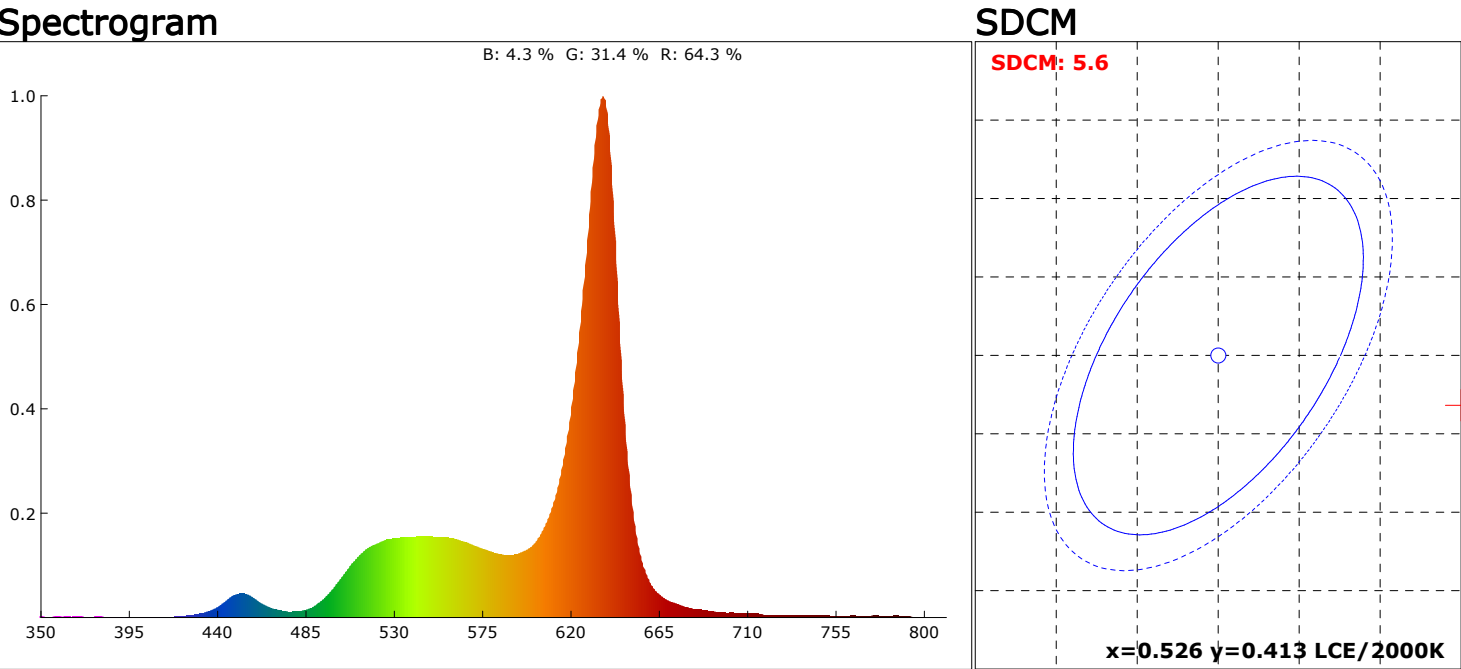




Color Parameter:

x: 0.5197y: 0.4168u: 0.2986v: 0.3592u': 0.2986v': 0.5388

R_ratio: 64.3 %G_ratio: 31.4 %B_ratio: 4.3 %RedRatio: 37.1 %GreenRatio: 62.3 %BlueRatio: 0.5 %

Ra: 67.3AvgR: 63.7

R1: 62.5R2: 87.6R3: 72.2R4: 52.5R5: 63.0R6: 78.5R7: 77.0R8: 45.8

R9: 10.2R10: 83.1R11: 37.7R12: 74.8R13: 66.9R14: 79.7R15: 63.8

CCT: 2080 KFlux: 1738.554 lmPeakWave: 636.5 nmSDCM: 5.6

S/P: 1.1CentralWave: 634.7 nmDominantWave: 588.0 nmCentroidWave: 601.4 nm

HalfWidth: 22.1 nmduv: 0.00077purity: 81.1 %CQS: 83.8

LER(TM-30): 288.6Ep: 6024.4 mwRg: 111.2Rf: 78.1

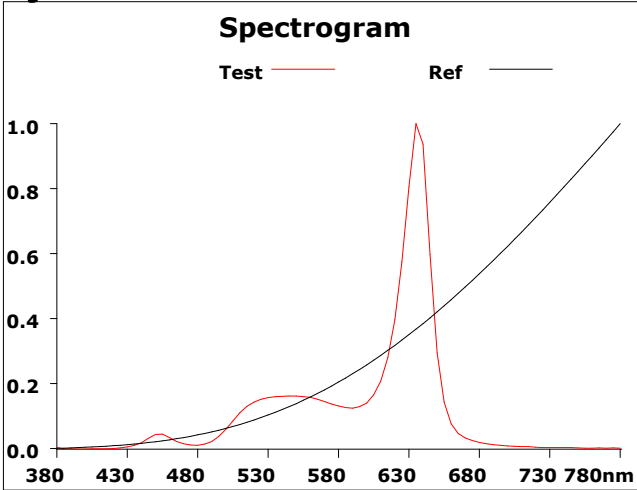
Red Ep: 3820.0 mwNear red Ep: 60.6 mwNear infrared Ep: 8.5 mw

Electrical parameters:

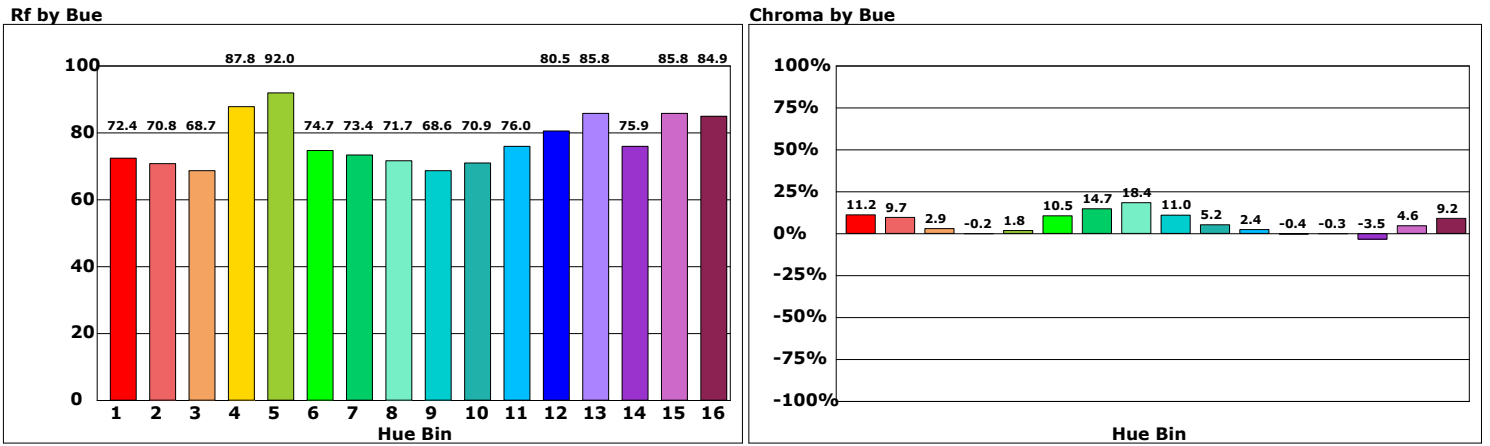
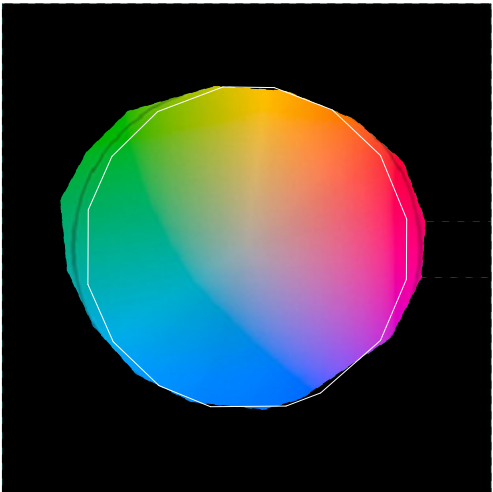
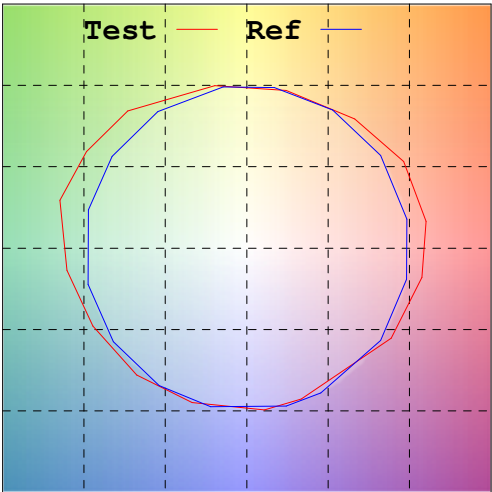
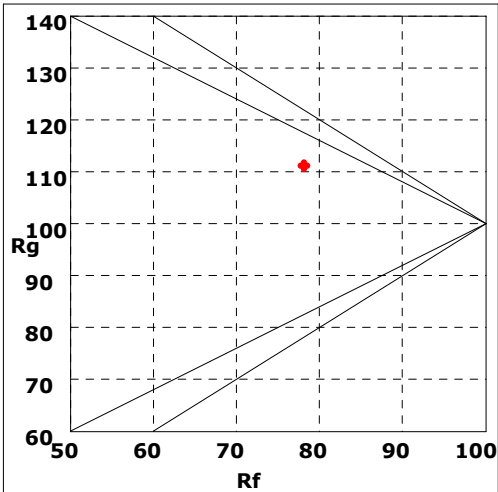
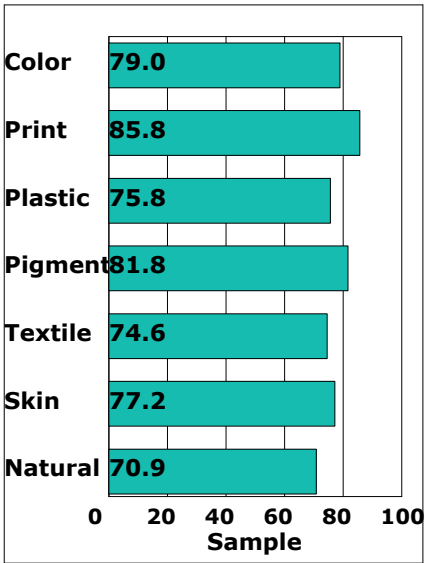
Effic: 17.0 Lm/WEnergy: 18.5Effi: GPf: 0.909

