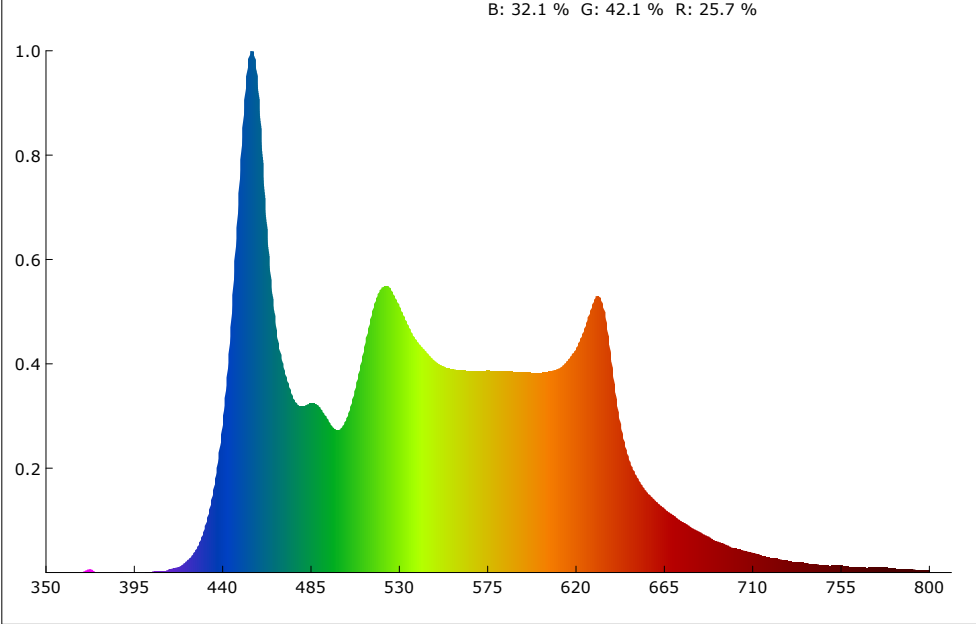
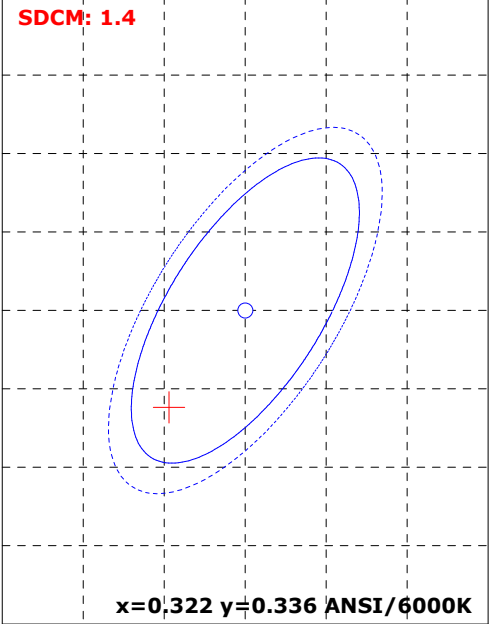


Spectrogram



SDCM



Color Parameter:

x: 0.3203 y: 0.3338 u: 0.2013 v: 0.3147 u': 0.2013 v': 0.4721
R_ratio: 25.7 % G_ratio: 42.1 % B_ratio: 32.1 % RedRatio: 16.0 % GreenRatio: 79.4 % BlueRatio: 4.7 %

Ra: 96.5 AvgR: 94.1
R1: 97.0 R2: 98.8 R3: 94.9 R4: 99.2 R5: 96.2 R6: 94.5 R7: 96.5 R8: 95.6
R9: 91.6 R10: 94.9 R11: 95.1 R12: 67.4 R13: 98.1 R14: 96.1 R15: 95.8

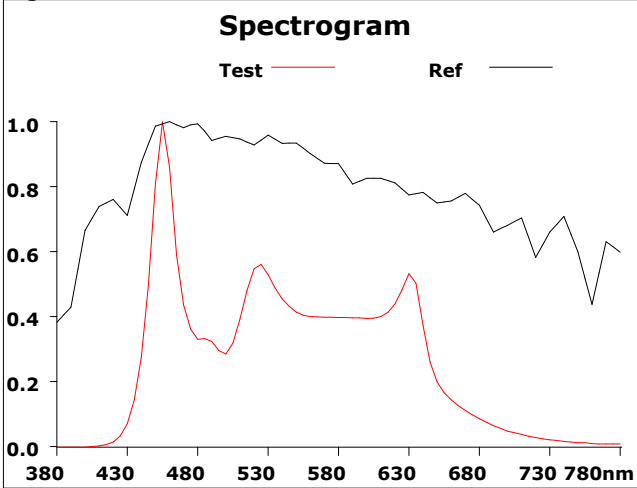
CCT: 6079 K Flux: 2410.059 lm PeakWave: 455.4 nm SDCM: 1.4
S/P: 2.3 CentralWave: 455.8 nm DominantWave: 492.2 nm CentroidWave: 546.1 nm
HalfWidth: 21.2 nm duv: 0.00192 purity: 4.4 % CQS: 91.7
LER(TM-30): 298.5 Ep: 8075.0 mw Rg: 99.6 Rf: 89.5
Red Ep: 2039.3 mw Near red Ep: 136.0 mw Near infrared Ep: 11.6 mw

Electrical parameters:

