



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): 8FM-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.



1.1 Product Information:		
Model Number	8FM-BP-XXXXXX	
Remark	"XXXXXX" can be A to Z and/or 0 to 9 and or/blank(commerical code)	
Representative (Tested) Model	8FM-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-C1(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

1.2 Rated Values:	
Rated Voltage / Frequency	120Vac, 50/60Hz
Nominal Power	28W
Rated Initial Lamp Lumen	--
Declared CCT	3000K



1.3 Test Specifications:

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

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 ° vertical intervals and 22.5 ° 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)	
				Standard: >=	Premium: >=
Minimum Total Luminous	2109.6		Pass	>=1000(-10%)	
Minimum Luminous Efficacy	79.26		Pass	Standard: >= 105(-3%)	Premium: >= 120(-3%)
Minimum Power Factor	0.9816		Pass	>= 0.9(-3%)	
Maximum THD %	14.89		Pass	<= 20(+5)	
Minimum CRI	93.6		Pass	>= 70(-1)	
Minimum R9	63		Pass	>= -40(-1)	
Minimum Rg	99		Pass	>= 89(-1)	
Minimum Rf	92		Pass	>= 70(-1)	
Rcs, h1	-5		Pass	-18%-23%(-1%)	
CCT	3000K	2948	Pass	<=6500K	



2.2 Electrical, Photometric and Chromaticity Measurements

Test date	2021-11-03	Test Ambient:	25 ± 1 °C
Test Orientation	As intended	Stabilization Time (min)	45
Model Number	8FM-BP-MB	Total Operating Time(min)	60

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD211036 NB-C1	120.0	60.01	0.2234	26.50	0.9862	14.56

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

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	2109.6
Luminous Efficacy (lm/W)	79.26
Beam Angle (°)	109.9
Center Beam Candle Power (cd)	812

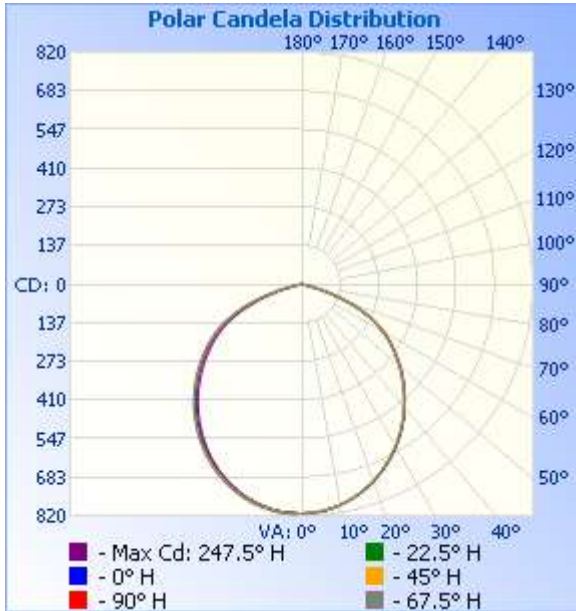


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	624.3	29.6%
0-40	1,016.4	48.2%
0-60	1,781.0	84.4%
60-90	328.4	15.6%
70-100	70.1	3.3%
90-120	0	0%
0-90	2,109.4	100%
90-180	0	0%
0-180	2,109.4	100%

Lumens Per Zone					
Zone	Lumens	%Total	Zone	Lumens	%Total
0-10	76.7	3.6%	90-100	0	0%
10-20	218.8	10.4%	100-110	0	0%
20-30	328.8	15.6%	110-120	0	0%
30-40	392.1	18.6%	120-130	0	0%
40-50	402.6	19.1%	130-140	0	0%
50-60	362.0	17.2%	140-150	0	0%
60-70	258.3	12.2%	150-160	0	0%
70-80	69.9	3.3%	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	50.7 fc	11.3 ft	11.4 ft
8.0ft	12.7 fc	22.6 ft	22.8 ft
12.0ft	5.6 fc	33.9 ft	34.1 ft
16.0ft	3.2 fc	45.2 ft	45.5 ft
20.0ft	2.0 fc	56.6 ft	56.9 ft