U: 220.7 VI: 0.510 AP: 102.400 W

Rf: 78.1 CCT: 2080K u': 0.2986
Rg: 111.2 LER: 288.6 Duv: 0.00077 v': 0.5388

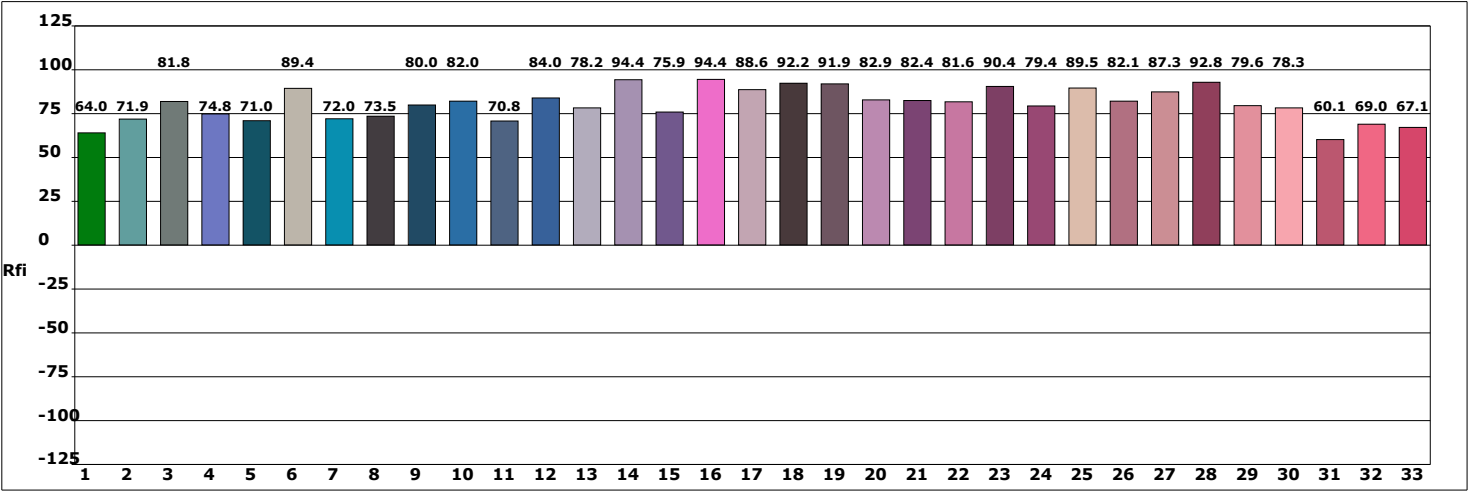
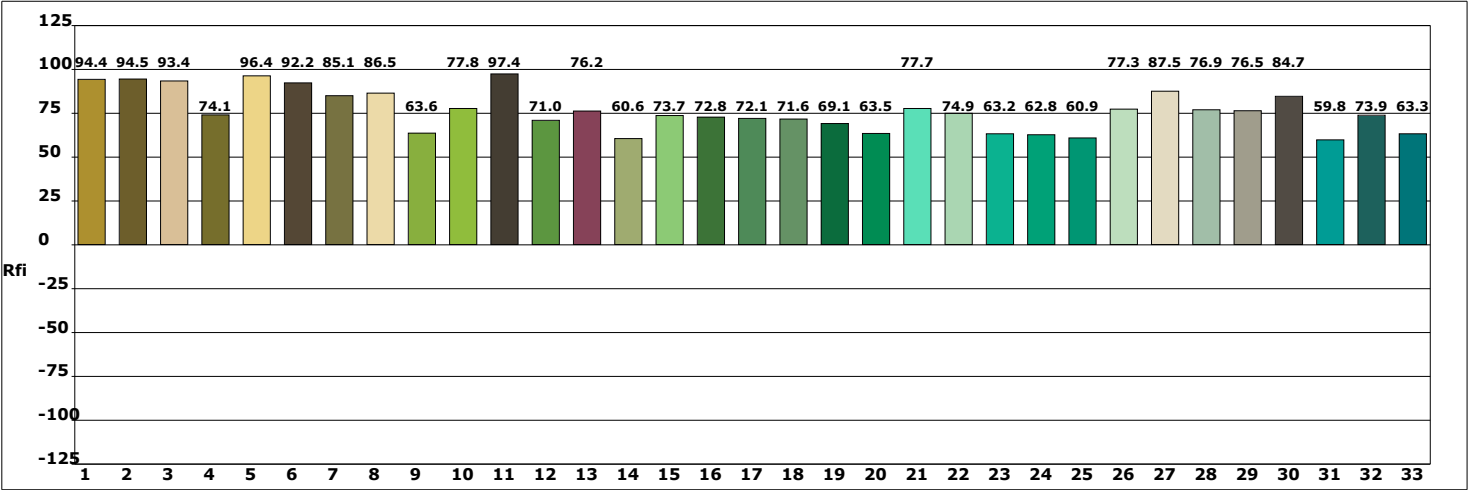
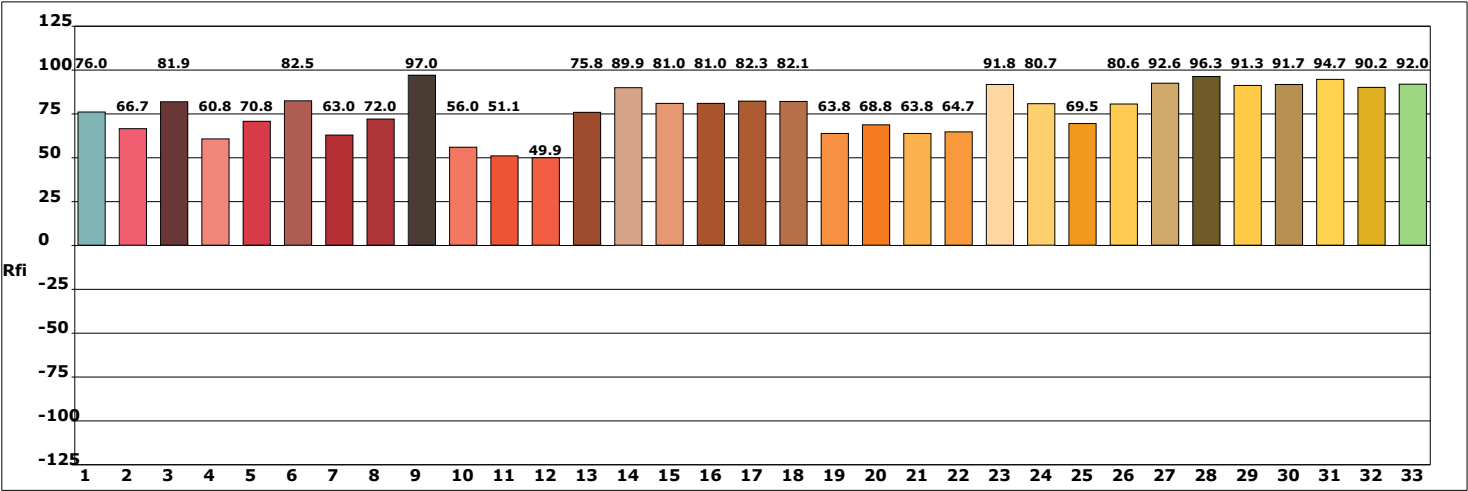


