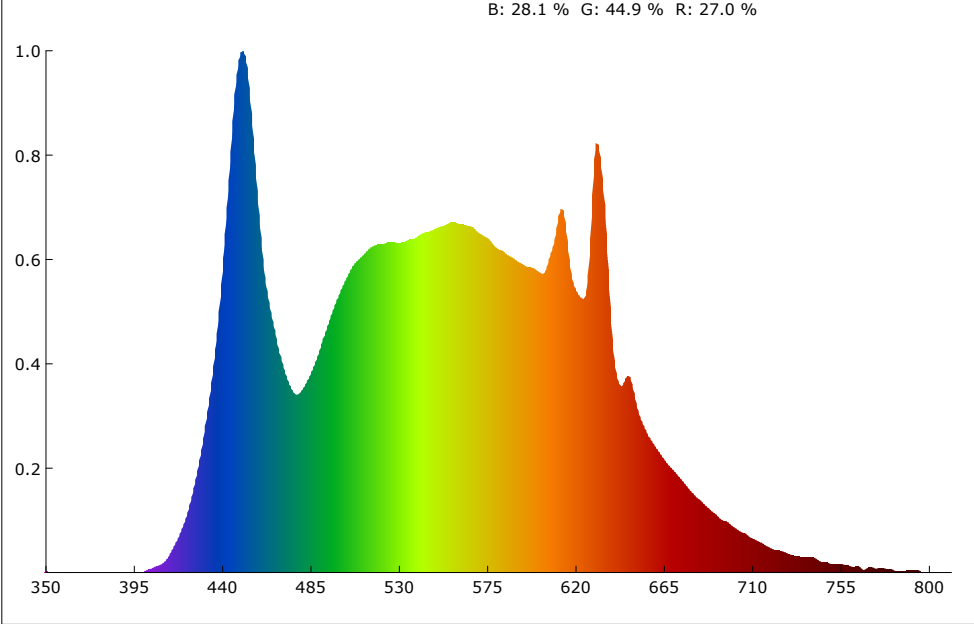
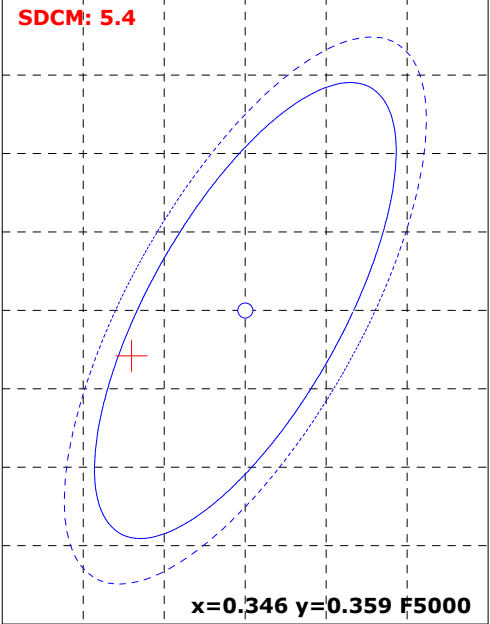


Spectrogram



SDCM



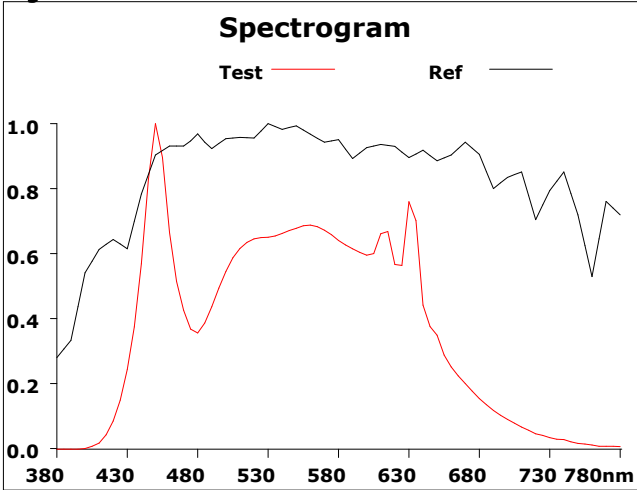
Color Parameter:

x: 0.3380	y: 0.3571	u: 0.2046	v: 0.3242	u': 0.2046	v': 0.4863
R_ratio: 27.0 %	G_ratio: 44.9 %	B_ratio: 28.1 %	RedRatio: 15.7 %	GreenRatio: 80.9 %	BlueRatio: 3.4 %
Ra: 90.7	AvgR: 86.8				
R1: 91.8	R2: 93.9	R3: 94.9	R4: 88.5	R5: 87.1	R6: 87.9
R7: 96.1	R8: 86.0				
R9: 51.7	R10: 83.7	R11: 88.9	R12: 72.7	R13: 92.8	R14: 97.2
R15: 89.1					
CCT: 5285 K	Flux: 490.093 lm	PeakWave: 450.6 nm	SDCM: 5.4		
S/P: 2.1	CentralWave: 451.8 nm	DominantWave: 562.1 nm	CentroidWave: 550.8 nm		
HalfWidth: 25.7 nm	duv: 0.00562	purity: 8.6 %	CQS: 92.0		
LER(TM-30): 303.3	Ep: 1615.9 mw	Rg: 98.4	Rf: 89.0		
Red Ep: 428.5 mw	Near red Ep: 29.3 mw	Near infrared Ep: 0.9 mw			

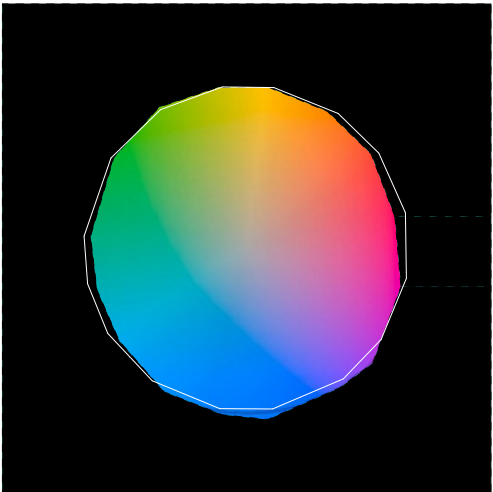
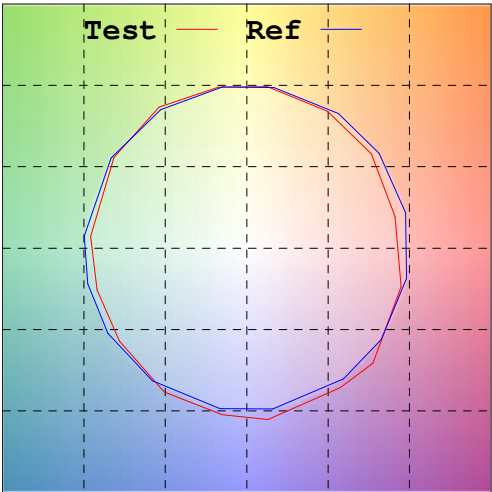
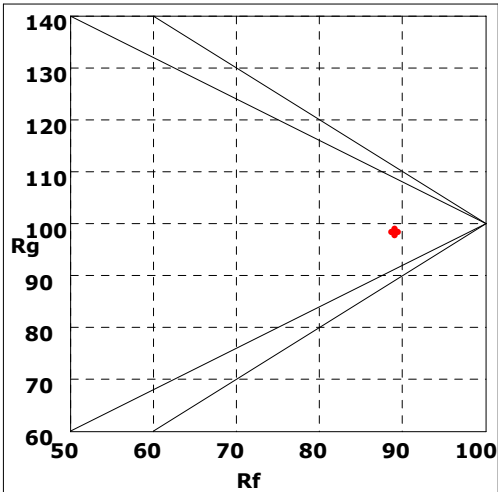
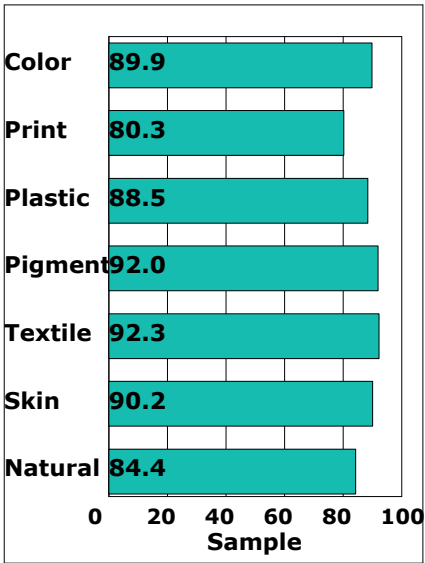
Electrical parameters:

