



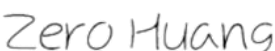

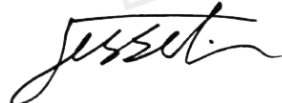
# TEST REPORT

## Of IES LM-79-08

|  |  |
|--|--|
| <b>Kunde:</b><br><i>Client:</i>                                  | PCI Green Technologies Pty Ltd   |
| <b>Adresse:</b><br><i>Address:</i>                               | [REDACTED]   |
| <b>Hersteller:</b><br><i>Manufacturer:</i>                       | Shenzhen Karming Technologies Co.Ltd   |
| <b>Adresse:</b><br><i>Address:</i>                               | 1A401 R401,1A Bld. Shenzhen Software Industry Base, Yuehai St.Nanshan Dist. Shenzhen, China                |
| <b>Name der Marke:</b><br><i>Brand Name:</i>                     | PCI Green Light  |
| <b>Beschreibung des Produkts:</b><br><i>Product Description:</i> | LED street lamp  |
| <b>Modelle:</b><br><i>Models:</i>                                | JML-100  |
| <b>Bewertung:</b><br><i>Rating:</i>                              | AC220-240V, 50/60Hz, 100W  |
| <b>Verfahren:</b><br><i>Method:</i>                              | IES LM-79-08: Approved Method for Electrical and Photometric Measurements of Solid-State Lighting Products |
| <b>Prüfergebnis*:</b><br><i>Test result*:</i>                    | Please see the following test data   |

| <b>Datum der Prüfung:</b><br><i>Date of Test:</i> | <b>Datum der Emission:</b><br><i>Date of Issue:</i> | <b>Klassifizierung:</b><br><i>Classification:</i> | <b>Gegenstand der Prüfung:</b><br><i>Test item:</i> |
|---|---|---|---|
| 2022-02-16-2022-02-18                             | 2023-01-07  | Commission Test                                   | IES LM-79-08  |

**Prüflabor (Testlabor) / Testing Laboratory:**  
Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

| <b>Compiled von/Compiled by:</b>  | <b>Check von/Check by:</b>   | <b>Genehmigt von/Approved by:</b>   |
|---|--|---|
| <br>Zero Huang/ Project Engineer | <br>Ian Luo/ Director | <br>Jesse Liu/ Manager |

**Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.**

*Remark: The duplication of this report or parts of it and its use for advertising purposes is only allowed with permission of the testing laboratory. This report contains the result of examination of the product sample submitted by the appliance. A general statement concerning the quality of the products from the series manufacturer cannot be derived therefore.*

*This report can be used by the customer to claim product certification, approval or endorsement by NVLAP,NIST,or any agency of the Federal Government.*





## Table of Contents

|   |           |
|---|-----------|
| <b>1. Test Method .....</b>   | <b>3</b>  |
| <b>2. Product Information .....</b>   | <b>4</b>  |
| <b>3. Test equipment list.....</b>  | <b>4</b>  |
| <b>4. Integrating Sphere Test Results .....</b>   | <b>5</b>  |
| 4.1 Test Data .....   | 5         |
| 4.2 Spectrum .....  | 5         |
| <b>5. Goniophotometer Test results .....</b>  | <b>6</b>  |
| 5.1 Test Data .....   | 6         |
| 5.2 Luminous Intensity Distribution Diagram and C0 Plane Isolux Diagram (Unit : lx) ..... | 6         |
| 5.3 Zonal Flux Diagram .....  | 7         |
| 5.4 Isocandela Diagram .....  | 8         |
| 5.5 Luminous Distribution Intensity Data .....  | 9         |
| <b>6. Photo of sample .....</b>   | <b>10</b> |





1. Test Method

|  |  |
|--|--|
| Test Item.....   | : Integrating Sphere Test  |
| Ambient Condition .....  | : 24.9°C   |
| Stabilization time .....   | (h): 0.5h  |
| Orientation(burning position) of SSL product during test .....                   | down   |
| Test Method .....  | : The sample was tested according to the IES LM-79-2008.<br>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 rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm. |
| Test Item.....   | : Goniophotometer Test   |
| Ambient Condition.....   | : 24.9°C   |
| Total operated time of the product for measurements including stabilization..... | (h): 1.0h  |
| Orientation(burning position) of SSL product during test .....                   | down   |
| Test Method.....   | : The sample was tested according to the IES LM-79-2008. Photometric paramters were measured using a type C goniophotometer and software. The sample reference plane was located at the center of the sample goniometer at a test distance of 26m from the detectors. The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, Luminous efficacy, zonal flux were calculated from the software taken at 1° vertical intervals and 22.5°horizontal intervals.             |





