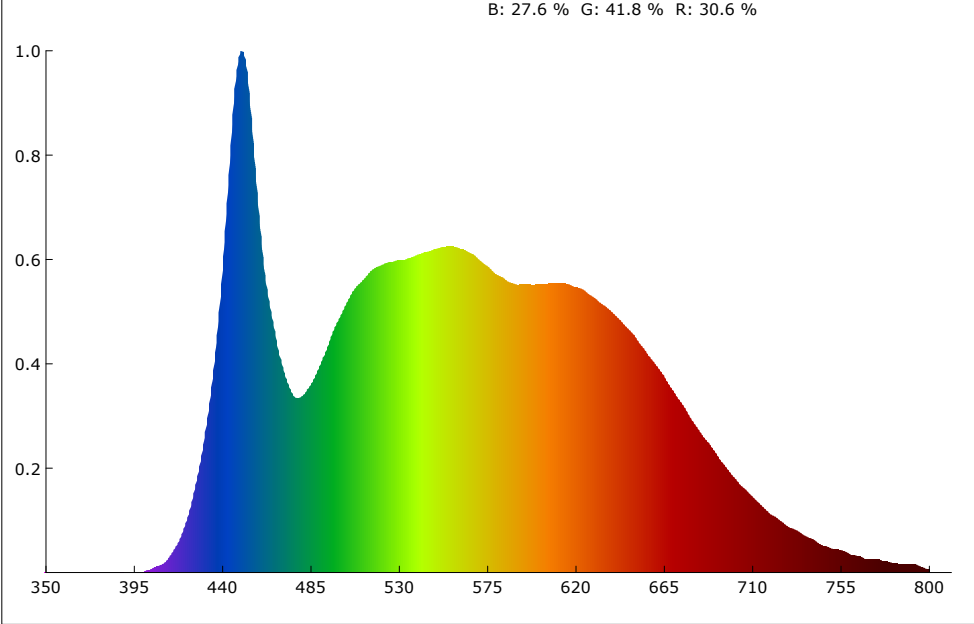
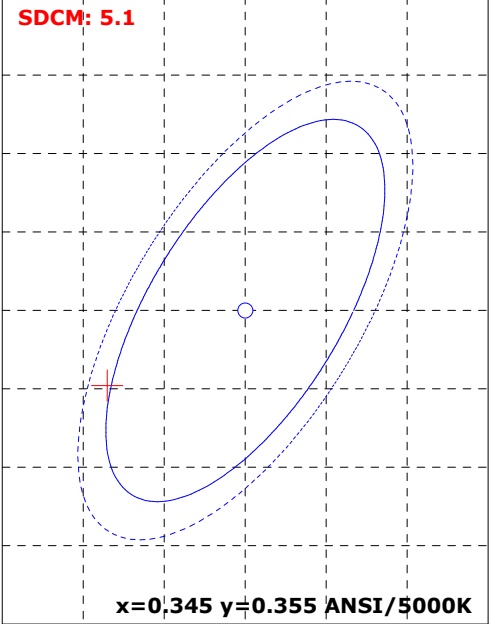


Spectrogram



SDCM



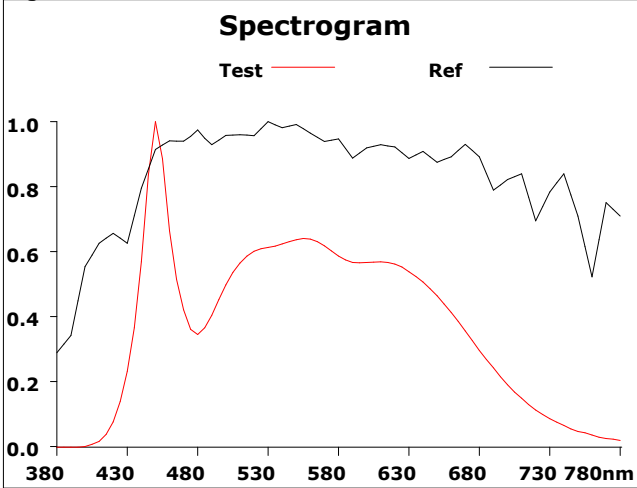
Color Parameter:

x: 0.3362	y: 0.3505	u: 0.2058	v: 0.3219	u': 0.2058	v': 0.4829		
R_ratio: 30.6 %	G_ratio: 41.8 %	B_ratio: 27.6 %	RedRatio: 15.7 %	GreenRatio: 80.7 %	BlueRatio: 3.6 %		
Ra: 91.7	AvgR: 88.6						
R1: 92.0	R2: 92.9	R3: 92.5	R4: 92.6	R5: 91.5	R6: 88.8	R7: 94.3	R8: 89.1
R9: 68.0	R10: 82.5	R11: 92.3	R12: 73.1	R13: 92.1	R14: 95.8	R15: 91.1	
CCT: 5350 K	Flux: 757.392 lm		PeakWave: 449.6 nm		SDCM: 5.1		
S/P: 2.1	CentralWave: 451.8 nm		DominantWave: 561.1 nm		CentroidWave: 560.8 nm		
HalfWidth: 25.7 nm	duv: 0.00317		purity: 6.1 %		CQS: 90.7		
LER(TM-30): 286.0	Ep: 2648.1 mw		Rg: 100.0		Rf: 89.9		
Red Ep: 773.5 mw	Near red Ep: 111.0 mw		Near infrared Ep: 5.8 mw				

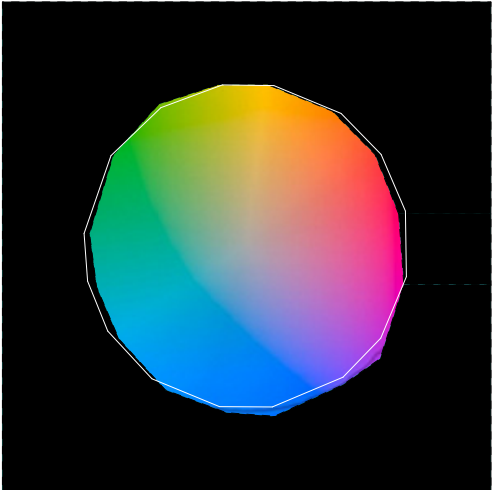
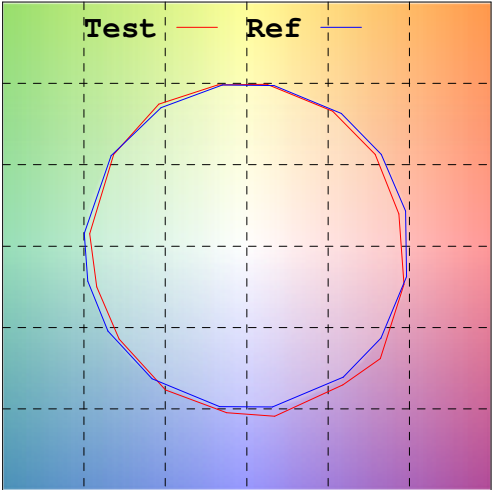
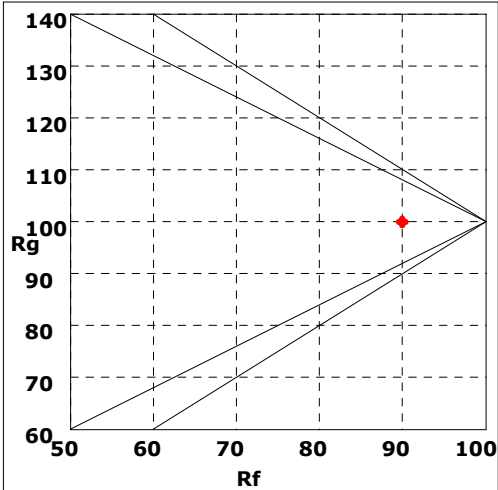
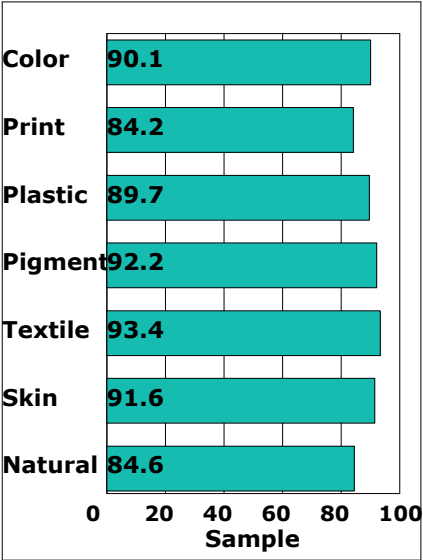
Electrical parameters:

