






# LM-84-14 TEST REPORT

## Applied for SASO-2927

<b>Kunde:</b> <i>Client:</i>	AOK Industrial Company Limited
<b>Adresse:</b> <i>Address:</i>	Building 1, Shengzuozhi Technology Industrial Park, Shajing Street, Shenzhen City, Guangdong, P.R. China
<b>Hersteller:</b> <i>Manufacturer:</i>	AOK Industrial Company Limited
<b>Adresse:</b> <i>Address:</i>	Building 1, Shengzuozhi Technology Industrial Park, Shajing Street, Shenzhen City, Guangdong, P.R. China
<b>Name der Marke:</b> <i>Brand Name:</i>	
<b>Beschreibung des Produkts:</b> <i>Product Description:</i>	LED STREET LIGHT
<b>Modelle:</b> <i>Models:</i>	AOK-150WiL02-NV-L3-00-40
<b>Bewertung:</b> <i>Rating:</i>	AC120-277V, 50/60Hz, 150W, 1560mA
<b>Verfahren:</b> <i>Method:</i>	IES LM-84-14: Approved Method for Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires SASO 2927: 2019:Energy efficiency functionality and labelling requirements for lighting products – Part 3: Street lighting
<b>Prüfergebnis*:</b> <i>Test result*:</i>	/

<b>Datum der Prüfung:</b> <i>Date of Test:</i>	<b>Datum der Emission:</b> <i>Date of Issue:</i>	<b>Klassifizierung:</b> <i>Classification:</i>	<b>Gegenstand der Prüfung:</b> <i>Test item:</i>
2020-10-10--2021-06-21	2021-09-03	Commission Test	LM-84-14

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

<b>Test von/Prepare by:</b>  Seth Cai/ Project Engineer	<b>Check von/Check by:</b>  Ian Luo/ Director	<b>Genehmigt von/Approved by:</b>  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.*



## Table of Contents

1. Test Method.....	3
1.1 Photometric and Electrical Measurement.....	3
1.2 Luminous Flux and Color Maintenance Measurement.....	3
1.3 In-Situ Temperature Measurement Test (ISTMT).....	3
2. Product Information.....	4
3. Test equipment list.....	4
4. Test Results.....	5
5. Photo of sample.....	6



## 1. Test Method

### 1.1 Photometric and Electrical Measurement

Test Standard.....: IES LM-79-08:Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

Ambient Condition .....: 25.1°C

Stabilization time .....: 0.5h

Orientation(burning position) of SSL product during test .....: 5 base-up and 5 base-down

Test Method .....: 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. Lumen output, Lamp efficacy,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. Input power,Power factor,Voltage ,Current,were calculated from the digital power meter.

### 1.2 Luminous Flux and Color Maintenance Measurement

Test Standard.....: IES LM-84: Approved Method: Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires

Ambient Condition .....: 50°C / 60%RH

Orientation(burning position) of SSL product during test .....: 5 base-up and 5 base-down

Test Method .....: Season the LED Lamp from 0 hours to 6000 hours.

The sample are operated steady state (no cycling) for a period of 6000 hours, checked the lumen flux and Chromaticity Shift every 1000 hours. The samples are inspected at regular intervals ( 24 hours ) throughout the 6000 hours. The time and date of failure of each lamp is recorded. The actual elapsed time for each light package is in hour.

### 1.3 In-Situ Temperature Measurement Test (ISTMT)

Test Standard.....: Maximum led source operating temperature measurements were taken on one test sample per model with a thermocouple and temperature meter. The SSL sample was allowed to 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.



## 2. Product Information

Product description.....:	LED STREET LIGHT
Model Number.....:	AOK-150WiL02-NV-L3-00-40
Rated Inputs.....:	AC120-277V, 50/60Hz
Rated Power.....:	150W
Declared CCT.....:	4000K
LED Manufacturer.....:	LUMILEDS LLC.
LED Model.....:	L130-4080003000X21
Date of Receipt Samples.....:	October 10, 2020
Quantity of Receipt Samples.....:	10 unit

## 3. Test equipment list

Manufacturer	Description	Equipment ID	Model	Calibration Date	Calibration Due Date
SENSING	Integrating Sphere	SLCS-S-038	SPR-3000	2020/07/02	2021/07/01
YOKOGAWA	Digital Power Meter	SLCS-S-058	WT310	2020/06/24	2021/06/23
ALL POWER ELECTRONIC	AC Testing Power Source	SLCS-S-111	APW-105N	2020/06/24	2021/06/23
SENSING	Standard Lamp	SLCS-S-118	S11010017	2020/07/02	2021/07/01



#### 4. Test Results

Test Voltage (V):		120V		Frequency(Hz):			60		Test Voltage (V):	277V
Sample No.	Power (W)	Power Factor	Luminous Flux $\Phi_{use}$ (lm)	Efficacy (lm/W)	Beam angle ( $^{\circ}$ )	Color Temp (CCT)	Color rendering (Ra)	SDCM	Power (W)	Luminous Flux $\Phi_{use}$ (lm)
1	150.90	0.998	22005.10	145.83	109.5	3941	82.8	2.9	149.02	21653.31
2	150.24	0.996	21936.64	146.01	109.2	3958	82.5	3.5	149.61	21751.69
3	150.99	0.998	22112.59	146.45	108.8	3964	83.0	3.0	149.28	21689.10
4	150.24	0.999	21903.61	145.79	109.3	3908	82.4	2.5	148.95	21603.55
5	151.06	0.994	22189.57	146.89	109.9	3972	82.6	2.9	149.06	21667.89
6	150.64	0.998	21986.02	145.95	109.8	3936	83.3	3.1	149.24	21704.84
7	150.71	0.996	21957.87	145.70	108.7	3926	82.8	3.2	148.79	21534.79
8	150.59	0.998	21908.63	145.49	109.2	3981	82.4	2.5	149.33	21722.59
9	150.39	0.995	21885.69	145.53	109.6	3914	82.9	2.9	149.50	21763.96
10	150.77	0.993	21979.31	145.78	109.1	3962	83.1	3.3	149.72	21808.54
Avg.	150.65	0.997	21986.50	145.94	109.3	3946	82.8	3.0	149.25	21690.03

Sample No.	Starting time (s)	Switching Cycle	Premature Failure Rate 1000h	Luminous Flux $\Phi_{use}$ (lm)	Luminous flux (lm) After 6000h	Lumen Maintenance at 6000h (%)	Survival factor at 6000h
1	0.205	15000	P	22005.10	20255.69	92.05%	P
2	0.196	15000	P	21936.64	20146.61	91.84%	P
3	0.216	15000	P	22112.59	20268.40	91.66%	P
4	0.210	15000	P	21903.61	20197.32	92.21%	P
5	0.208	15000	P	22189.57	20356.71	91.74%	P
6	0.199	15000	P	21986.02	20137.00	91.59%	P
7	0.206	15000	P	21957.87	20152.93	91.78%	P
8	0.201	15000	P	21908.63	20083.64	91.67%	P
9	0.200	15000	P	21885.69	20152.34	92.08%	P
10	0.193	15000	P	21979.31	20256.13	92.16%	P
Avg.	0.203	15000	P	21986.50	20200.68	91.88%	P



## 5. Photo of sample

### Photo document

Photos of AOK-150WiL02-NV-L3-00-40



**Revision History**

Revision	Issue Date	Revision Content	Revised By
V1.1	2021/09/03	Modify the Client 、 Manufacturer 、 Model and Trademark	Seth Cai

**Remark:** This report is based on the report No. LCS200722080BS. This report is invalid without the original report.

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