## 2. Product Information

|                                       |                     |
|---------------------------------------|---------------------|
| Product description.....:             | LED street lamp     |
| Model Number.....:                    | JML-100             |
| Rated Inputs.....:                    | AC220-240V, 50/60Hz |
| Rated Power.....:                     | 100W                |
| Declared CCT.....:                    | 4000K               |
| LED Manufacturer.....:                | N/A                 |
| LED Model.....:                       | N/A                 |
| Forward current of the LED chip.....: | N/A                 |
| Date of Receipt Samples.....:         | February 14, 2022   |
| Quantity of Receipt Samples.....:     | 1 unit              |

## 3. Test equipment list

| Manufacturer         | Description                               | Equipment ID | Model     | Calibration Date | Calibration Due Date |
|----------------------|---|--------------|-----------|------------------|----------------------|
| EVERFINE             | Full-field Speed Goniophotometer          | SLCS-S-112   | GO-R5000  | 2021/06/21       | 2022/06/20           |
| EVERFINE             | Digital Power Meter                       | SLCS-S-103   | PF2010    | 2021/06/21       | 2022/06/20           |
| EVERFINE             | AC Testing Power Source                   | SLCS-S-115   | DPS1060   | 2021/06/21       | 2022/06/20           |
| EVERFINE             | Total Spectral Radiant Flux Standard Lamp | SLCS-S-143   | D908S     | 2021/07/02       | 2022/07/01           |
| SENSING              | 2 Meter Integrating Sphere                | SLCS-S-038   | SPR-3000  | 2021/06/21       | 2022/06/20           |
| YOKOGAWA             | Digital Power Meter                       | SLCS-S-058   | WT310     | 2021/06/21       | 2022/06/20           |
| ALL POWER ELECTRONIC | AC Testing Power Source                   | SLCS-S-111   | APW-105N  | 2021/06/21       | 2022/06/20           |
| SENSING              | Standard Lamp                             | SLCS-S-118   | S11010017 | 2021/07/02       | 2022/07/01           |





### 4. Integrating Sphere Test Results

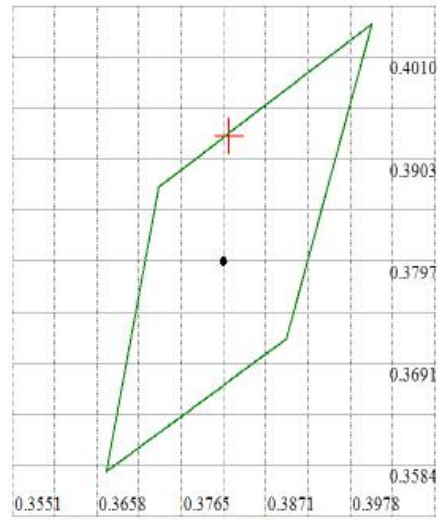
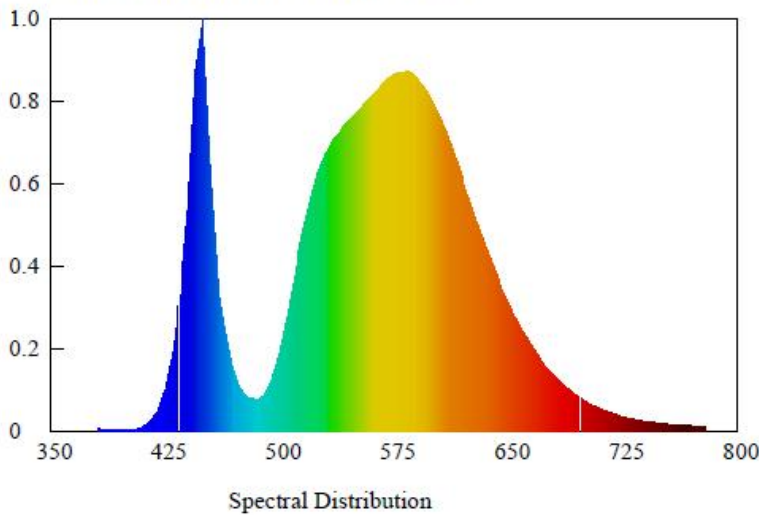
#### 4.1 Test Data

