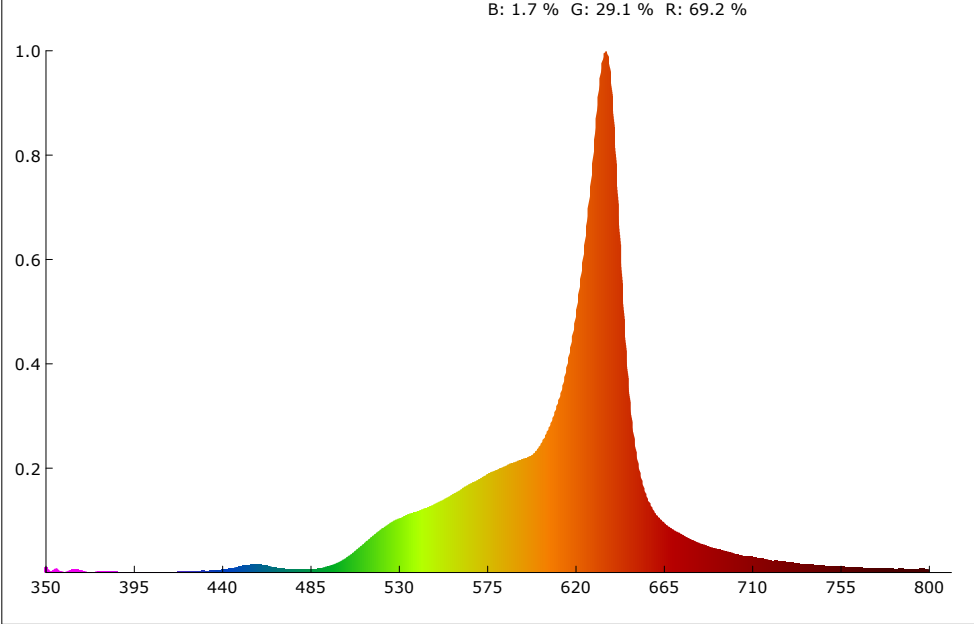
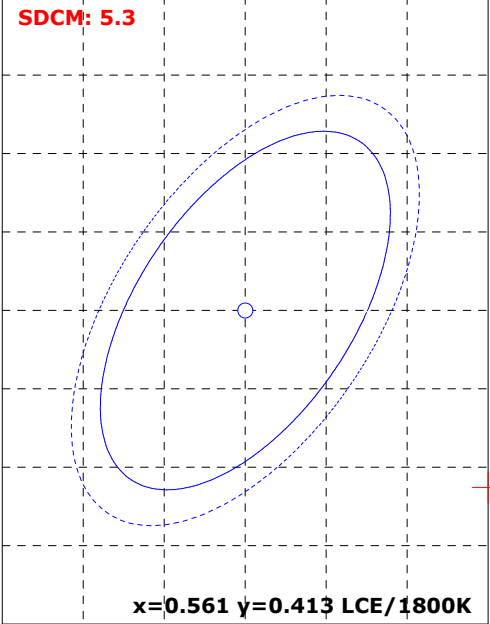


Spectrogram



SDCM



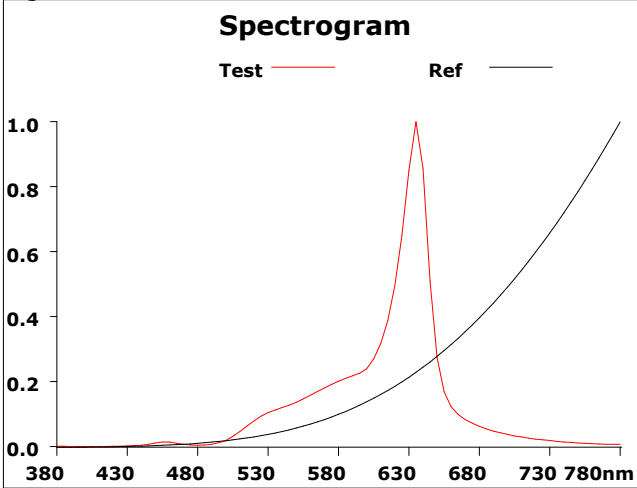
Color Parameter:

x: 0.5669	y: 0.4087	u: 0.3349	v: 0.3622	u': 0.3349	v': 0.5433
R_ratio: 69.2 %	G_ratio: 29.1 %	B_ratio: 1.7 %	RedRatio: 41.0 %	GreenRatio: 58.8 %	BlueRatio: 0.2 %
Ra: 94.2	AvgR: 93.0				
R1: 95.0	R2: 99.6	R3: 84.2	R4: 90.7	R5: 95.5	R6: 94.0
R7: 97.5	R8: 97.3	R9: 88.6	R10: 91.3	R11: 83.6	R12: 96.2
R13: 96.0	R14: 86.6	R15: 99.0			
CCT: 1687 K	Flux: 4354.960 lm	PeakWave: 635.5 nm	SDCM: 5.3		
S/P: 0.7	CentralWave: 632.7 nm	DominantWave: 591.7 nm	CentroidWave: 613.7 nm		
HalfWidth: 23.9 nm	duv: 0.00171	purity: 92.8 %	CQS: 48.8		
LER(TM-30): 282.3	Ep: 15425.5 mw	Rg: 95.3	Rf: 86.8		
Red Ep: 10277.9 mw	Near red Ep: 470.1 mw	Near infrared Ep: 51.8 mw			

