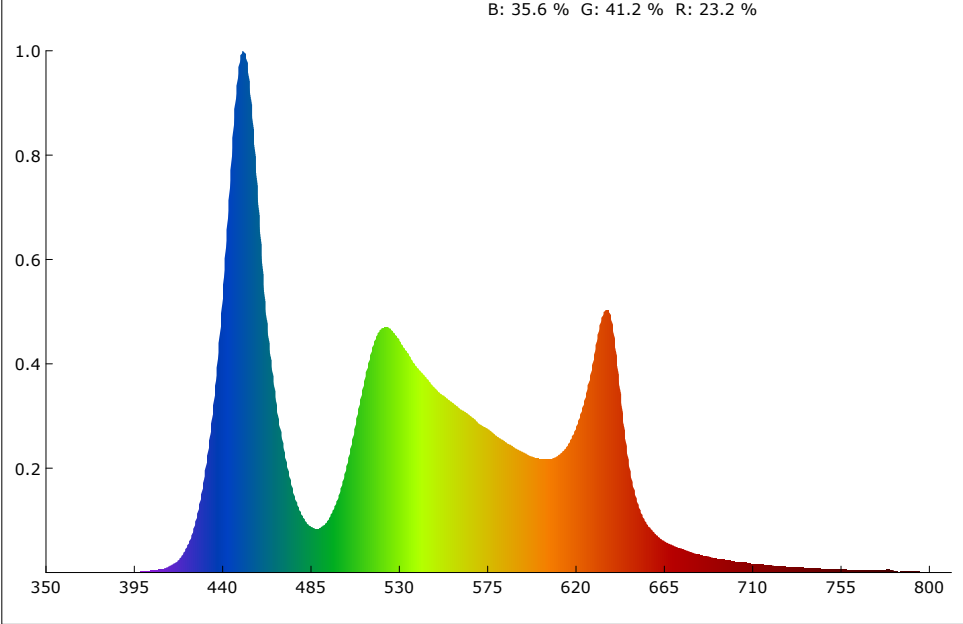
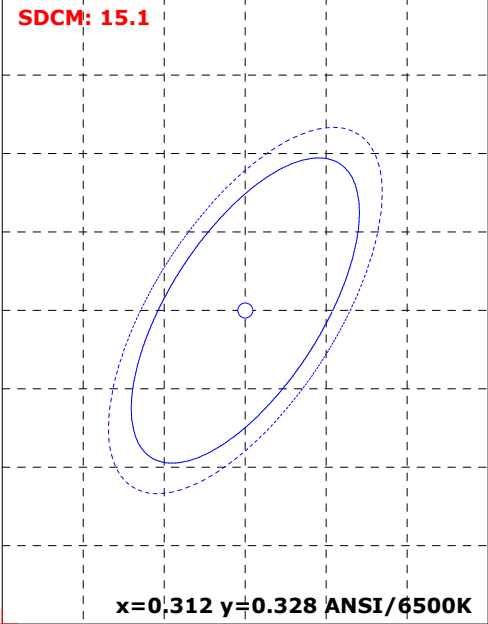


Spectrogram



SDCM



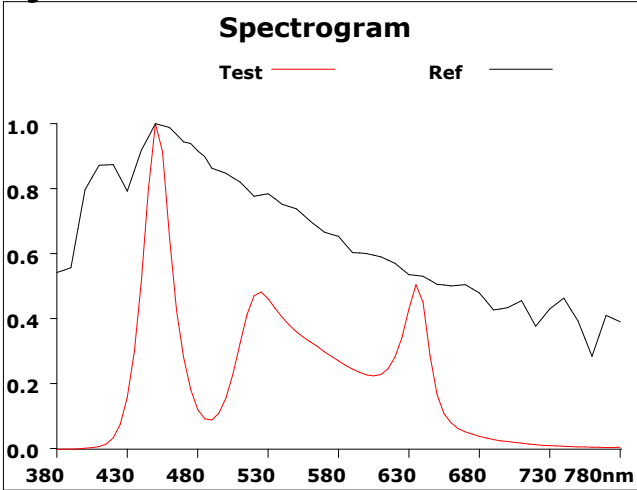
Color Parameter:

|                    |                       |                          |                        |                    |                  |
|--------------------|-----------------------|--------------------------|------------------------|--------------------|------------------|
| x: 0.2943          | y: 0.3002             | u: 0.1957                | v: 0.2995              | u': 0.1957         | v': 0.4492       |
| R_ratio: 23.2 %    | G_ratio: 41.2 %       | B_ratio: 35.6 %          | RedRatio: 14.5 %       | GreenRatio: 81.4 % | BlueRatio: 4.1 % |
| Ra: 86.0           | AvgR: 81.6            |                          |                        |                    |                  |
| R1: 97.6           | R2: 88.4              | R3: 70.8                 | R4: 84.1               | R5: 97.0           | R6: 82.4         |
| R7: 85.9           | R8: 81.9              | R9: 63.0                 | R10: 67.4              | R11: 80.4          | R12: 53.6        |
| R13: 97.8          | R14: 82.5             | R15: 91.0                |                        |                    |                  |
| CCT: 8205 K        | Flux: 942.693 lm      | PeakWave: 450.6 nm       | SDCM: 15.1             |                    |                  |
| S/P: 2.4           | CentralWave: 451.4 nm | DominantWave: 479.7 nm   | CentroidWave: 535.8 nm |                    |                  |
| HalfWidth: 22.6 nm | duv: -0.00191         | purity: 16.2 %           | CQS: 84.5              |                    |                  |
| LER(TM-30): 285.6  | Ep: 3300.2 mw         | Rg: 105.5                | Rf: 81.5               |                    |                  |
| Red Ep: 757.0 mw   | Near red Ep: 34.5 mw  | Near infrared Ep: 2.7 mw |                        |                    |                  |

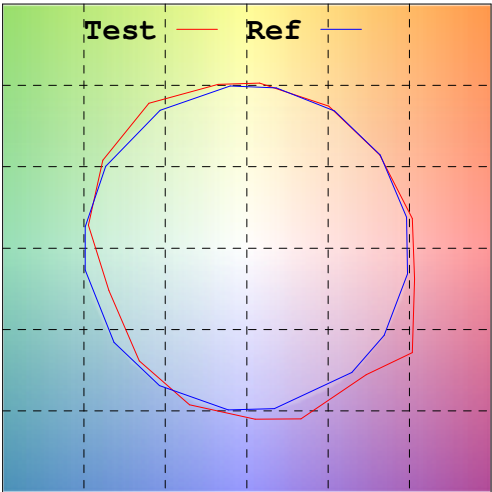
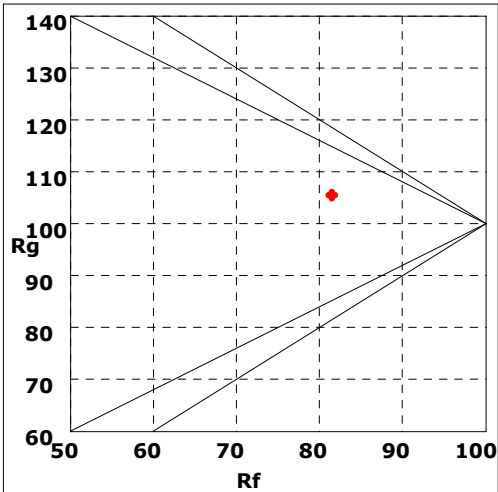
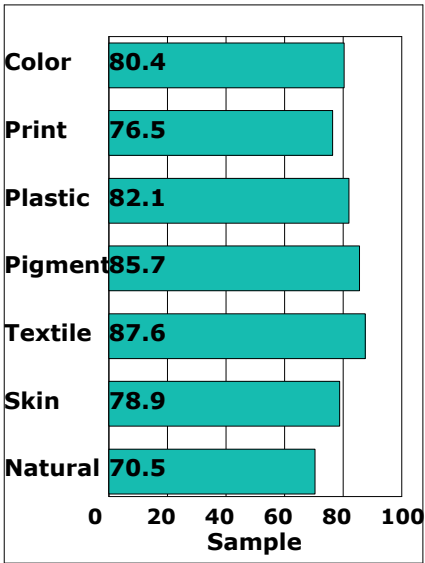
Electrical parameters:

|                  |              |             |           |
|------------------|--------------|-------------|-----------|
| Effic: 81.3 Lm/W | Energy: 88.6 | Effi: F     |           |
| U: 220.0 V       | I: 0.436 A   | P: 11.590 W | Pf: 0.120 |

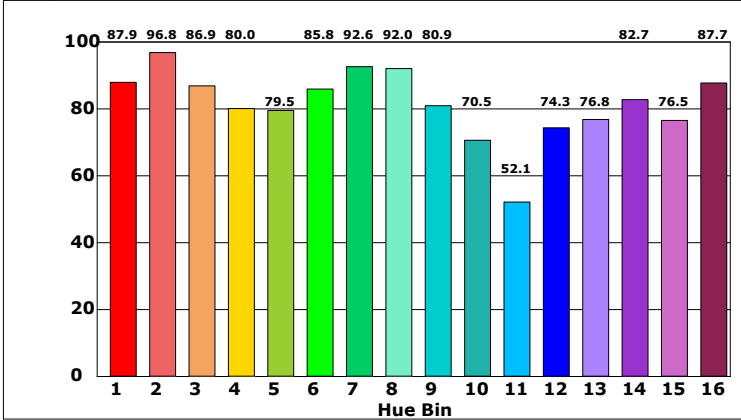
Rf: 81.5 CCT: 8205K u': 0.1957  
Rg: 105.5 LER: 285.6 Duv: -0.00191 v': 0.4492



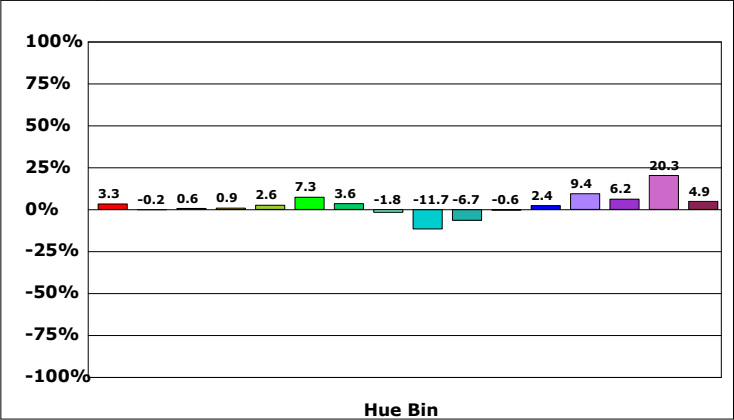
| 500     |      |        |       |
|---------|------|--------|-------|
| Hue Bin | Rf   | Chroma | Hue   |
| 1       | 87.9 | 3.3%   | -1.3% |
| 2       | 96.8 | -0.2%  | 0.5%  |
| 3       | 86.9 | 0.6%   | 4.6%  |
| 4       | 80.0 | 0.9%   | 10.5% |
| 5       | 79.5 | 2.6%   | 7.2%  |
| 6       | 85.8 | 7.3%   | 3.3%  |
| 7       | 92.6 | 3.6%   | -2.2% |
| 8       | 92.0 | -1.8%  | -1.3% |
| 9       | 80.9 | -11.7% | 15.2% |
| 10      | 70.5 | -6.7%  | 18.1% |
| 11      | 52.1 | -0.6%  | 21.9% |
| 12      | 74.3 | 2.4%   | 17.4% |
| 13      | 76.8 | 9.4%   | 14.6% |
| 14      | 82.7 | 6.2%   | 6.5%  |
| 15      | 76.5 | 20.3%  | 0.7%  |
| 16      | 87.7 | 4.9%   | -2.2% |



