

## ISTMT Test Report

For

### SHENZHEN JIANGJING LIGHTING CO., LTD.

3-5 Floor, Building A & 4-5 Floor, Building C, Aiqun Road, Tongfuyu Industrial Zone, Shangwu Community, Shiyuan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

### LED PANEL

Model Name(s):

PLC-30W-14-28-DM-02

PLC-35W-14-28-DM-02

PLC-40W-14-28-DM-02

PLC-45W-14-28-DM-02

Representative (Tested) Model:

PLC-45W-14-28-DM-02

**Model Difference: All is the same construction, except Wattage.**

Prepare by:

*Derek Lai*

Engineer: Derek Lai

Date: 2018-07-24

Review by:

*Vincent Yuan*

Technical Lead: Vincent Yuan

Issue Date: 2018-07-26

Revised Date: N/A

Note:

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

**Laboratory: Dongguan New Testing Centre Co., Ltd**

Address: 3F, No. 1 the 1<sup>st</sup> North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China

Tel: 86-769-89874553

Website: <http://www.ntc-cert.com>

**Product Information:**

|                        |  |
|------------------------|--|
| Client Name:           | SHENZHEN JIANGJING LIGHTING CO., LTD.                            |
| Brand Name:            | JIANGJING  |
| Model Number:          | PLC-45W-14-28-DM-02  |
| Product Type:          | 1x4 Luminaires for Ambient Lighting of Interior Commercial Space |
| Rating Input:          | 120-347Vac, 50/60Hz, 45W   |
| Declared CCT:          | 3000K  |
| Declared Light Output: | 4725 lm  |
| LED Manufacturer:      | ShenZhen JuFei Optoelectronics Co., Ltd.                         |
| LED Model:             | 2835 White SMD LED   |

**Test Information:**

|                              |              |
|------------------------------|--------------|
| Date of Receipt Samples:     | 2018-07-06   |
| Quantity of Receipt Samples: | 1            |
| Sample Number:               | 180706004-S1 |

**Laboratory Information:**

|                            |  |
|----------------------------|--|
| Test Laboratory:           | Dongguan New Testing Centre Co., Ltd   |
| Laboratory Address:        | 3F, No. 1 the 1 <sup>st</sup> North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China |
| Laboratory Contact Name:   | Neil Zhong   |
| Laboratory Contact E-mail: | <a href="mailto:Neil_ntc@163.com">Neil_ntc@163.com</a>   |

**Report Information:**

|                              |              |
|------------------------------|--------------|
| Issued Date of Test Report:  | 2018-07-26   |
| Revised Date of Test Report: | N/A          |
| Test Report No.:             | NTCR18070084 |
| Remark (If applicable):      | N/A          |

**Test Specification:**

|                    |  |
|--------------------|--|
| Date of Test       | 2018-07-17                                   |
| Test Item          | 1. In-Situ Temperature Measured Test (ISTMT) |
| Reference Standard | ANSI/UL 1598-2008 Luminaire                  |

**Test Methods:****1. In-Situ Temperature Measurement Test (ISTMT)**

Maximum LED source operated temperature measurements were taken on one test sample per model with a thermocouple and temperature meter. The SSL sample could reach thermal equilibrium for at least 3 hours before measurements were taken. LED source temperature was measured at the point as indicated by the included diagram in accordance with manufacturers declared hot spot location. The maximum temperature was recorded for the sample. A simulated ceiling or other enclosure may be used in accordance to UL 1598 as applicable.

**In-Situ Temperature Measurement Test Results (Test for PLC-45W-14-28-DM-02):**

**Electrical Data:**

| Voltage (V) | Frequency (Hz) | Current (A) | Wattage (W) | Power Factor | Orientation | Test Time (hours) |
|-------------|----------------|-------------|-------------|--------------|-------------|-------------------|
| 120         | 60             | 0.2786      | 33.29       | 0.9957       | Face Down   | 3.5               |

**Test Result:**

| TC Location        | Measured LED Driver Current (mA) | Temperature (°C) |             |                   | Limit s (°C) | TM-21 Result          |     |                  |     |
|--------------------|----------------------------------|------------------|-------------|-------------------|--------------|-----------------------|-----|------------------|-----|
|                    |                                  | Ambient          | Test Result | Corrected to 25°C |              | Lumen Maintenance (%) |     | Reported (hours) |     |
|                    |                                  |                  |             |                   |              | L70                   | L90 | L70              | L90 |
| TMP <sub>LED</sub> | 58.5                             | 27.2             | 77.5        | 75.0              | 85           | 89.31                 | N/A | >60000           | N/A |