Effic: 50.7 Lm/W	Energy: 55.2	Effi: G	
U: 222.1 V	I: 0.086 A	P: 9.660 W	Pf: 0.501

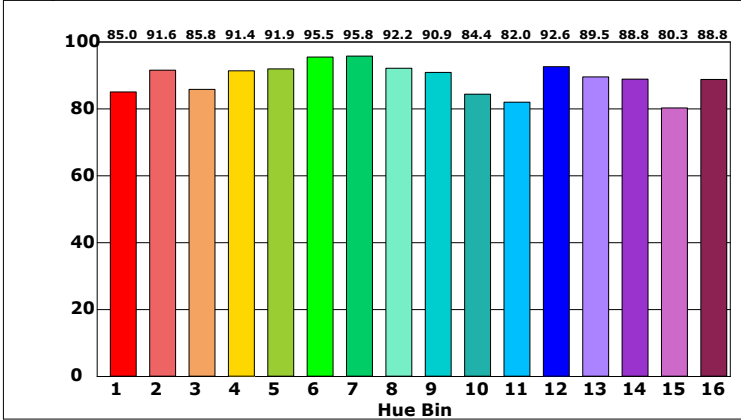
Rf: 89.0 CCT: 5285K u': 0.2046
Rg: 98.4 LER: 303.3 Duv: 0.00562 v': 0.4863



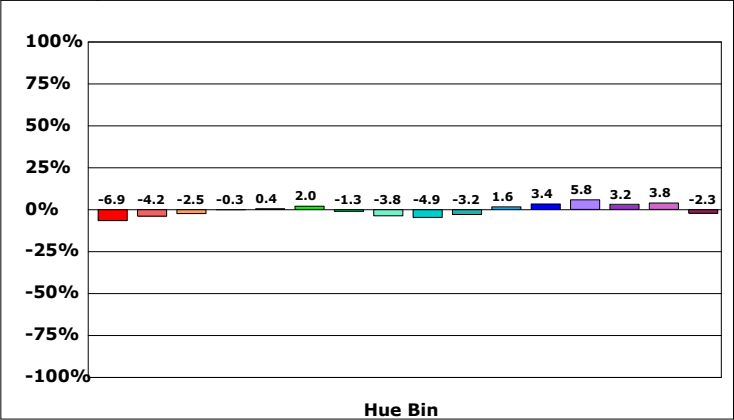
500			
Hue Bin	Rf	Chroma	Hue
1	85.0	-6.9%	-1.1%
2	91.6	-4.2%	2.3%
3	85.8	-2.5%	6.3%
4	91.4	-0.3%	4.3%
5	91.9	0.4%	2.9%
6	95.5	2.0%	-0.1%
7	95.8	-1.3%	-1.6%
8	92.2	-3.8%	-0.5%
9	90.9	-4.9%	4.7%
10	84.4	-3.2%	8.0%
11	82.0	1.6%	9.8%
12	92.6	3.4%	2.2%
13	89.5	5.8%	-4.2%
14	88.8	3.2%	-4.9%
15	80.3	3.8%	-14.9%
16	88.8	-2.3%	-5.7%