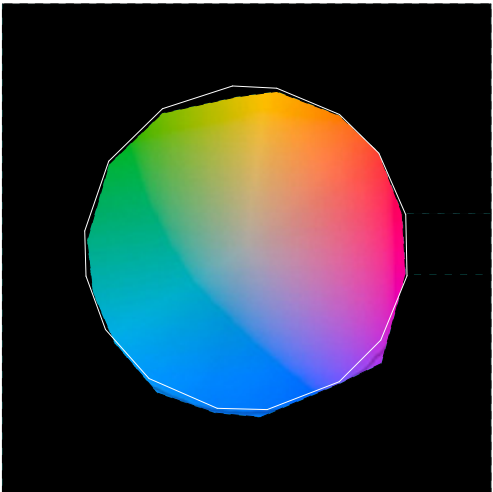
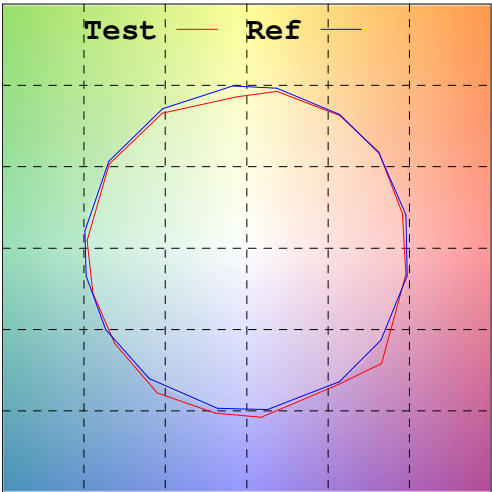
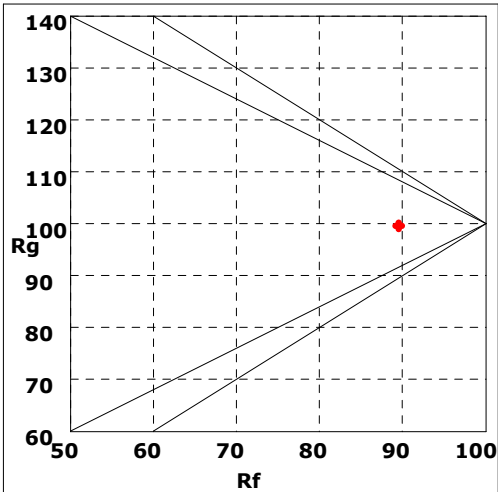
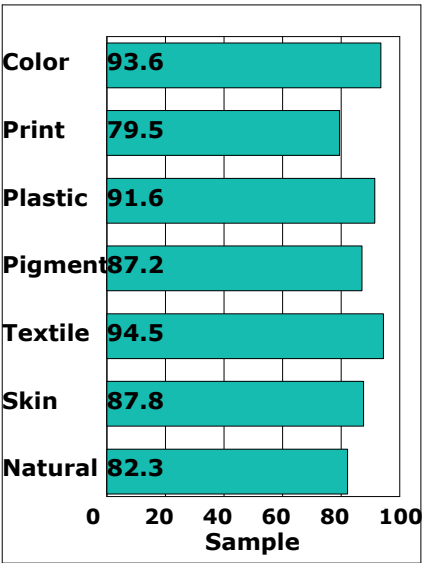
Effic: 12.8 Lm/W Energy: 13.9 Effi: G
U: 219.2 V I: 1.246 A P: 188.900 W Pf: 0.691

Product model: Manufacturer: Guangzhou Hotion Technology Co.,
Product number: Test unit:
Tester: Date of observation: 03/19/14
Remarks:

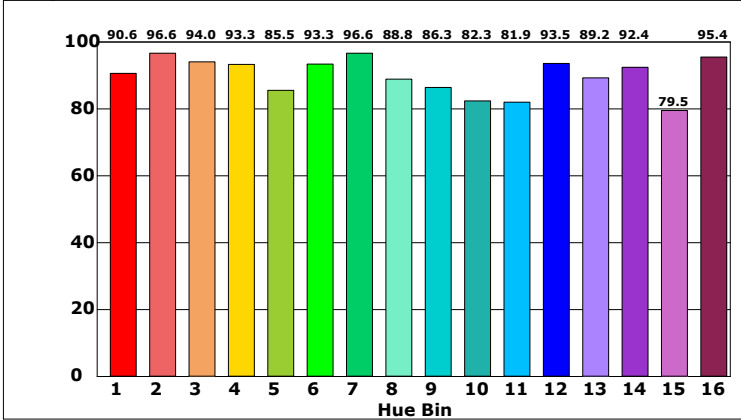
Rf: 89.5 CCT: 6079K u': 0.2013
Rg: 99.6 LER: 298.5 Duv: 0.00192 v': 0.4721



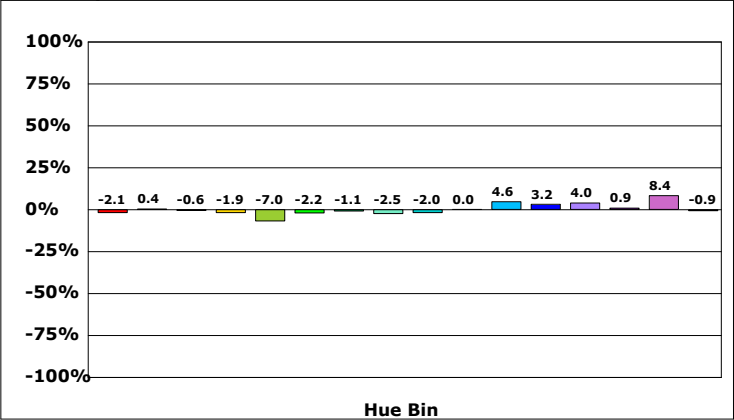
500			
Hue Bin	Rf	Chroma	Hue
1	90.6	-2.1%	1.1%
2	96.6	0.4%	0.7%
3	94.0	-0.6%	-0.4%
4	93.3	-1.9%	-0.4%
5	85.5	-7.0%	-0.9%
6	93.3	-2.2%	1.6%
7	96.6	-1.1%	1.3%
8	88.8	-2.5%	5.5%
9	86.3	-2.0%	10.9%
10	82.3	0.0%	10.1%
11	81.9	4.6%	9.0%
12	93.5	3.2%	-0.8%
13	89.2	4.0%	-4.5%
14	92.4	0.9%	-1.7%
15	79.5	8.4%	-11.7%
16	95.4	-0.9%	0.5%



