TEST REPORT

Of IES LM-82-12

Kunde: *Client:*	MIC Optoelectronic Co., Ltd
Adresse: *Address:*	2nd floor,Third Building, 97# AiNan Road,LongDong, BaoLong Street, LongGang District, Shenzhen, China
Hersteller: *Manufacturer:*	MIC Optoelectronic Co., Ltd
Adresse: *Address:*	2nd floor,Third Building, 97# AiNan Road,LongDong, BaoLong Street, LongGang District, Shenzhen, China
Name der Marke: *Brand Name:*	MIC
Beschreibungdes Produkts: *Product Description:*	LED Street Light
Modelle: *Models:*	MSL-F150
Bewertung: *Rating:*	AC100-240V, 50/60Hz, 150W
Verfahren: *Method:*	IES LM-82-12: Approved Method for the Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature
Prüfergebnis*: *Test result*:*	Please see the following test data

Datum der Prüfung: *Date of Test:*	**Datum der Emission:** *Date of Issue:*	**Klassifizierung:** *Classification:*	**Gegenstand der Prüfung:** *Test item:*
2023-12-08	2023-12-25	Commission Test	IES LM-82-12

Prüflabor (Testlabor) / Testing Laboratory:
Shenzhen Southern LCS Compliance Testing Laboratory Ltd.
Add: 101-201, No.39 Buliding, Xialang Industrial Zone, Heshuikou Community, Matian Street Guangming New District, Shenzhen,Guangdong Prov. 518000 China.

Compiled von/Compiled by:	**Check von**/Check by:	**Genehmigt von**/Approved by:
Zero Huang	Ian Luo	Jesse Liu
Zero Huang/ Project Engineer	Ian Luo/ Director	Jesse Liu/ Manager

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1. Test Method

Ambient Condition.....:	24.9℃
Number of hours operated prior to Measurement .....(h):	0h
Stabilization time .....(h):	1h/time
Orientation(burning position) of SSL product during test.....:	Down
Test Item.....:	Room Temperature Initial Measurement Tb =Tb,0 (71.0°C)
Test Method .....:	The sample was tested according to the IES LM-79-2008. Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25º C ±1ºC. 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 self-absorption correction used for integrating sphere, then 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.....:	Measurement at First Elevated Temperature Tb,1 =Tb,0 + 25°C (96.0°C)
Test Method.....:	The sample was tested with a device that controls the temperature Tb of the UUT, so that Tb reaches no lower than Tb = Tb,0 + 25°C. Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 60º C ± 1º C. 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 self-absorption correction used for integrating sphere, then 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.....:	Measurement at Second Elevated Temperature Tb,2 =88.4°C
Test Method.....:	The sample was tested with a device that controls the temperature Tb of the UUT, so that Tb reaches no lower than Tb,0 = 71.0°C. Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 50º C ± 1º C. 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 self-absorption correction used for integrating sphere, then 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.

2. Product Information

Product description.....:	LED Street Light
Model Number.....:	MSL-F150
Rated Inputs.....:	AC100-240V
Rated Power.....:	150W
Declared CCT.....:	6000K
LED Manufacturer.....:	N/A
LED Model.....:	N/A
LED Package, Array or Module.....:	N/A
Forward current of the LED chip.....:	N/A
Date of Receipt Samples.....:	December 06, 2023
Quantity of Receipt Samples.....:	1 unit

3. Test equipment list

Description	Equipment ID	Model	Calibration Date	Calibration Due Date
2 Meter Integrating Sphere	SLCS-S-312	HAAS2000	2023/06/15	2024/06/14
Digital Power Meter	SLCS-S-309	PF9810	2023/06/15	2024/06/14
AC Testing Power Source	SLCS-S-310	DPS1005	2023/06/15	2024/06/14
DC Testing Power Source	SLCS-S-311	WY605	2023/06/15	2024/06/14
Standard Lamp	SLCS-S-313	DC24V/50W	2023/07/05	2024/07/04

4. Test results

4.1 Room Temperature Initial Measurement Tb =Tb,0 (71.0°C) :Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	229.91	50.0	0.6577	0.9841	148.8

Test type	Luminous Flux (lm)	Luminous efficacy(lm/w)	CCT(K)	Color Rendering Index (Ra)
Output	26058	175.12	6525	71.9

