220	2300	640
PJD6350	3300	730
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
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
<b>Vivitek</b>		
D512-3D	2600	560
D5280	4500	900
D530	3200	790

	White Brightness	Tested Color Brightness
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
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

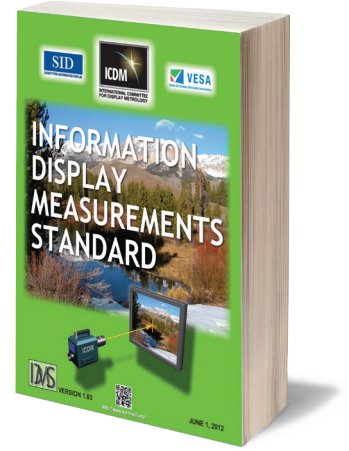


## ***What's behind this new Color Brightness standard?***

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.