Effic: 50.5 Lm/W	Energy: 55.0	Effi: G	
U: 222.1 V	I: 0.070 A	P: 15.010 W	Pf: 0.958

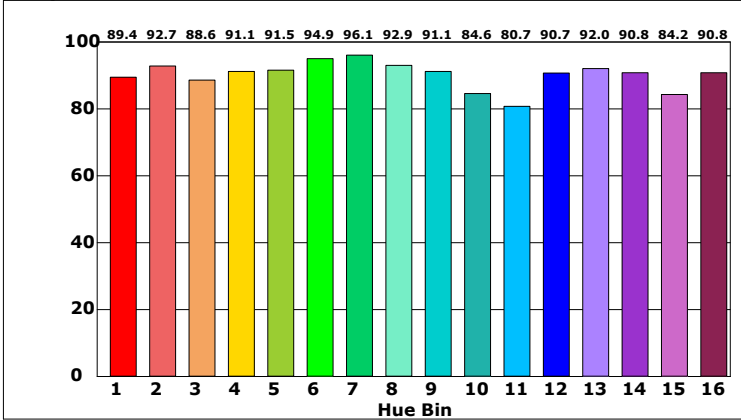
Rf: 89.9 CCT: 5350K u': 0.2058
Rg: 100.0 LER: 286.0 Duv: 0.00317 v': 0.4829



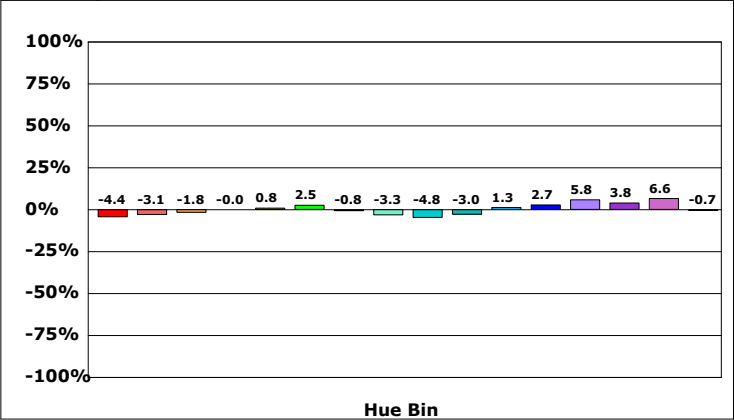
500			
Hue Bin	Rf	Chroma	Hue
1	89.4	-4.4%	-1.1%
2	92.7	-3.1%	2.1%
3	88.6	-1.8%	5.3%
4	91.1	-0.0%	4.4%
5	91.5	0.8%	2.9%
6	94.9	2.5%	-0.2%
7	96.1	-0.8%	-1.7%
8	92.9	-3.3%	-0.6%
9	91.1	-4.8%	4.7%
10	84.6	-3.0%	8.0%
11	80.7	1.3%	10.7%
12	90.7	2.7%	4.9%
13	92.0	5.8%	0.4%
14	90.8	3.8%	-2.7%
15	84.2	6.6%	-10.8%
16	90.8	-0.7%	-5.0%