500			
Hue Bin	Rf	Chroma	Hue
1	72.4	11.2%	-3.5%
2	70.8	9.7%	-10.8%
3	68.7	2.9%	-14.3%
4	87.8	-0.2%	-7.4%
5	92.0	1.8%	4.9%
6	74.7	10.5%	15.0%
7	73.4	14.7%	6.3%
8	71.7	18.4%	-2.3%
9	68.6	11.0%	-10.9%
10	70.9	5.2%	-15.2%
11	76.0	2.4%	-15.0%
12	80.5	-0.4%	-11.6%
13	85.8	-0.3%	-13.6%
14	75.9	-3.5%	-11.9%
15	85.8	4.6%	4.7%
16	84.9	9.2%	2.9%



Product model:
Product number:
Tester:
Remarks:

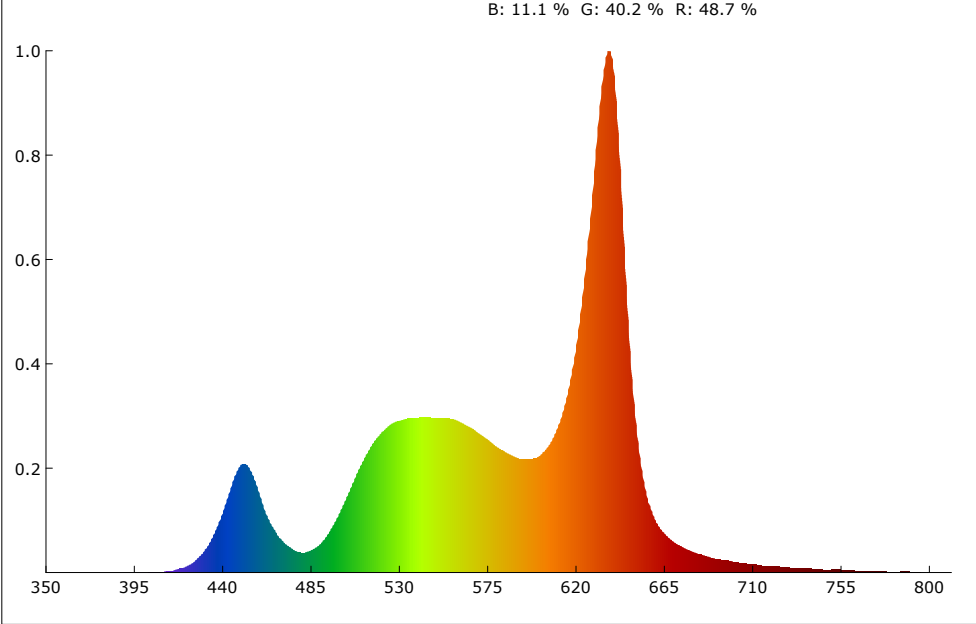
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14



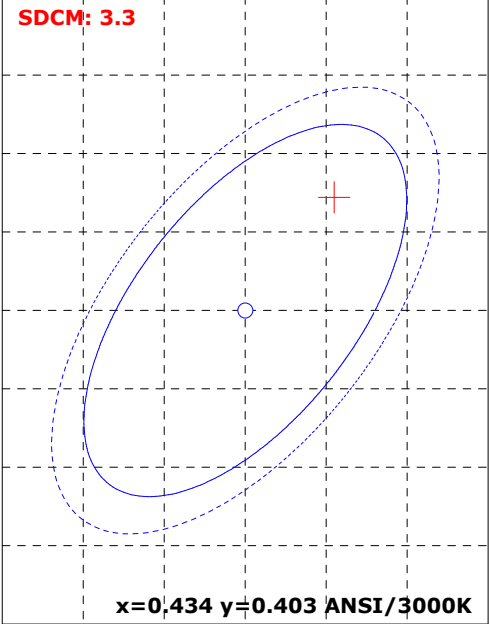
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14

Spectrogram



SDCM



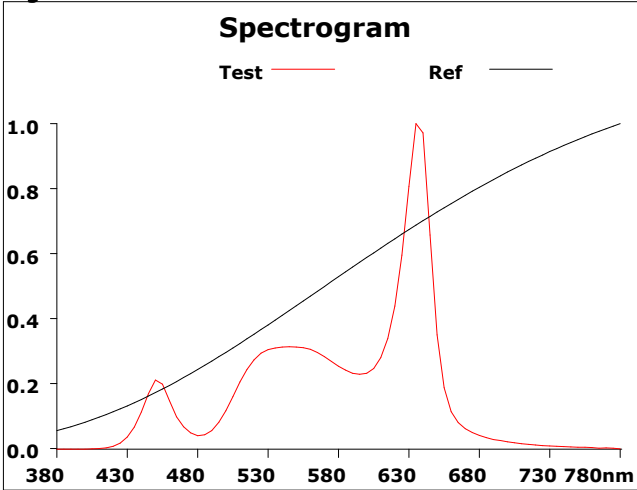
Color Parameter:

x: 0.4393	y: 0.4102	u: 0.2495	v: 0.3494	u': 0.2495	v': 0.5241		
R_ratio: 48.7 %	G_ratio: 40.2 %	B_ratio: 11.1 %	RedRatio: 25.8 %	GreenRatio: 73.0 %	BlueRatio: 1.2 %		
Ra: 82.0		AvgR: 78.5					
R1: 84.2	R2: 98.1	R3: 72.9	R4: 77.6	R5: 88.6	R6: 95.5	R7: 79.5	R8: 60.1
R9: 28.2	R10: 89.1	R11: 74.8	R12: 79.2	R13: 89.3	R14: 82.1	R15: 78.3	
CCT: 3009 K		Flux: 2525.658 lm	PeakWave: 637.5 nm	SDCM: 3.3			
S/P: 1.4		CentralWave: 634.9 nm	DominantWave: 582.1 nm	CentroidWave: 582.9 nm			
HalfWidth: 23.5 nm		duv: 0.00207	purity: 55.0 %	CQS: 92.2			
LER(TM-30): 316.5		Ep: 7979.6 mw	Rg: 110.5	Rf: 86.8			
Red Ep: 3842.5 mw		Near red Ep: 89.9 mw	Near infrared Ep: 4.9 mw				

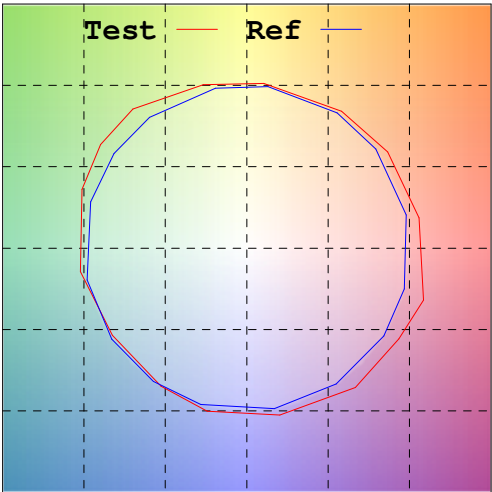
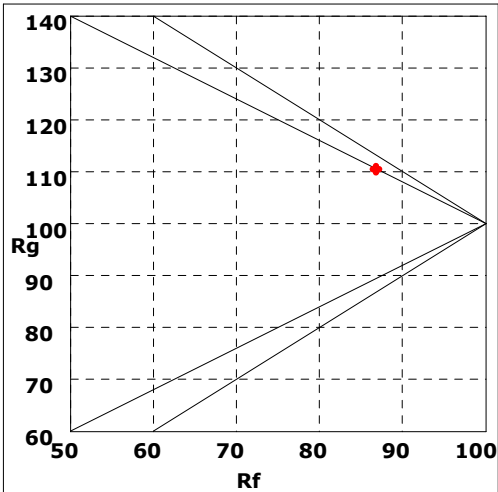
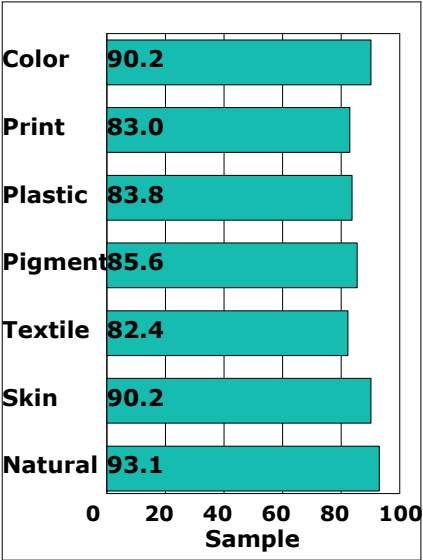
Electrical parameters:

Effic: 18.2 Lm/W	Energy: 19.8	Effi: G	
U: 220.6 V	I: 0.665 A	P: 138.600 W	Pf: 0.943

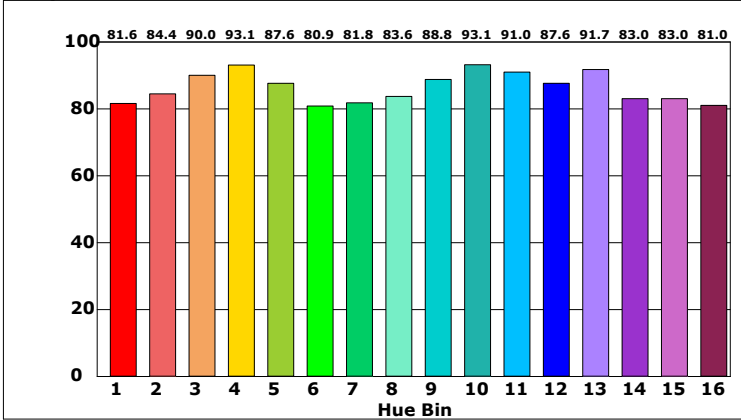
Rf: 86.8 CCT: 3009K u': 0.2495
Rg: 110.5 LER: 316.5 Duv: 0.00207 v': 0.5241



