



## LM-79-08 Test Report

For

### ARTIKA FOR LIVING INC

(Brand Name: ARTIKA)

1756 50th avenue, Lachine, Qu ébec, Canada H8T 2V5

### Model name(s): 6FM-BP-XXXXXX

**Report Type:** Testing and Report According to IES LM-79-2008  
**Type of Luminaire:** LED Luminaire  
**Report Date:** 2021-11-10  
Ningbo TengLi Testing Co., Ltd  
**Prepared By:** 2nd floor, Block B, Ningbo Testing and Certification Base,  
No. 66 Qingyi Road, Ningbo National Hi-Tech Zone,  
Ningbo, Zhejiang

Test & Report By:

*Nick Song*

Engineer: Nick Song

Review By:

*Garman Mo*

Manager: Garman Mo

Note: 1. The results contained in this report pertain only to the tested samples  
2. This report does not imply product certification, approval, or endorsement by A2LA, or any agency of the Federal Government.



<b>1.1 Product Information:</b>		
Model Number	6FM-BP-XXXXXX	
Remark	"XXXXXX" can be A to Z and/or 0 to 9 and or/blank(commerical code)	
Representative (Tested) Model	6FM-BP-MB	
Model Difference	N/A	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Luminaires	
LED Manufacturer	Lextar Electronics Corp	
LED Model	PC35U27	
Dimming	Dimmable	
Integral Controls	N/A	
Sample Number	STD211036NB-B1(3000K)	
Date of Receipt	Nov.01,2021	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

<b>1.2 Rated Values:</b>	
Rated Voltage / Frequency	120Vac, 50/60Hz
Nominal Power	26W
Rated Initial Lamp Lumen	--
Declared CCT	3000K



### 1.3 Test Specifications:

Test item	<ol style="list-style-type: none"> <li>1. Total Luminous Flux</li> <li>2. Luminous Distribution Intensity</li> <li>3. Luminous Efficacy</li> <li>4. Correlated Color Temperature</li> <li>5. Color Rendering Index</li> <li>6. Chromaticity Coordinate</li> <li>7. Electrical Parameters</li> </ol>
Reference Standard	<ol style="list-style-type: none"> <li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li> <li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li> <li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li> <li>4. CIE 15-2004 Technical Report Colorimetry</li> <li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li> </ol>

### 1.4 Test Methods

#### 1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ , measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals.

#### 2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

#### 3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.



**2.1 Summary of Test Result**

Criteria Item	Measured Value		Compliance	Requirement (DLC V5.1)	
Minimum Total Luminous	1711.4		Pass	≥1000(-10%)	
Minimum Luminous Efficacy	66.40		Pass	Standard: ≥105(-3%)	Premium: ≥120(-3%)
Minimum Power Factor	0.9812		Pass	≥0.9(-3%)	
Maximum THD %	17.36		Pass	≤20(+5)	
Minimum CRI	93.7		Pass	≥70(-1)	
Minimum R9	65		Pass	≥-40(-1)	
Minimum Rg	101		Pass	≥89(-1)	
Minimum Rf	92		Pass	≥70(-1)	
Rcs, h1	-5		Pass	-18%-23%(-1%)	
CCT	3000K	2955	Pass	≤6500K	



**2.2 Electrical, Photometric and Chromaticity Measurements**

<b>Test date</b>	2021-11-03	<b>Test Ambient:</b>	25 ± 1 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	45
<b>Model Number</b>	6FM-BP-MB	<b>Total Operating Time(min)</b>	60

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD211036 NB-B1	119.9	60.01	0.2191	25.77	0.9812	17.36

**Photometric Measurement – Goniophotometer Method(Tset Dstance: 26.00m):**

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	1711.4
Luminous Efficacy (lm/W)	66.40
Beam Angle (°)	106.5
Center Beam Candle Power (cd)	729

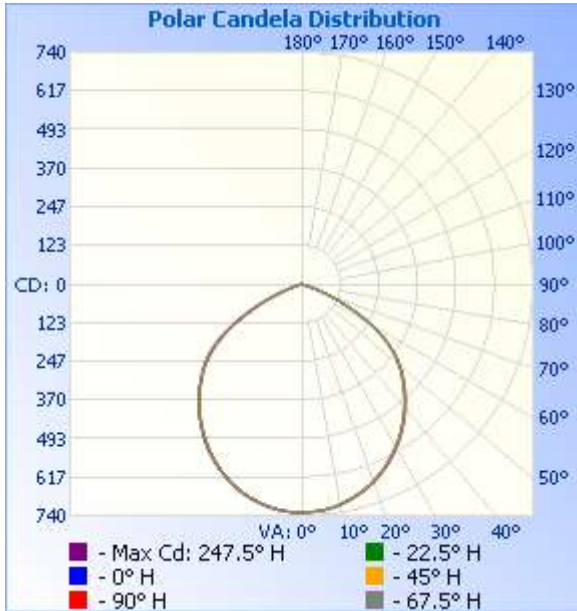


**Zonal Lumen Tabulation**

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	559.6	32.7%
0-40	909.0	53.1%
0-60	1,562.3	91.3%
60-90	148.8	8.7%
70-100	10.7	0.6%
90-120	0	0%
0-90	1,711.1	100%
90-180	0	0%
0-180	1,711.1	100%