Rf by Bue

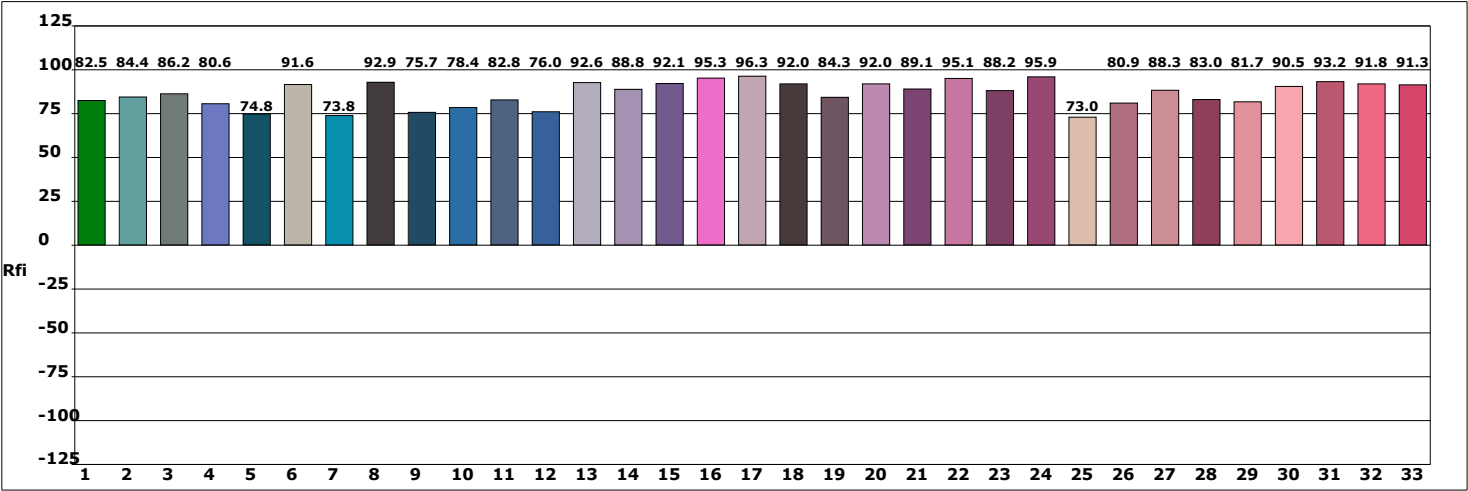
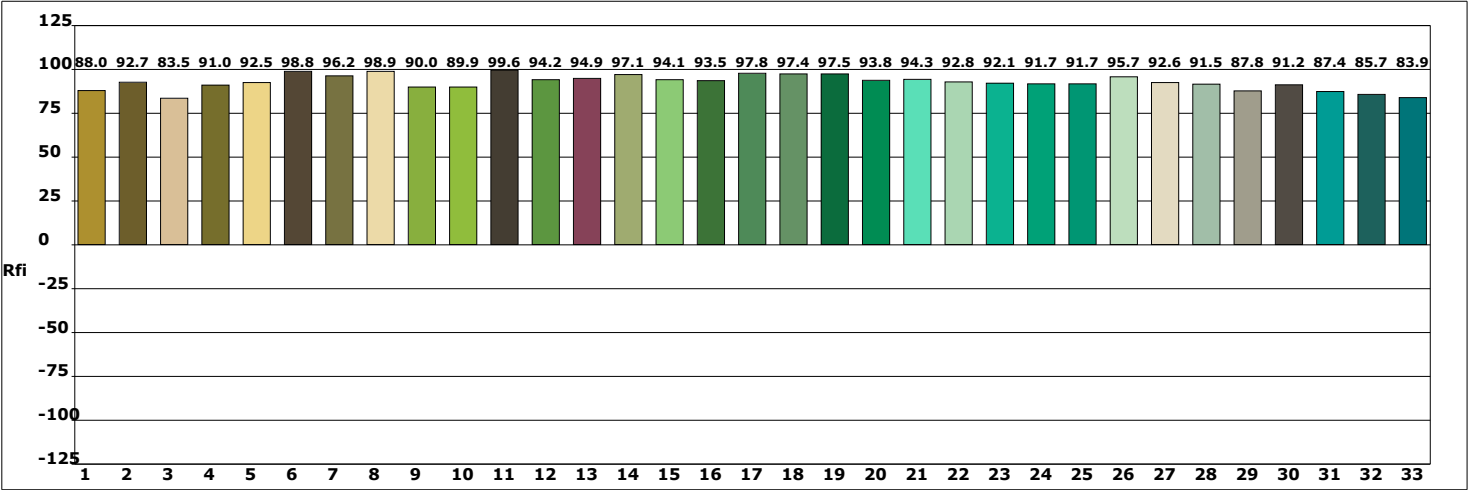
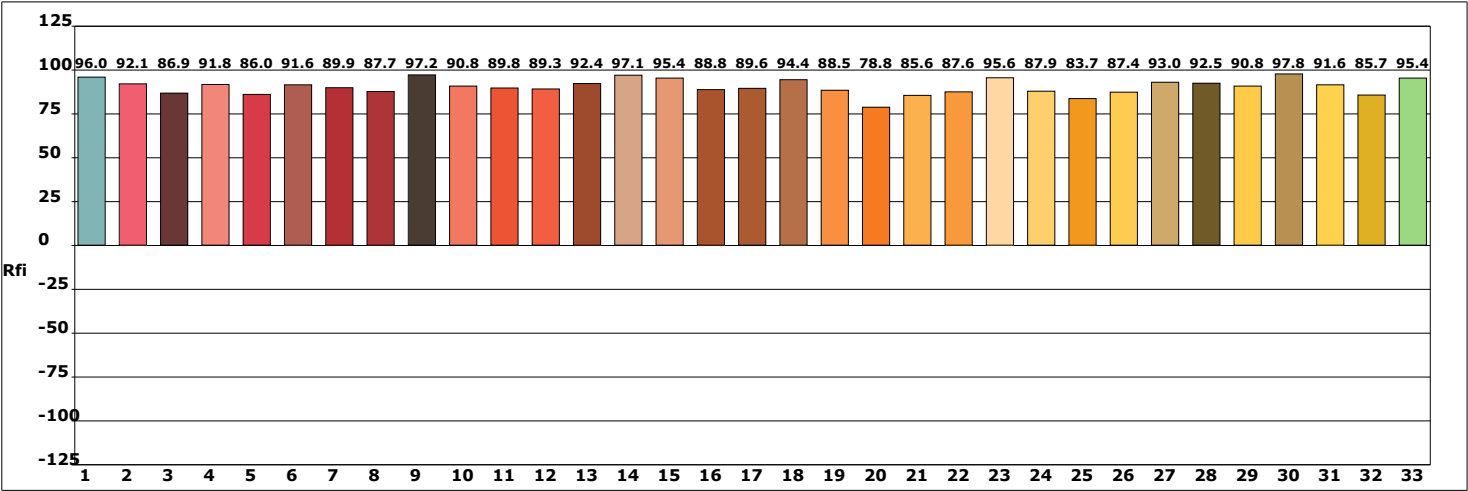


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

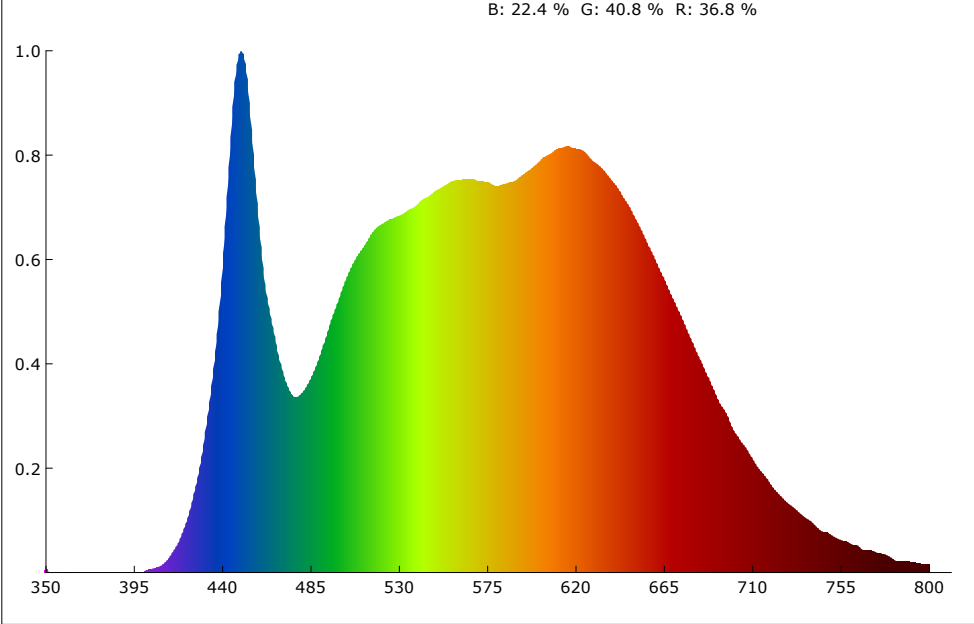
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/04/13