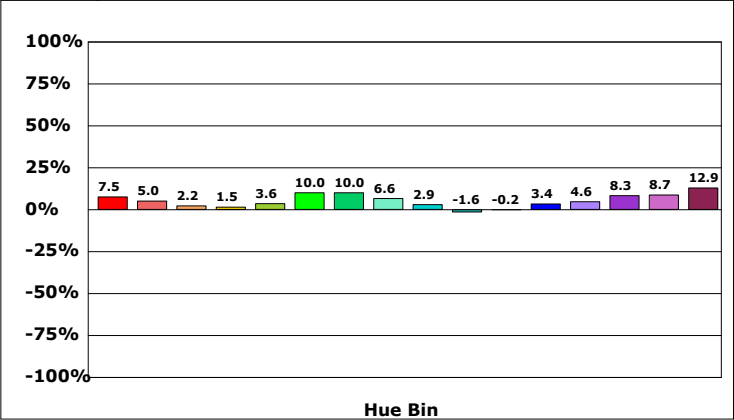
500			
Hue Bin	Rf	Chroma	Hue
1	81.6	7.5%	-3.2%
2	84.4	5.0%	-5.6%
3	90.0	2.2%	-1.8%
4	93.1	1.5%	2.8%
5	87.6	3.6%	6.9%
6	80.9	10.0%	5.7%
7	81.8	10.0%	0.1%
8	83.6	6.6%	-6.5%
9	88.8	2.9%	-5.8%
10	93.1	-1.6%	-1.6%
11	91.0	-0.2%	5.4%
12	87.6	3.4%	4.7%
13	91.7	4.6%	2.6%
14	83.0	8.3%	8.7%
15	83.0	8.7%	3.6%
16	81.0	12.9%	-4.6%



Rf by Bue

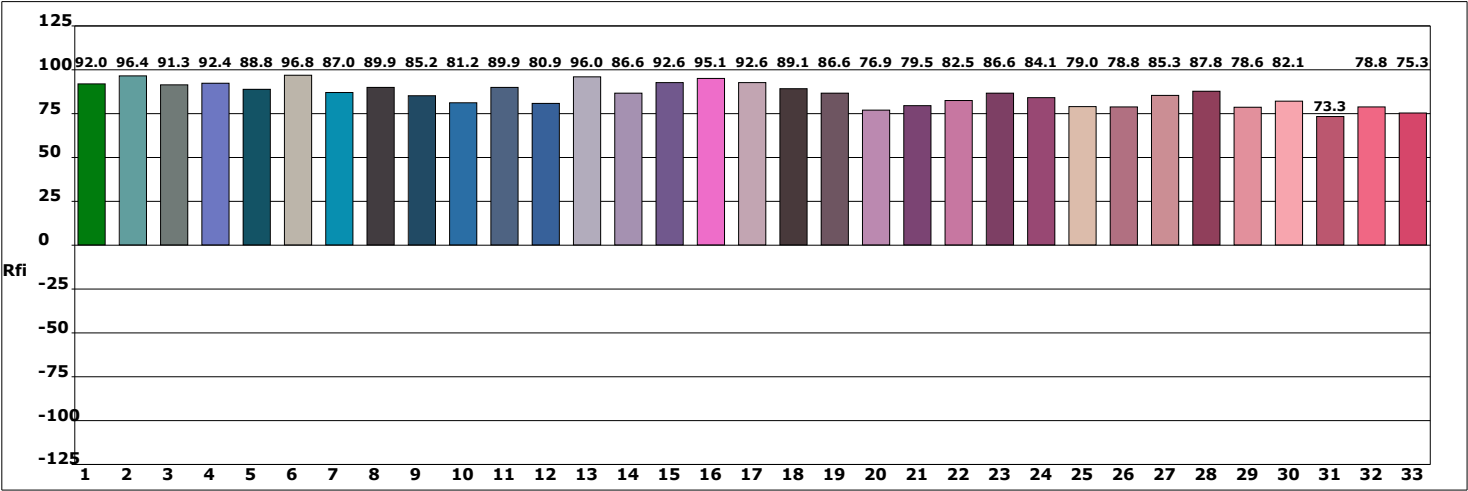
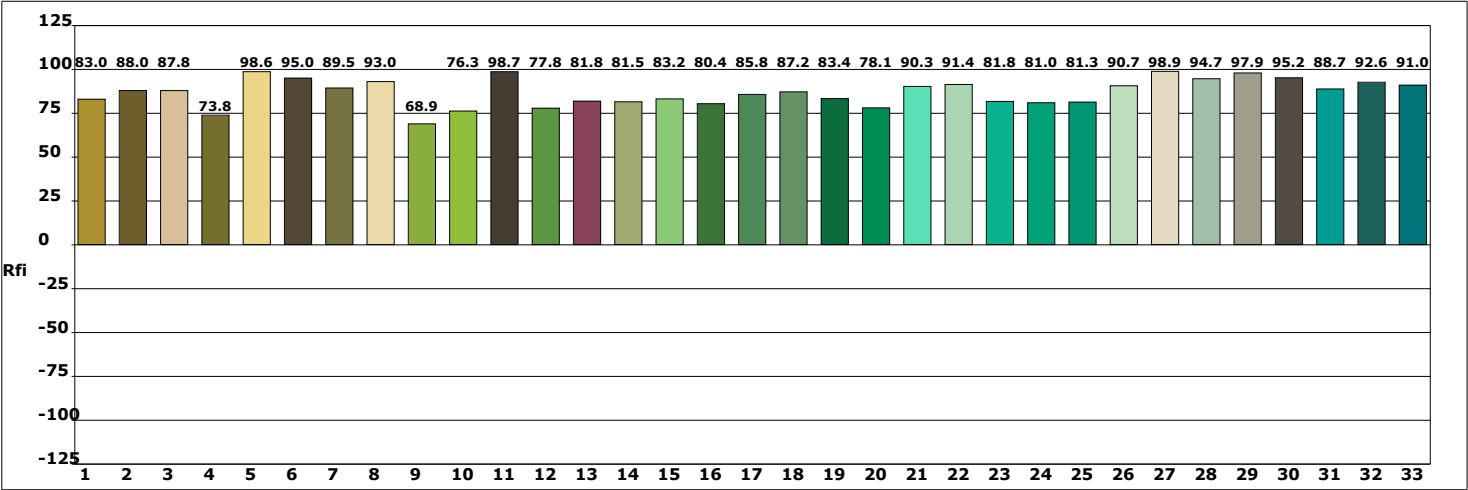
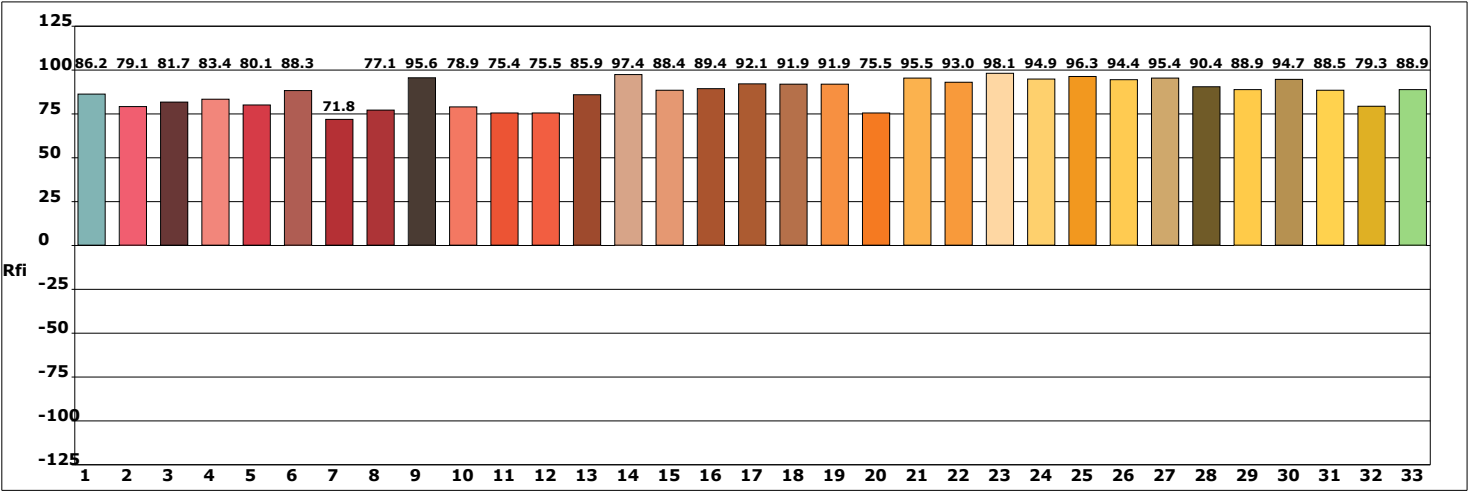


