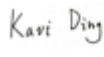


# TEST REPORT

No. ETA22010019P-003 R1 for

## LED One Corporation

12437 Bellegrave Ave. Eastvale, CA 91752

|                        |                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------|
| <b>Service</b>         | Performance Tests according to IESNA LM-79 standard                                           |
| <b>Product Name</b>    | Outdoor Pole/Arm-mounted Area and Roadway Luminaires                                          |
| <b>Model Number</b>    | LOC-RGAL-MW(75/100/120/150)40KD-T3LV                                                          |
| <b>Trade Mark</b>      | N/A                                                                                           |
| <b>Date of Issue</b>   | January 19, 2022                                                                              |
| <b>Date of Tests</b>   | May 07, 2021 through May 17, 2021                                                             |
| <b>Test Laboratory</b> | ETA Testing Technology Co., Ltd.                                                              |
| <b>Address</b>         | Floor 8, Building A, The Western Science Park, Yuhang District, Hangzhou 311121, China        |
| <b>Test Location</b>   | ETA Testing Technology Co., Ltd.                                                              |
| <b>Prepared By</b>     | Kavi Ding  |
| <b>Reviewer</b>        | Sean Wan   |



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REMARKS

|                             |                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------|
| <b>Accreditation Scope*</b> | Operating Frequency, Dimming and Audible Noise test are not in NVLAP accreditation scope. |
| <b>General Disclaimer</b>   | The test results presented in this report relate only to the object tested.               |
| <b>TBD</b>                  | To Be Determined, test case will be conducted.                                            |
| <b>N/A</b>                  | Test case does not apply to the test object.                                              |
| <b>Pass</b>                 | Test item does meet the requirement.                                                      |

REFERENCE STANDARD

| <b>Designation</b>     | <b>Description</b>                                                                                             |
|------------------------|----------------------------------------------------------------------------------------------------------------|
| ANSI C82.77-10-2014    | American National Standard for Lighting Equipment -Harmonic Emission Limits—Related Power Quality Requirements |
| CIE Pub. No. 13.3-1995 | Method of Measuring and Specifying Color Rendering of Light Sources                                            |
| IES LM-79-08           | Electrical and Photometric Measurements of Solid-State Lighting Products (Goniophotometer)                     |
| ANSI C78.377-2015      | Specifications for the Chromaticity of Solid State Lighting Products                                           |

The above standards or test methods were used in part or totally to test.

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## EQUIPMENT LIST

| <b>Equipment Used</b>                                | <b>Model Number</b> | <b>Control Number</b> | <b>Calibration data</b> | <b>Due date</b> |
|------------------------------------------------------|---------------------|-----------------------|-------------------------|-----------------|
| Everfine – Goniophotometer                           | GO-R5000            | ETA1013               | ---                     | ---             |
| AC power source for Goniophotometer System           | DPS1010             | ETA1006               | 2021/12/6               | 2022/12/6       |
| Power Analyzer for Goniophotometer                   | WT310               | ETA1005               | 2021/12/6               | 2022/12/6       |
| Two meter integrating sphere unit                    | Everfine – 2M       | ETA1014               | ---                     | ---             |
| AC power source for Integrating Sphere System        | DPS1010             | ETA1002               | 2021/12/6               | 2022/12/6       |
| Power Analyzer for Integrating Sphere System         | WT310               | ETA1001               | 2021/12/6               | 2022/12/6       |
| Spectroradiometer                                    | HAAS 2000           | ETA1003               | ---                     | ---             |
| DC Linear Power Source                               | WY12010             | ETA1004               | 2021/12/6               | 2022/12/6       |
| AC power source for Integrating Sphere System        | DPS1010             | ETA1006               | 2021/12/6               | 2022/12/6       |
| Power Analyzer for Integrating Sphere System         | WT310               | ETA1001               | 2021/12/6               | 2022/12/6       |
| Illumination Photometer                              | Z-10                | ETA1007               | 2021/12/6               | 2022/12/6       |
| Luminous intensity Standard lamp For Goniophotometer | ---                 | ETA1008               | 2021/3/21               | 2022/3/21       |
| Standard lamp                                        | D204                | ETA1009               | 2021/3/21               | 2022/3/21       |
| Digital thermometer                                  | TES-1311A           | ETA1141               | 2021/12/6               | 2022/12/6       |
| Tektronix Oscilloscope                               | DPO2012B            | ETA1187               | 2021/4/30               | 2022/4/30       |