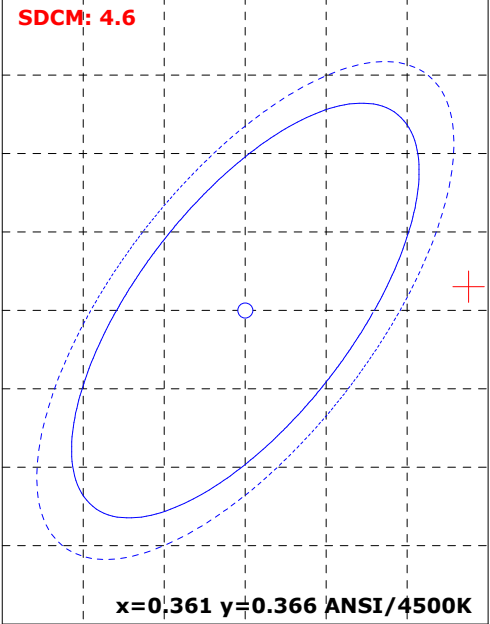
Product model:
Product number:
Tester:
Remarks:

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

Spectrogram



SDCM



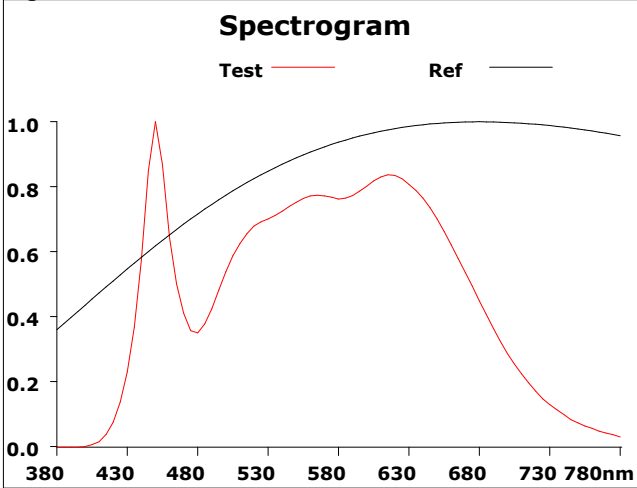
Color Parameter:

x: 0.3688	y: 0.3665	u: 0.2215	v: 0.3302	u': 0.2215	v': 0.4953
R_ratio: 36.8 %	G_ratio: 40.8 %	B_ratio: 22.4 %	RedRatio: 18.6 %	GreenRatio: 78.5 %	BlueRatio: 2.9 %
Ra: 94.0	AvgR: 91.5				
R1: 95.2	R2: 95.2	R3: 93.5	R4: 94.8	R5: 94.3	R6: 92.1
R7: 95.8	R8: 91.5	R9: 76.8	R10: 87.5	R11: 94.4	R12: 75.8
R13: 95.1	R14: 96.0	R15: 94.4			
CCT: 4262 K	Flux: 717.932 lm	PeakWave: 449.6 nm	SDCM: 4.6		
S/P: 1.8	CentralWave: 451.8 nm	DominantWave: 578.9 nm	CentroidWave: 573.2 nm		
HalfWidth: 25.7 nm	duv: -0.00127	purity: 20.7 %	CQS: 88.2		
LER(TM-30): 283.6	Ep: 2531.5 mw	Rg: 100.9	Rf: 91.1		
Red Ep: 882.5 mw	Near red Ep: 127.9 mw	Near infrared Ep: 6.2 mw			

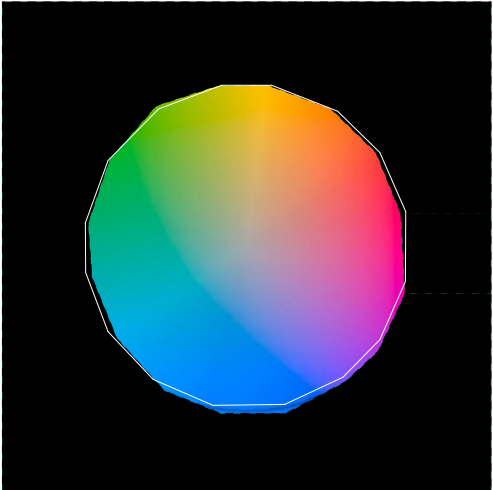
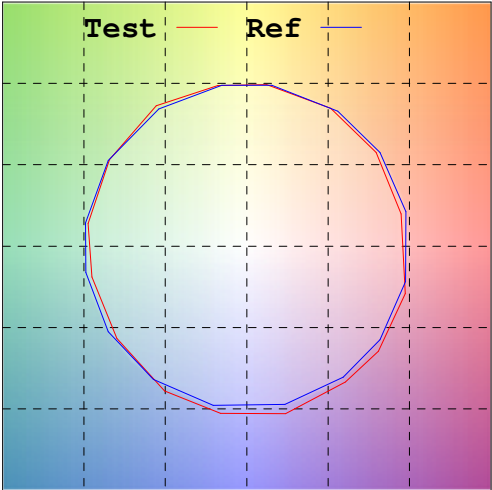
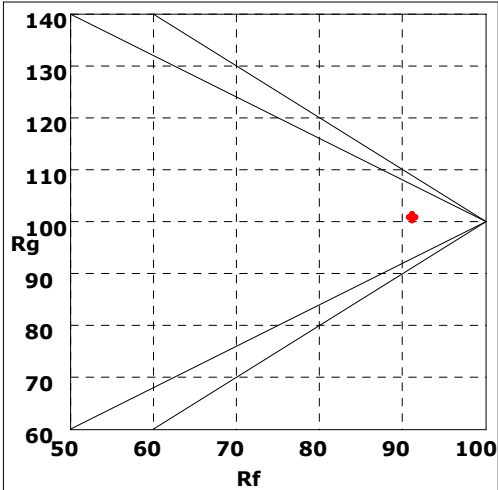
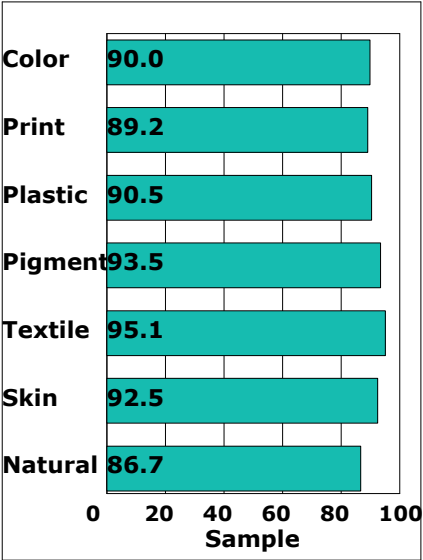
Electrical parameters:

Effic: 47.8 Lm/W	Energy: 52.0	Effi: G	
U: 222.0 V	I: 0.070 A	P: 15.030 W	Pf: 0.958

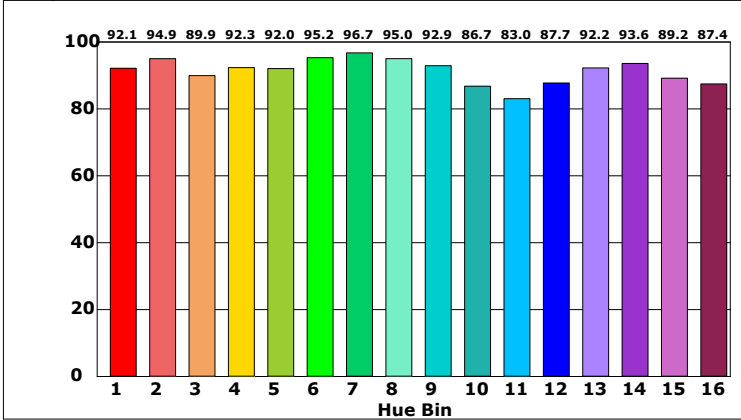
Rf: 91.1 CCT: 4262K u': 0.2215
Rg: 100.9 LER: 283.6 Duv: -0.00127 v': 0.4953