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

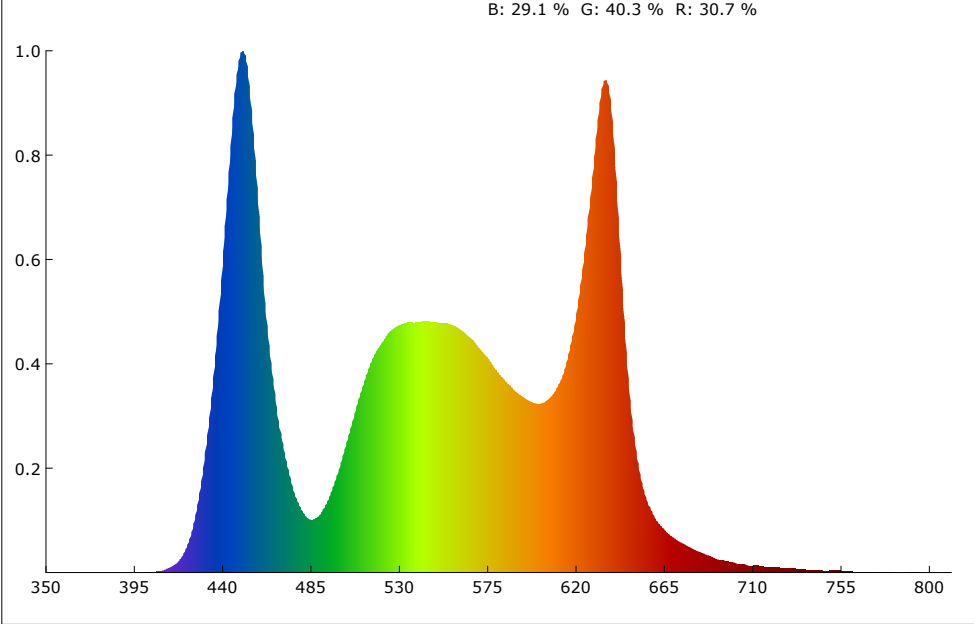
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14



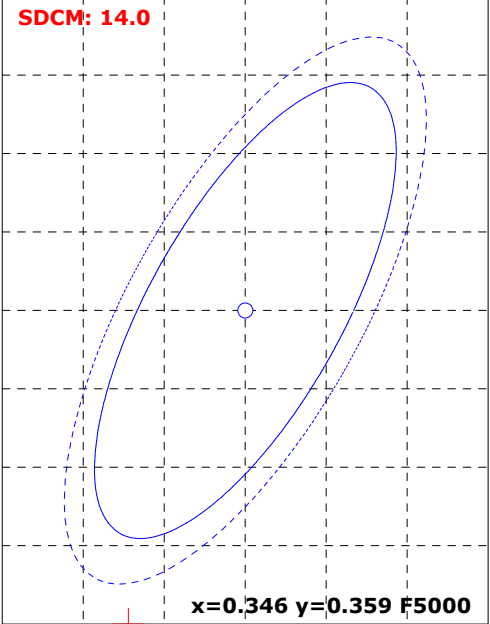
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14

Spectrogram



SDCM



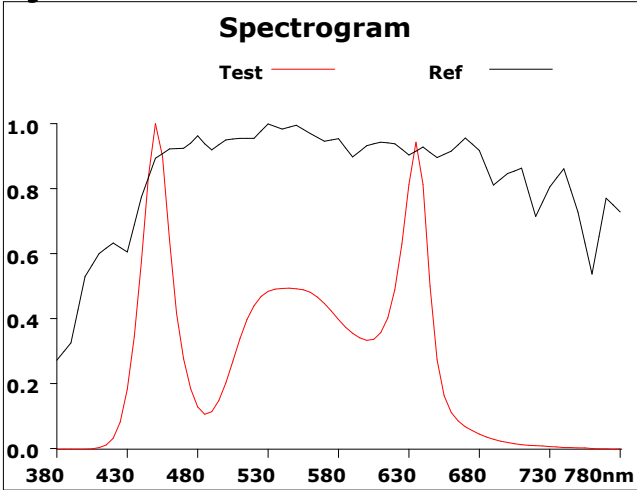
Color Parameter:

x: 0.3378	y: 0.3224	u: 0.2182	v: 0.3123	u': 0.2182	v': 0.4685		
R_ratio: 30.7 %	G_ratio: 40.3 %	B_ratio: 29.1 %	RedRatio: 18.7 %	GreenRatio: 78.2 %	BlueRatio: 3.2 %		
Ra: 84.9		AvgR: 80.5					
R1: 91.7	R2: 92.6	R3: 72.1	R4: 82.7	R5: 95.7	R6: 86.6	R7: 84.6	R8: 73.3
R9: 42.9	R10: 77.0	R11: 83.0	R12: 67.3	R13: 94.5	R14: 82.1	R15: 81.4	
CCT: 5226 K		Flux: 1940.582 lm	PeakWave: 450.6 nm	SDCM: 14.0			
S/P: 2.0		CentralWave: 450.8 nm	DominantWave: 0.0 nm	CentroidWave: 548.5 nm			
HalfWidth: 23.7 nm		duv: -0.01244	purity: 0.0 %	CQS: 77.2			
LER(TM-30): 298.0		Ep: 6512.7 mw	Rg: 110.7	Rf: 80.2			
Red Ep: 1984.9 mw		Near red Ep: 36.0 mw	Near infrared Ep: 0.7 mw				

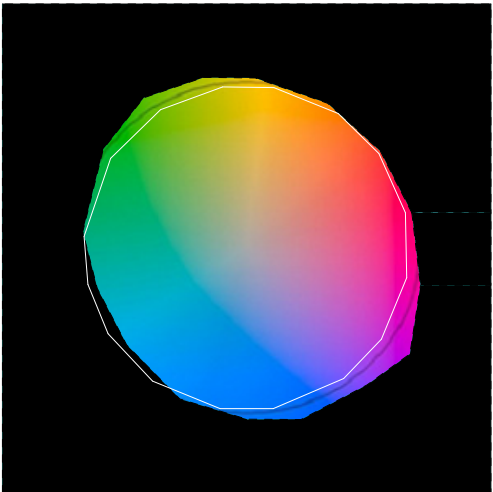
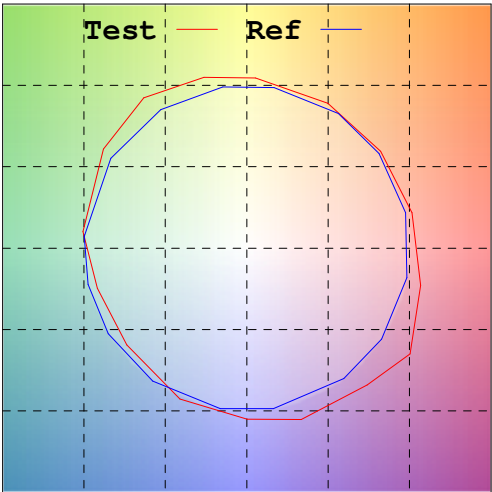
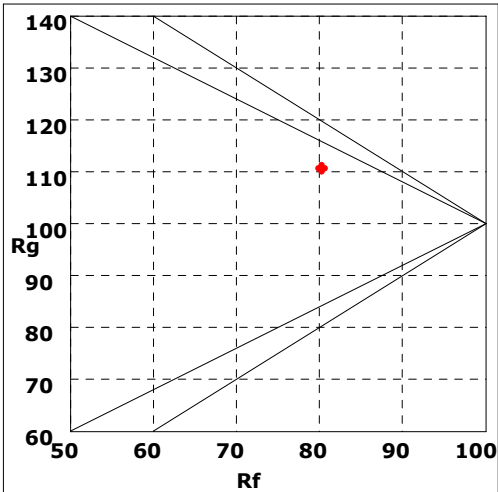
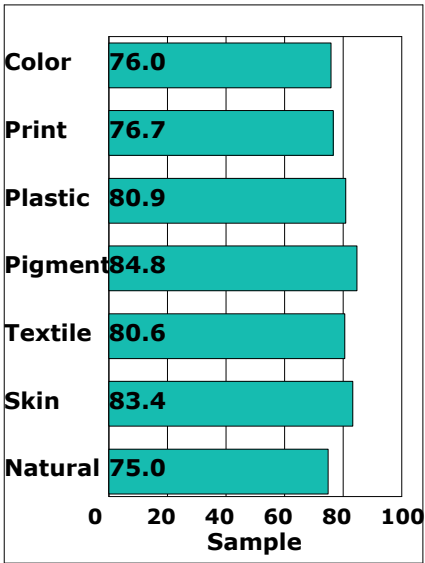
Electrical parameters:

Effic: 18.2 Lm/W	Energy: 19.9	Effi: G	
U: 220.6 V	I: 0.527 A	P: 106.400 W	Pf: 0.914

