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Test report of

IES LM-79-08

Approved Method: Electrical and Photometric

Measurements of Solid-State Lighting Products

Rendered to:

Foshan Innovative Lighting Co.,Ltd.

Dajin Industrial Zone,Danzao,Nanhai,Foshan,China

For products:

Linear Ambient Luminaires: Direct

Models:

LWP-522B (5000K)

Test date: Feb 27, 2015
Test laboratory: LCTECH (Zhongshan) Testing Service Co.,Ltd
2/F.,Technology and Enterprise Development Center, Guangyuan Road,
Xiaolan, Zhongshan, Guangdong, China
Laboratory note: N/A

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1 General

1.1 Product Information

Brand Name	Innovative
Trade Mark	-
Luminaire Type	Linear Ambient Luminaires: Direct
Model Number	LWP-522B (5000K)
Rated Inputs	AC 120-277V,50/60Hz
Rated Power	52 W
Rated Initial Lamp Lumens	4600 lm
Declared CCT	5000 K
Power Supply	Integral LED driver in luminaire
LED Package, Array or Module	Model: 5730,manufactured by Zhongshan Dongguan Star Photoelectric Technology Co., Ltd.
Luminous Length	3.94 ft
Date of Receipt Samples	Jan 22, 2015
Quantity of Receipt Samples	1 unit

Photo



Picture 1



Picture 2

1.2 Standards or methods

The following standards are partly or totally used or referenced for test:

No.	Name
ANSI/NEMA/ ANSLG C78.377-2011	Specifications for the Chromaticity of Solid State Lighting Products
ANSI C82.77-2002	Harmonic Emission Limits—Related Power Quality Requirements for Lighting Equipment
CIE Pub. No. 13.3-1995	Method of Measuring and Specifying Color Rendering of Light Sources
CIE Pub. No. 15:2004	Colorimetry
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products

1.3 Equipment list

ID	Instrument	Model name	Cal. date	Next cal. Date
AC Power supply	LC-I-923	CHP-500	2015-02-05	2016-02-04
AC Power supply	LC-I-987	APW-120N	2015-02-05	2016-02-04
Power analyzer	LC-I-928	WT210	2014-03-21	2015-03-20
Power analyzer	LC-I-954	WT210	2015-02-05	2016-02-04
Multimeter	LC-I-972	Fluke 17B	2014-08-15	2015-08-14
Photometric colorimetric electric system (2 meter sphere)	LC-I-900	SPR3000	Before use	Before use
Standard lamp	LC-I-971	STD-ESN	2014-05-16	2015-05-15
Goniophotometer(with mirror)	LC-I-902	GMS2000	2014-05-14	2015-05-13
Wireless temperature transmitter	LC-I-958	DWRP-B(0)	2014-08-19	2015-08-18
Wireless temperature transmitter	LC-I-959	DWRP-B(0)	2014-08-19	2015-08-18

2 Test conducted and method

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at 25°C ± 1°C, the air flow around the sample(s) being tested did not affect the performance.

2.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within ±0.2 percent under load.

2.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

2.4 Electrical Instrumentation

The calibration uncertainties of the instruments for AC voltage and current were less than 0.2 percent, and the calibration uncertainty of the AC power meter was less than 0.5 percent (95 % confidence interval, k=2).

2.5 Color Measurement Method

Spectral radiant flux was measured by a sphere (2 meter)-spectroradiometer system, and the color characteristics (Color rendering index, correlated color temperature, chromaticity coordinate) were calculated from these by software automatically.

2.6 Total Luminous Flux Measurement Method

The customer did not require this measurement.

2.7 Luminous Intensity Distribution Measurement Method

The customer did not require this measurement.

2.8 Spatial Non-uniformity of Chromaticity

The customer did not require this measurement.