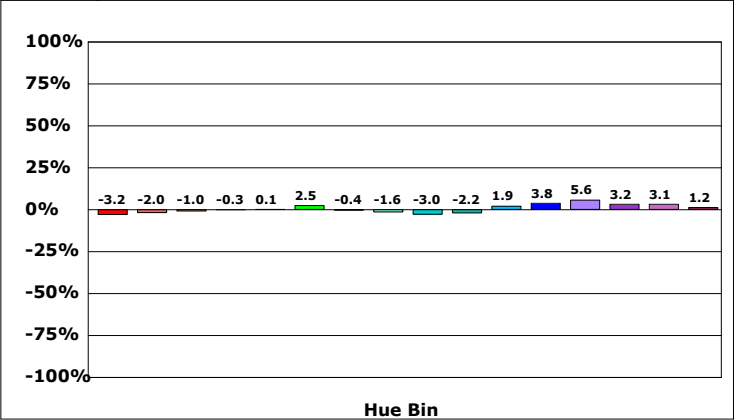
500			
Hue Bin	Rf	Chroma	Hue
1	92.1	-3.2%	-0.7%
2	94.9	-2.0%	1.3%
3	89.9	-1.0%	4.5%
4	92.3	-0.3%	3.3%
5	92.0	0.1%	2.4%
6	95.2	2.5%	0.2%
7	96.7	-0.4%	-1.0%
8	95.0	-1.6%	-0.0%
9	92.9	-3.0%	3.5%
10	86.7	-2.2%	6.6%
11	83.0	1.9%	9.7%
12	87.7	3.8%	5.3%
13	92.2	5.6%	-0.6%
14	93.6	3.2%	-0.6%
15	89.2	3.1%	-6.5%
16	87.4	1.2%	-7.4%



Rf by Bue

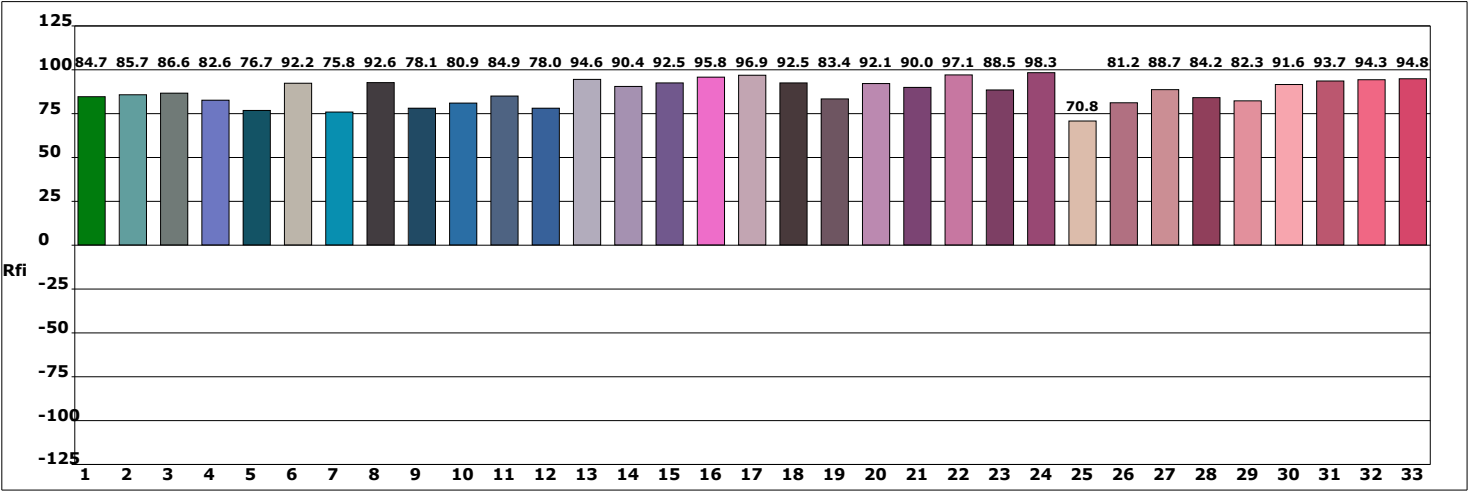
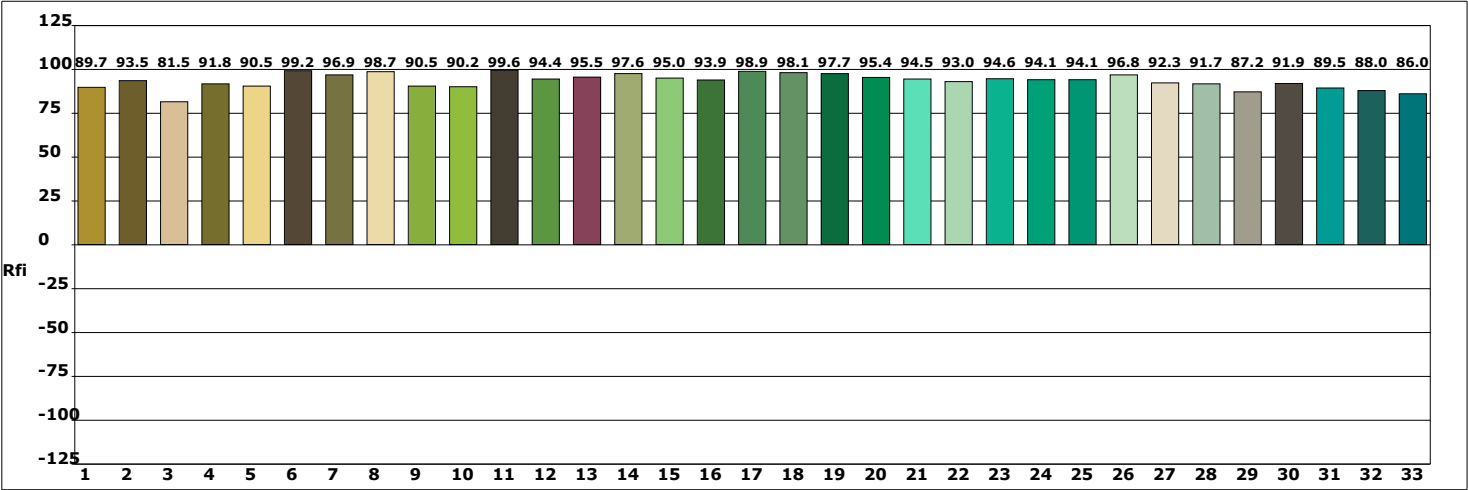
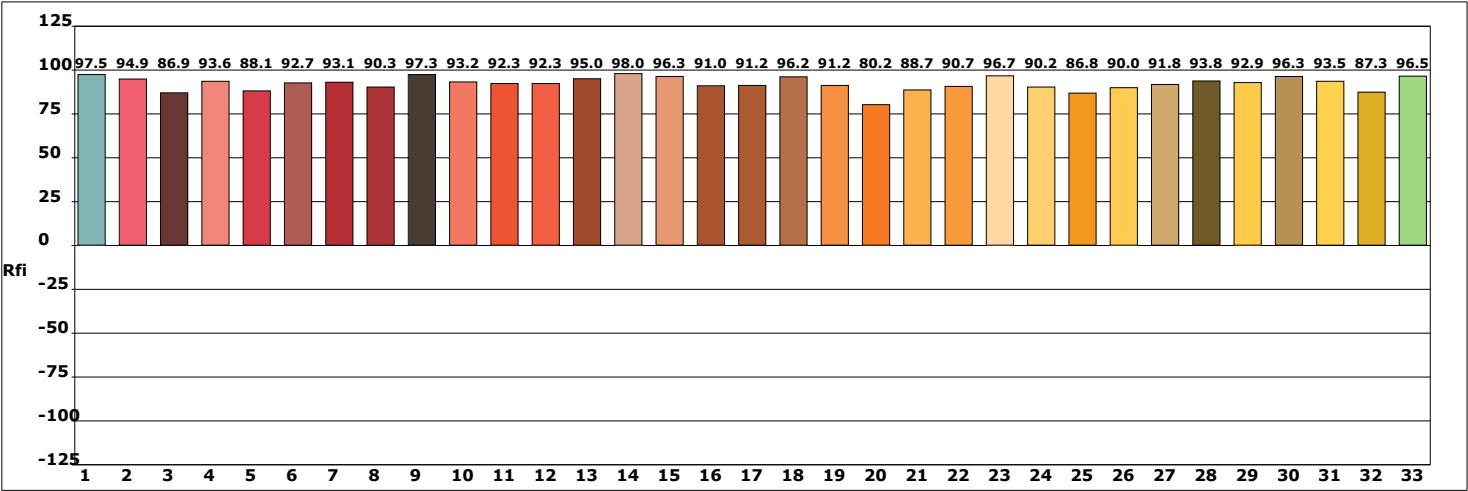