Rf by Bue

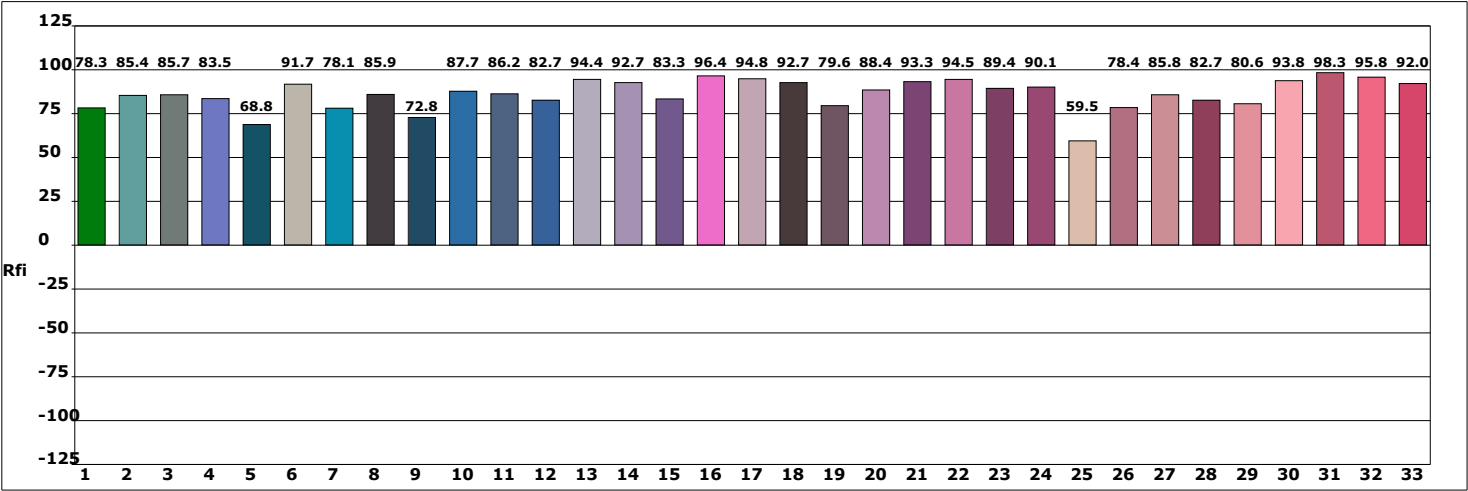
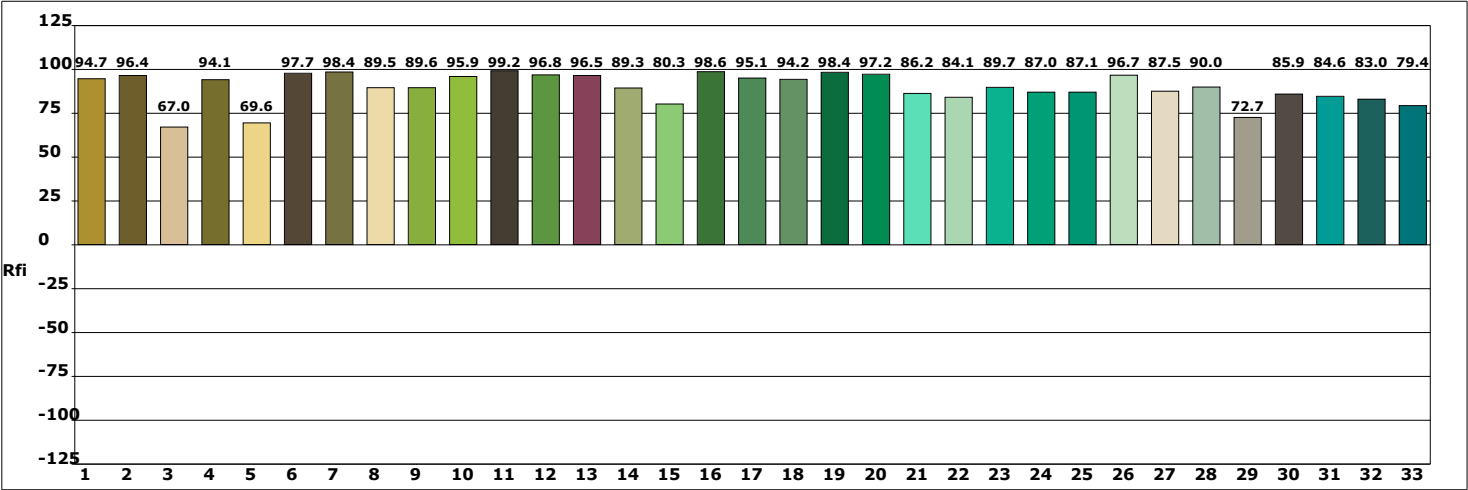
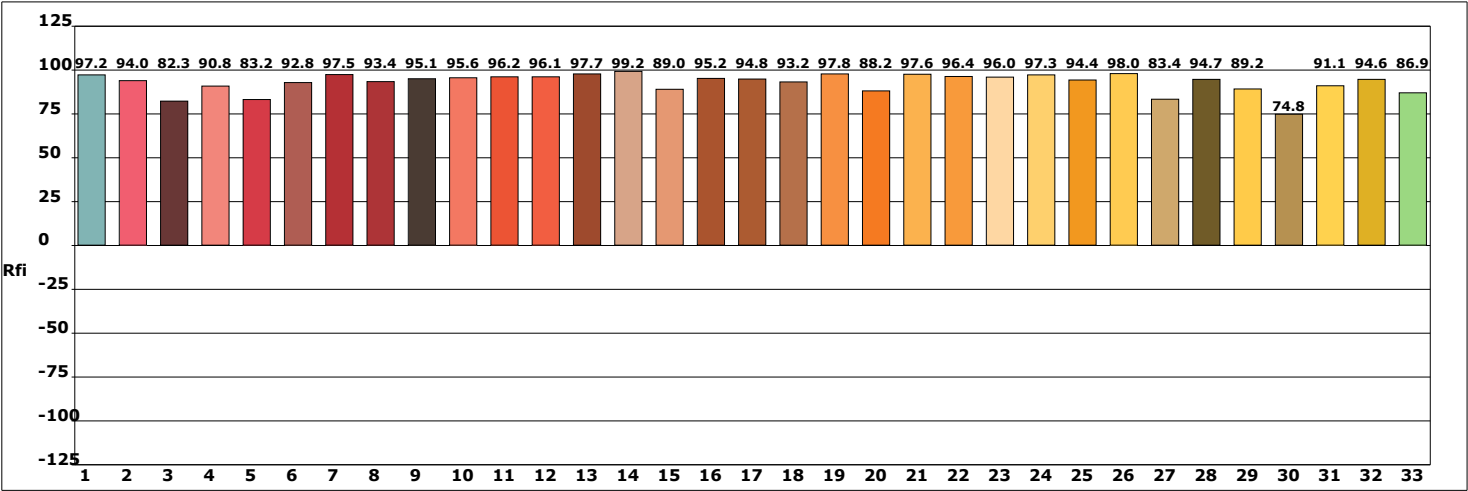


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

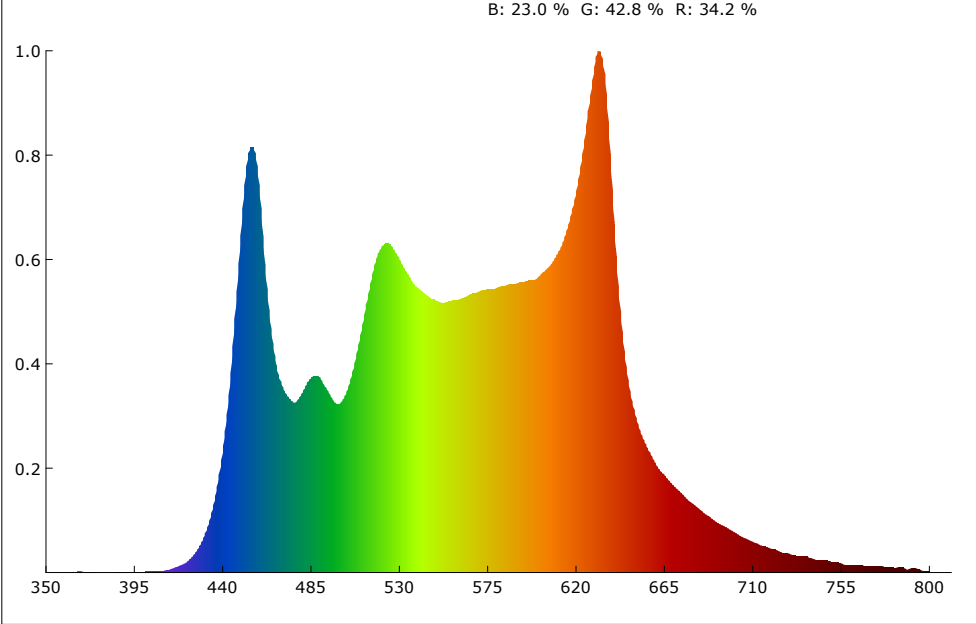
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/19/14