3 Test Result Summary

3.1 Electrical data

Criteria Item	Result (Sphere)	Result (Goniophotometer)
Input Voltage	120.00 V~60Hz	-
Input Current	0.407 A	-
Total Power	48.74 W	-
Power Factor	0.998	-
I-THD	3.7 %	-
Off-state Power	0.0 W	-

3.2 Photometric data

Criteria Item	Result (Sphere)	Result (Goniophotometer)
Total Lumens	-	-
Luminaire Efficacy	-	-
Correlated Color Temperature (CCT)	5279 K	-
Color Rendering Index (CRI)	84.2	-
R9	17	-
Chromaticity Coordinate (x,y)	x= 0.3379 y= 0.3495	-
Chromaticity Coordinate (u,v)	u= 0.2074 v= 0.3217	-
Chromaticity Coordinate (u',v')	u'= 0.2074 v'=0.4826	-
Duv	0.0019	-
Spacing Criteria (0-180)	-	-
Spacing Criteria (90-270)	-	-

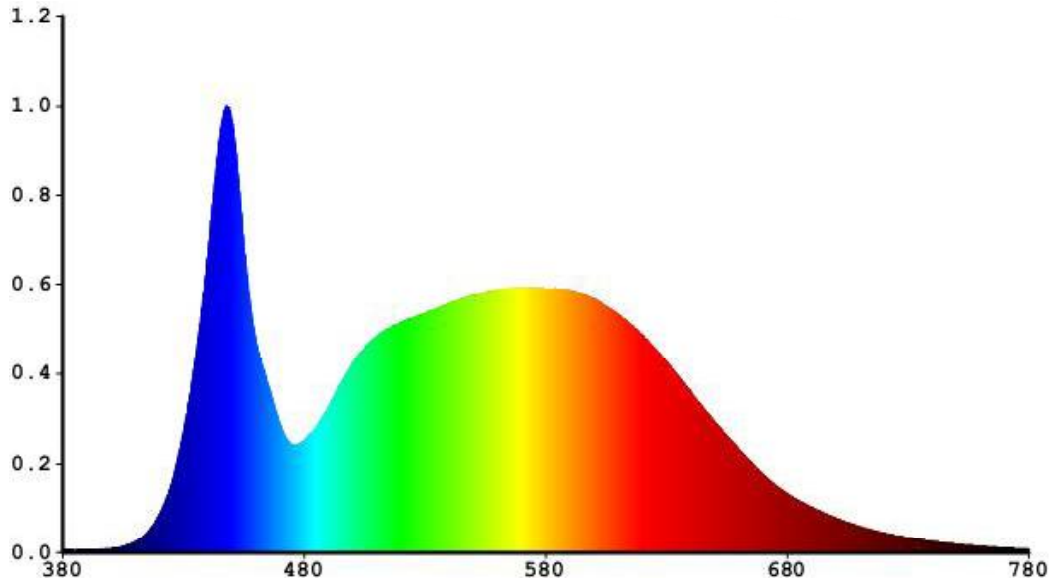
3.3 Additional test at 277V

Criteria Item	Result (Sphere)	Result (Goniophotometer)
Input Voltage	277.00 V~60Hz	-
Power Factor	0.957	-
I-THD	11.1 %	-
Off-state Power	0.0 W	-

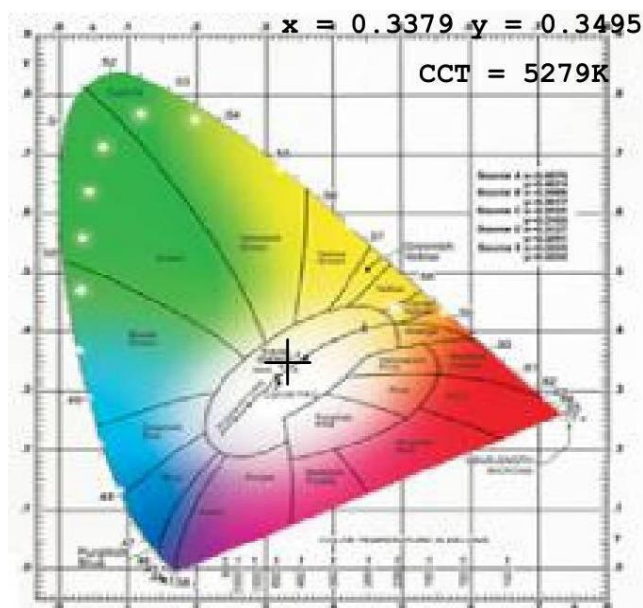
Note: N.A.