| Test type | Voltage (V AC) | Frequency (Hz) | Current (A) | Power Factor | Power (W) |
|-----------|----------------|----------------|-------------|--------------|-----------|
| Input     | 229.99         | 50.0           | 0.4483      | 0.9820       | 101.29    |

| Test type | CCT (K) | CRI  | Duv      | Luminous flux (lm) | Luminaire efficacy(lm/W) |
|-----------|---------|------|----------|--------------------|--------------------------|
| Output    | 4059    | 67.9 | +0.00671 | 17654.85           | 174.3                    |

#### 4.2 Spectrum

##### Spectroradiometric Parameters



Chromaticity Coordinates:  $x=0.3825$   $y=0.3927$   $u'=0.2202$   $v'=0.5087$

Correlated Color Temperature: 4059 K

Dominant Wavelength: 574.0 nm(E)

Colour Fidelity Index:  $R_f=68$

Gamut Index:  $R_g=92$

Luminous Flux: 17654.85 lm

Purity: 0.3257

Chromaticity Difference:  $+0.00671D_{uv}$

Peak Wavelength: 450.0 nm

Color Ratio:  $K_r=35.9\%$   $K_g=57.7\%$   $K_b=6.3\%$

Bandwidth: 18.2nm

Radiant Flux: 49.753 W

Rendering Index:  $R_a=67.9$

R1=64 R2=74 R3=82 R4=68 R5=63 R6=63 R7=80 R8=48

R9=-47 R10=39 R11=62 R12=30 R13=67 R14=90 R15=57  $R_e=56$





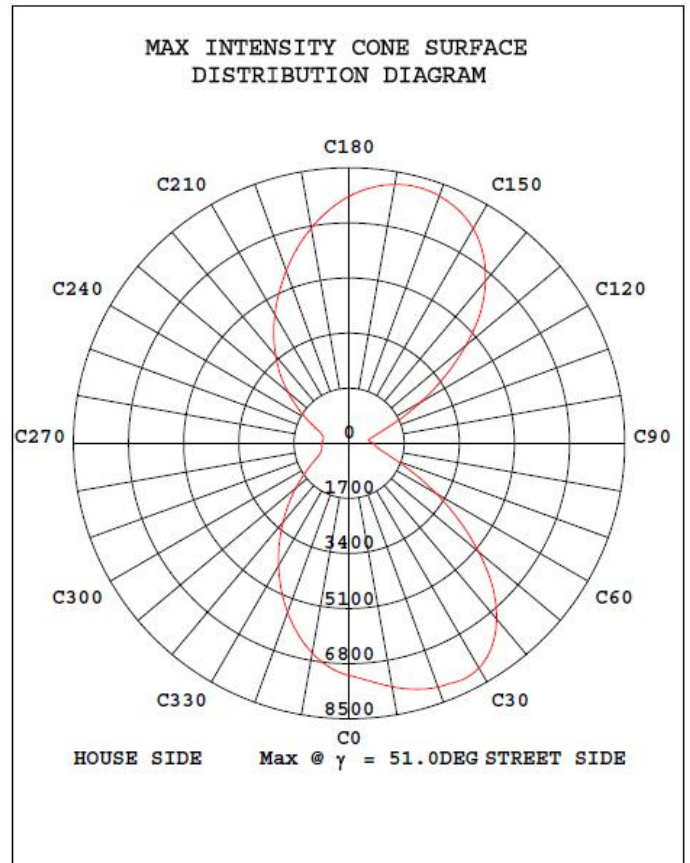
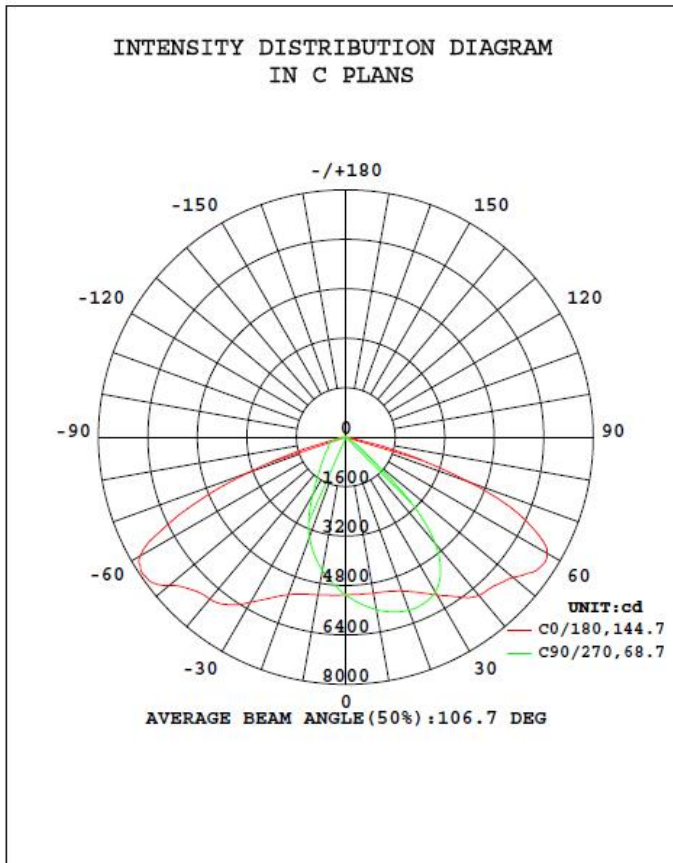
### 5. Goniophotometer Test results