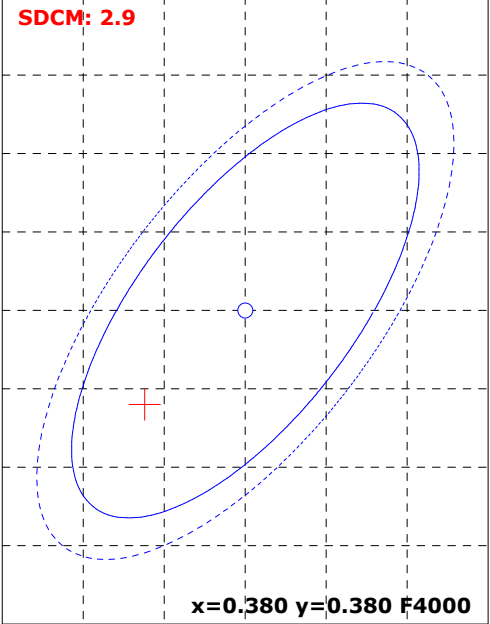
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/19/14

Spectrogram



SDCM



Color Parameter:

x: 0.3738 y: 0.3740 u: 0.2218 v: 0.3329 u': 0.2218 v': 0.4993
R_ratio: 34.2 % G_ratio: 42.8 % B_ratio: 23.0 % RedRatio: 19.9 % GreenRatio: 76.8 % BlueRatio: 3.3 %

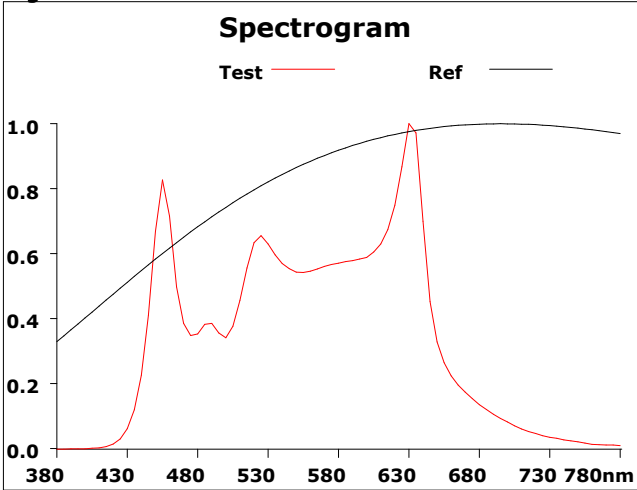
Ra: 97.0 AvgR: 95.2
R1: 96.2 R2: 99.2 R3: 96.1 R4: 97.9 R5: 97.5 R6: 96.2 R7: 96.8 R8: 96.6
R9: 96.3 R10: 98.1 R11: 94.7 R12: 73.4 R13: 96.7 R14: 96.3 R15: 96.4

CCT: 4168 K Flux: 2403.667 lm PeakWave: 632.5 nm SDCM: 2.9
S/P: 1.9 CentralWave: 577.8 nm DominantWave: 578.0 nm CentroidWave: 563.0 nm
HalfWidth: 129.5 nm duv: 0.00070 purity: 24.4 % CQS: 93.8
LER(TM-30): 314.3 Ep: 7647.9 mw Rg: 99.5 Rf: 90.1
Red Ep: 2559.1 mw Near red Ep: 156.4 mw Near infrared Ep: 9.7 mw

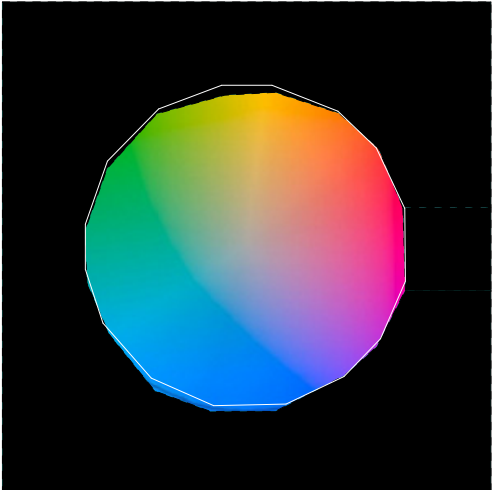
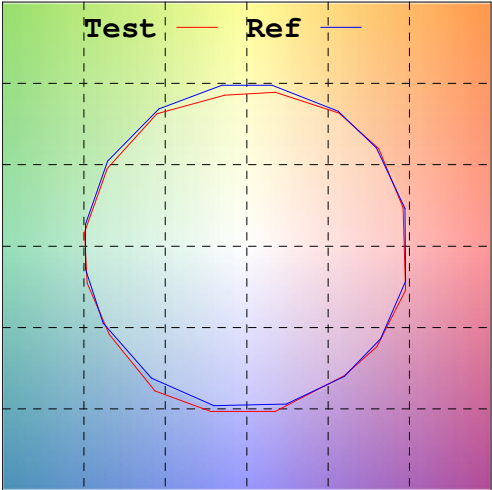
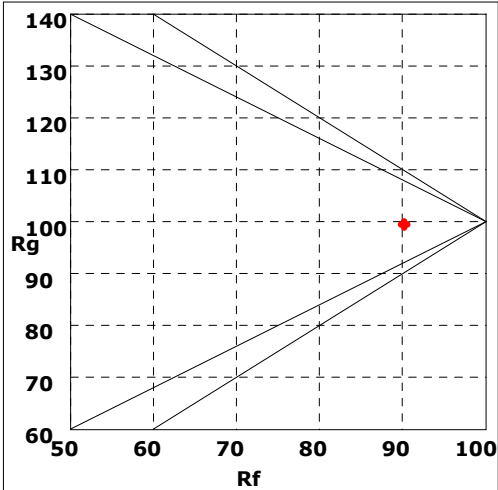
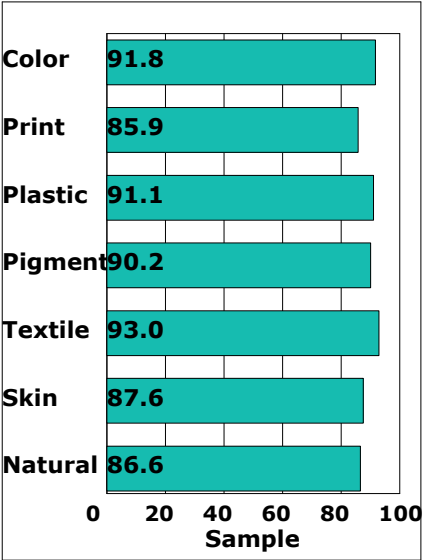
Electrical parameters:

Effic: 13.4 Lm/W Energy: 14.6 Effi: G
U: 219.3 V I: 1.192 A P: 179.700 W Pf: 0.687