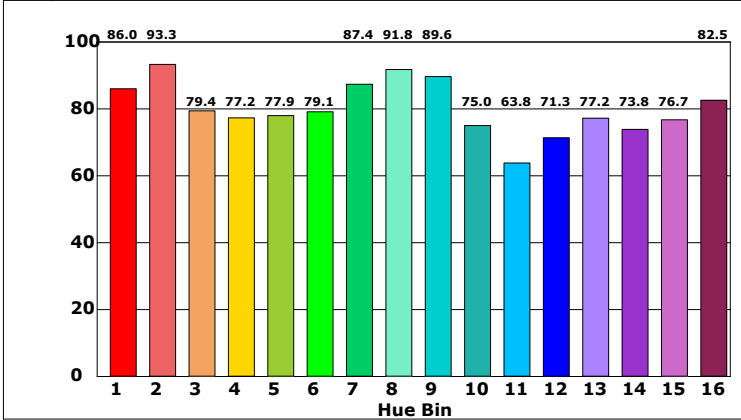
Rf: 80.2 CCT: 5226K u': 0.2182
Rg: 110.7 LER: 298.0 Duv: -0.01244 v': 0.4685



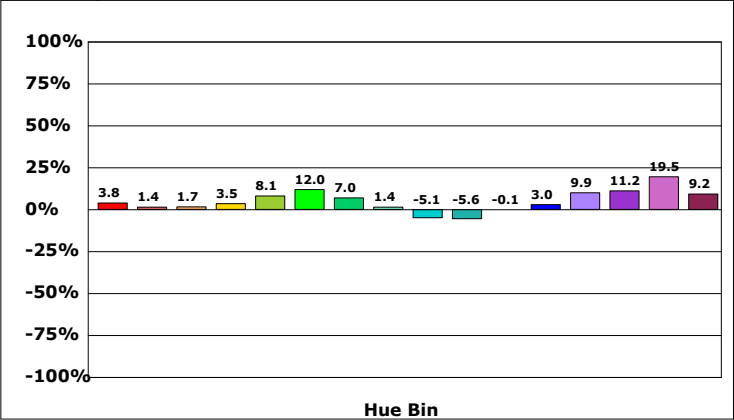
500			
Hue Bin	Rf	Chroma	Hue
1	86.0	3.8%	-0.9%
2	93.3	1.4%	0.6%
3	79.4	1.7%	8.8%
4	77.2	3.5%	12.4%
5	77.9	8.1%	10.0%
6	79.1	12.0%	4.5%
7	87.4	7.0%	-2.2%
8	91.8	1.4%	-2.6%
9	89.6	-5.1%	3.4%
10	75.0	-5.6%	12.1%
11	63.8	-0.1%	20.1%
12	71.3	3.0%	17.5%
13	77.2	9.9%	15.4%
14	73.8	11.2%	9.7%
15	76.7	19.5%	2.2%
16	82.5	9.2%	-2.8%



Rf by Bue

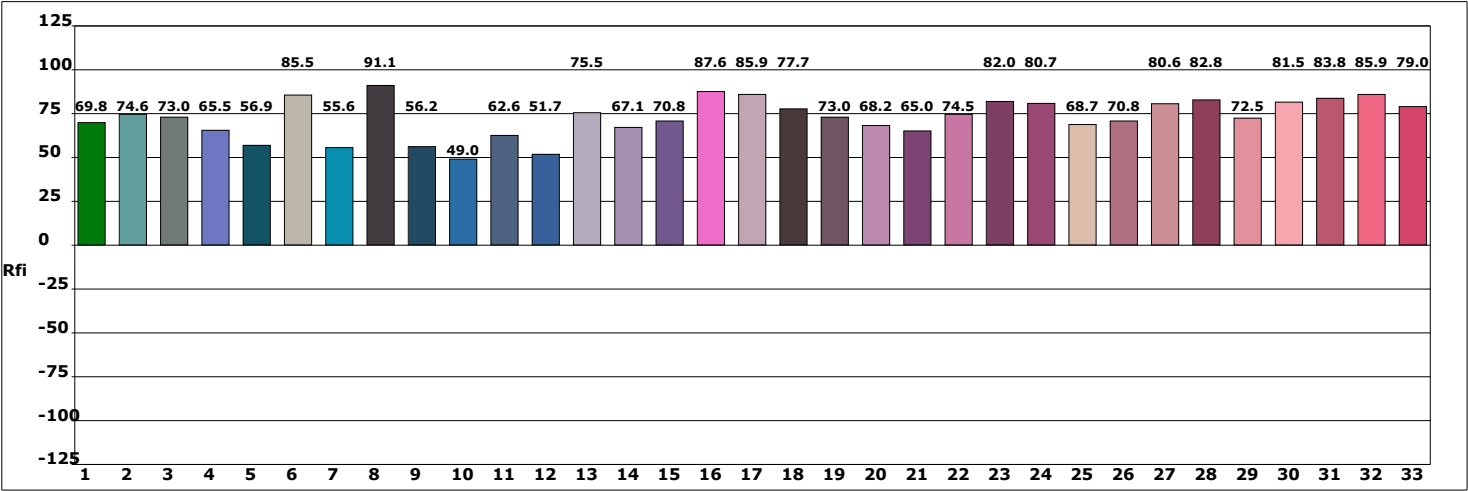
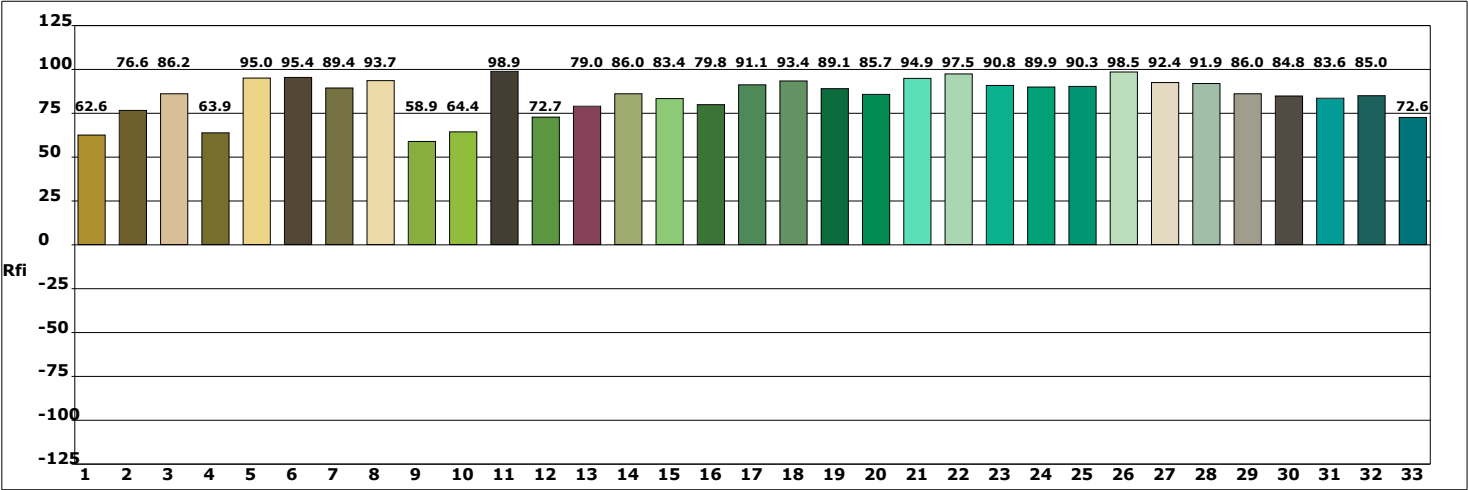
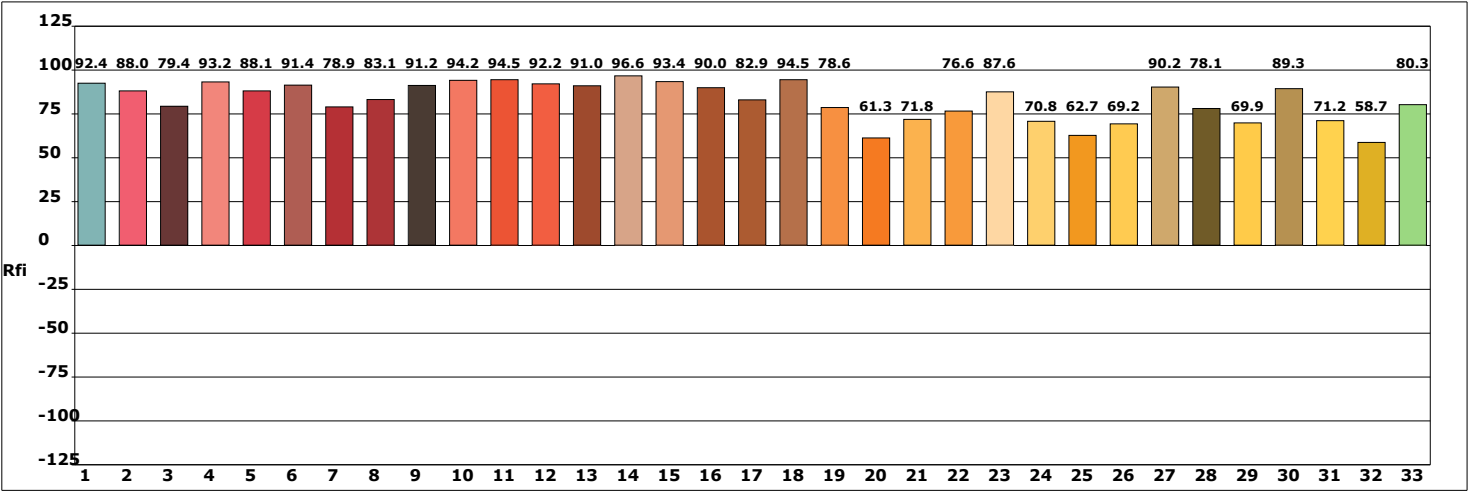