Rf by Bue

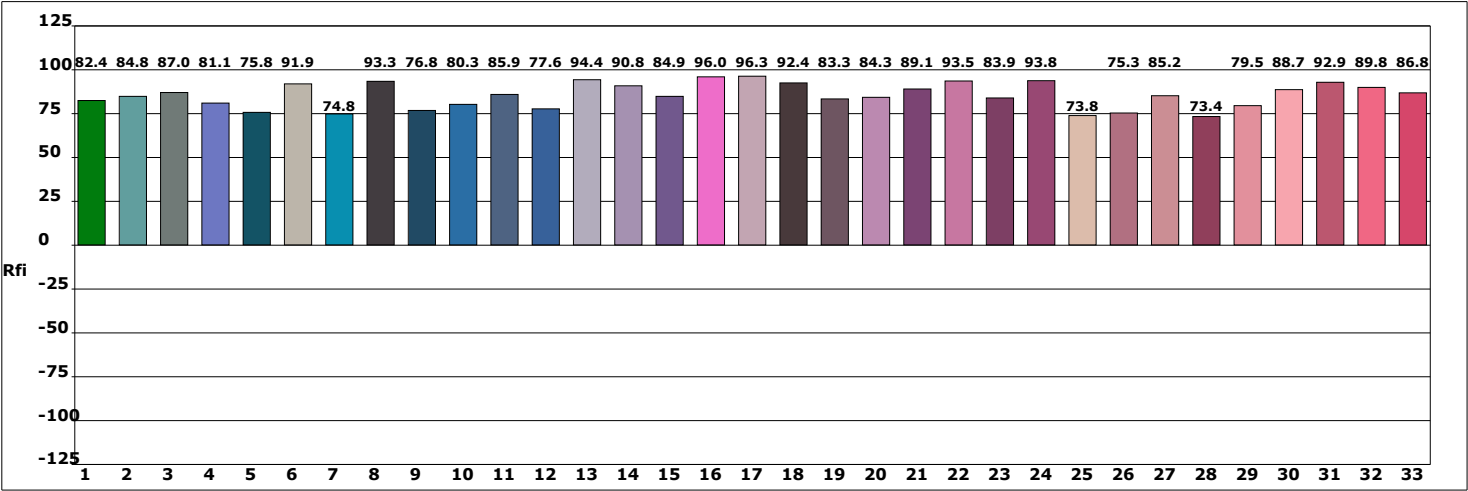
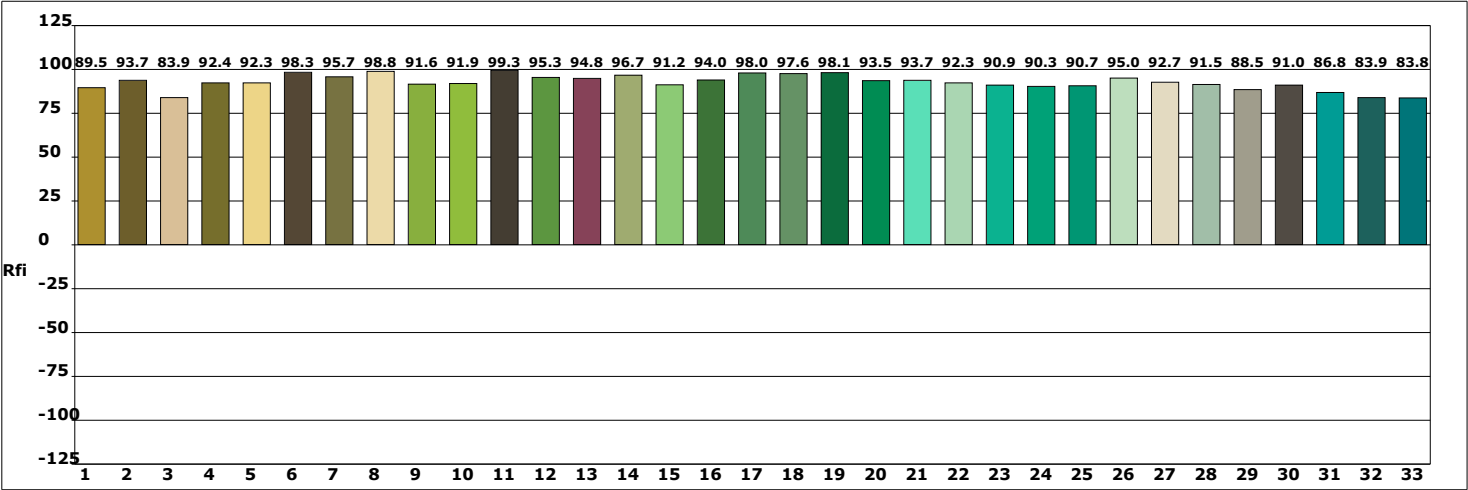
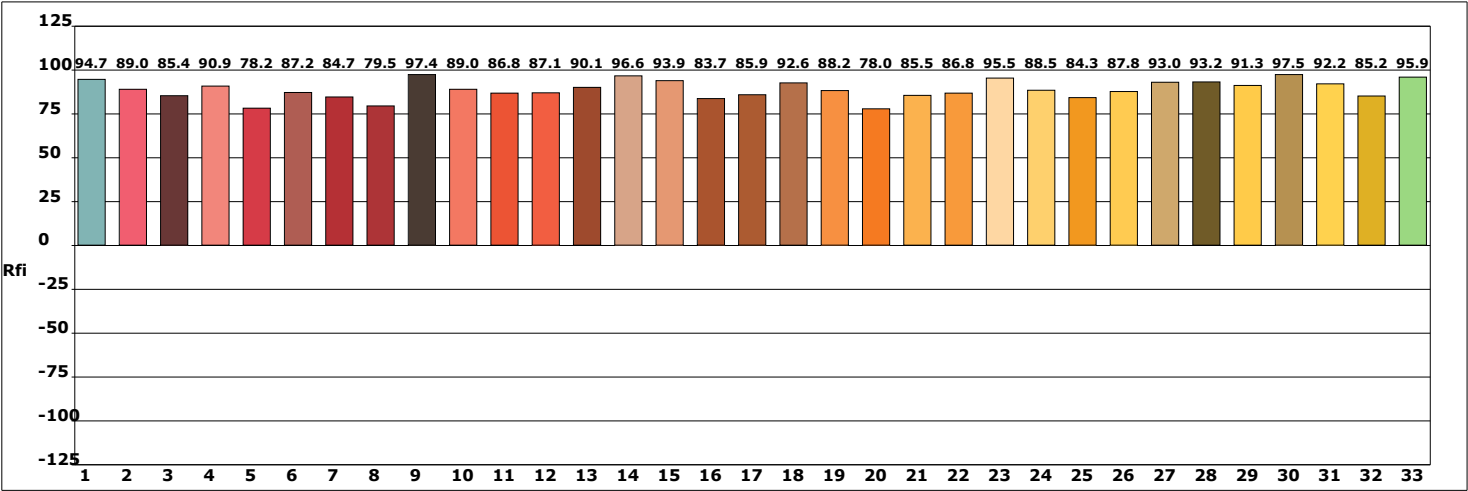


Chroma by Bue

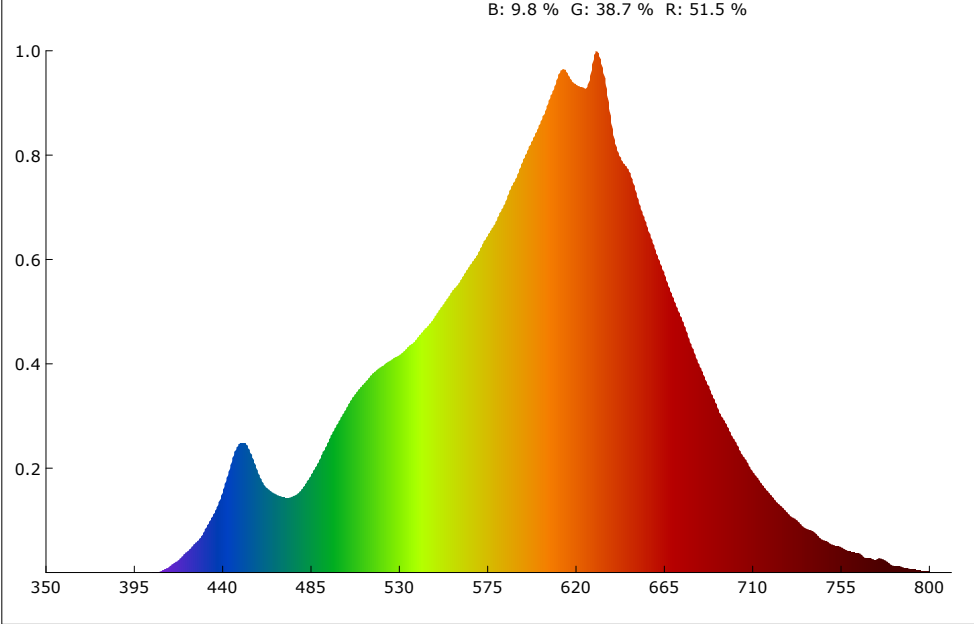


Product model:
Product number:
Tester:
Remarks:

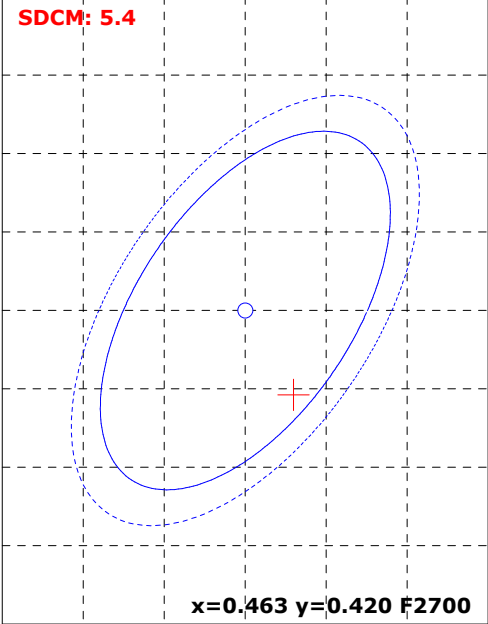
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/04/13



Spectrogram



SDCM



Color Parameter:

x: 0.4680 y: 0.4146 u: 0.2659 v: 0.3534 u': 0.2659 v': 0.5301
R_ratio: 51.5 % G_ratio: 38.7 % B_ratio: 9.8 % RedRatio: 26.3 % GreenRatio: 72.4 % BlueRatio: 1.3 %

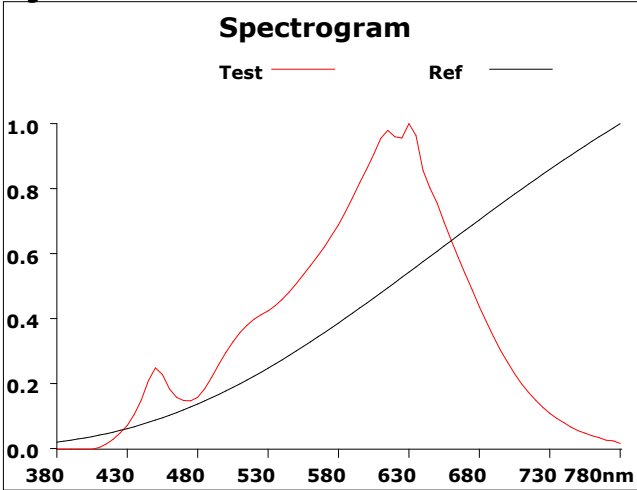
Ra: 92.3 AvgR: 89.8
R1: 92.3 R2: 96.5 R3: 99.1 R4: 93.6 R5: 93.0 R6: 97.7 R7: 89.8 R8: 77.1
R9: 50.6 R10: 92.0 R11: 96.0 R12: 91.1 R13: 93.3 R14: 99.4 R15: 86.2

CCT: 2621 K Flux: 395.066 lm PeakWave: 630.5 nm SDCM: 5.4
S/P: 1.2 CentralWave: 611.2 nm DominantWave: 584.4 nm CentroidWave: 598.8 nm
HalfWidth: 121.6 nm duv: 0.00086 purity: 64.9 % CQS: 88.1
LER(TM-30): 292.4 Ep: 1351.2 mw Rg: 98.6 Rf: 92.0
Red Ep: 657.4 mw Near red Ep: 73.7 mw Near infrared Ep: 1.7 mw

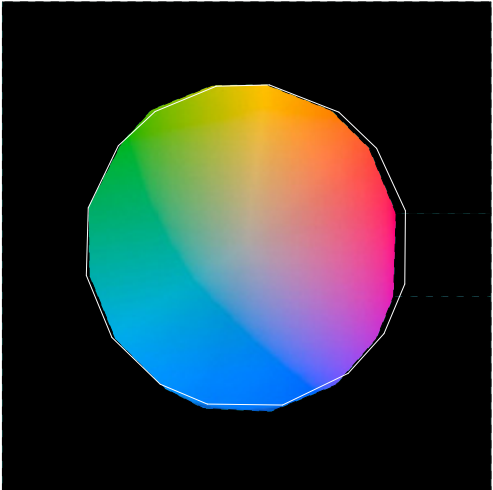
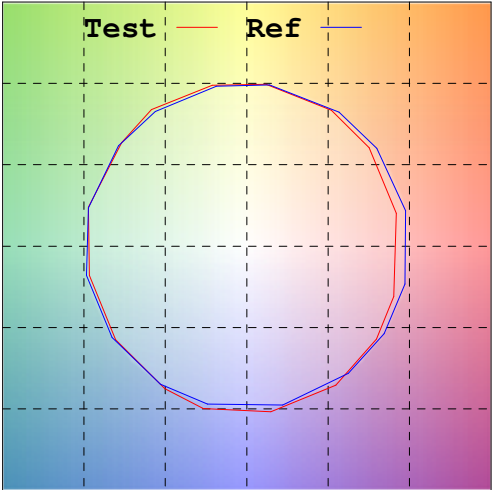
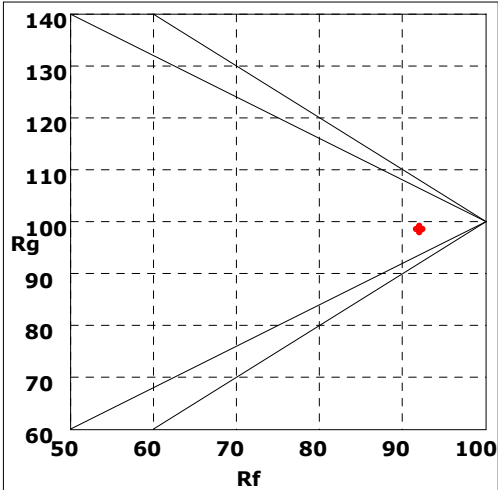
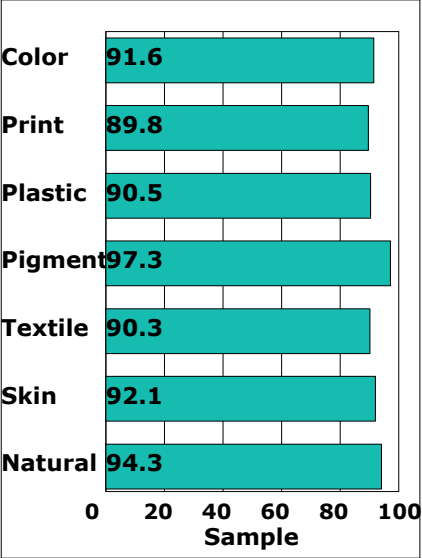
Electrical parameters:

Effic: 40.6 Lm/W Energy: 44.3 Effi: G
U: 222.1 V I: 0.087 A P: 9.720 W Pf: 0.501

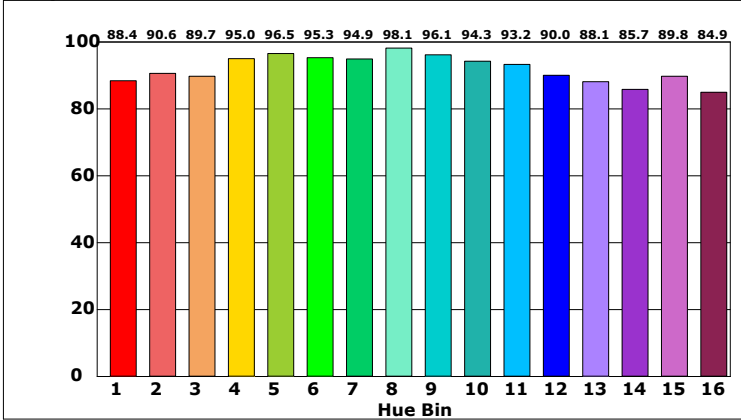
Rf: 92.0 CCT: 2621K u': 0.2659
Rg: 98.6 LER: 292.4 Duv: 0.00086 v': 0.5301