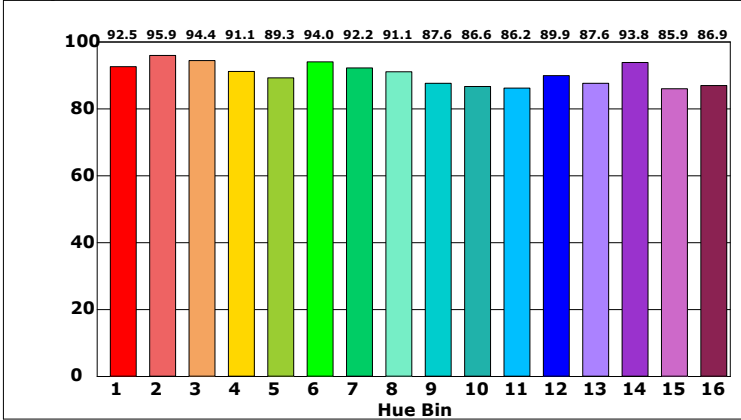
Rf: 90.1 CCT: 4168K u': 0.2218
Rg: 99.5 LER: 314.3 Duv: 0.00070 v': 0.4993



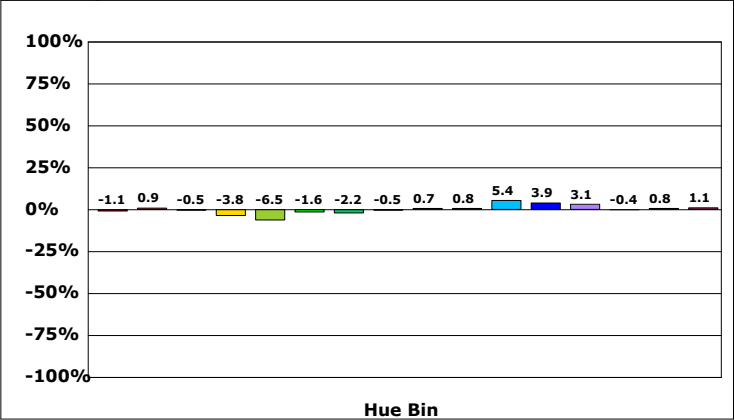
500			
Hue Bin	Rf	Chroma	Hue
1	92.5	-1.1%	0.9%
2	95.9	0.9%	-1.0%
3	94.4	-0.5%	-1.2%
4	91.1	-3.8%	-2.9%
5	89.3	-6.5%	-0.5%
6	94.0	-1.6%	2.6%
7	92.2	-2.2%	3.8%
8	91.1	-0.5%	5.0%
9	87.6	0.7%	8.3%
10	86.6	0.8%	7.6%
11	86.2	5.4%	6.1%
12	89.9	3.9%	-1.2%
13	87.6	3.1%	-7.4%
14	93.8	-0.4%	0.5%
15	85.9	0.8%	-5.5%
16	86.9	1.1%	-5.4%



Rf by Bue

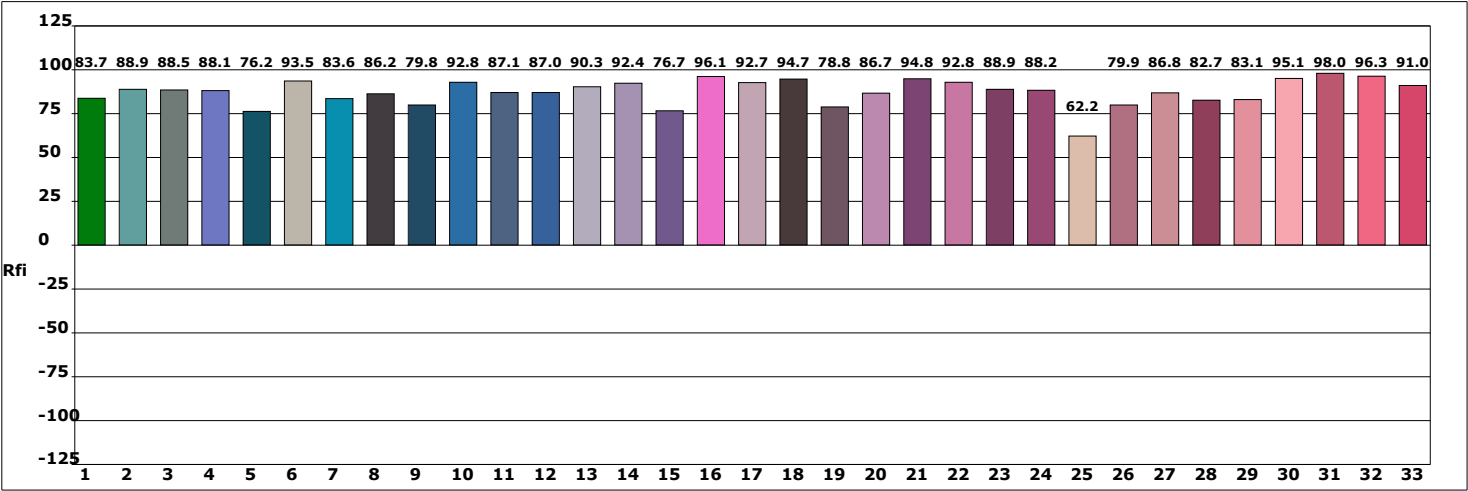
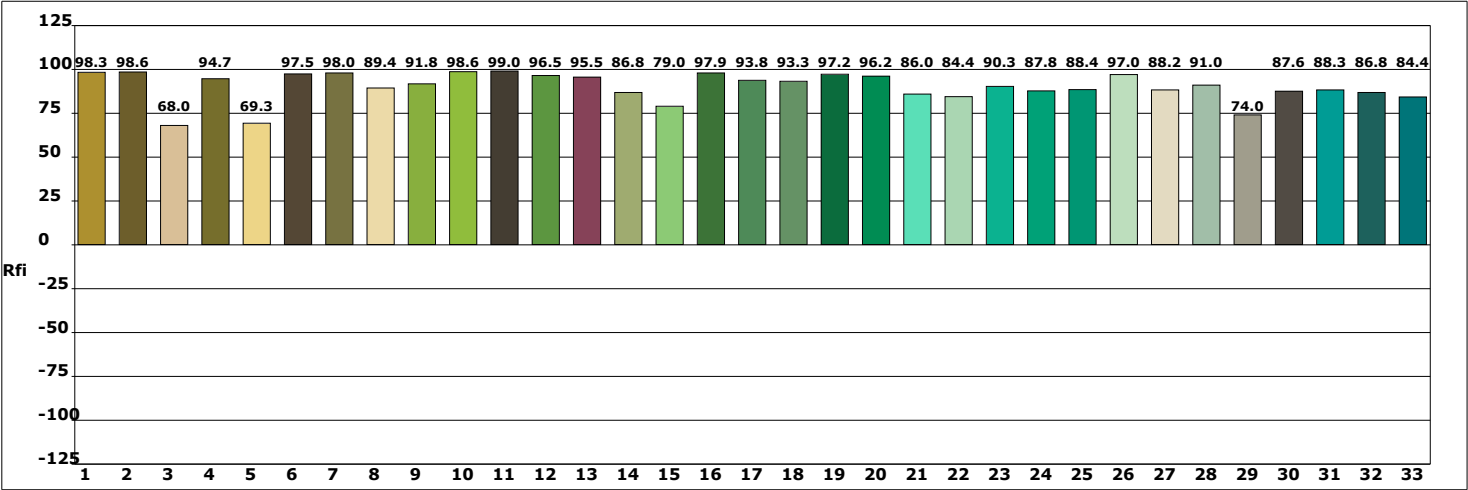
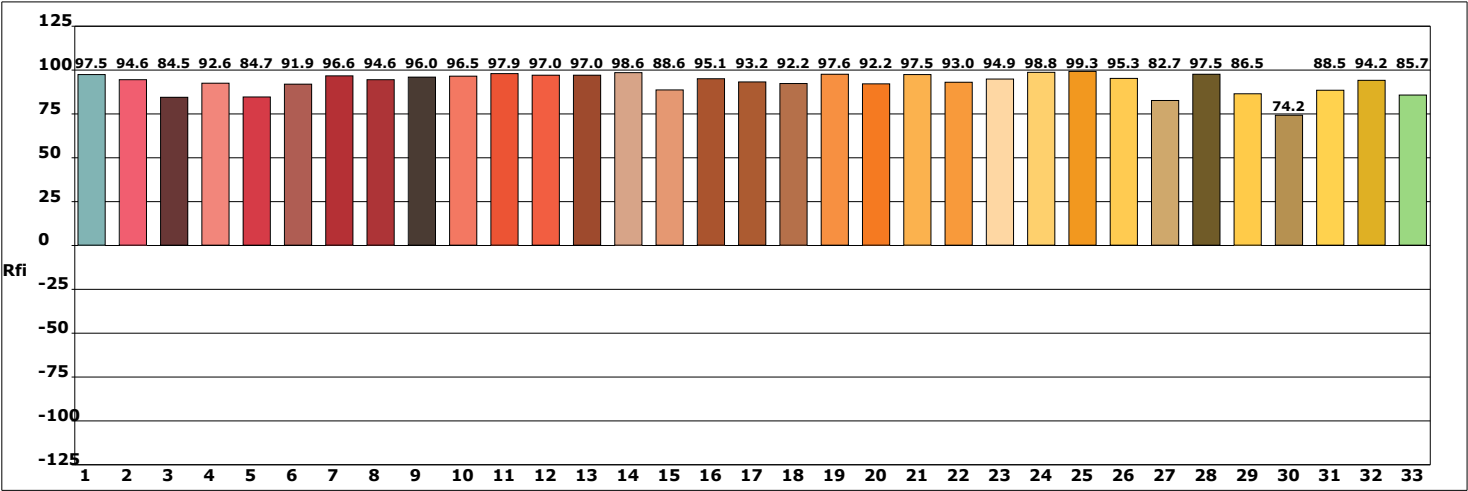