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

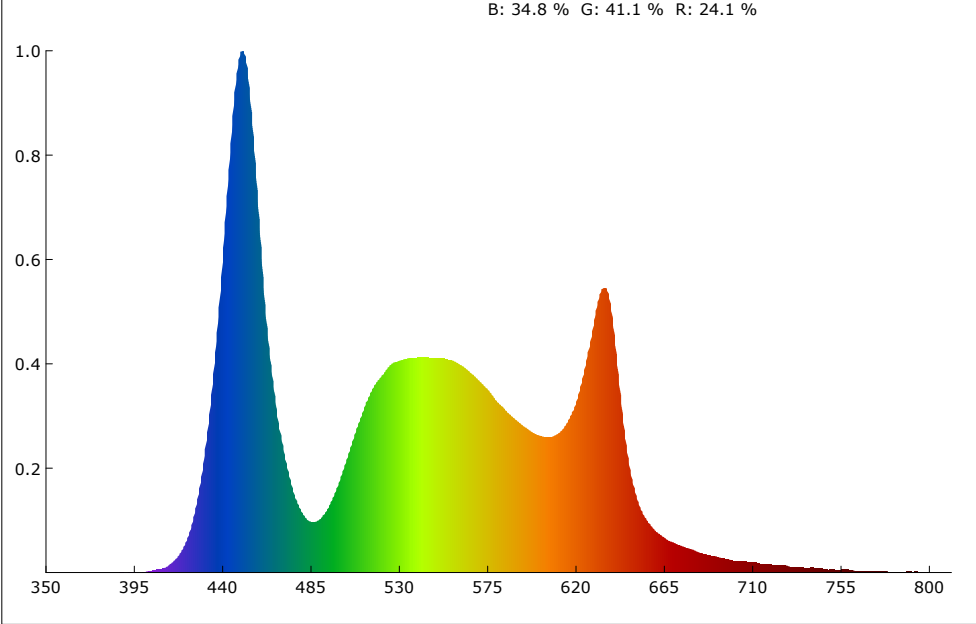
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14



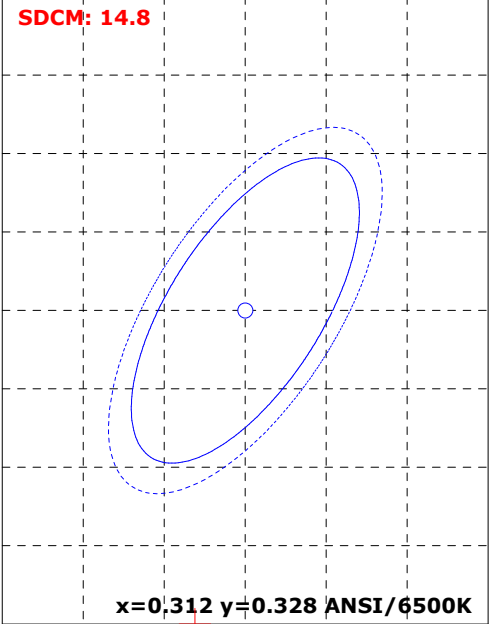
Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14

Spectrogram



SDCM



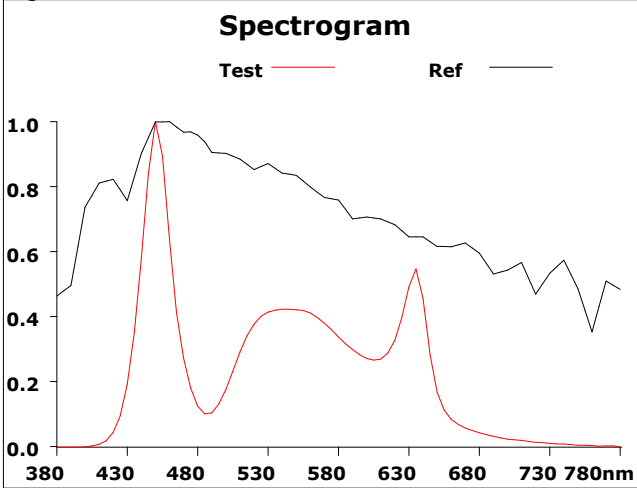
Color Parameter:

x: 0.3092	y: 0.3036	u: 0.2053	v: 0.3024	u': 0.2053	v': 0.4536
R_ratio: 24.1 %	G_ratio: 41.1 %	B_ratio: 34.8 %	RedRatio: 15.2 %	GreenRatio: 81.0 %	BlueRatio: 3.8 %
Ra: 86.1	AvgR: 83.1				
R1: 96.4	R2: 87.2	R3: 71.0	R4: 87.4	R5: 93.8	R6: 78.9
R7: 86.6	R8: 87.5	R9: 81.8	R10: 63.5	R11: 87.8	R12: 54.7
R13: 93.2	R14: 82.3	R15: 94.3			
CCT: 6981 K	Flux: 1851.311 lm	PeakWave: 450.6 nm	SDCM: 14.8		
S/P: 2.2	CentralWave: 450.6 nm	DominantWave: 472.1 nm	CentroidWave: 538.3 nm		
HalfWidth: 23.7 nm	duv: -0.00856	purity: 11.2 %	CQS: 76.8		
LER(TM-30): 292.1	Ep: 6337.5 mw	Rg: 104.9	Rf: 78.8		
Red Ep: 1511.0 mw	Near red Ep: 62.5 mw	Near infrared Ep: 3.2 mw			

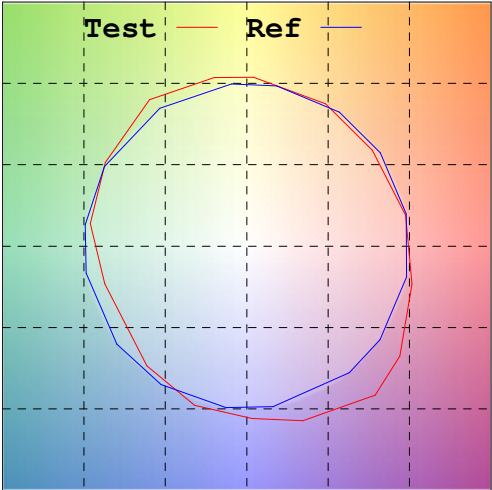
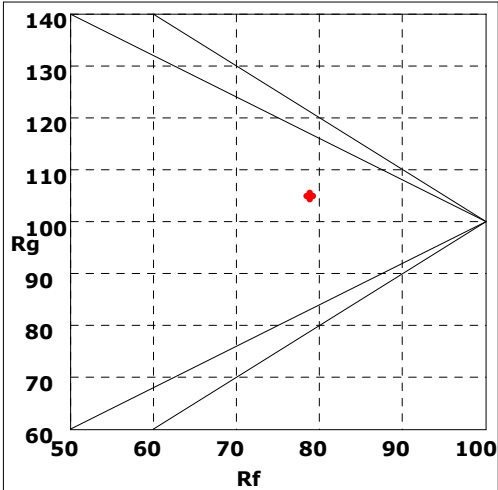
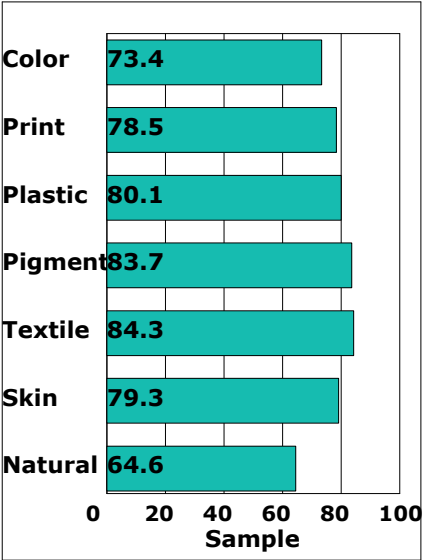
Electrical parameters:

Effic: 18.2 Lm/W	Energy: 19.8	Effi: G	
U: 220.7 V	I: 0.507 A	P: 101.900 W	Pf: 0.909

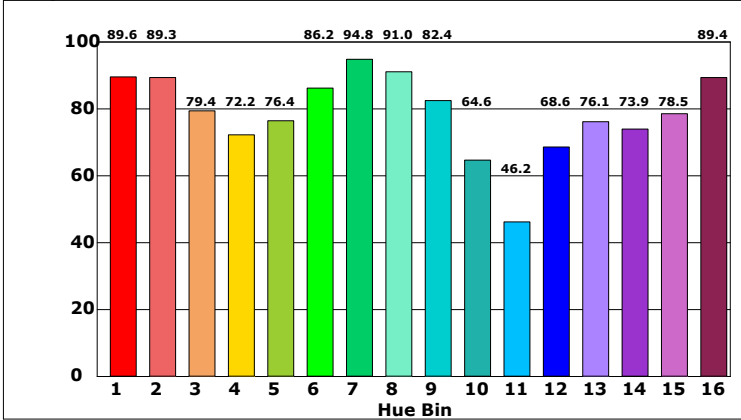
Rf: 78.8 CCT: 6981K u': 0.2053
Rg: 104.9 LER: 292.1 Duv: -0.00856 v': 0.4536