Lumens Per Zone					
Zone	Lumens	%Total	Zone	Lumens	%Total
0-10	68.9	4.0%	90-100	0	0%
10-20	196.3	11.5%	100-110	0	0%
20-30	294.4	17.2%	110-120	0	0%
30-40	349.4	20.4%	120-130	0	0%
40-50	355.5	20.8%	130-140	0	0%
50-60	297.8	17.4%	140-150	0	0%
60-70	138.2	8.1%	150-160	0	0%
70-80	10.5	0.6%	160-170	0	0%
80-90	0.2	0.0%	170-180	0	0%

**Photometric Data**



**Illuminance at a Distance**

Center Beam fc	Beam Width	
4.0ft	45.6 fc	10.7 ft 10.7 ft
8.0ft	11.4 fc	21.4 ft 21.4 ft
12.0ft	5.1 fc	32.1 ft 32.1 ft
16.0ft	2.8 fc	42.8 ft 42.9 ft
20.0ft	1.8 fc	53.5 ft 53.6 ft

Vert. Spread: 106.4°  
Horiz. Spread: 106.5°

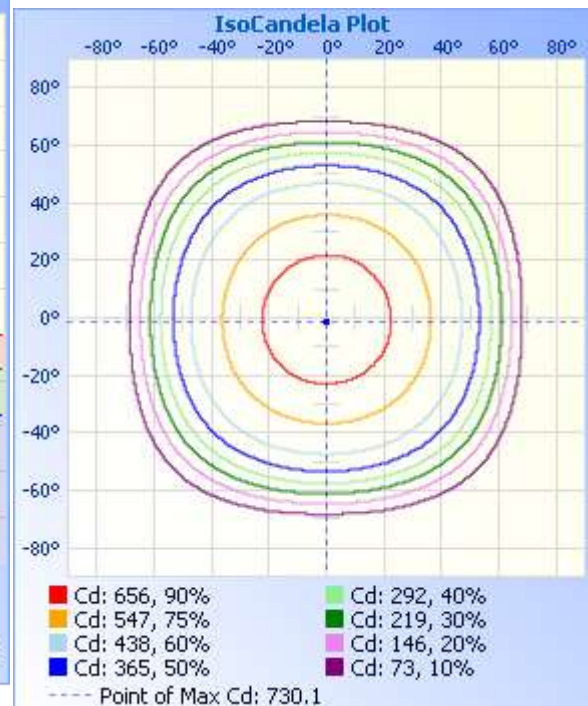
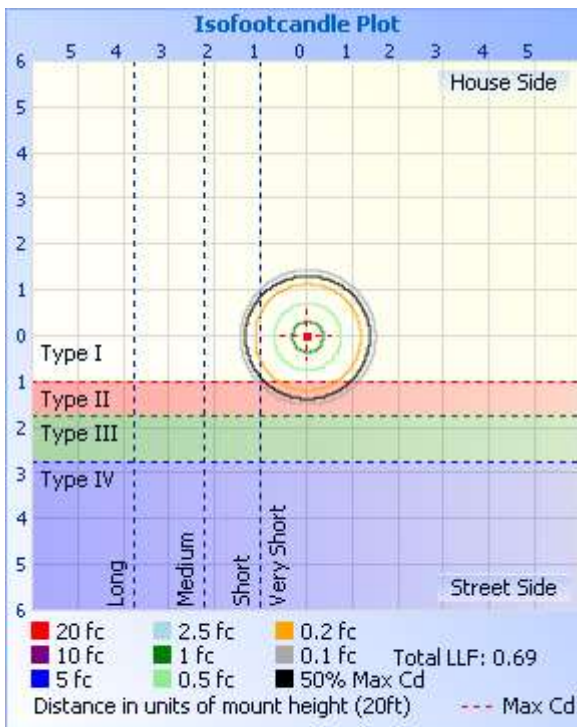