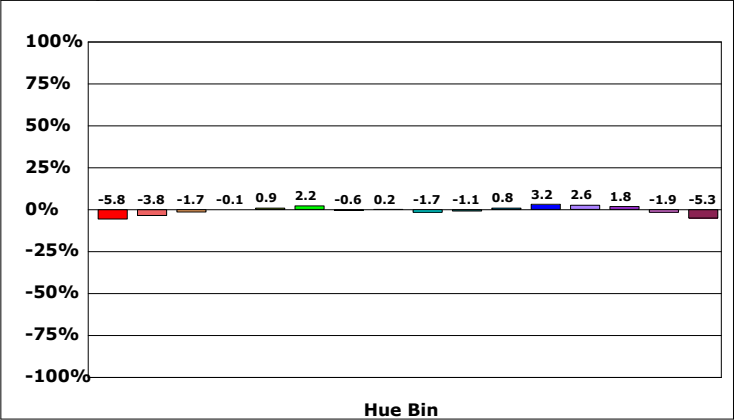
500			
Hue Bin	Rf	Chroma	Hue
1	88.4	-5.8%	-0.3%
2	90.6	-3.8%	2.9%
3	89.7	-1.7%	4.6%
4	95.0	-0.1%	2.2%
5	96.5	0.9%	2.4%
6	95.3	2.2%	1.2%
7	94.9	-0.6%	-2.6%
8	98.1	0.2%	-0.3%
9	96.1	-1.7%	0.3%
10	94.3	-1.1%	2.3%
11	93.2	0.8%	3.8%
12	90.0	3.2%	-1.8%
13	88.1	2.6%	-7.9%
14	85.7	1.8%	-10.5%
15	89.8	-1.9%	-5.4%
16	84.9	-5.3%	-8.9%



Rf by Bue

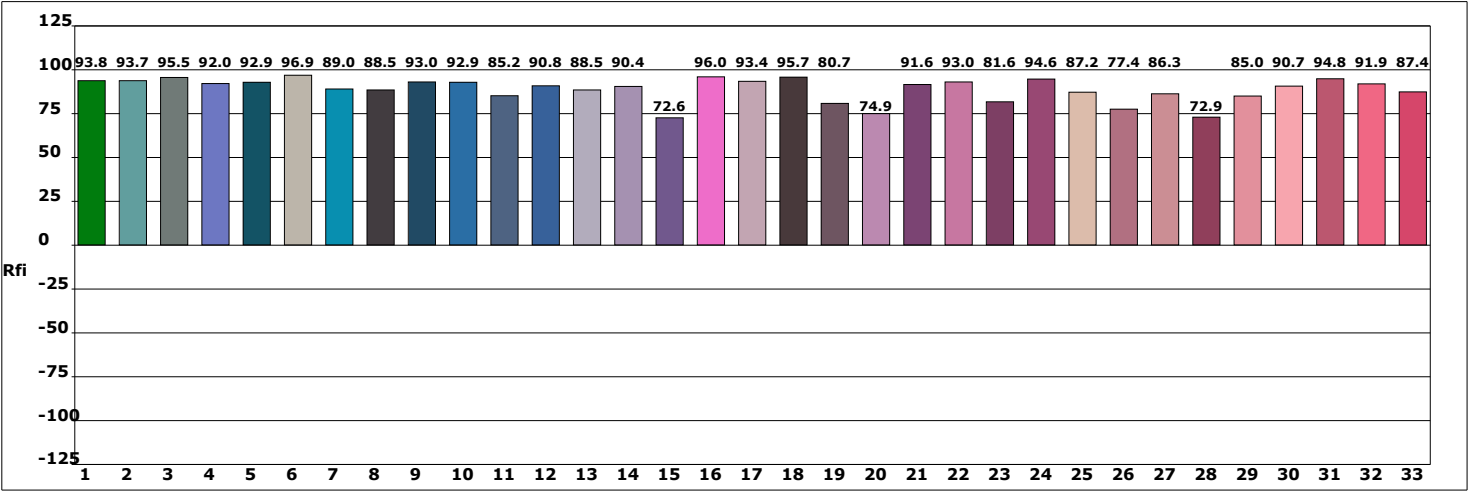
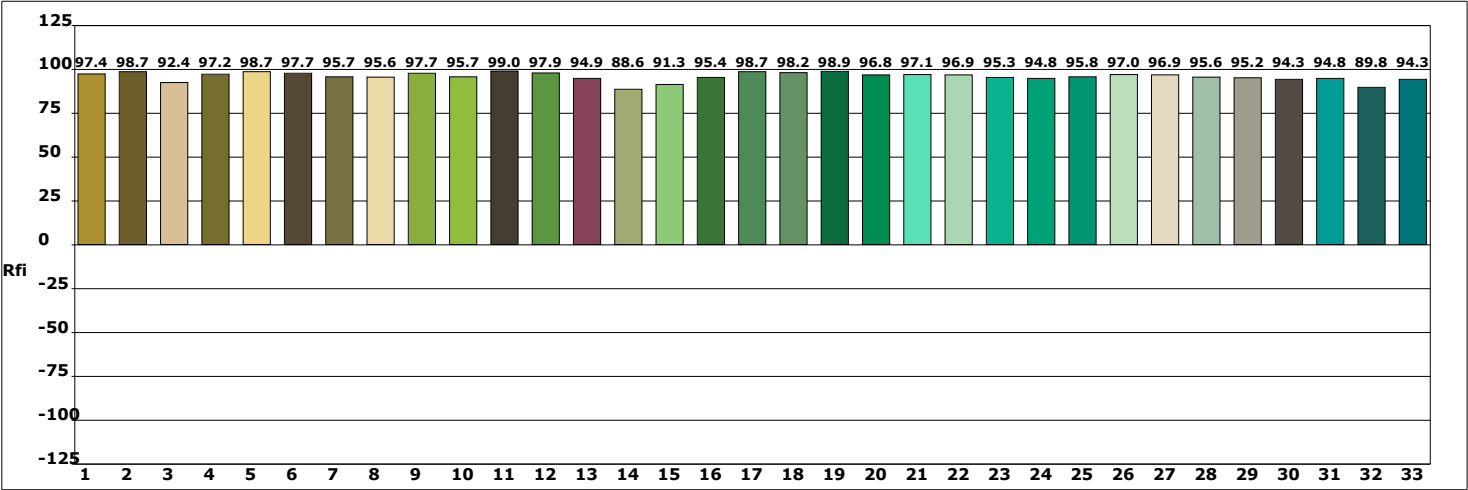
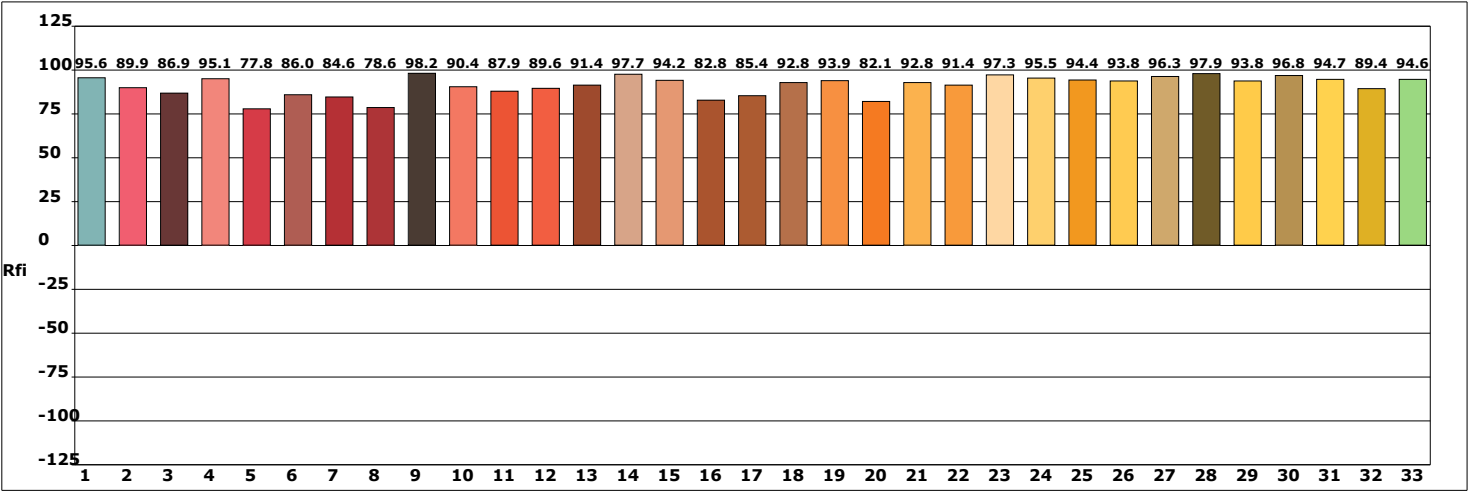