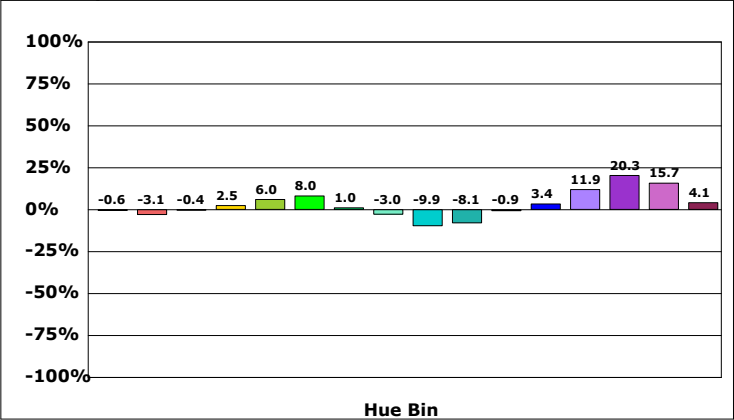
500			
Hue Bin	Rf	Chroma	Hue
1	89.6	-0.6%	-0.7%
2	89.3	-3.1%	4.1%
3	79.4	-0.4%	10.0%
4	72.2	2.5%	14.9%
5	76.4	6.0%	9.8%
6	86.2	8.0%	2.4%
7	94.8	1.0%	-2.4%
8	91.0	-3.0%	-1.3%
9	82.4	-9.9%	8.7%
10	64.6	-8.1%	21.3%
11	46.2	-0.9%	24.2%
12	68.6	3.4%	17.0%
13	76.1	11.9%	16.2%
14	73.9	20.3%	5.6%
15	78.5	15.7%	-1.7%
16	89.4	4.1%	-3.6%



Rf by Bue

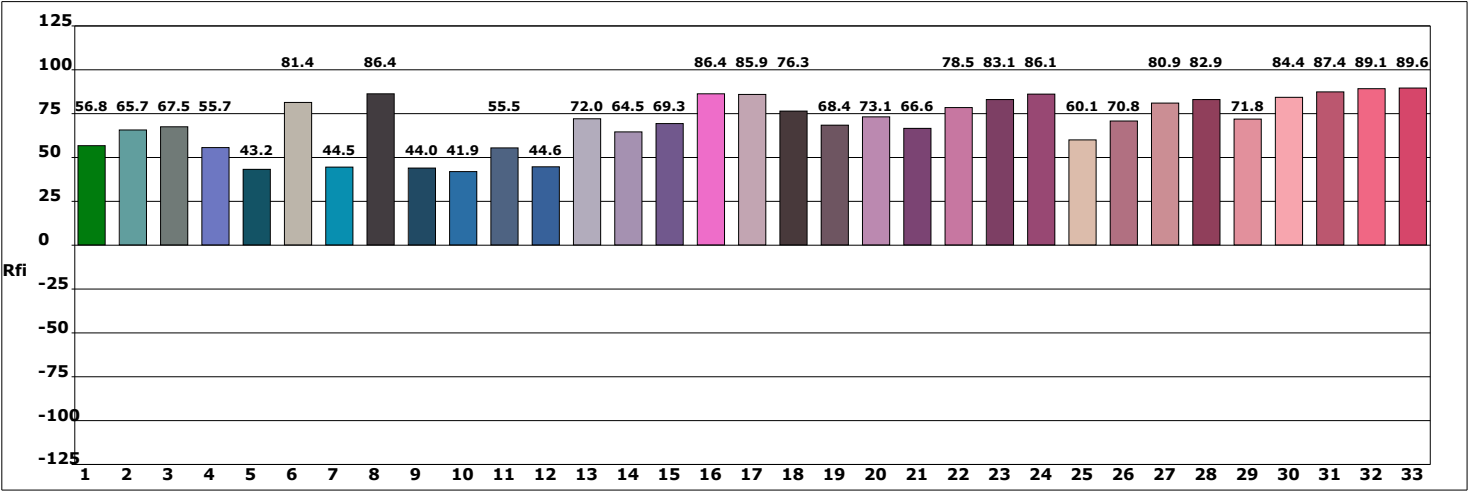
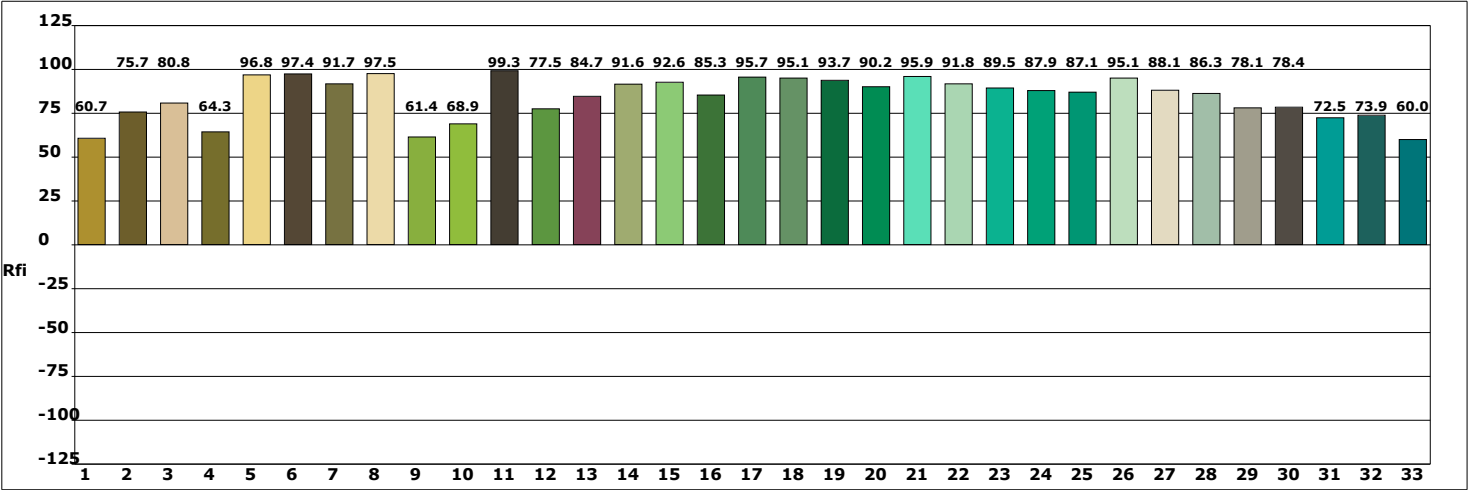
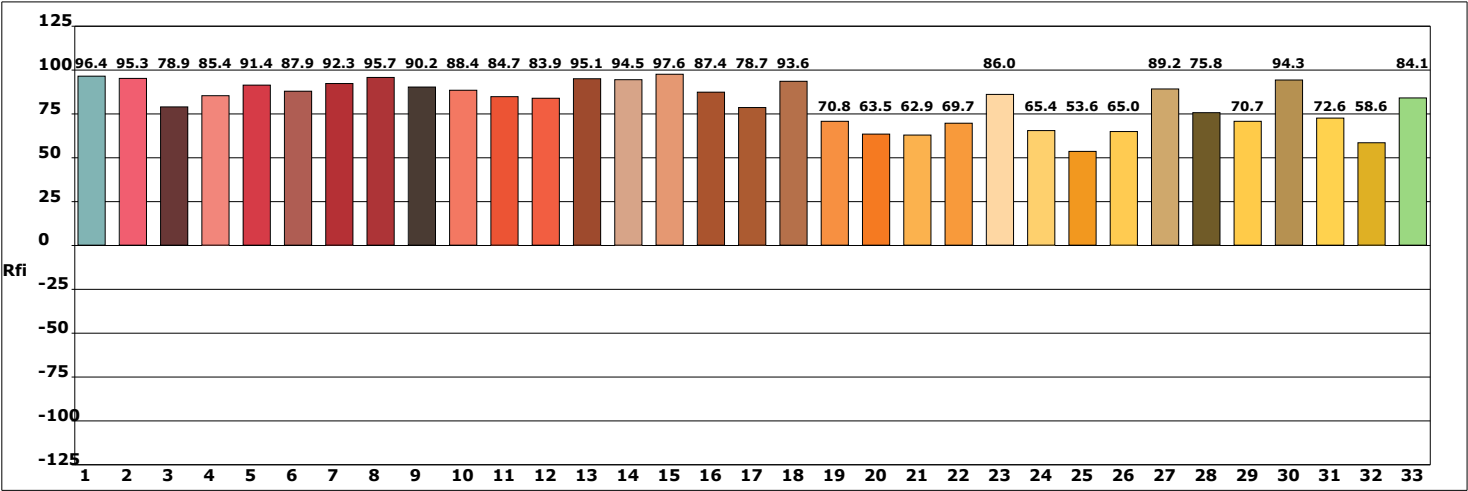


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14



Product model:
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 07/15/14