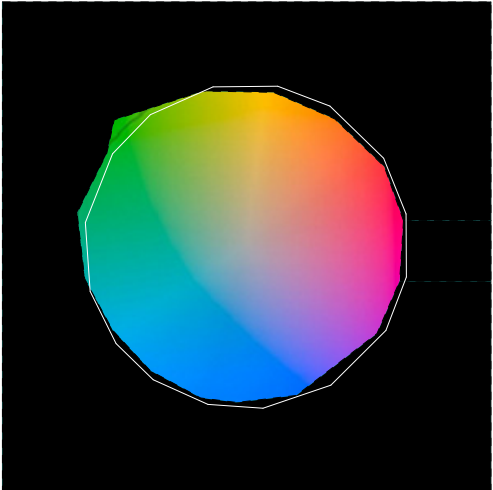
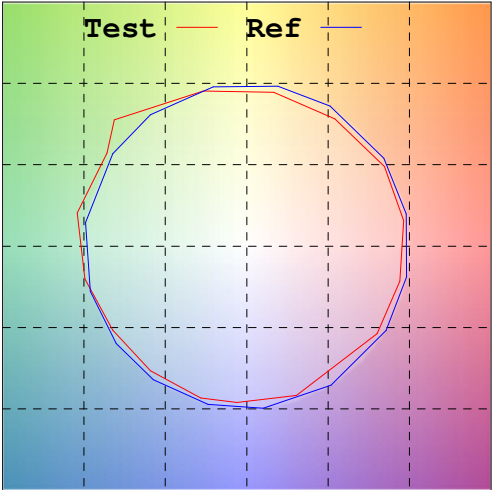
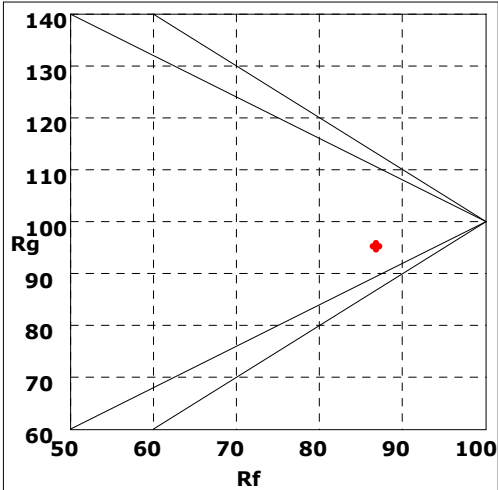
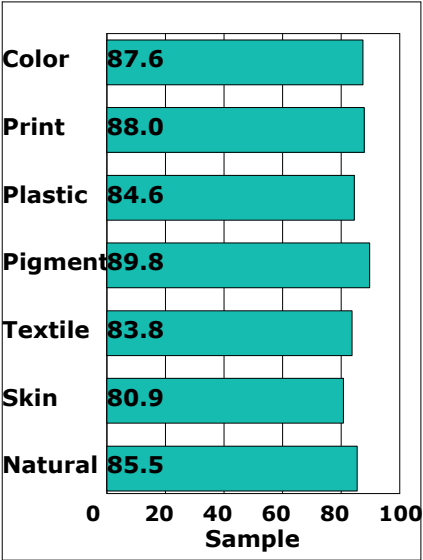
Electrical parameters:

Effic: 41.2 Lm/W	Energy: 44.9	Effi: G	
U: 220.3 V	I: 0.735 A	P: 105.700 W	Pf: 0.652

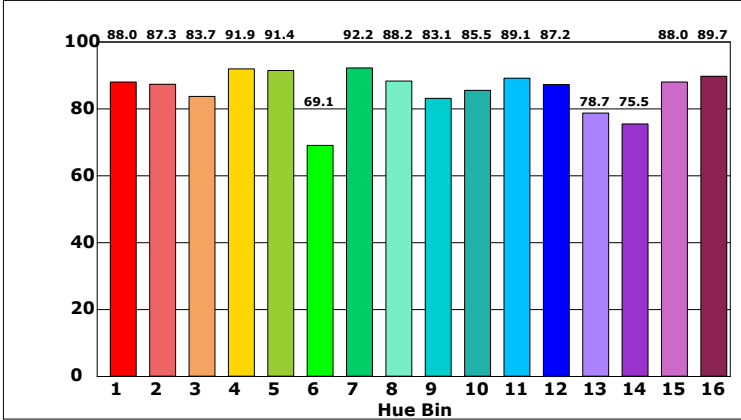
Rf: 86.8 CCT: 1687K u': 0.3349
Rg: 95.3 LER: 282.3 Duv: 0.00171 v': 0.5433



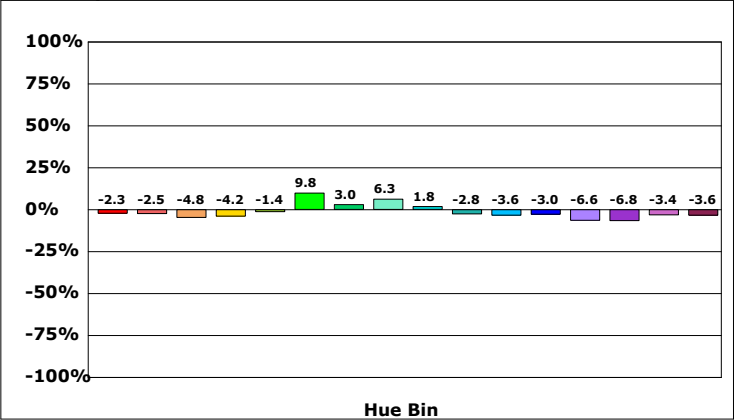
500			
Hue Bin	Rf	Chroma	Hue
1	88.0	-2.3%	-3.6%
2	87.3	-2.5%	-4.5%
3	83.7	-4.8%	-6.8%
4	91.9	-4.2%	1.7%
5	91.4	-1.4%	6.5%
6	69.1	9.8%	20.3%
7	92.2	3.0%	1.7%
8	88.2	6.3%	-4.9%
9	83.1	1.8%	-8.2%
10	85.5	-2.8%	-8.0%
11	89.1	-3.6%	-4.5%
12	87.2	-3.0%	-5.4%
13	78.7	-6.6%	-15.1%
14	75.5	-6.8%	-21.2%
15	88.0	-3.4%	-4.7%
16	89.7	-3.6%	-3.3%



