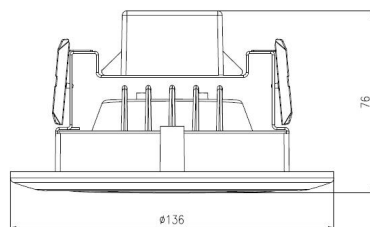




LED DOWN LIGHT



72621

Size : $\Phi 136 \times 76 \text{mm}$ (5.35x2.99")

Characteristics

Item Number	72621
Description	4" LED Gimbal Down Light
Voltage	120V AC
Power	10W
Dimmable	Yes
LED Type	SMD
CRI	90
Lumens	720 lms
Color	4000K
Life time	50,000 hours
Certificate	ETL, Energy Star, FCC, Lighting Facts, LM79, LM80

Features

- Energy efficient: save up to 80% in energy costs
- High lumen output
- Mercury-free
- Instant-on light
- For dry, damp, wet location
- 50,000 hours lifetime
- CCT: 4000K
- 5 years manufacturer warranty
- Compatible with most Lutron and Leviton dimmers

Application



Easy to Install in 3 Easy Steps:



Step1:Twist adaptor into socket.



Step2: Insert male connector into female one.



Step3: Insert LED trim.

Packaging

Size	Carton Size	Pcs/CTN	N.W.	G.W.
4"	47x29x16cm/18.50x11.42x6.30"	12	4kgs/8.82 lb	5kgs/11.02 lb



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Test Report of

IES LM-79-08

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Applicant:

Morris Products Inc.

53 Carey Rd Queensbury, NY 12804

For Products:

SSL Downlight Retrofits

Models:

72621

Test Date: From Jun. 08, 2016 to Jun. 08, 2016

Test Item: Total luminous flux, Luminous Efficacy, Electrical values, Chromaticity coordinates, CCT and CRI, Spectral Power Distribution.

Test Lab.: **LCTECH (Zhongshan) Testing Service Co., Ltd**

2/F., Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China

Tel: +86-760-22833366 Fax: +86-760-22833399

E-mail: Service@lccert.com <http://www.lccert.com>

Template No.: LC-RT-PL/LM79-08/02

Lab. Note: /

Complied by: Fish Tan

Project Engineer

Aug. 11, 2016

Fish Tan

Reviewed by: Richard Li

Technical Manager

Aug. 11, 2016

Richard Li

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1. General

1.1 Product Information

Brand Name	Morris
Product Type	SSL Downlight Retrofits
Model Number	72621
Rated Inputs	120VAC, 60Hz
Rated Power	10W
Rated Light output	740lm
Declared CCT	4000K
Power Supply	LED Driver
LED Package, Array or Module	HL-A2835DW-S1-08-HR3
Sample Code:	160525101104
Date of Receipt Samples	2016/5/25
Note	All the tests are tested in a Can. Auxiliary test can mode: EPL405/WL-416-AT



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

Instrument	ID	Model name	Cal. date	Next cal. Date
AC Power supply	LC-I-923	CHP-500	2016/2/4	2017/2/3
AC Power supply	LC-I-987	APW-110N	2016/2/4	2017/2/3
Power analyzer	LC-I-928	WT210	2016/1/24	2017/1/24
Power analyzer	LC-I-954	WT210	2016/2/4	2017/2/3
Multimeter	LC-I-972	Fluke 17B	2015/8/17	2016/8/16
Photometric colorimetric electric system(2 meter sphere)	LC-I-900	SPR3000	Before use	Before use
Standard lamp	LC-I-917	24V100W	2015/10/9	2016/10/8
Luminous Flux Standard Lamp	LC-I-946	110V/200W	2015/10/17	2016/10/16
Goniophotometer(with mirror)	LC-I-902	GMS2000	2016/5/7	2017/5/7
Wireless temperature transmitter	LC-I-978	DWRF-B	2016/2/3	2017/2/2
Wireless temperature transmitter	LC-I-979	DWRF-B	2016/2/3	2017/2/2

2. Test Conduct and Method

The lamp/luminaire was operated at least 2 hours to reach stabilization and temperature equilibrium before test.

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at $25\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$; 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

Total luminous flux was measured by both sphere-spectroradiometer system and type C goniophotometer system. Light intensity distribution was measured by a type C goniophotometer (with mirror) which can keep the sample in burn position when the tests conduct, and the total luminous flux was calculated from the intensity data by software automatically.

Spectral radiant flux was measured by a sphere (2 meter)-spectroradiometer system, and the total luminous flux was calculated from these by software automatically.

2.7 Luminous Intensity Distribution Measurement Method

Luminous intensity distribution was measured by a mirror-type goniophotometer (Type C) which can keep the sample in burn position when the tests conduct, and the kinds of graph were generated by software automatically.