■ Vert. Spread: 109.5°
■ Horiz. Spread: 109.8°

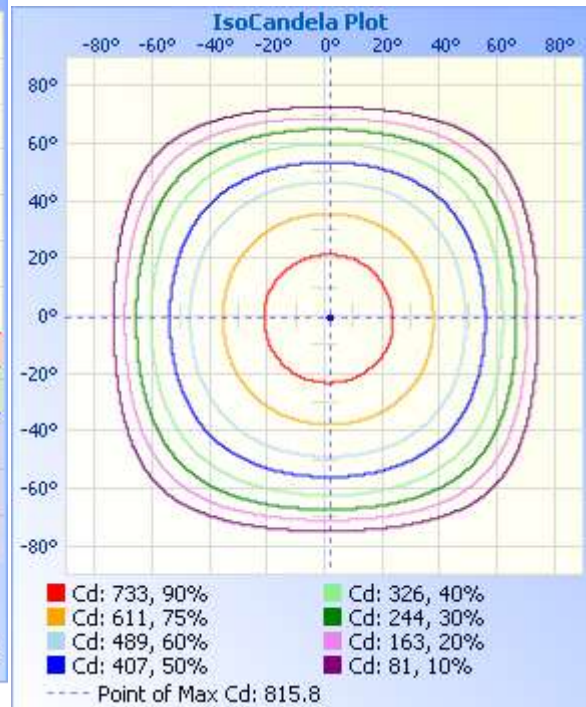
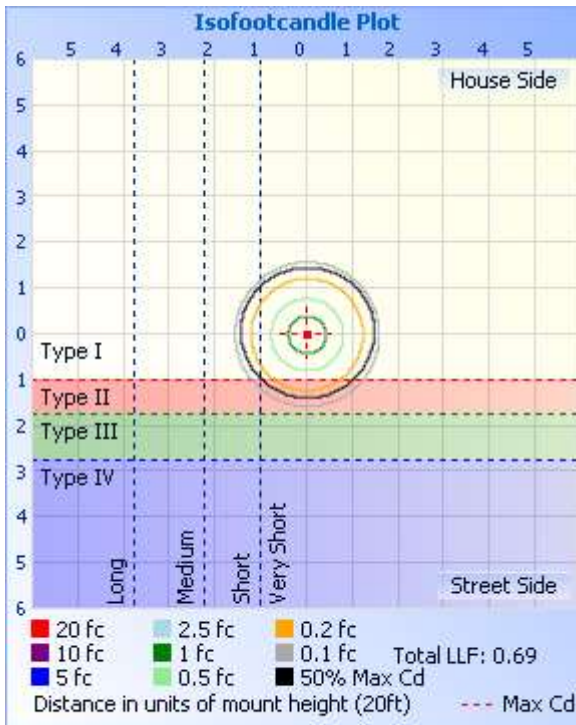