**Test Result from TM-21:**

**L70**

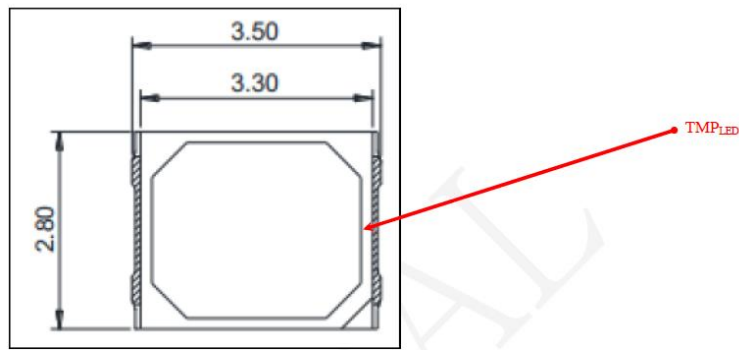
***In-Situ Inputs***

|   |      |
|---|------|
| Drive current for each LED package/array/module (mA):                             | 58.5 |
| In-situ case temperature (T <sub>c</sub> , °C):                                   | 75   |
| Percentage of initial lumens to project to (e.g. for L <sub>70</sub> , enter 70): | 70   |

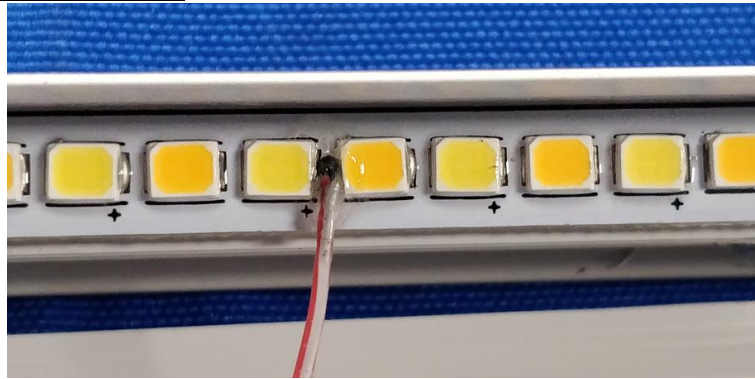
**Results**

|  |        |
|--|--------|
| Time (t) at which to estimate lumen maintenance (hours): | 50,000 |
| Lumen maintenance at time (t) (%):                       | 89.31% |
| Reported L70 (hours):                                    | >60000 |

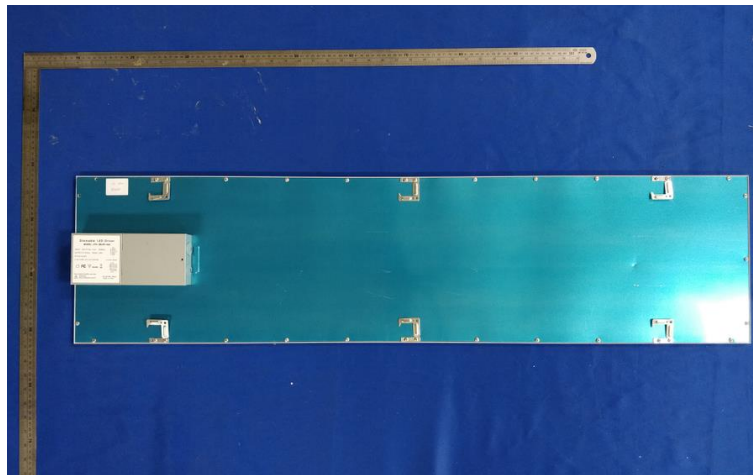
**TMP Position in LM-80:**



**Thermocouple Position on TMP:**



**Photo of Sample:**



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**Equipment List:**

| Equipment ID | Equipment Name               | Last Cal.  | Due Cal.   |
|--------------|------------------------------|------------|------------|
| NTC-F01-031  | Digital Power Meter          | 2017-11-18 | 2018-11-17 |
| NTC-F01-019  | Temperature & Humidity Meter | 2017-11-23 | 2018-11-22 |
| NTCD-S001    | Temperature Data Logger      | 2017-11-27 | 2018-11-26 |