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 (V)	120.10	-
Input Frequency (Hz)	60	-
Input Current (A)	0.089	-
Total Power (W)	9.94	-
Power Factor	0.928	-

3.2 Photometric data

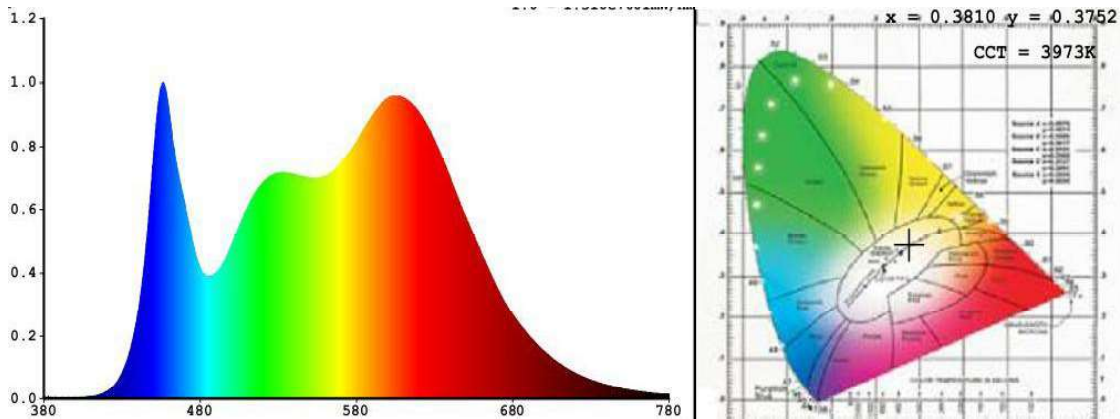
Criteria Item	Result (Sphere)	Result (Goniophotometer)
Total Lumens (Lm)	747.15	-
Luminous Efficacy (Lm/W)	75.17	-
Correlated Color Temperature(CCT) (K)	3973	-
Color Rendering Index(Ra)	92.2	-
R9	49	-
Chromaticity Coordinate (x,y)	x=0.381, y=0.3752	-
Chromaticity Coordinate (u,v)	u=0.2261, v=0.334	-
Chromaticity Coordinate (u',v')	u'=0.2261, v'=0.501	-
Duv	-0.0009	-
Zone Lumens between 0-60°	-	-

3.3 Color Rendering Details

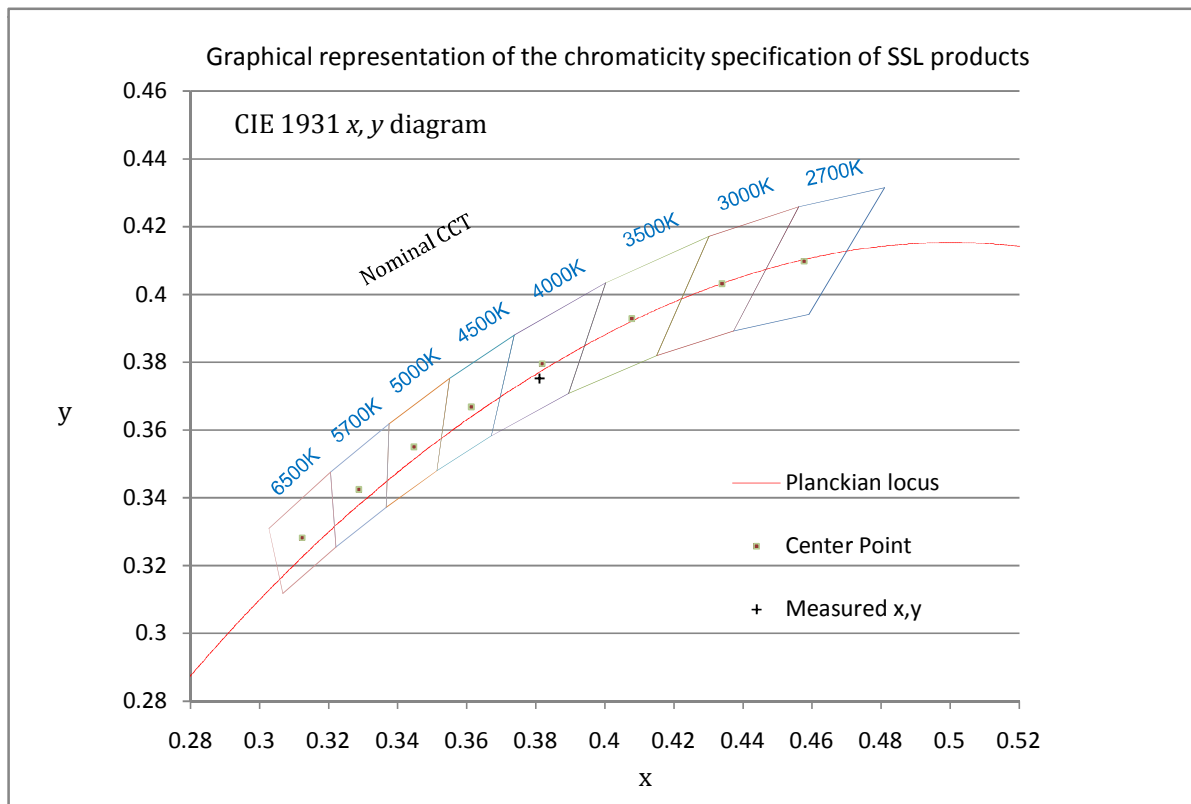
R1	R2	R3	R4	R5	R6	R7	R8
94	99	97	92	93	95	89	78
R9	R10	R11	R12	R13	R14	R15	-
49	96	95	72	97	100	89	-

4. Test Data

4.1 Spectral Distribution



4.2 ANSI Chromaticity Quadrangles Diagram



Appendix 1 Product Photo



Picture 1



Picture 2