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

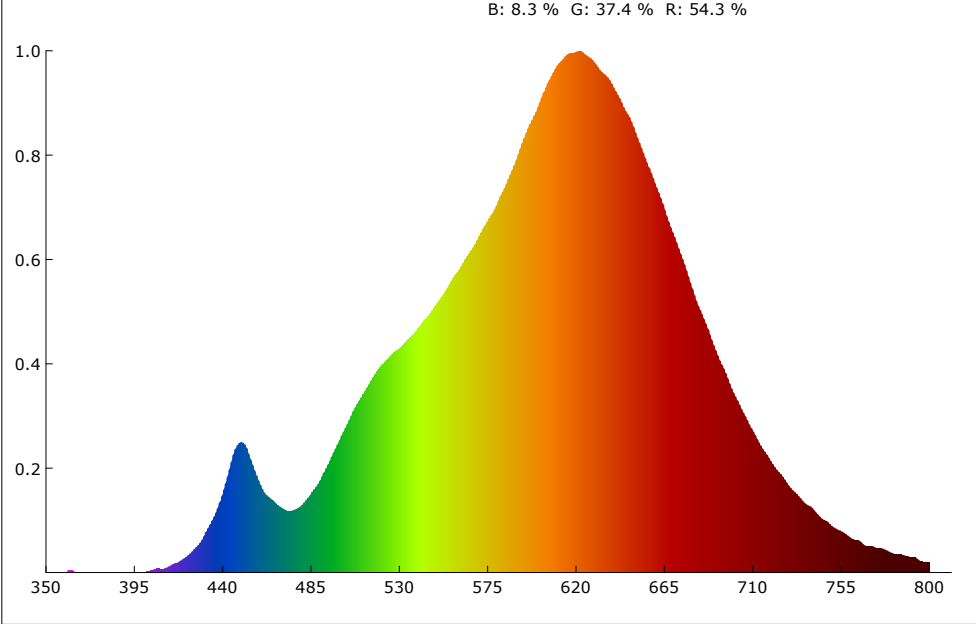
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/04/13



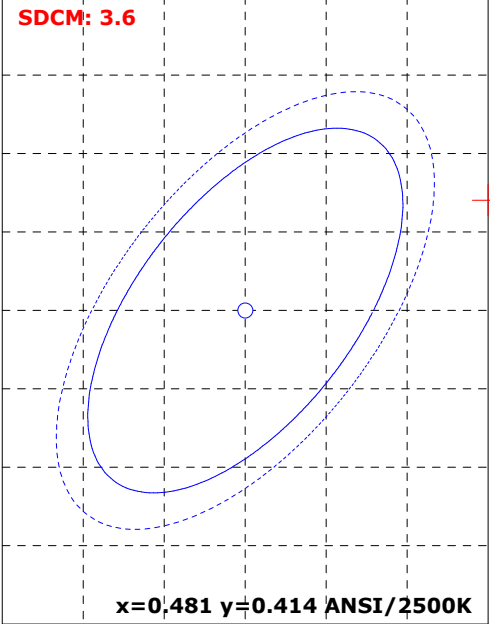
Product model:
Product number:
Tester:
Remarks:

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

Spectrogram



SDCM



Color Parameter:

x: 0.4768 y: 0.4171 u: 0.2705 v: 0.3549 u': 0.2705 v': 0.5324
R_ratio: 54.3 % G_ratio: 37.4 % B_ratio: 8.3 % RedRatio: 26.9 % GreenRatio: 72.0 % BlueRatio: 1.1 %

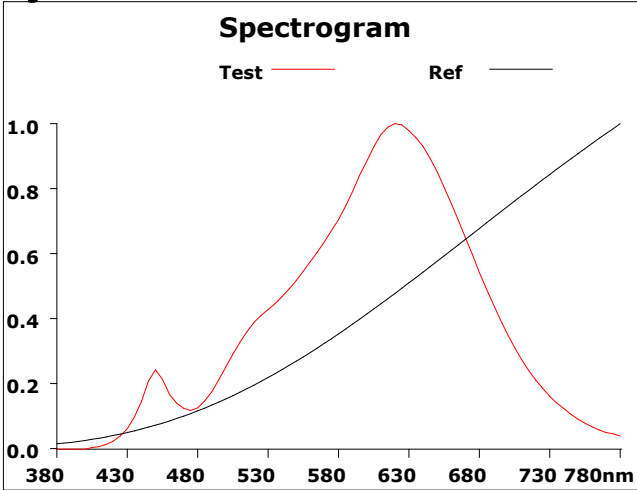
Ra: 91.2 AvgR: 88.1
R1: 90.7 R2: 94.4 R3: 97.6 R4: 92.5 R5: 91.1 R6: 95.3 R7: 90.6 R8: 77.4
R9: 51.1 R10: 87.1 R11: 93.9 R12: 85.2 R13: 91.3 R14: 97.6 R15: 85.4