Rf by Bue

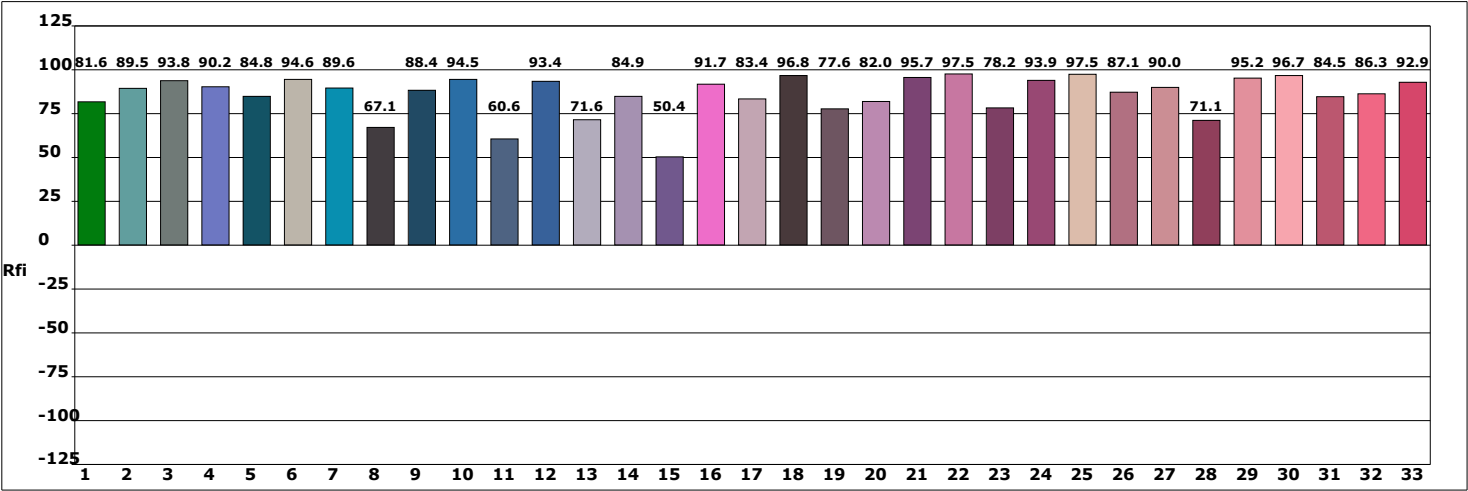
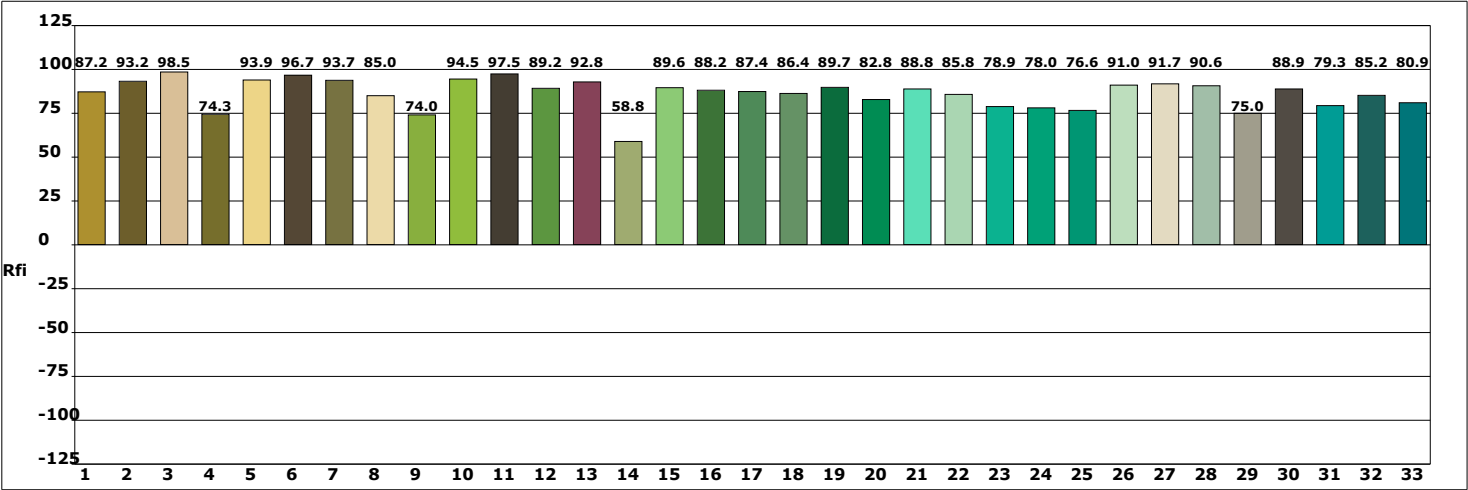
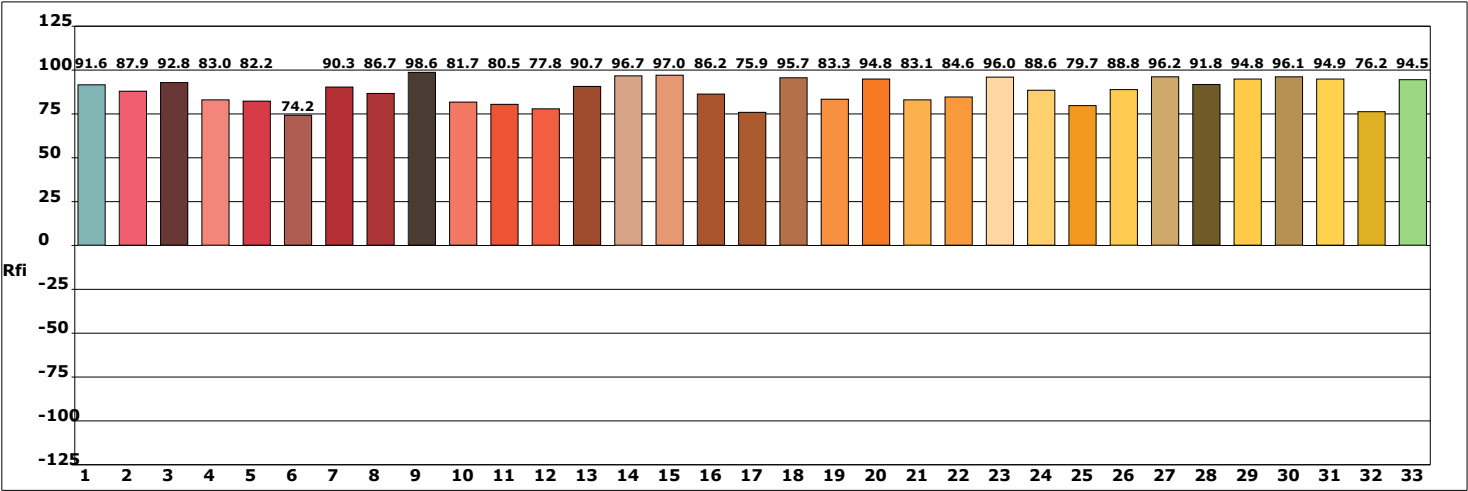


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

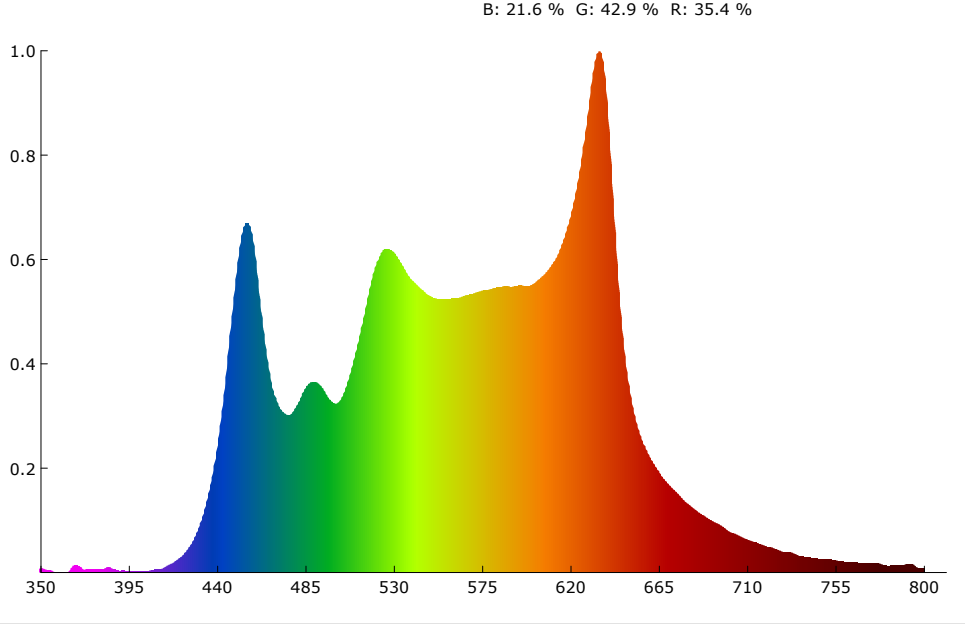
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/17/14