#### 5.1 Test Data

| Test type | Voltage (V AC) | Frequency (Hz) | Current (A) | Power Factor | Power (W) |
|-----------|----------------|----------------|-------------|--------------|-----------|
| Input     | 230.1          | 50.00          | 0.4472      | 0.9823       | 101.1     |

| Test type | Total Flux (lm) | Luminaire efficacy(lm/W) | ZL (0~90°) | ZL (80~90°) |
|-----------|-----------------|--------------------------|------------|-------------|
| Output    | 17637.8         | 174.50                   | 99.7%      | 0.5%        |

#### 5.2 Luminous Intensity Distribution Diagram and C0 Plane Isolux Diagram (Unit : lx)





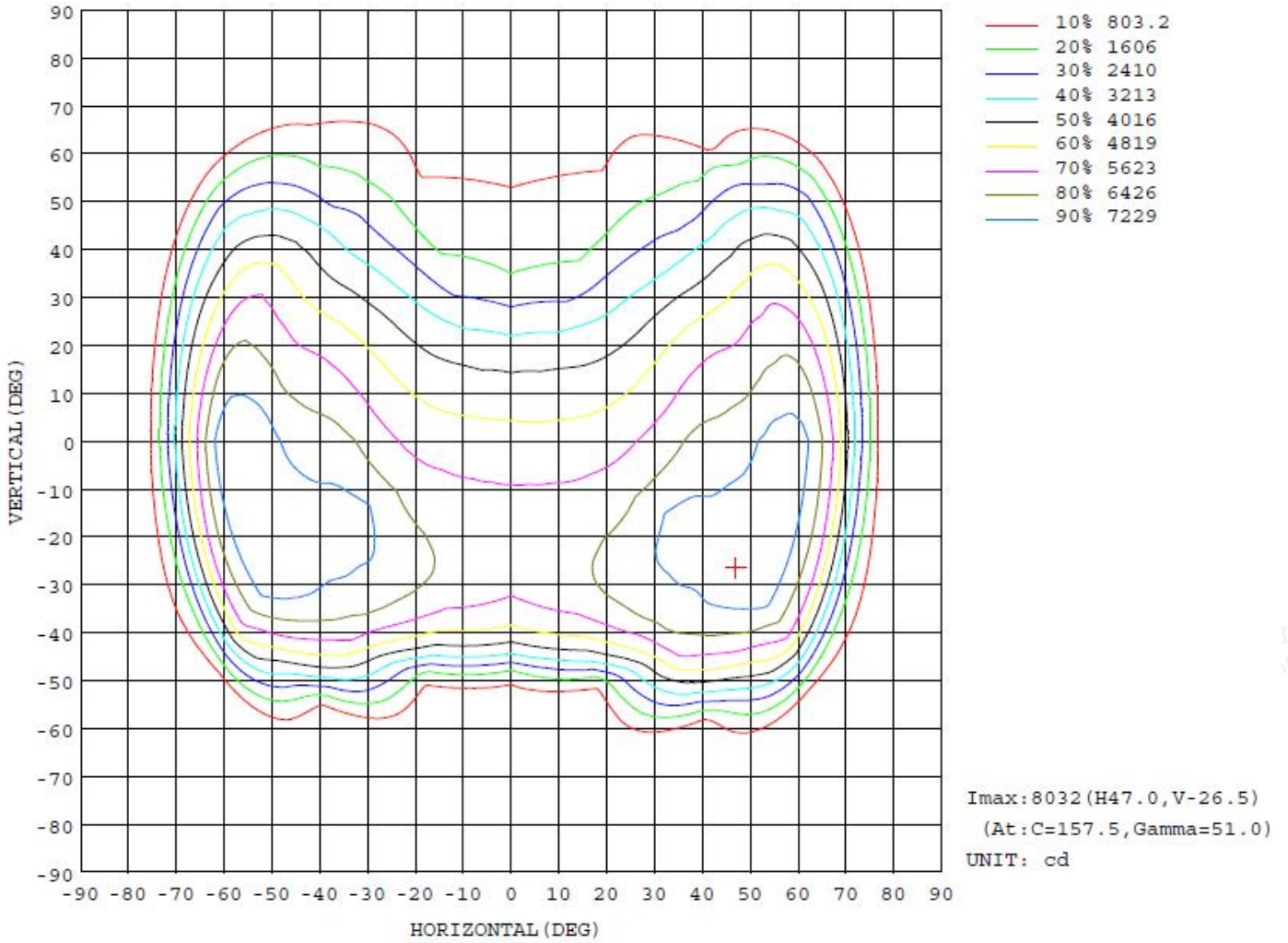
5.3 Zonal Flux Diagram

| y   | C0                    | C45   | C90   | C135  | C180  | C225   | C270   | C315  | y       | Φ zone | Φ total | lum, lamp  |
|-----|-----------------------|-------|-------|-------|-------|--------|--------|-------|---------|--------|---------|------------|
| 10  | 5125                  | 5527  | 5663  | 5578  | 5181  | 4656   | 4379   | 4609  | 0- 10   | 486.5  | 486.5   | 2.76, 2.76 |
| 20  | 5299                  | 5942  | 5959  | 6007  | 5425  | 4209   | 3435   | 4108  | 10- 20  | 1437   | 1923    | 10.9, 10.9 |
| 30  | 5896                  | 6647  | 5780  | 6773  | 6169  | 3916   | 2129   | 3658  | 20- 30  | 2350   | 4273    | 24.2, 24.2 |