CCT: 2527 K Flux: 590.369 lm PeakWave: 621.6 nm SDCM: 3.6
S/P: 1.1 CentralWave: 615.0 nm DominantWave: 584.8 nm CentroidWave: 606.8 nm
HalfWidth: 135.8 nm duv: 0.00119 purity: 68.3 % CQS: 87.0
LER(TM-30): 278.1 Ep: 2122.9 mw Rg: 99.5 Rf: 90.6
Red Ep: 1062.3 mw Near red Ep: 158.3 mw Near infrared Ep: 8.7 mw

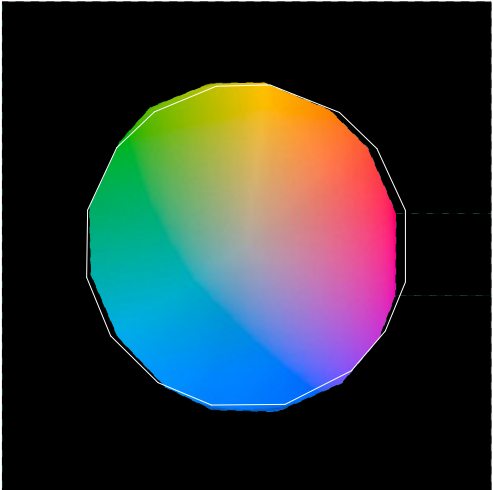
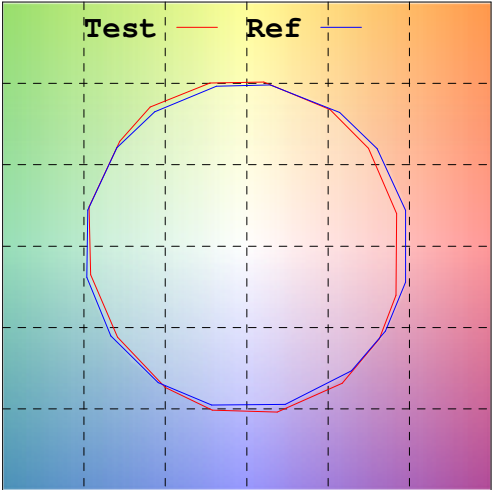
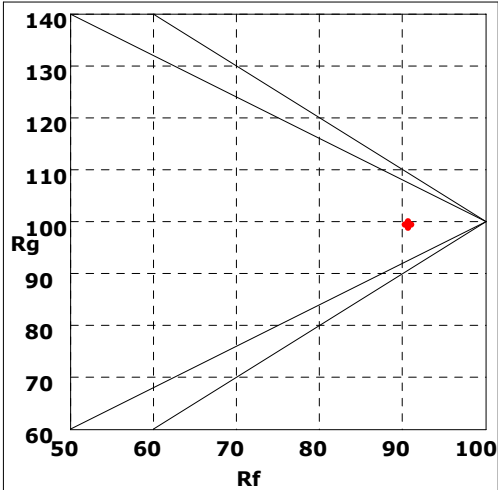
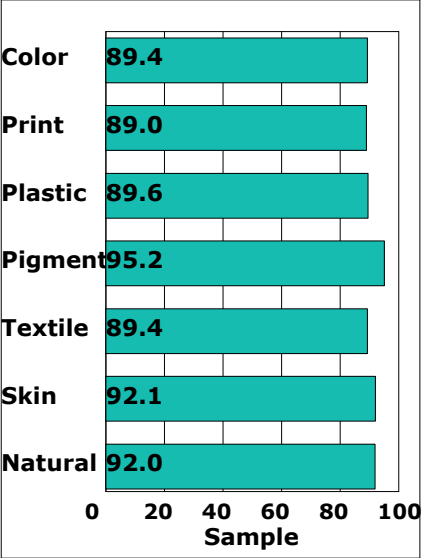
Electrical parameters:

Effic: 39.6 Lm/W Energy: 43.2 Effi: G
U: 222.0 V I: 0.069 A P: 14.890 W Pf: 0.958

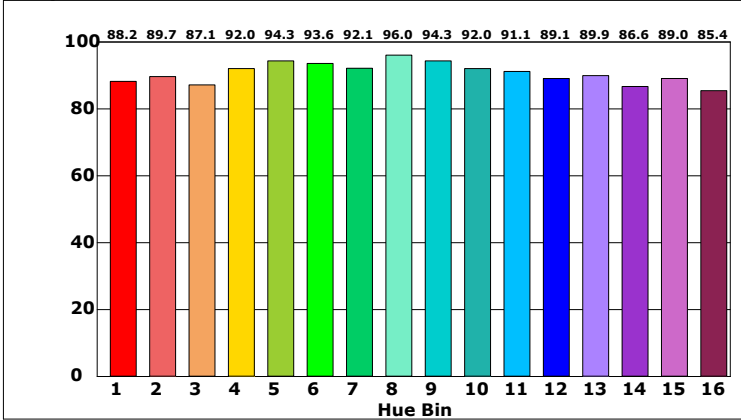
Rf: 90.6 CCT: 2527K u': 0.2705
Rg: 99.5 LER: 278.1 Duv: 0.00119 v': 0.5324



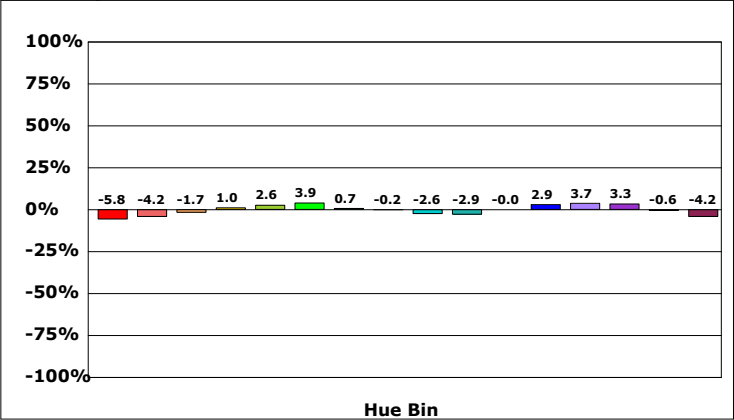
500			
Hue Bin	Rf	Chroma	Hue
1	88.2	-5.8%	-0.9%
2	89.7	-4.2%	3.2%
3	87.1	-1.7%	5.9%
4	92.0	1.0%	4.1%
5	94.3	2.6%	3.6%
6	93.6	3.9%	0.7%
7	92.1	0.7%	-4.3%
8	96.0	-0.2%	-2.2%
9	94.3	-2.6%	-1.1%
10	92.0	-2.9%	2.8%
11	91.1	-0.0%	5.3%
12	89.1	2.9%	0.9%
13	89.9	3.7%	-5.7%
14	86.6	3.3%	-9.1%
15	89.0	-0.6%	-6.1%
16	85.4	-4.2%	-9.0%