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## TEST METHOD

### Photometric, Chromaticity and Electrical Measurements

No seasoning was performed in accordance with IESNA LM-79

Photometric and chromaticity were measured using a 2 meters integrating sphere spectral lamp measurement system. Maintain the ambient temperature at  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer (bandwidth: 5nm) attached to the detector port of the integrating sphere. Each fixture was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to NIST. Lamp efficacy (lumens per watt) for each fixture model was then computed based on the luminous flux result.

Prior to measurement, stabilize the fixture as specified in section 5.0 of IES LM-79-08 Calculate the stabilization variation as [(maximum—minimum)/minimum] of at least three readings of the input power and lumen output over a period of 30 minutes, taken 15 minutes apart.

Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter, model WT310.

A goniophotometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniophotometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the power analyzer YOKOGAWA - Digital Power Meter, model WT310.

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### PRODUCT INFORMATION

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Manufacturer                    | N/A                                  |
| Address                         | N/A                                  |
| Trade Mark                      | N/A                                  |
| Sample Quantity                 | 1 pcs                                |
| Sample Number                   | 1210507-01-001                       |
| Model Number                    | LOC-RGAL-MW(75/100/120/150)40KD-T3LV |
| Nominal Operate Voltage (V; Hz) | AC 120-277V, 50/60Hz                 |
| Nominal Power                   | 75W; 100W; 120W; 150W                |
| Nominal Lumen Output            | 12000lm; 15500lm; 18000lm; 22500lm   |
| Nominal CCT                     | 4000K; 5000K                         |
| Nominal CRI(Ra)                 | ≥70                                  |
| Nominal Life                    | 50000hours                           |
| Lighting Source Model Number    | LUXEON 3030 2D                       |
| Lighting Source Manufacturer    | Lumileds                             |

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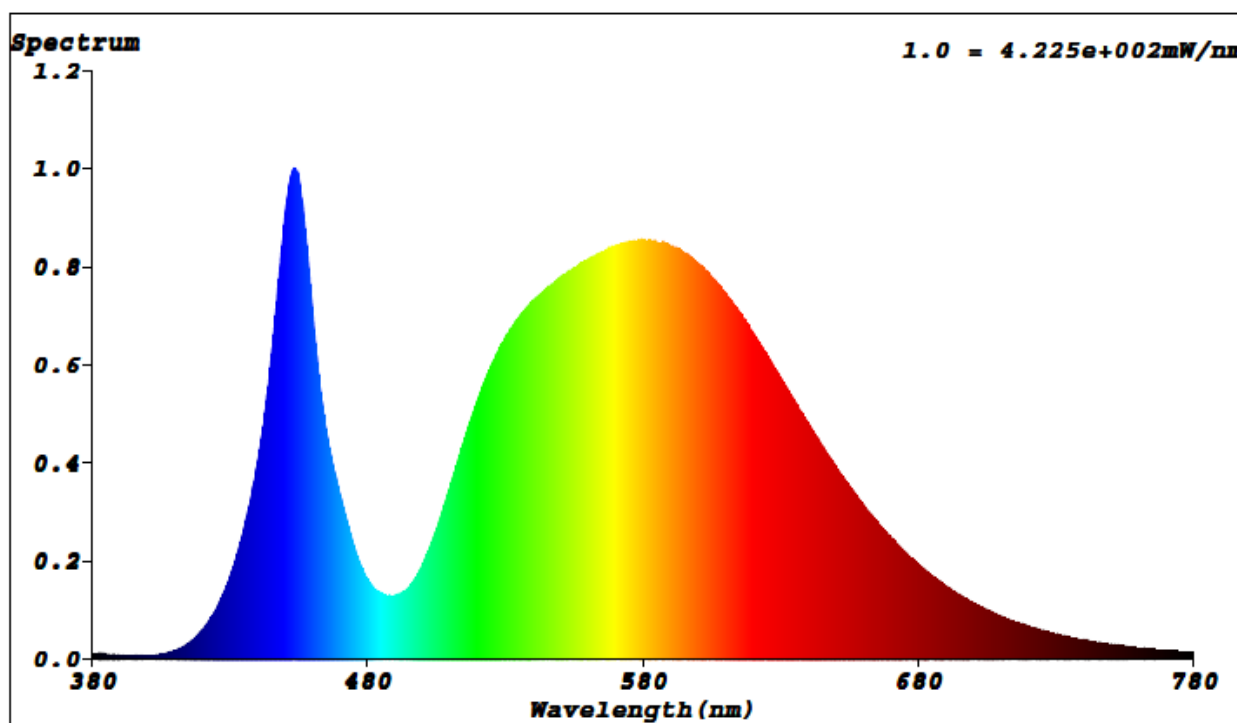
## TEST SUMMARY