Table--1

UNIT: cd

C (DEG) y (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729			
5	725	724	724	726	725	724	725	726	727	726	727	726	726	725	726	726			
10	714	712	715	713	714	713	714	715	715	716	717	716	715	714	715	715			
15	694	694	695	696	694	695	696	697	697	698	697	697	696	697	696	697			
20	669	668	670	670	669	670	670	671	674	673	674	673	670	670	671	671			
25	637	637	637	637	638	639	639	640	643	642	642	641	640	640	639	640			
30	597	599	599	600	601	600	601	602	605	605	604	604	603	602	601	601			
35	556	555	555	557	558	558	559	560	563	563	562	560	560	558	558	558			
40	508	508	509	511	512	512	512	513	516	516	515	514	512	511	510	511			
45	457	457	459	460	462	462	462	463	466	466	464	462	461	459	459	460			
50	401	402	405	407	408	409	409	410	414	412	411	408	406	404	404	404			
55	330	334	337	340	342	343	343	343	347	345	341	336	332	333	332	333			
60	232	237	243	248	250	252	253	252	257	252	246	240	235	232	233	237			
65	126	131	136	143	145	148	149	148	152	146	140	133	129	126	126	129			
70	39.4	43.3	45.2	49.2	52.7	55.6	56.0	54.1	56.6	52.6	47.1	42.3	40.0	38.8	37.6	38.8			
75	2.27	2.92	3.73	2.66	3.87	4.67	4.96	4.51	1.93	1.28	0.95	0.88	0.86	0.84	0.84	0.85			
80	0.37	0.38	0.40	0.42	0.44	0.45	0.46	0.46	0.47	0.45	0.42	0.40	0.39	0.38	0.37	0.38			
85	0.09	0.10	0.11	0.12	0.13	0.14	0.14	0.14	0.15	0.14	0.12	0.11	0.10	0.09	0.09	0.09			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			





**2.3 Electrical, Photometric and Chromaticity Measurements**

<b>Test date</b>	2021-11-03	<b>Test Ambient:</b>	25 ± 1 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	45
<b>Model Number</b>	6FM-BP-MB	<b>Total Operating Time(min)</b>	46

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD211036 NB-B1	120.0	60	0.2195	25.86	0.9816	17.31

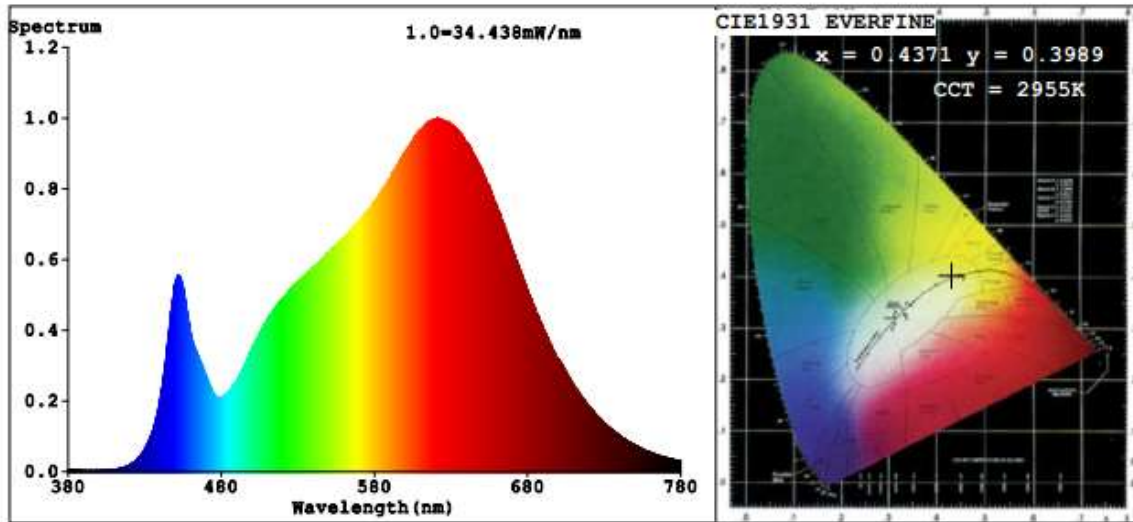
**Chromaticity Measurement - Sphere-Spectroradiometer  
 Method(Self-absorption:1.0879)(4π geometry):**

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	2955
Duv	-0.0021
Chromaticity (x, y)	x=0.4371 y=0.3989
Chromaticity (u', v')	u'=0.2529 v'=0.5193
Color Rendering Index (CRI)	93.7
R9	65
Rg	101
Rf	92
Rcs,h1(%)	-5

**Photometric Measurement –Sphere-Spectroradiometer Method:**

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	1720
Luminous Efficacy (lm/W)	66.51