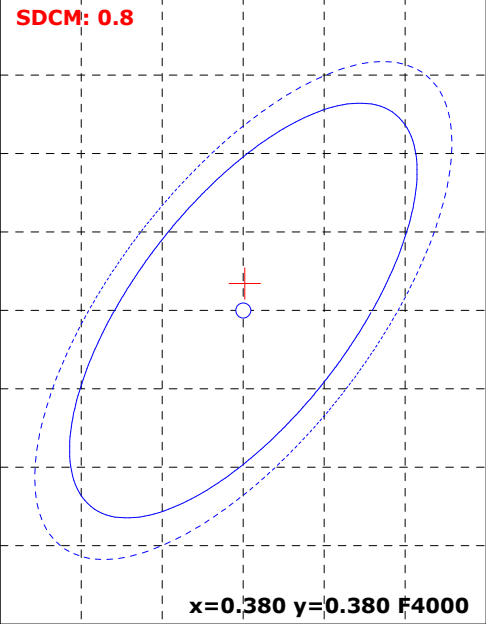
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/17/14

Spectrogram



SDCM



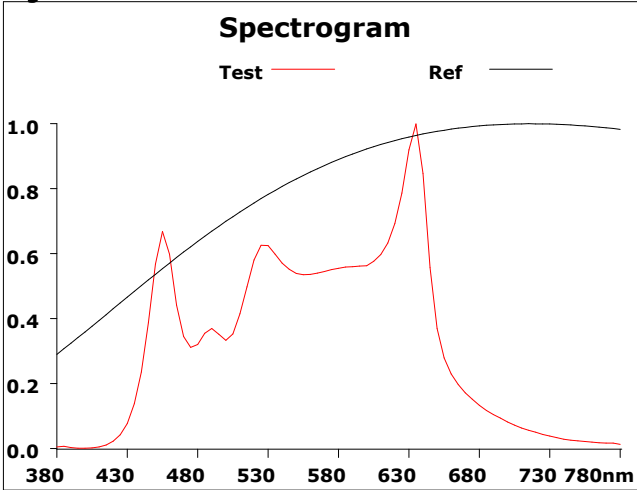
Color Parameter:

x: 0.3801	y: 0.3817	u: 0.2229	v: 0.3358	u': 0.2229	v': 0.5037
R_ratio: 35.4 %	G_ratio: 42.9 %	B_ratio: 21.6 %	RedRatio: 19.9 %	GreenRatio: 77.1 %	BlueRatio: 3.0 %
Ra: 97.4	AvgR: 95.5				
R1: 97.6	R2: 99.1	R3: 93.6	R4: 98.5	R5: 98.2	R6: 97.2
R7: 98.0	R8: 97.3	R9: 98.2	R10: 94.2	R11: 95.8	R12: 74.4
R13: 98.0	R14: 95.0	R15: 96.9			
CCT: 4046 K	Flux: 4558.645 lm	PeakWave: 634.5 nm	SDCM: 0.8		
S/P: 1.8	CentralWave: 580.2 nm	DominantWave: 577.6 nm	CentroidWave: 565.9 nm		
HalfWidth: 130.4 nm	duv: 0.00241	purity: 28.6 %	CQS: 95.1		
LER(TM-30): 313.5	Ep: 14543.0 mw	Rg: 99.6	Rf: 91.1		
Red Ep: 5009.1 mw	Near red Ep: 342.3 mw	Near infrared Ep: 33.1 mw			

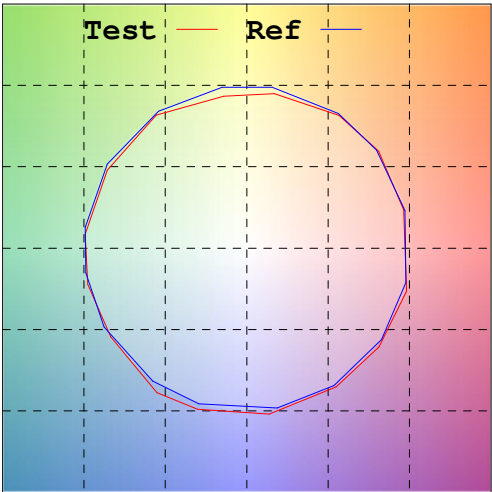
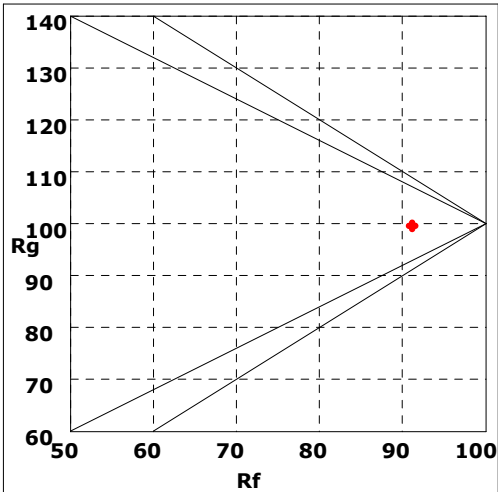
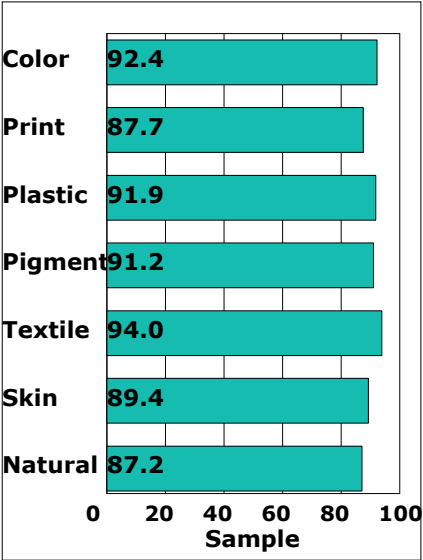
Electrical parameters:

Effic: 45.0 Lm/W	Energy: 49.0	Effi: G	
U: 220.1 V	I: 0.707 A	P: 101.400 W	Pf: 0.651

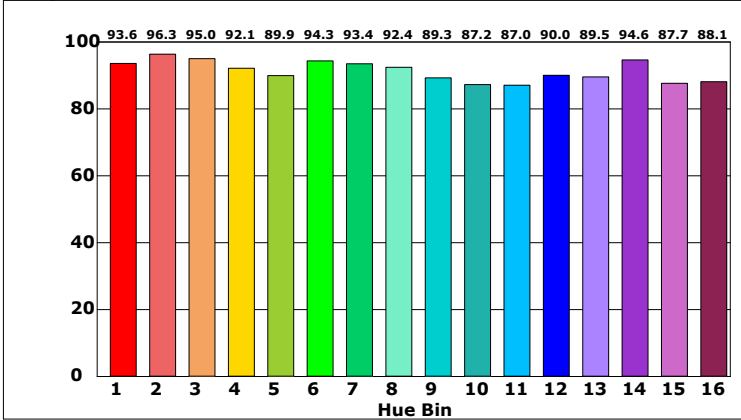
Rf: 91.1 CCT: 4046K u': 0.2229
Rg: 99.6 LER: 313.5 Duv: 0.00241 v': 0.5037