Table--1

UNIT: cd

C (DEG) γ (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	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812			
5	810	809	808	809	807	808	804	808	805	807	808	808	809	810	809	812			
10	800	798	797	796	794	793	792	793	792	792	795	796	798	801	800	803			
15	780	779	776	776	771	770	769	770	771	771	774	778	777	780	782	786			
20	754	752	750	747	743	744	740	742	742	743	746	748	750	754	756	759			
25	722	718	715	712	708	706	703	704	707	708	712	714	718	722	723	726			
30	681	678	674	671	667	665	662	665	666	666	670	674	677	682	683	687			
35	637	632	627	623	619	618	616	616	618	620	625	630	633	636	639	642			
40	586	581	575	571	567	565	563	566	568	571	574	579	582	588	589	592			
45	532	527	520	515	512	510	509	512	514	517	521	527	530	534	536	537			
50	474	468	462	457	454	452	452	453	457	461	465	470	473	476	479	481			
55	413	407	401	396	393	393	393	395	398	402	407	413	414	419	418	421			
60	351	343	337	332	329	328	328	331	337	341	345	351	354	357	357	358			
65	272	265	257	252	249	249	251	255	262	266	271	277	278	280	281	281			
70	169	163	156	149	146	149	153	155	163	170	176	179	180	182	183	180			
75	59.1	53.6	48.5	45.6	44.1	43.7	46.0	49.7	56.6	60.9	65.4	69.0	70.1	70.9	70.6	68.0			
80	3.39	2.60	0.32	0.34	0.31	0.29	0.31	0.37	0.31	0.32	0.36	0.47	0.53	0.49	0.56	0.34			
85	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.10	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.11			
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

Test date	2021-11-03	Test Ambient:	25 ± 1 °C
Test Orientation	As intended	Stabilization Time (min)	45
Model Number	8FM-BP-MB	Total Operating Time(min)	46

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD211036 NB-C1	120.0	60	0.2274	26.79	0.9816	14.89

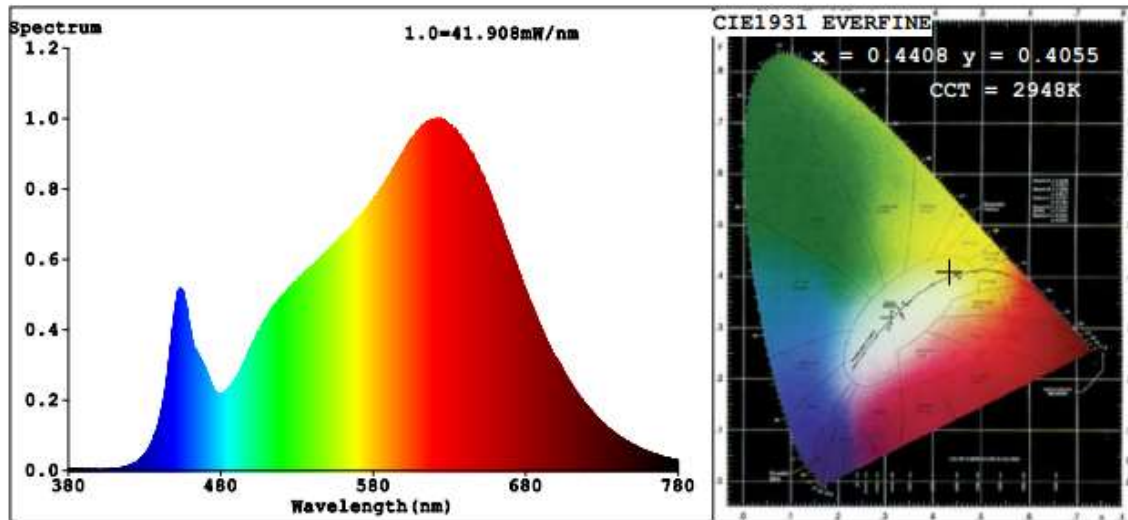
**Chromaticity Measurement - Sphere-Spectroradiometer
 Method(Self-absorption:1.1482)(4π geometry):**

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	2948
Duv	0.0001
Chromaticity (x, y)	x=0.4408 y=0.4055
Chromaticity (u', v')	u'=0.2524 v'=0.5225
Color Rendering Index (CRI)	93.6
R9	63
Rg	99
Rf	92
Rcs,h1(%)	-5

Photometric Measurement –Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	2129
Luminous Efficacy (lm/W)	79.47