Test Model No: LOC-RGAL-MW(75/100/120/150)40KD-T3LV

### Photometric and Electrical Test Data

| Input Voltage (V) | Frequency (Hz) | ITHD | Input Current (A) | Input Power (W) | Power Factor | Lumen Output (Lumens) | Efficiency Lumen/w |
|-------------------|----------------|------|-------------------|-----------------|--------------|-----------------------|--------------------|
| 120.0             | 60.0           | 8.2% | 1.258             | 150.32          | 0.996        | 22032.77              | 146.57             |
| CCT (K)           | CRI Ra         | R9   | x CIE1931         | y CIE1931       | u' CIE1976   | v' CIE1976            | Duv                |
| 4075              | 73.3           | -19  | 0.3787            | 0.3807          | 0.2224       | 0.5031                | 0.0024             |

### Spectral Plots

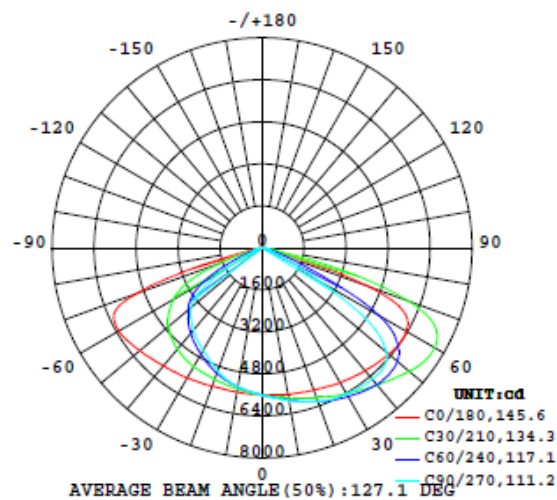


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**Luminous Intensity Distribution Test Plots**