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

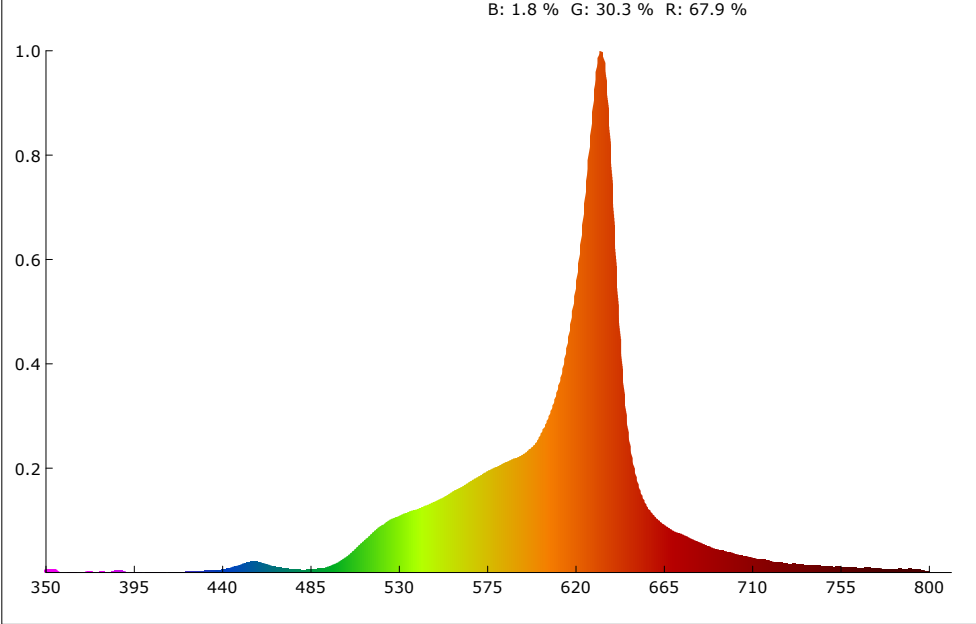
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/19/14



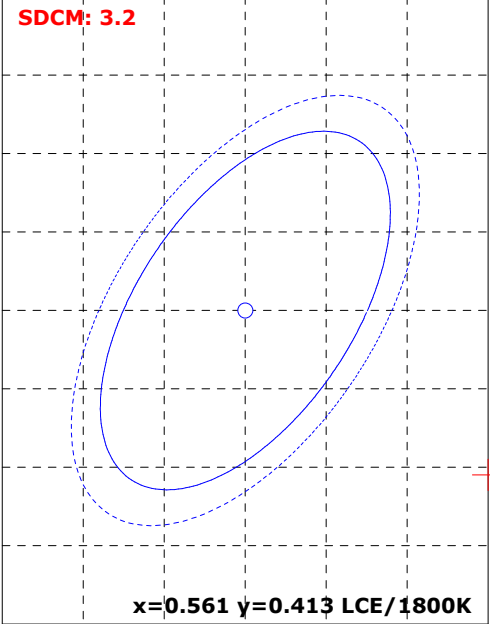
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/19/14

Spectrogram



SDCM



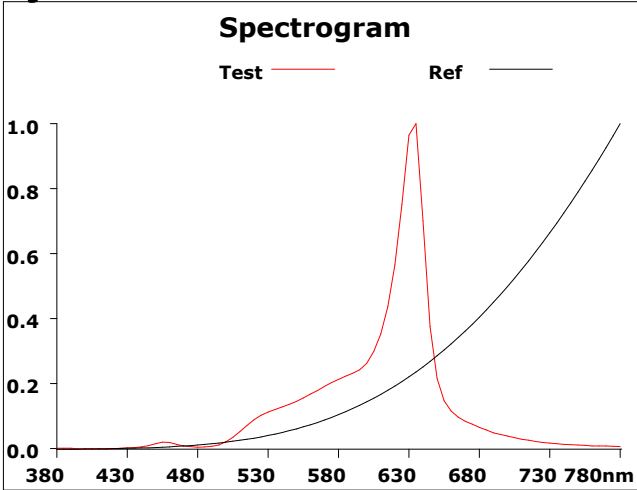
Color Parameter:

x: 0.5639	y: 0.4095	u: 0.3324	v: 0.3621	u': 0.3324	v': 0.5432
R_ratio: 67.9 %	G_ratio: 30.3 %	B_ratio: 1.8 %	RedRatio: 40.8 %	GreenRatio: 58.9 %	BlueRatio: 0.2 %
Ra: 93.6	AvgR: 91.8				
R1: 96.9	R2: 99.1	R3: 86.5	R4: 92.5	R5: 97.1	R6: 92.8
R7: 94.0	R8: 90.2	R9: 75.8	R10: 90.5	R11: 85.4	R12: 95.8
R13: 97.6	R14: 87.9	R15: 95.2			
CCT: 1709 K	Flux: 1852.912 lm	PeakWave: 633.5 nm	SDCM: 3.2		
S/P: 0.7	CentralWave: 630.5 nm	DominantWave: 591.4 nm	CentroidWave: 611.7 nm		
HalfWidth: 23.1 nm	duv: 0.00165	purity: 92.2 %	CQS: 51.3		
LER(TM-30): 293.4	Ep: 6316.4 mw	Rg: 96.0	Rf: 87.0		
Red Ep: 4141.3 mw	Near red Ep: 182.0 mw	Near infrared Ep: 19.2 mw			

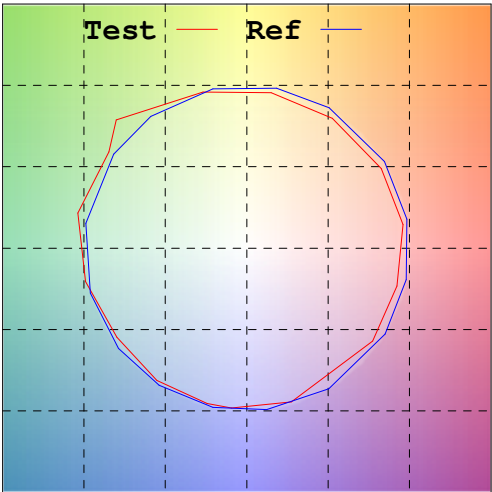
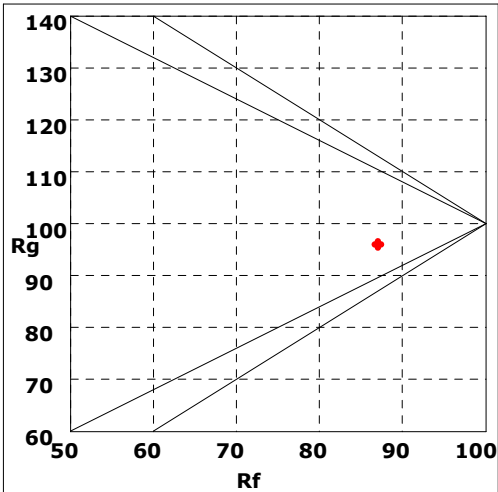
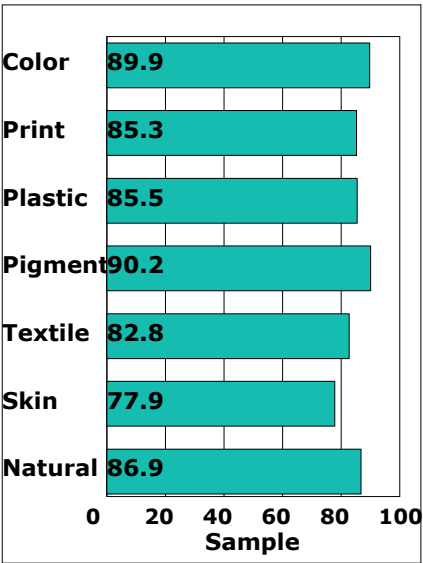
Electrical parameters:

Effic: 12.6 Lm/W	Energy: 13.7	Effi: G	
U: 219.2 V	I: 0.999 A	P: 147.400 W	Pf: 0.673

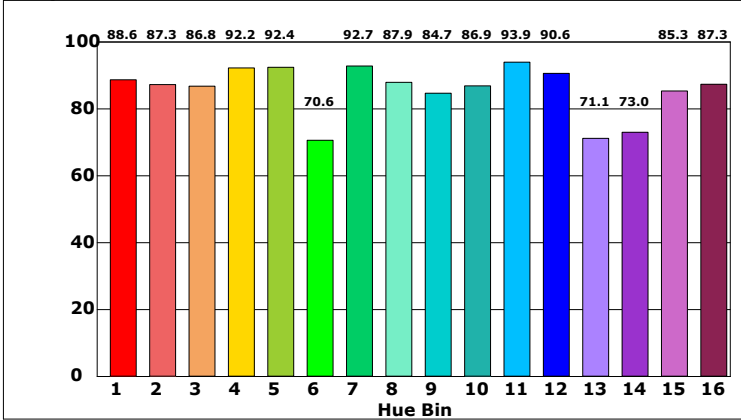
Rf: 87.0 CCT: 1709K u': 0.3324
Rg: 96.0 LER: 293.4 Duv: 0.00165 v': 0.5432



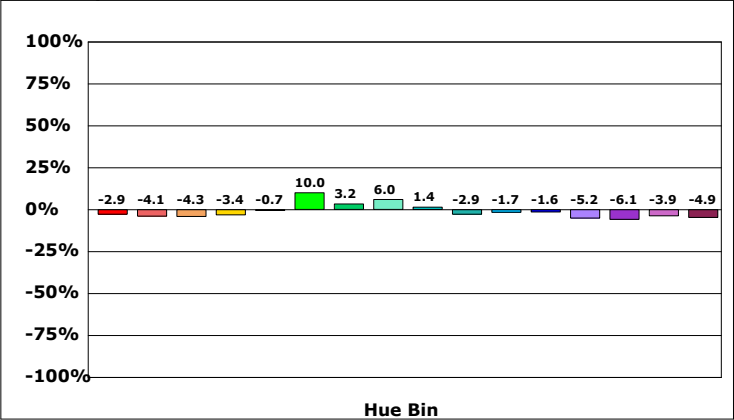
500			
Hue Bin	Rf	Chroma	Hue
1	88.6	-2.9%	-2.9%
2	87.3	-4.1%	-2.4%
3	86.8	-4.3%	-5.1%
4	92.2	-3.4%	2.7%
5	92.4	-0.7%	6.3%
6	70.6	10.0%	18.9%
7	92.7	3.2%	0.4%
8	87.9	6.0%	-5.2%
9	84.7	1.4%	-7.4%
10	86.9	-2.9%	-6.2%
11	93.9	-1.7%	-2.8%
12	90.6	-1.6%	-4.0%
13	71.1	-5.2%	-20.9%
14	73.0	-6.1%	-23.8%
15	85.3	-3.9%	-8.0%
16	87.3	-4.9%	-5.0%