Rf by Bue

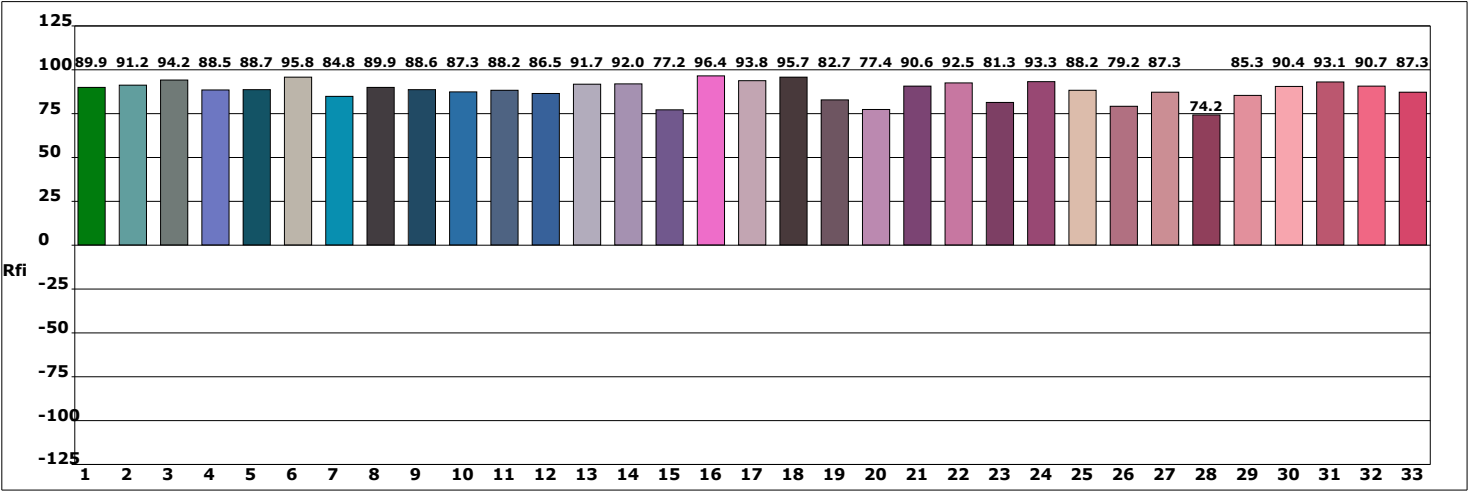
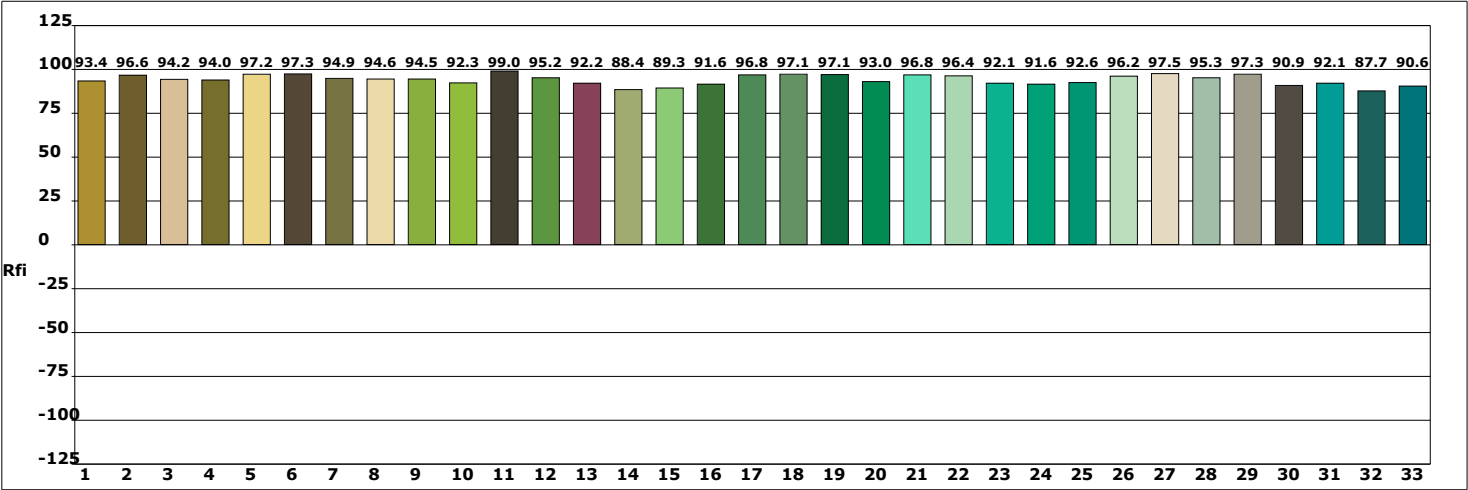
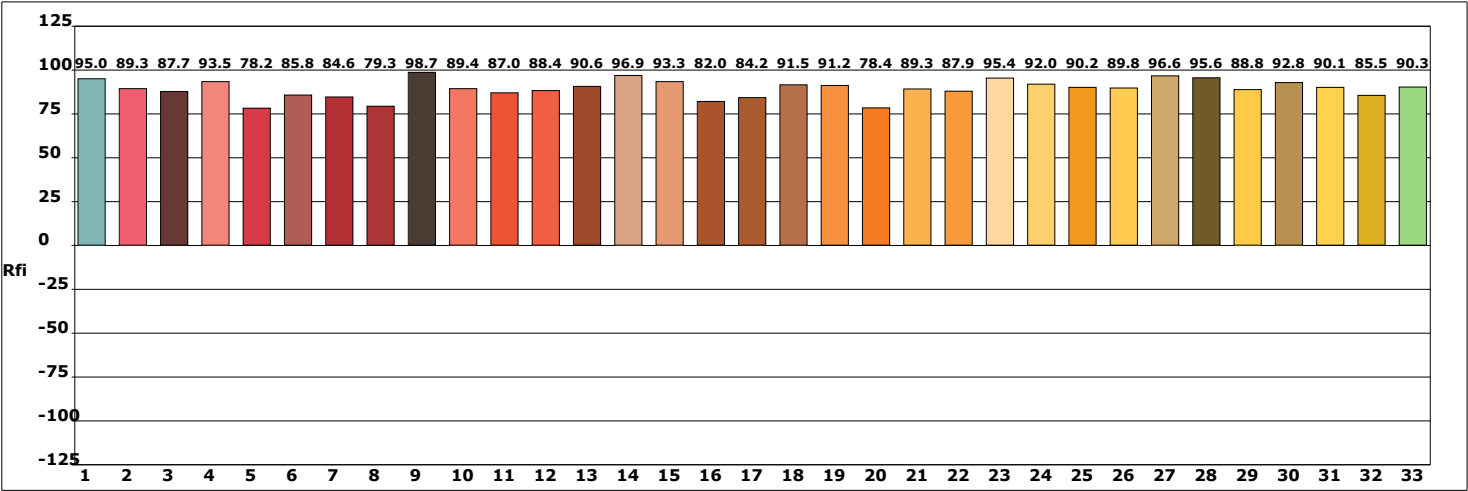


Chroma by Bue



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