Chroma by Bue

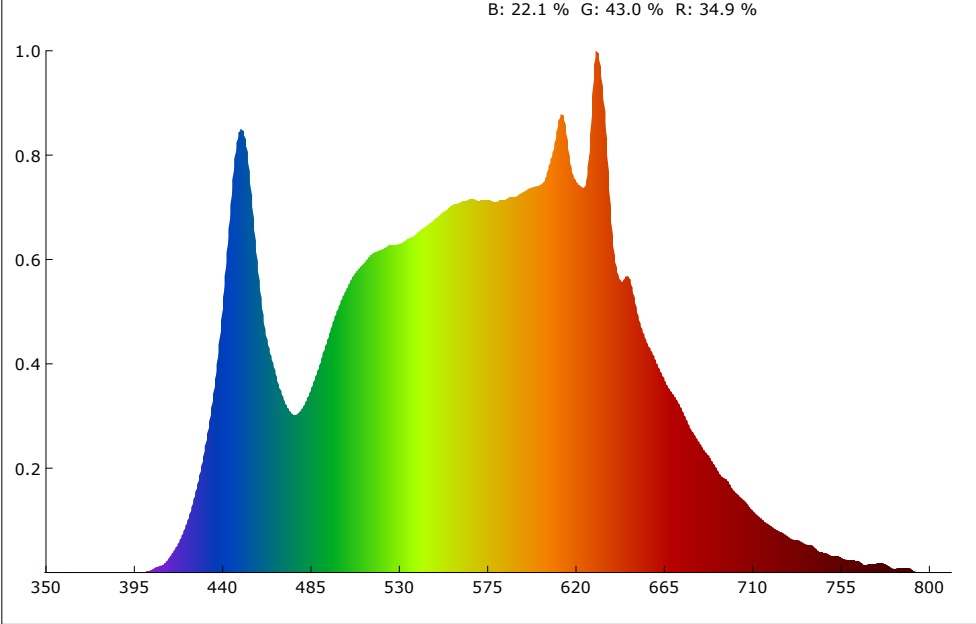


Product model:
Product number:
Tester:
Remarks:

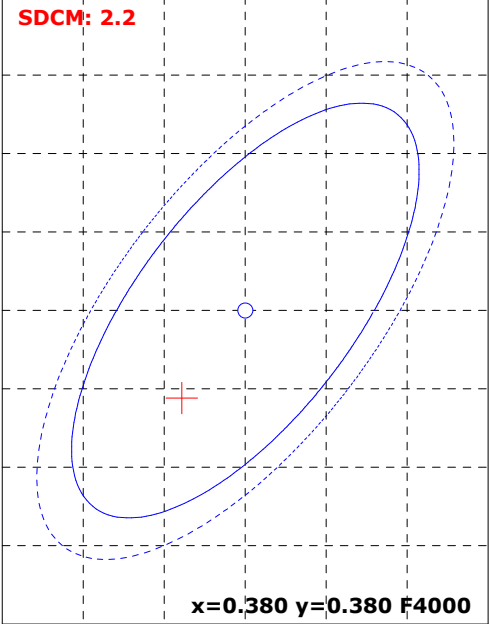
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/04/13



Spectrogram



SDCM



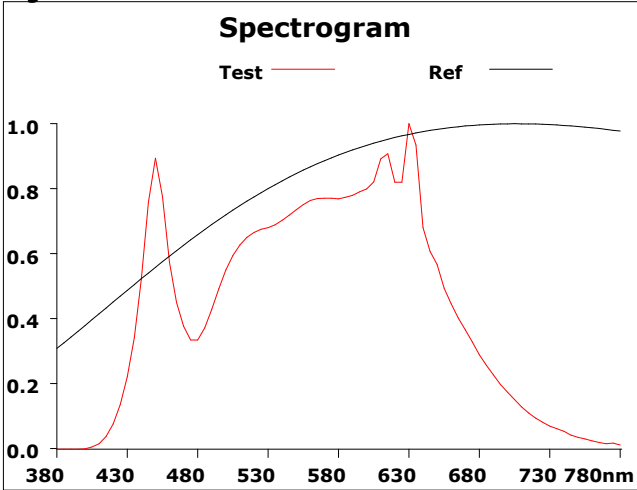
Color Parameter:

x: 0.3761	y: 0.3744	u: 0.2232	v: 0.3333	u': 0.2232	v': 0.4999
R_ratio: 34.9 %	G_ratio: 43.0 %	B_ratio: 22.1 %	RedRatio: 19.0 %	GreenRatio: 78.3 %	BlueRatio: 2.7 %
Ra: 93.3	AvgR: 90.2				
R1: 93.8	R2: 95.0	R3: 95.1	R4: 94.6	R5: 93.6	R6: 93.2
R7: 94.5	R8: 86.7				
R9: 64.5	R10: 87.5	R11: 94.8	R12: 77.8	R13: 94.0	R14: 96.8
R15: 91.1					
CCT: 4102 K	Flux: 475.183 lm	PeakWave: 631.5 nm	SDCM: 2.2		
S/P: 1.8	CentralWave: 574.8 nm	DominantWave: 578.6 nm	CentroidWave: 566.6 nm		
HalfWidth: 151.8 nm	duv: 0.00020	purity: 25.2 %	CQS: 89.5		
LER(TM-30): 306.2	Ep: 1551.9 mw	Rg: 99.8	Rf: 91.1		
Red Ep: 525.3 mw	Near red Ep: 46.7 mw	Near infrared Ep: 1.2 mw			