| 40  | 6690                  | 7008  | 4500  | 6922  | 6838  | 3637   | 1280   | 3314  | 30- 40  | 3210   | 7482    | 42.4, 42.4 |
| 50  | 7058                  | 6350  | 953.1 | 5922  | 7475  | 3067   | 889.8  | 2711  | 40- 50  | 3591   | 11074   | 62.8, 62.8 |
| 60  | 7507                  | 3929  | 171.8 | 2662  | 7687  | 2194   | 659.7  | 1831  | 50- 60  | 3415   | 14489   | 82.1, 82.1 |
| 70  | 4246                  | 164.7 | 114.5 | 123.9 | 3364  | 1087   | 550.4  | 553.9 | 60- 70  | 2413   | 16902   | 95.8, 95.8 |
| 80  | 215.6                 | 77.77 | 55.29 | 68.13 | 231.1 | 120.8  | 78.73  | 50.99 | 70- 80  | 597.9  | 17500   | 99.2, 99.2 |
| 90  | 130.2                 | 63.97 | 16.63 | 45.70 | 107.1 | 48.25  | 28.96  | 23.39 | 80- 90  | 81.84  | 17582   | 99.7, 99.7 |
| 100 | 5.010                 | 26.13 | 1.235 | 18.49 | 4.960 | 0.9924 | 0.3292 | 1.076 | 90-100  | 17.80  | 17600   | 99.8, 99.8 |
| 110 | 10.68                 | 4.109 | 1.399 | 2.893 | 9.696 | 3.632  | 0.4964 | 2.485 | 100-110 | 4.772  | 17605   | 99.8, 99.8 |
| 120 | 12.57                 | 5.342 | 1.399 | 3.551 | 11.34 | 7.157  | 1.075  | 5.705 | 110-120 | 5.170  | 17610   | 99.8, 99.8 |
| 130 | 14.46                 | 6.485 | 1.644 | 4.298 | 10.76 | 8.711  | 2.890  | 7.690 | 120-130 | 5.851  | 17616   | 99.9, 99.9 |
| 140 | 14.54                 | 7.227 | 3.619 | 5.371 | 9.776 | 8.960  | 7.905  | 9.179 | 130-140 | 5.944  | 17622   | 99.9, 99.9 |