Rf by Bue

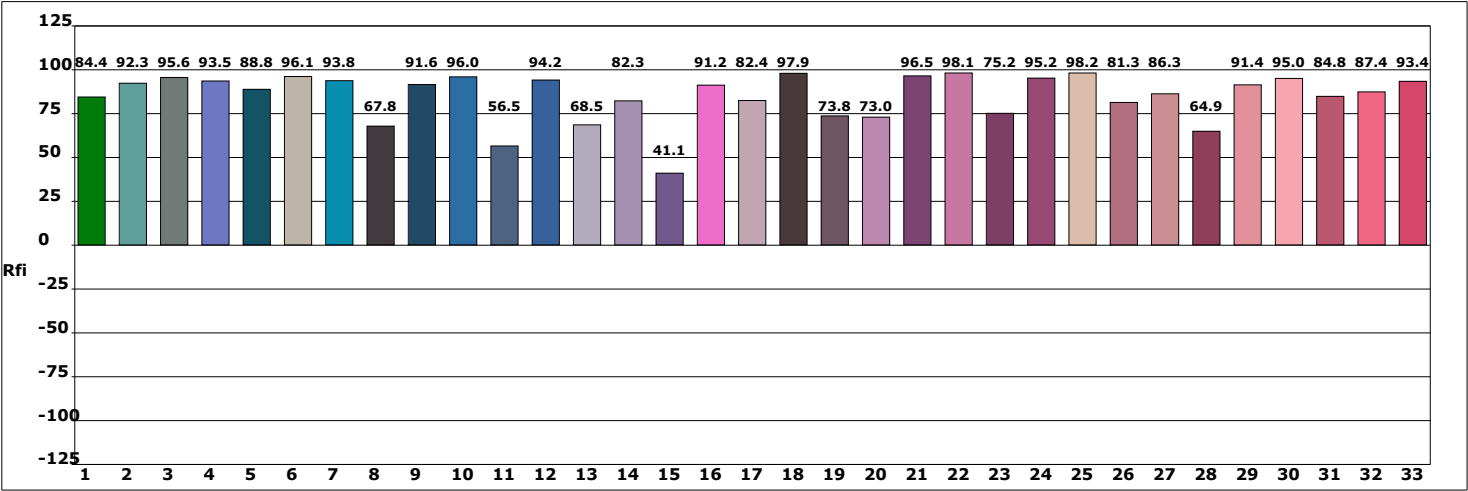
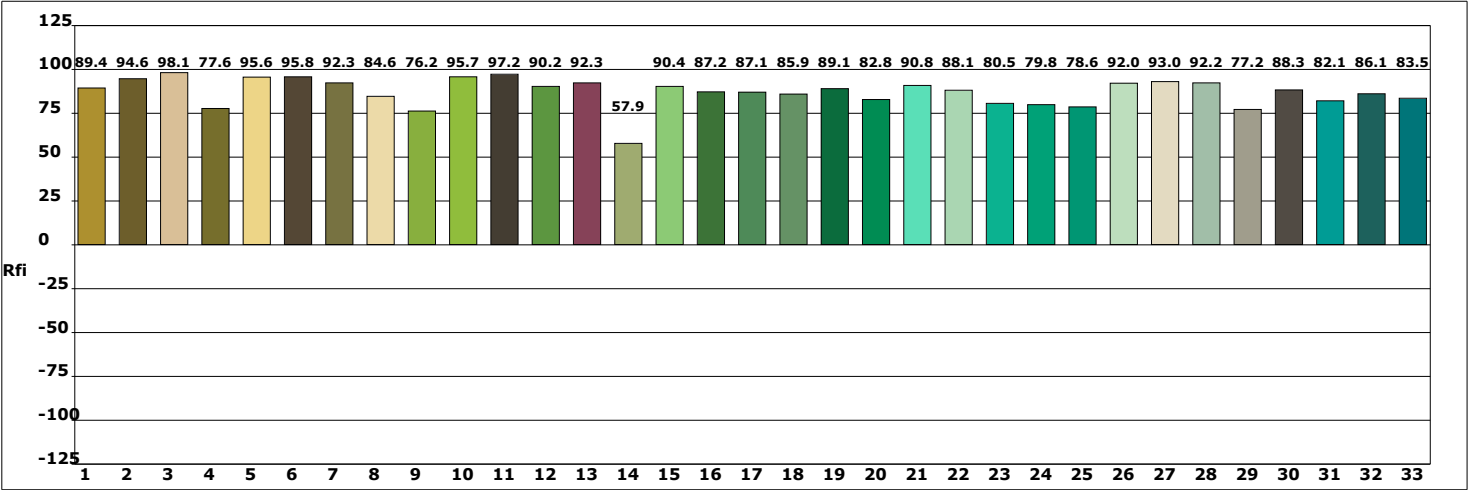
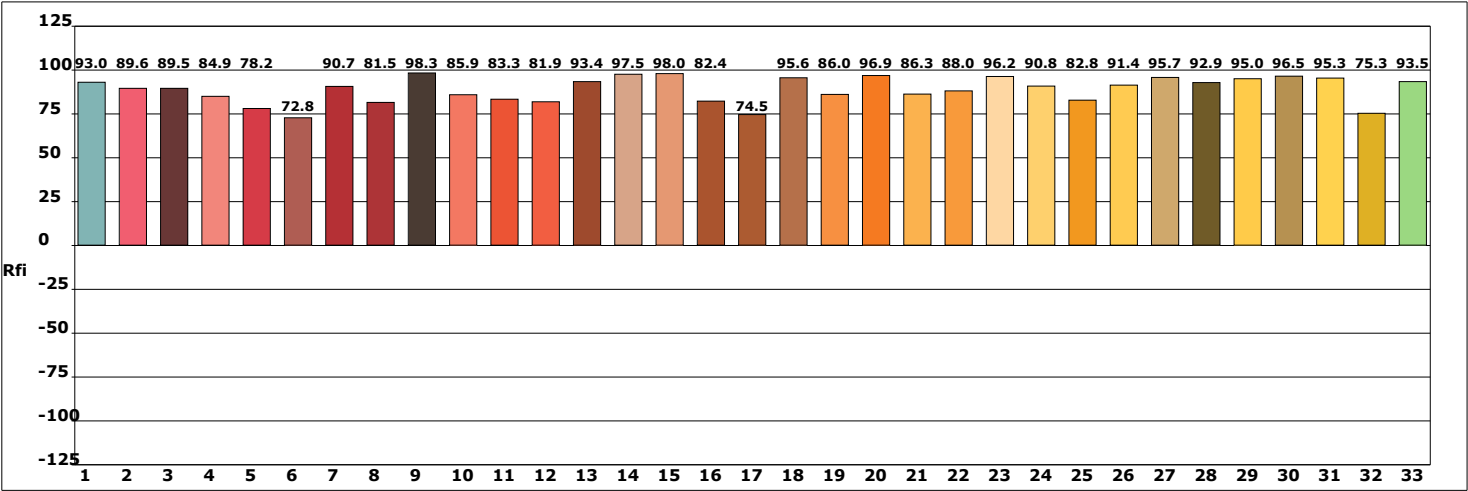


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/19/14



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 03/19/14