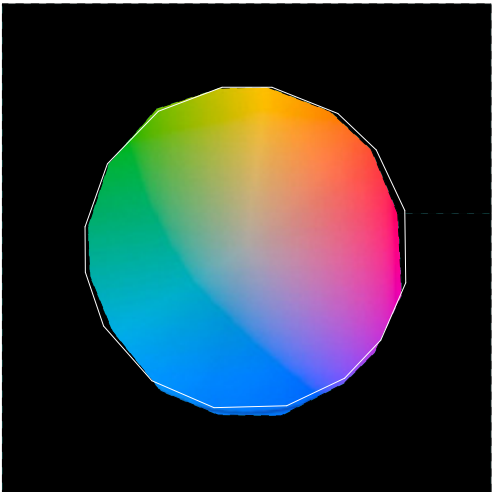
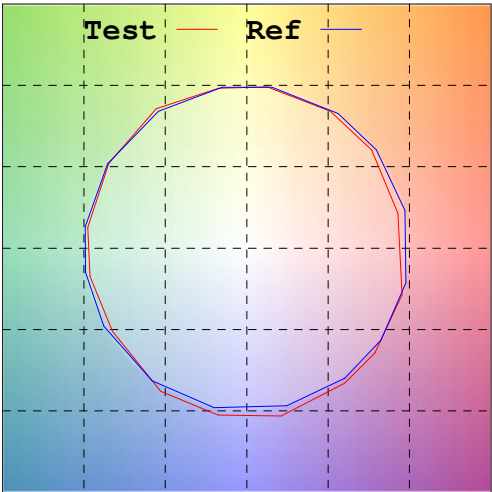
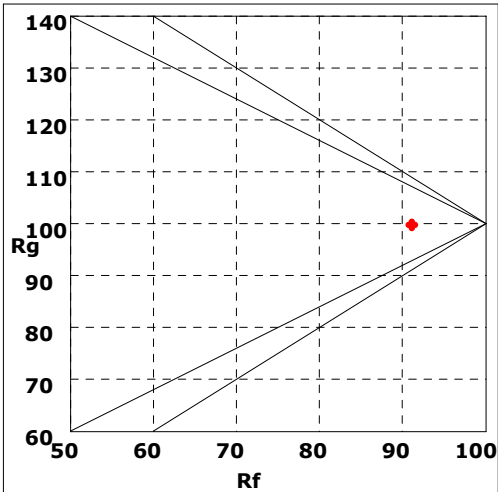
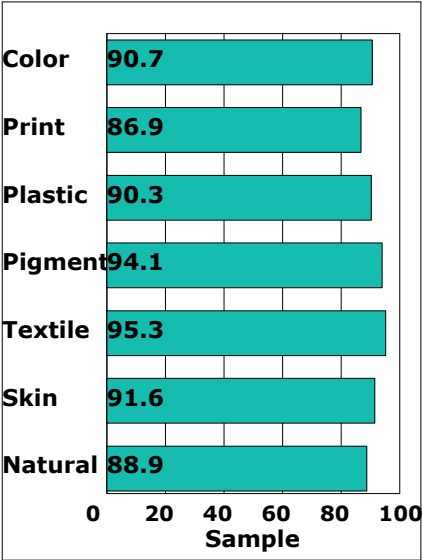
Electrical parameters:

Effic: 48.9 lm/W	Energy: 53.2	Effi: G	
U: 222.1 V	I: 0.087 A	P: 9.720 W	Pf: 0.502

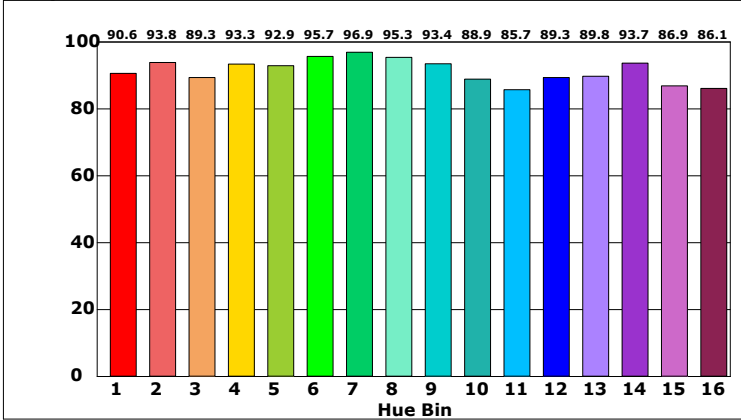
Rf: 91.1 CCT: 4102K u': 0.2232
Rg: 99.8 LER: 306.2 Duv: 0.00020 v': 0.4999



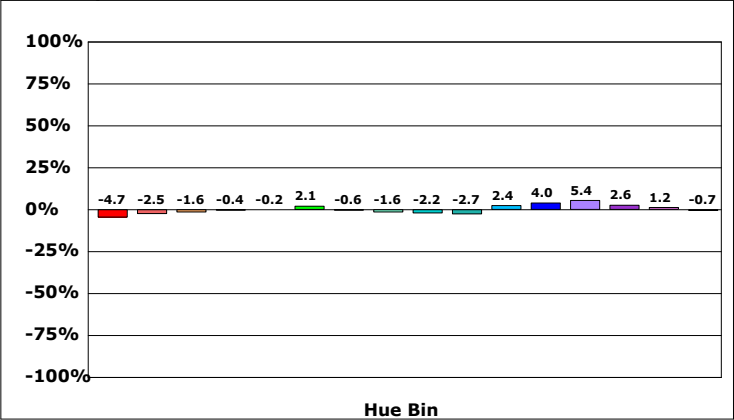
500			
Hue Bin	Rf	Chroma	Hue
1	90.6	-4.7%	-0.8%
2	93.8	-2.5%	1.7%
3	89.3	-1.6%	4.7%
4	93.3	-0.4%	2.8%
5	92.9	-0.2%	2.2%
6	95.7	2.1%	0.4%
7	96.9	-0.6%	-0.8%
8	95.3	-1.6%	0.1%
9	93.4	-2.2%	3.1%
10	88.9	-2.7%	5.5%
11	85.7	2.4%	8.1%
12	89.3	4.0%	3.2%
13	89.8	5.4%	-4.8%
14	93.7	2.6%	-1.8%
15	86.9	1.2%	-8.6%
16	86.1	-0.7%	-7.9%