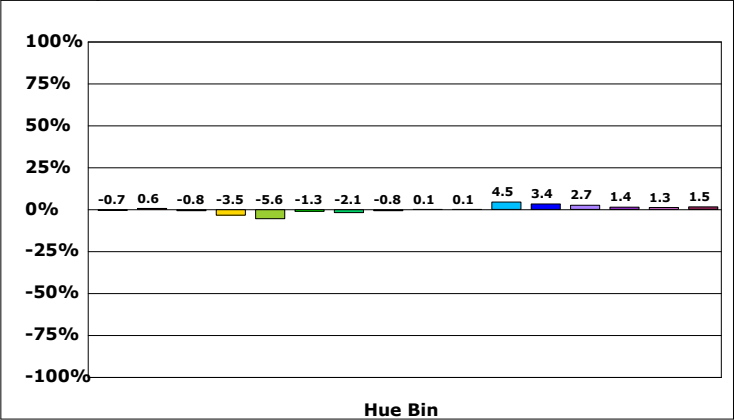
500			
Hue Bin	Rf	Chroma	Hue
1	93.6	-0.7%	0.4%
2	96.3	0.6%	-1.3%
3	95.0	-0.8%	-1.0%
4	92.1	-3.5%	-2.0%
5	89.9	-5.6%	0.1%
6	94.3	-1.3%	2.4%
7	93.4	-2.1%	3.1%
8	92.4	-0.8%	4.1%
9	89.3	0.1%	7.2%
10	87.2	0.1%	7.3%
11	87.0	4.5%	6.2%
12	90.0	3.4%	-0.1%
13	89.5	2.7%	-5.6%
14	94.6	1.4%	0.7%
15	87.7	1.3%	-4.7%
16	88.1	1.5%	-5.1%



Rf by Bue

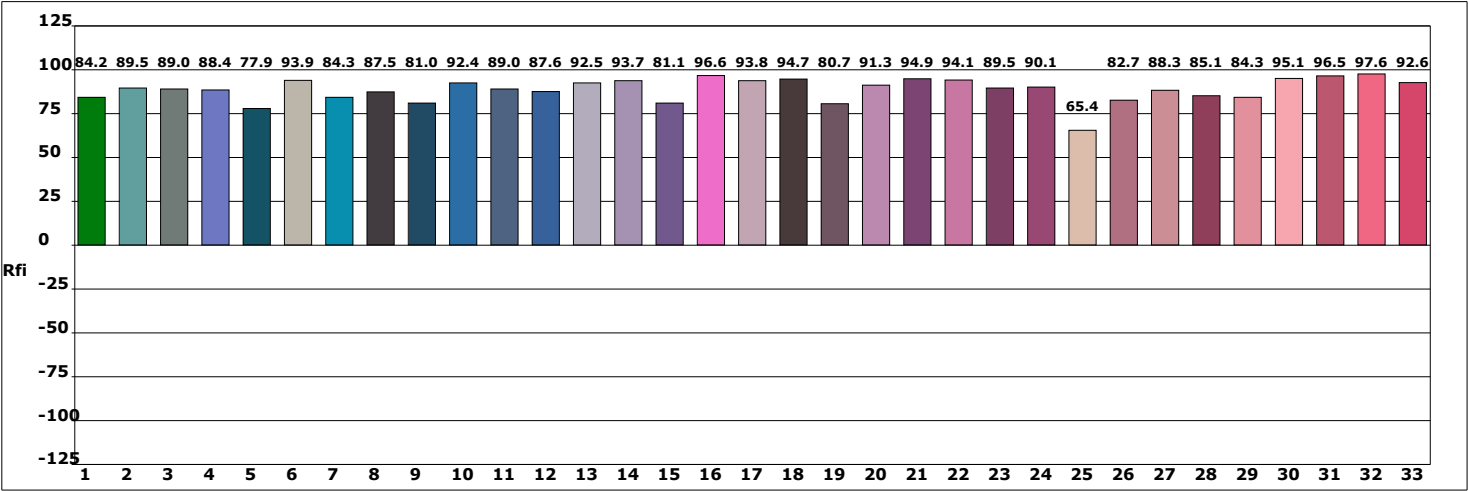
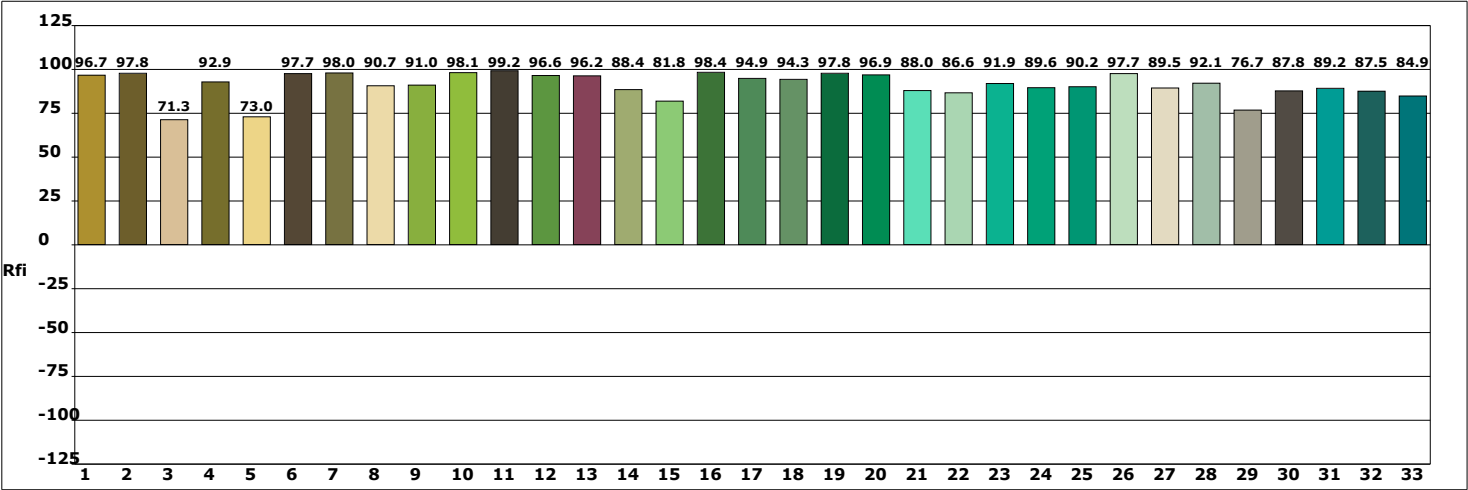
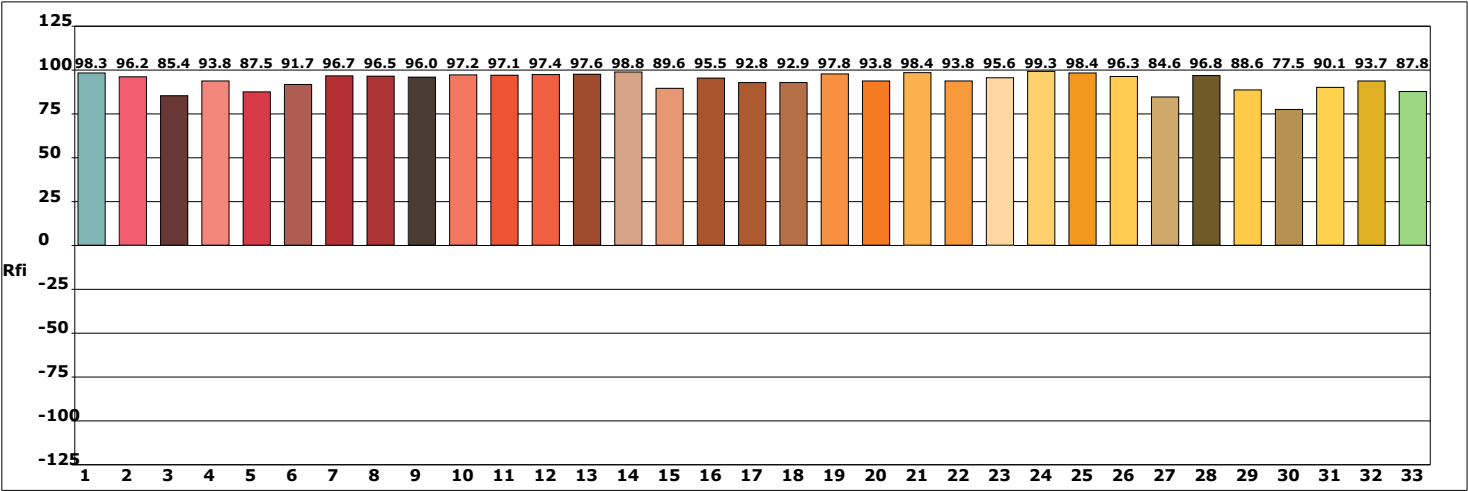