4 Test Data

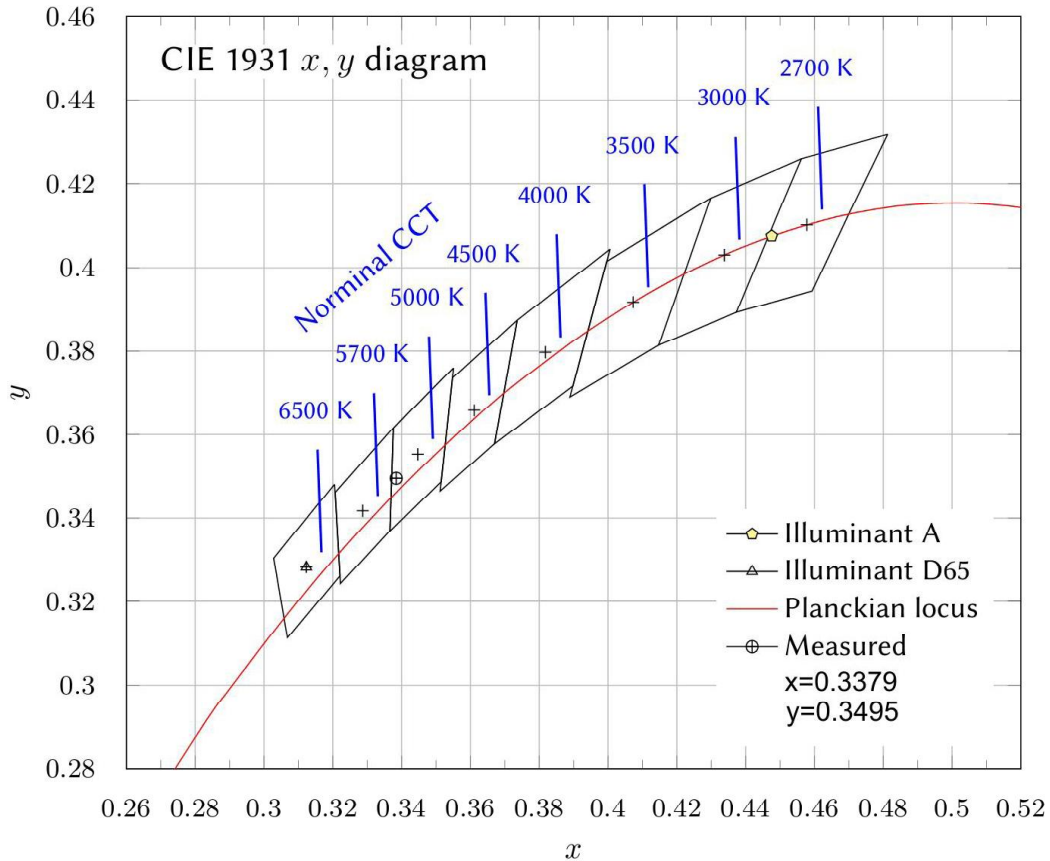
4.1 Spectral Distribution



4.2 Chromaticity Diagram (CIE 1931)



4.3 ANSI Chromaticity Quadrangles Diagram



4.4 Color Rendering Details

R1	R2	R3	R4	R5
83	87	91	86	84
R6	R7	R8	R9	R10
84	87	71	17	70
R11	R12	R13	R14	R15
86	69	84	95	78

****End of test report****