| 150 | 14.13                 | 9.613 | 6.741 | 7.769 | 10.68 | 11.76  | 11.94  | 11.83 | 140-150 | 5.937  | 17627   | 99.9, 99.9 |
| 160 | 14.13                 | 11.26 | 9.460 | 10.08 | 12.32 | 12.82  | 14.57  | 14.63 | 150-160 | 5.317  | 17633   | 100, 100   |
| 170 | 14.54                 | 13.48 | 11.77 | 12.14 | 13.31 | 13.89  | 14.57  | 14.55 | 160-170 | 3.626  | 17636   | 100, 100   |
| 180 | 15.69                 | 15.04 | 14.39 | 14.14 | 15.86 | 15.04  | 14.24  | 13.97 | 170-180 | 1.343  | 17638   | 100, 100   |
| DEG | LUMINOUS INTENSITY:cd |       |       |       |       |        |        |       | UNIT:lm |        |         |            |





5.4 Isocandela Diagram







5.5 Luminous Distribution Intensity Data

Table--1

UNIT: cd

Table with 18 columns (C (DEG) and 17 rows (y (DEG))) containing luminous distribution intensity data. Values range from 5106 to 14.5.

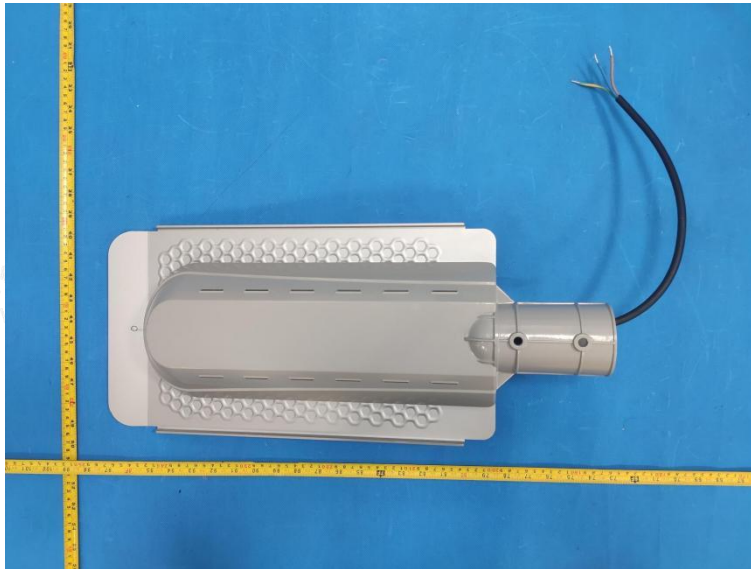




6. Photo of sample

Photo document

Photos of JML-100





**Revision History**

| Revision | Issue Date       | Revision Content   | Revised By |
|----------|------------------|--|------------|
| 001      | January 07, 2023 | At the request of the customer, Change the original report Luminous efficacy to Luminaire efficacy, other information remains unchanged, the original report is invalid. | Zero Huang |
|          |                  |  |            |
|          |                  |  |            |

----- End of test report -----