**Spectral Power Distribution & Chromaticity Diagram**



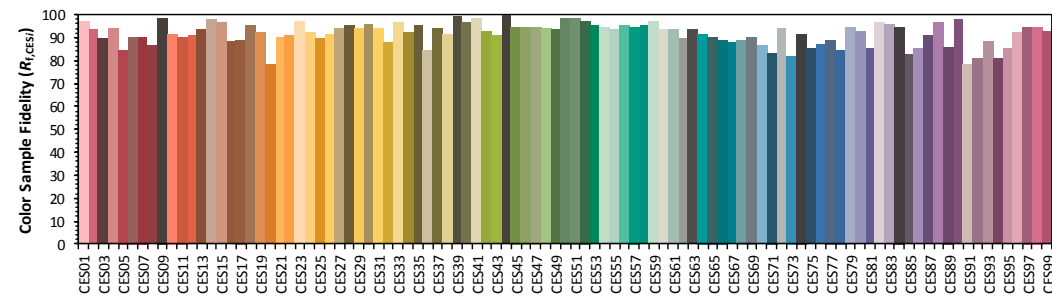
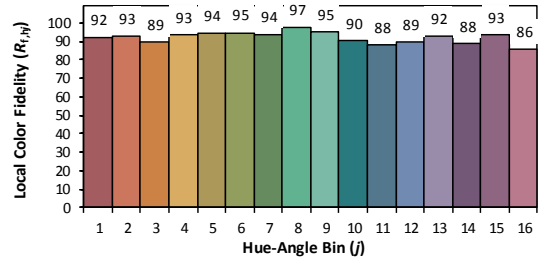
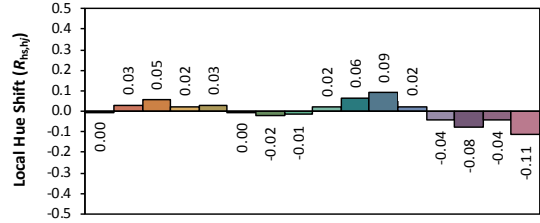
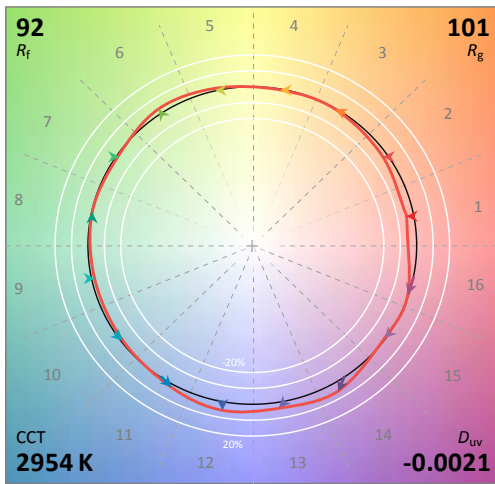
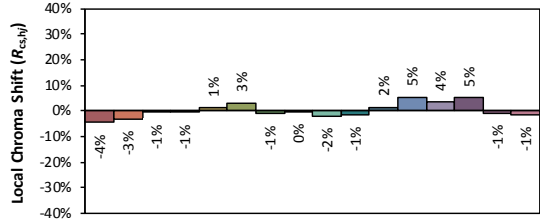
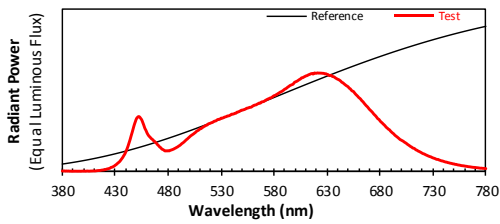
R1 =95	R2 =97	R3 =98	R4 =94	R5 =94	R6 =96	R7 =92		
R8 =84	R9 =65	R10=92	R11=95	R12=82	R13=95	R14=98	R15=91	



**TM30**

ANSI/IES TM-30-18 Color Rendition Report

Source:	PC35U27	Manufacturer:	ARTIKA FOR LIVING INC
Date:	2021-11-03	Model:	6FM-BP-MB



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.	$x$	0.4371	CIE 13.3-1995 (CRI) $R_a$ 94 $R_g$ 65
	$y$	0.3988	
	$u'$	0.2530	
	$v'$	0.5193	

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0



### 3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-702	2 meter Integrating Sphere	Verified by D204 standard lamp	
ST-R-701	Spectral analysis system HAAS-1200	Verified by D204 standard lamp	
ST-R-703	Standard Lamp D204	2021-02-21	2022-02-20
ST-R-704	Power Meter for Integrating Sphere	2021-01-05	2022-01-04
ST-R-714	Goniophotometer system	Verified by D908S standard lamp	
ST-R-710	Standard Lamp D908S	2021-02-21	2022-02-20
ST-R-711	Power Meter for Goniophotometer	2021-01-05	2022-01-04
Uncertainty(K=2): Photometric Measurement (Sphere):3.94% Chromaticity Measurement(Sphere):48.2K Photometric Measurement(Goniophotometer):3.96%			

#### 4. Product Photo



**\*\*\*\*\* END OF REPORT \*\*\*\*\***