Rf by Bue

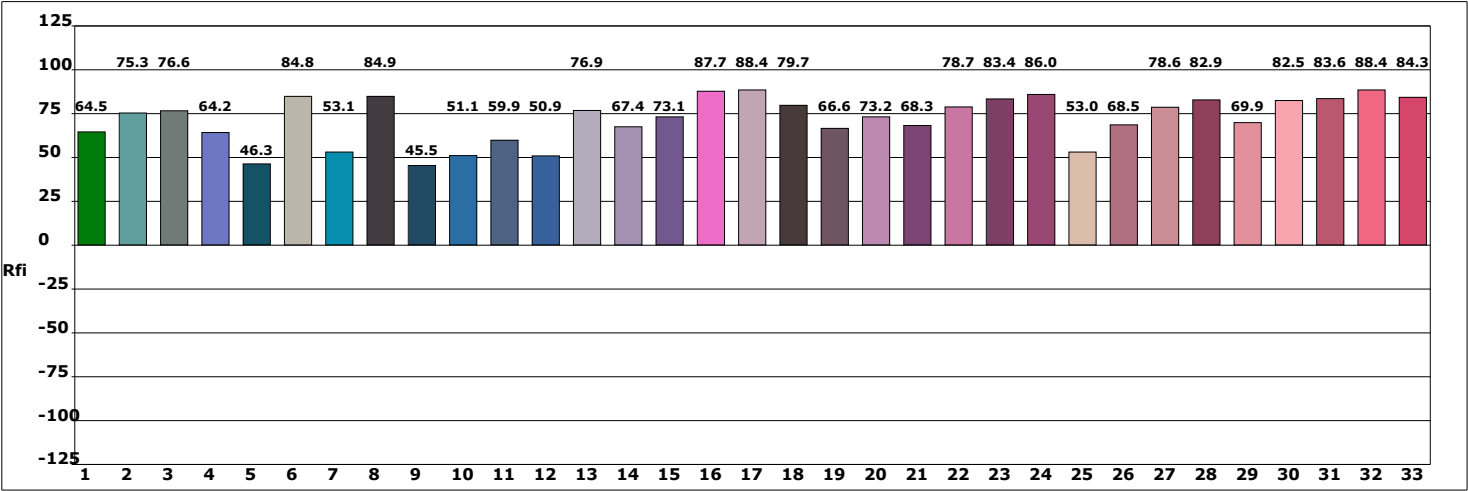
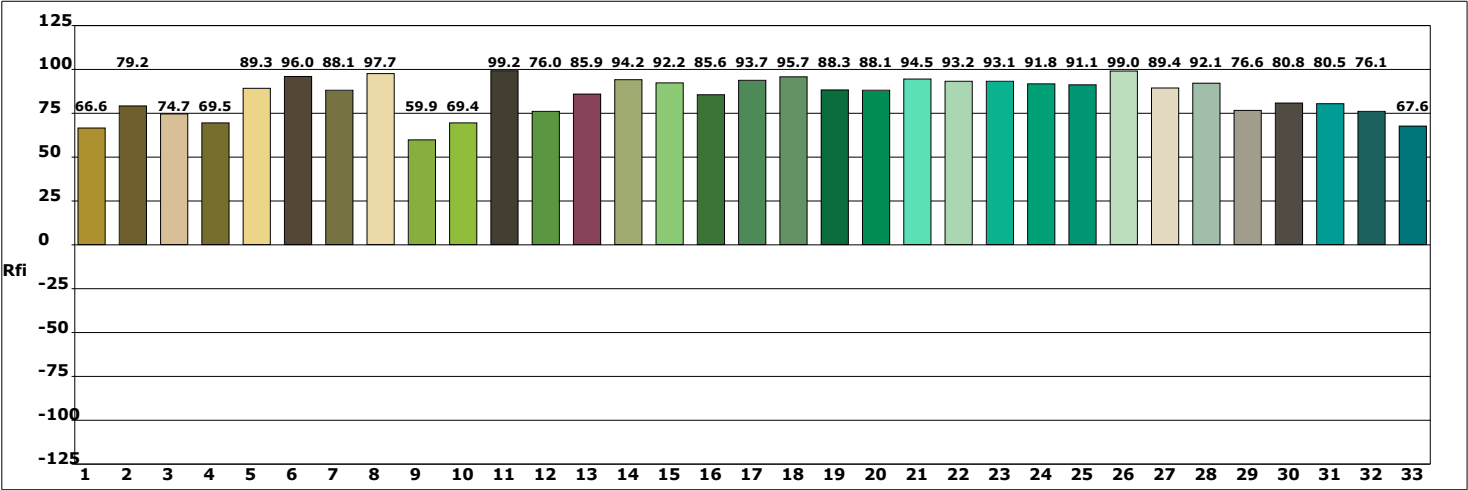
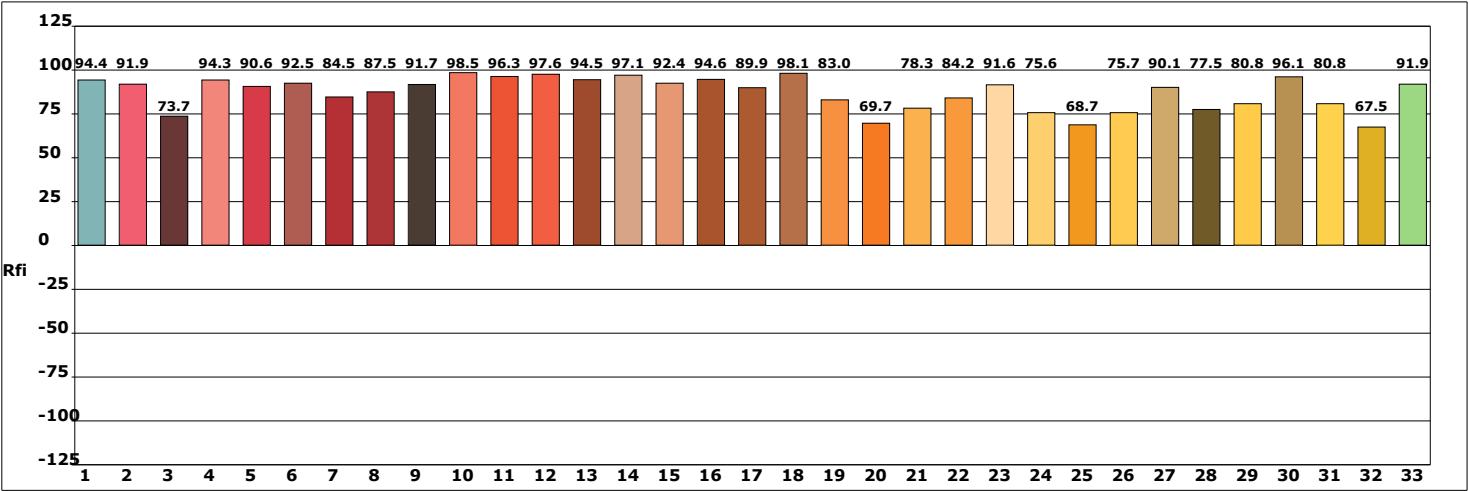


Chroma by Bue



Product model:  
Product number:  
Tester:  
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,  
Test unit:  
Date of observation: 02/03/13



Product model:  
Product number:  
Tester:  
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,  
Test unit:  
Date of observation: 02/03/13