Spectral Power Distribution & Chromaticity Diagram



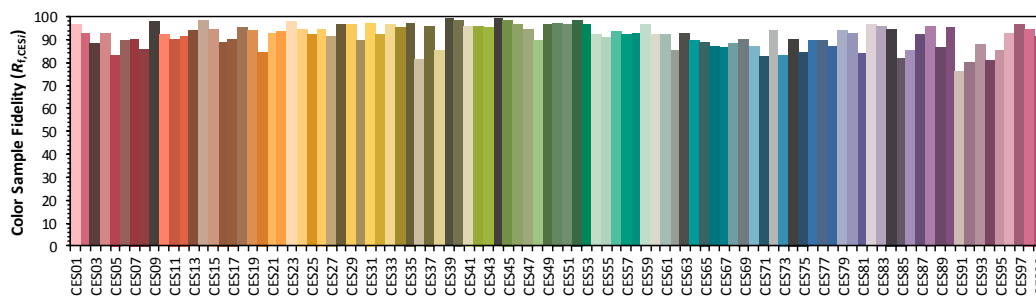
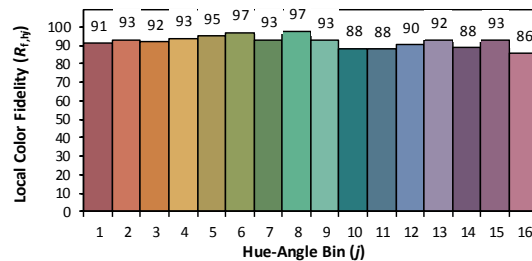
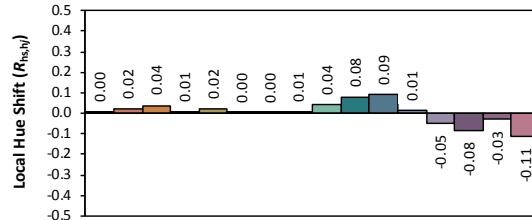
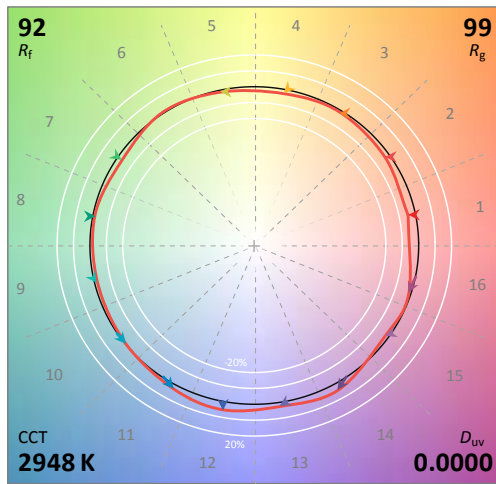
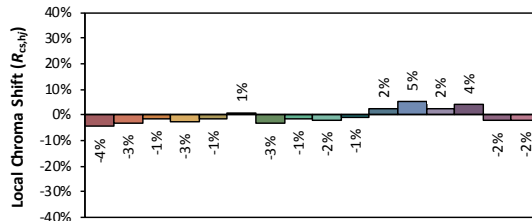
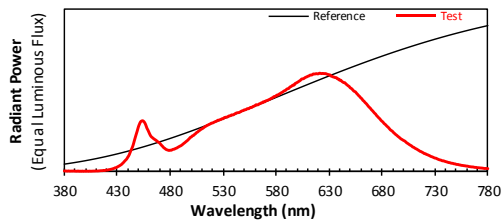
R1 =94	R2 =97	R3 =98	R4 =94	R5 =93	R6 =96	R7 =93		
R8 =84	R9 =63	R10=91	R11=95	R12=80	R13=95	R14=98	R15=90	



TM30

ANSI/IES TM-30-18 Color Rendition Report

Source:	PC35U27	Manufacturer:	ARTIKA FOR LIVING INC
Date:	2021-11-03	Model:	8FM-BP-MB



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4408
y	0.4054
u'	0.2525
v'	0.5225

CIE 13.3-1995 (CRI)	
R_a	94
R_g	63

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 *****