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

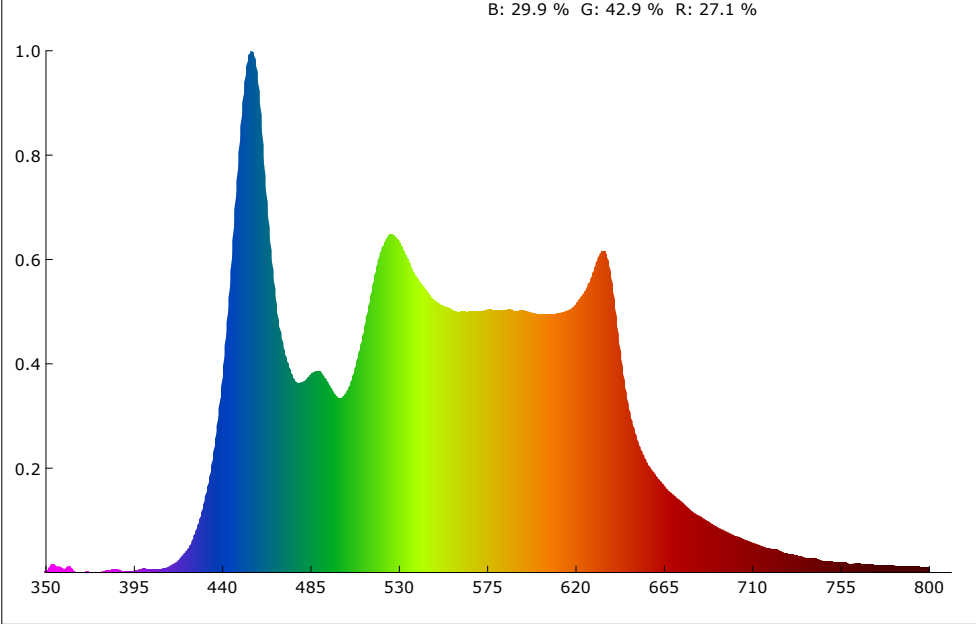
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/17/14



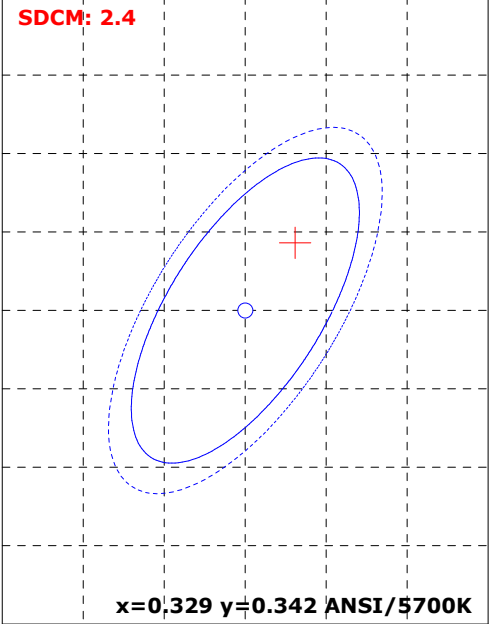
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/17/14

Spectrogram



SDCM



Color Parameter:

x: 0.3318 y: 0.3460 u: 0.2045 v: 0.3200 u': 0.2045 v': 0.4800
R_ratio: 27.1 % G_ratio: 42.9 % B_ratio: 29.9 % RedRatio: 16.0 % GreenRatio: 79.8 % BlueRatio: 4.2 %

Ra: 94.7 AvgR: 91.6
R1: 96.7 R2: 96.6 R3: 93.6 R4: 95.7 R5: 94.0 R6: 92.7 R7: 96.6 R8: 92.1
R9: 76.4 R10: 88.4 R11: 94.8 R12: 68.6 R13: 97.7 R14: 95.7 R15: 94.8

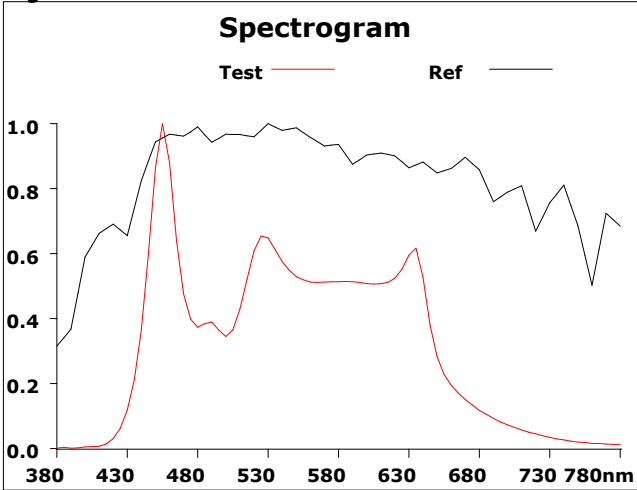
CCT: 5529 K Flux: 4405.985 lm PeakWave: 455.4 nm SDCM: 2.4
S/P: 2.2 CentralWave: 456.0 nm DominantWave: 548.3 nm CentroidWave: 550.5 nm
HalfWidth: 25.3 nm duv: 0.00286 purity: 3.4 % CQS: 91.4
LER(TM-30): 302.8 Ep: 14548.5 mw Rg: 98.9 Rf: 89.5
Red Ep: 3844.2 mw Near red Ep: 311.8 mw Near infrared Ep: 30.2 mw