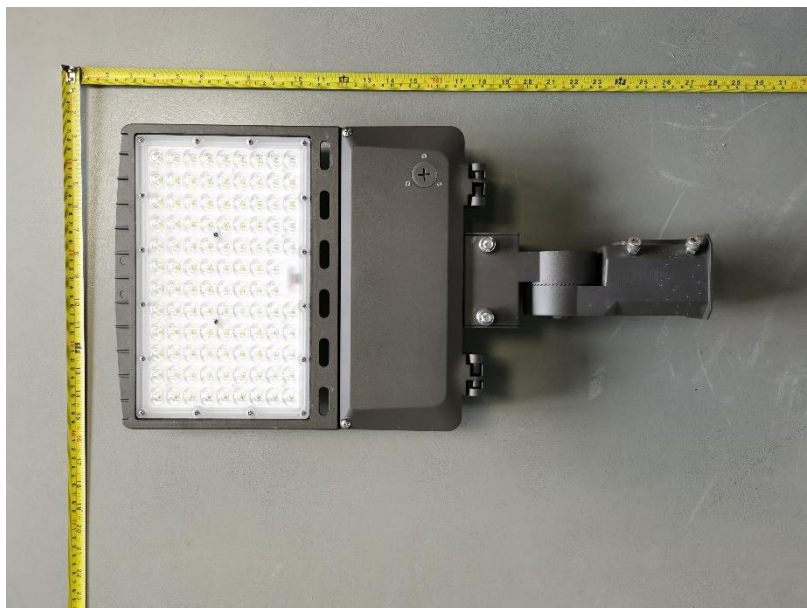
| Angle | 0      | 22.5   | 45     | 67.5   | 90     |
|-------|--------|--------|--------|--------|--------|
| 0     | 5606.5 | 5606.5 | 5606.5 | 5606.5 | 5606.5 |
| 5     | 5625.6 | 5671.2 | 5708.4 | 5728.6 | 5733.7 |
| 10    | 5655.1 | 5757.7 | 5836.4 | 5890.4 | 5902.7 |
| 15    | 5701.8 | 5857.9 | 5997.0 | 6073.6 | 6088.8 |
| 20    | 5760.1 | 5987.2 | 6172.2 | 6241.2 | 6233.9 |
| 25    | 5833.4 | 6139.6 | 6355.7 | 6390.3 | 6349.1 |
| 30    | 5921.9 | 6294.9 | 6538.7 | 6510.1 | 6429.4 |
| 35    | 6010.8 | 6465.6 | 6725.4 | 6621.0 | 6485.4 |
| 40    | 6102.1 | 6652.8 | 6905.1 | 6703.2 | 6531.0 |
| 45    | 6204.1 | 6874.6 | 7077.2 | 6704.4 | 6506.1 |
| 50    | 6300.1 | 7119.7 | 7179.6 | 6516.8 | 6174.1 |
| 55    | 6374.5 | 7366.3 | 7114.1 | 5870.3 | 5039.6 |
| 60    | 6344.5 | 7530.2 | 6730.9 | 4082.6 | 2467.6 |
| 65    | 6034.0 | 7389.7 | 5644.8 | 1612.6 | 884.0  |
| 70    | 4342.3 | 6249.4 | 3120.5 | 612.6  | 404.1  |
| 75    | 1086.2 | 2765.8 | 905.4  | 327.5  | 271.3  |
| 80    | 238.6  | 378.5  | 245.3  | 204.7  | 176.3  |
| 85    | 101.7  | 138.2  | 116.8  | 102.7  | 92.7   |
| 90    | 7.4    | 22.7   | 14.3   | 24.5   | 16.6   |
| 95    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| 100   | 0.2    | 0.1    | 0.1    | 0.1    | 0.1    |
| 105   | 0.4    | 0.2    | 0.1    | 0.1    | 0.1    |
| 110   | 0.5    | 0.4    | 0.2    | 0.2    | 0.1    |
| 115   | 0.6    | 0.5    | 0.3    | 0.3    | 0.2    |
| 120   | 0.7    | 0.6    | 0.5    | 0.4    | 0.4    |
| 125   | 0.9    | 0.8    | 0.7    | 0.6    | 0.5    |
| 130   | 1.1    | 1.0    | 0.9    | 0.8    | 0.8    |
| 135   | 1.2    | 1.1    | 1.0    | 1.0    | 1.0    |
| 140   | 1.2    | 1.2    | 1.2    | 1.1    | 1.1    |
| 145   | 1.3    | 1.3    | 1.3    | 1.3    | 1.3    |
| 150   | 1.4    | 1.4    | 1.5    | 1.4    | 1.5    |
| 155   | 1.3    | 1.4    | 1.4    | 1.5    | 1.5    |
| 160   | 1.3    | 1.4    | 1.4    | 1.4    | 1.4    |
| 165   | 1.3    | 1.4    | 1.4    | 1.4    | 1.4    |
| 170   | 1.3    | 1.4    | 1.4    | 1.4    | 1.4    |
| 175   | 1.0    | 1.1    | 1.2    | 1.2    | 1.2    |
| 180   | 0.7    | 0.7    | 0.6    | 0.6    | 0.6    |



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### PRODUCT PICTURES



LOC-RGAL-MW(75/100/120/150)40KD-T3LV

None Attachment

\*\*\*\*\* End of Report \*\*\*\*\*