Rf by Bue

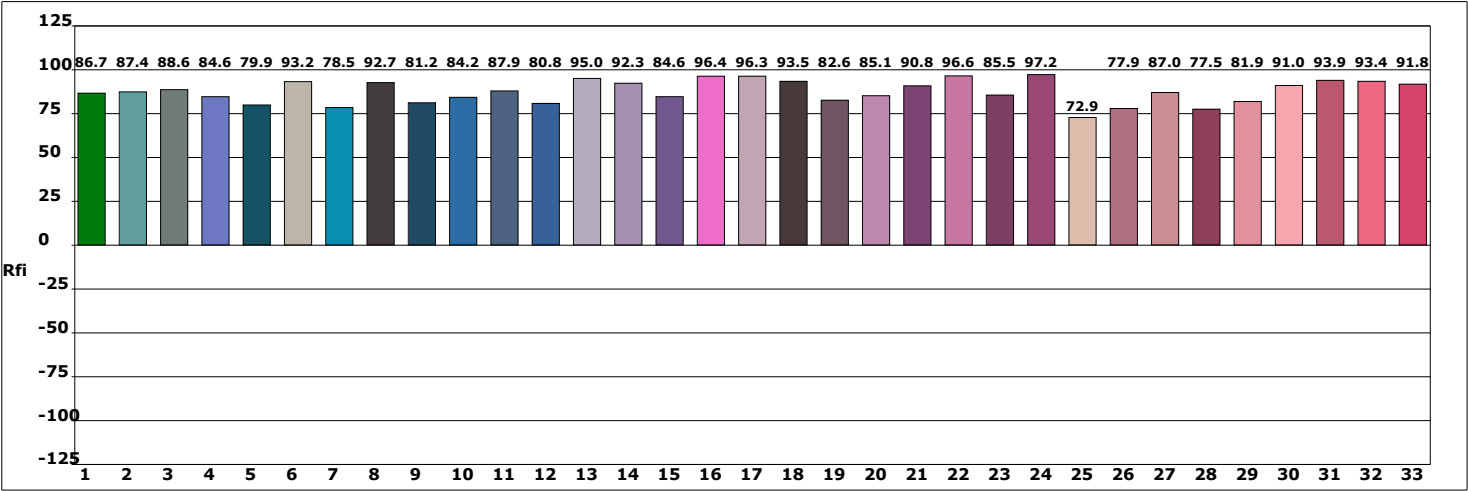
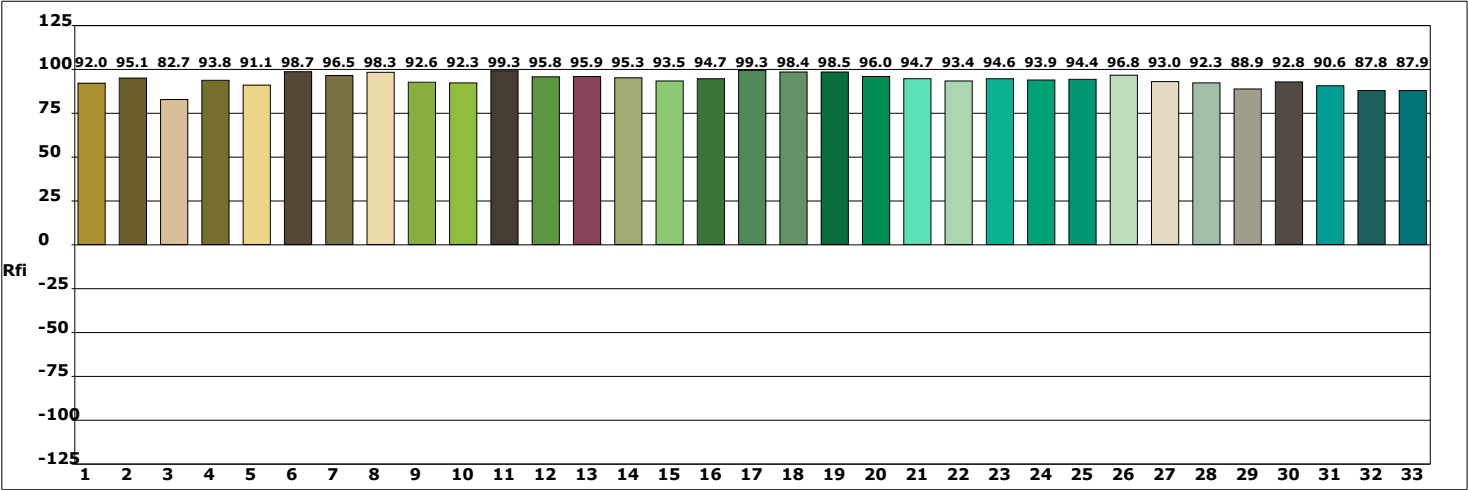
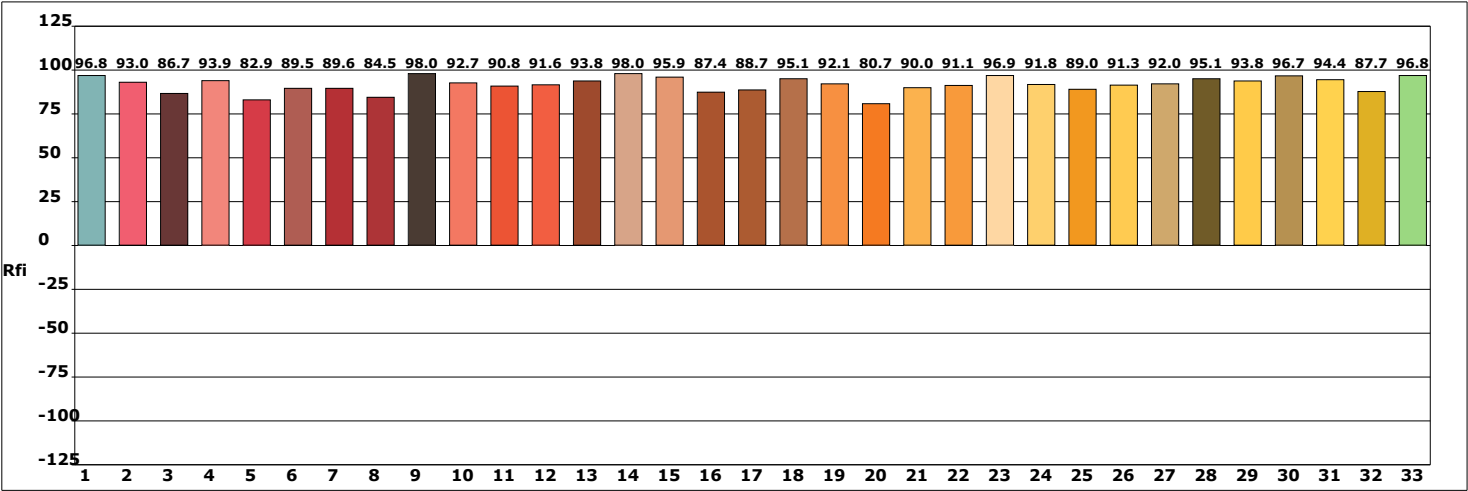


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/04/13



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/04/13