Electrical parameters:

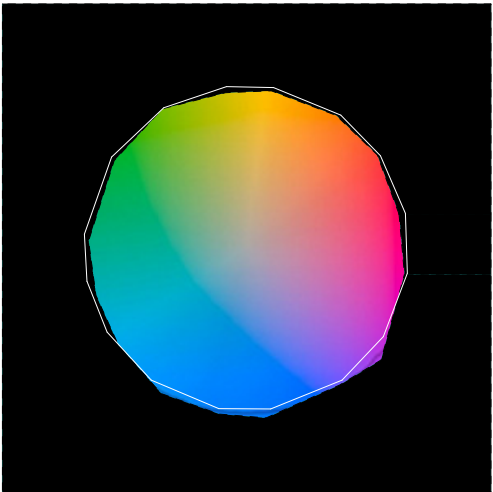
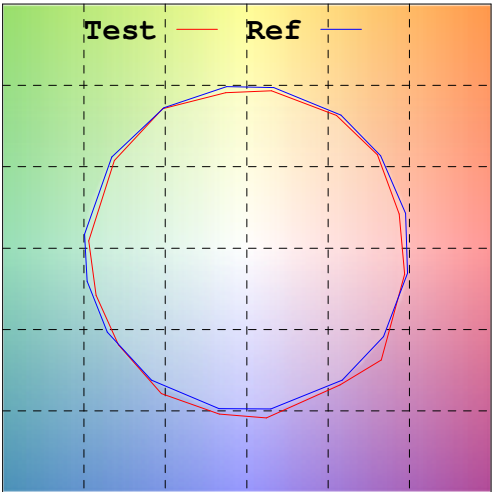
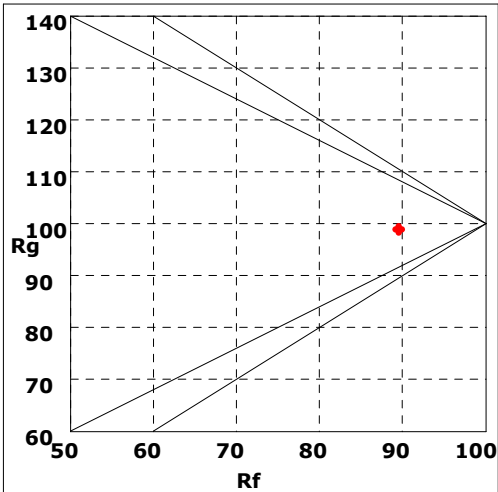
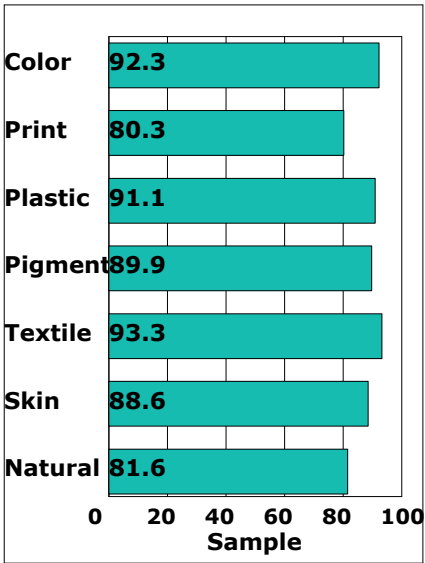
Effic: 43.4 Lm/W Energy: 47.2 Effi: G
U: 220.4 V I: 0.710 A P: 101.600 W Pf: 0.648

Product model: Manufacturer: Guangzhou Hotion Technology Co.,
Product number: Test unit:
Tester: Date of observation: 03/17/14
Remarks:

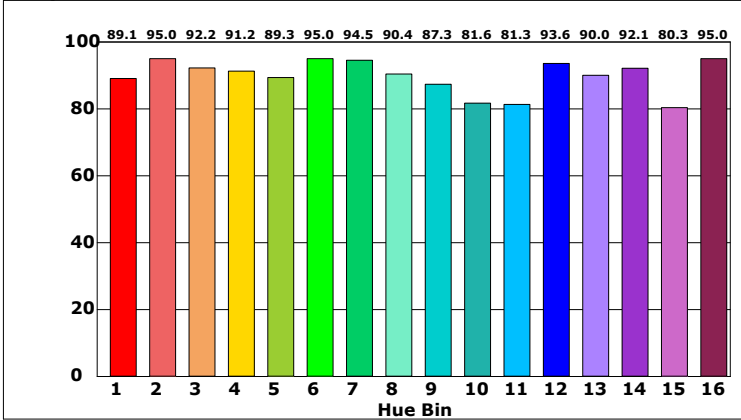
Rf: 89.5 CCT: 5529K u': 0.2045
Rg: 98.9 LER: 302.8 Duv: 0.00286 v': 0.4800



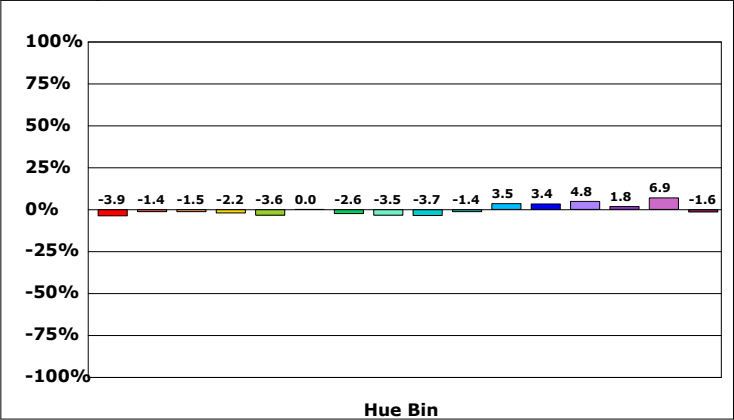
500			
Hue Bin	Rf	Chroma	Hue
1	89.1	-3.9%	0.4%
2	95.0	-1.4%	1.5%
3	92.2	-1.5%	2.1%
4	91.2	-2.2%	1.1%
5	89.3	-3.6%	1.2%
6	95.0	0.0%	0.9%
7	94.5	-2.6%	0.9%
8	90.4	-3.5%	3.6%
9	87.3	-3.7%	9.6%
10	81.6	-1.4%	10.3%
11	81.3	3.5%	9.8%
12	93.6	3.4%	0.8%
13	90.0	4.8%	-3.8%
14	92.1	1.8%	-2.9%
15	80.3	6.9%	-12.7%
16	95.0	-1.6%	-1.1%



Rf by Bue

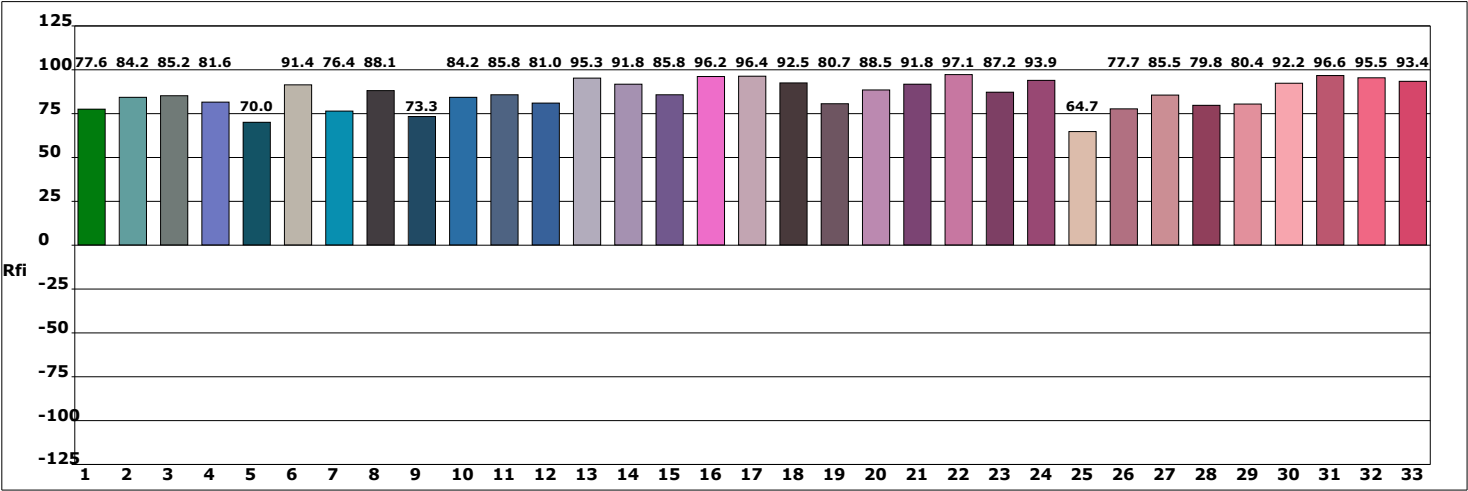
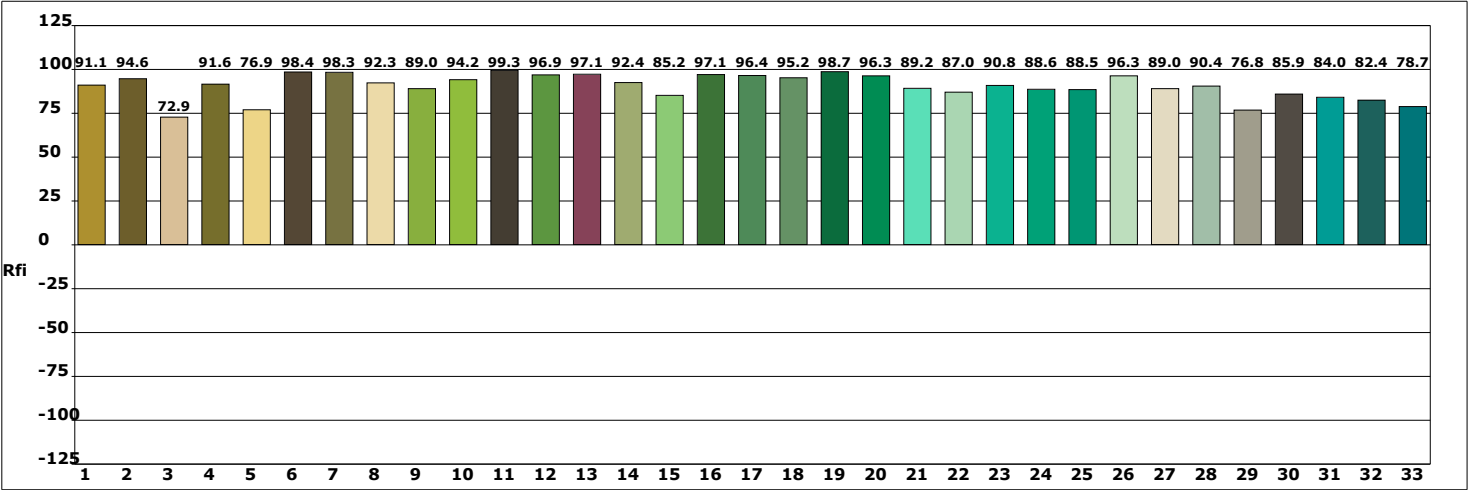
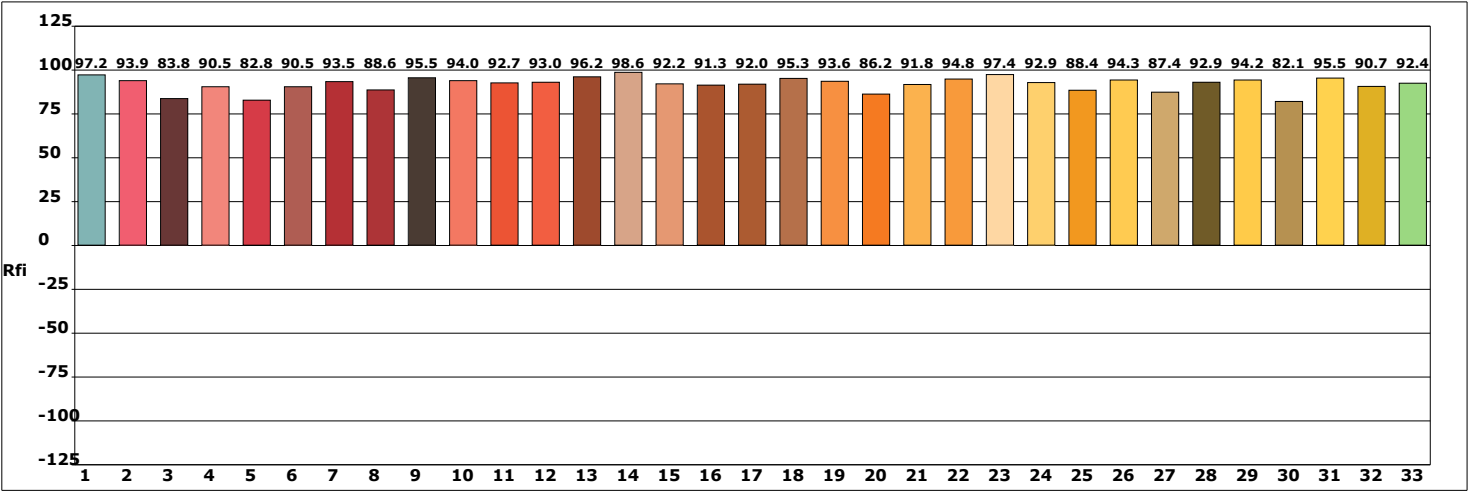


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/17/14



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/17/14