4.2 Measurement at First Elevated Temperature Tb,1 =Tb,0 + 25°C (96.0°C):Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	229.91	50.0	0.6452	0.9843	146.0

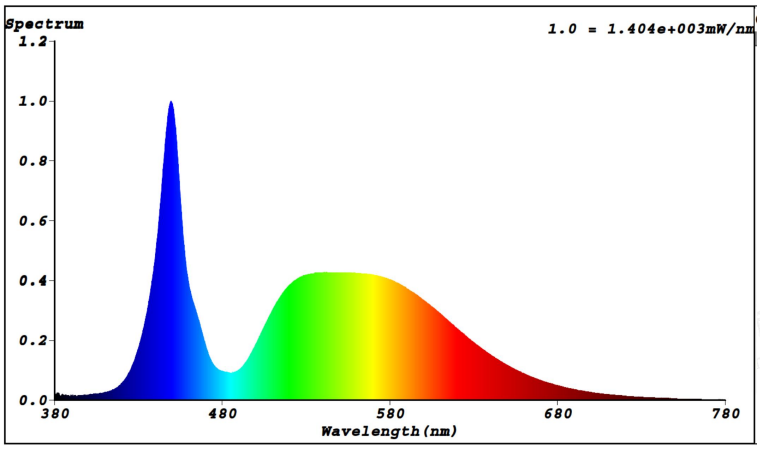
Test type	Luminous Flux (lm)	Luminous efficacy(lm/w)	CCT(K)	Color Rendering Index (Ra)
Output	24870	170.34	6533	72.0

4.3 Measurement at Second Elevated Temperature Tb,2 =88.4°C : Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	229.91	50.0	0.6519	0.9842	147.5

Test type	Luminous Flux (lm)	Luminous efficacy(lm/w)	CCT(K)	Color Rendering Index (Ra)
Output	25479	172.74	6529	71.9

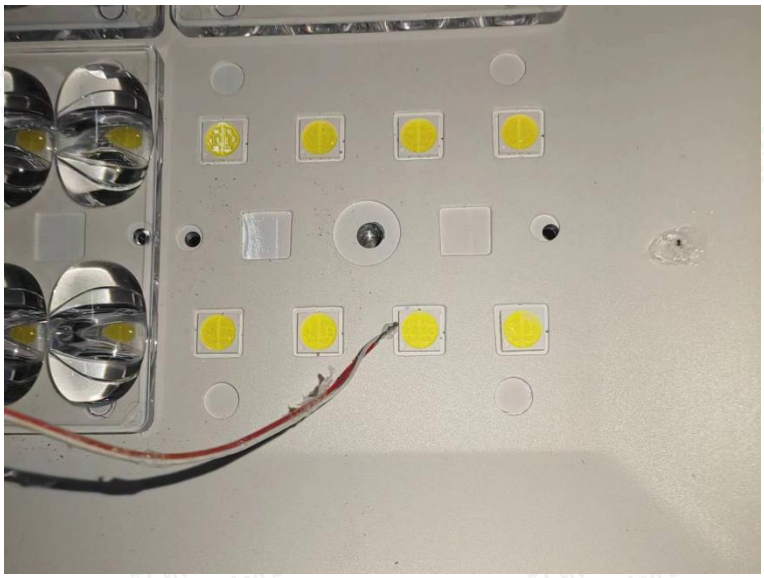
4.4 Spectrum



4.5 Result Summary

	Room Temperaturel Initial Measurement Tb,0	First Elevated Temperature Tb,1 =Tb,0 + 25°C	Second Elevated Temperature Tb,2 =88.4°C
Ambient (ºC)	**24.9**	**59.9**	**50.1**
Measured Temperature of Tb (°C)	**71.0**	**96.0**	**88.4**
Input Power (W)	**148.8**	**146.0**	**147.5**
Input Voltage (V)	**229.91**	**229.91**	**229.91**
Input Current (A)	**0.6577**	**0.6452**	**0.6519**
Luminous Flux (lm)	**26058**	**24870**	**25479**
Luminous Efficacy (lm/W)	**175.12**	**170.34**	**172.74**
CIE Chromaticity (u')	**0.1952**	**0.1949**	**0.1950**
CIE Chromaticity (v')	**0.4708**	**0.4709**	**0.4708**
Correlated Color Temperature (CCT)	**6525**	**6533**	**6529**

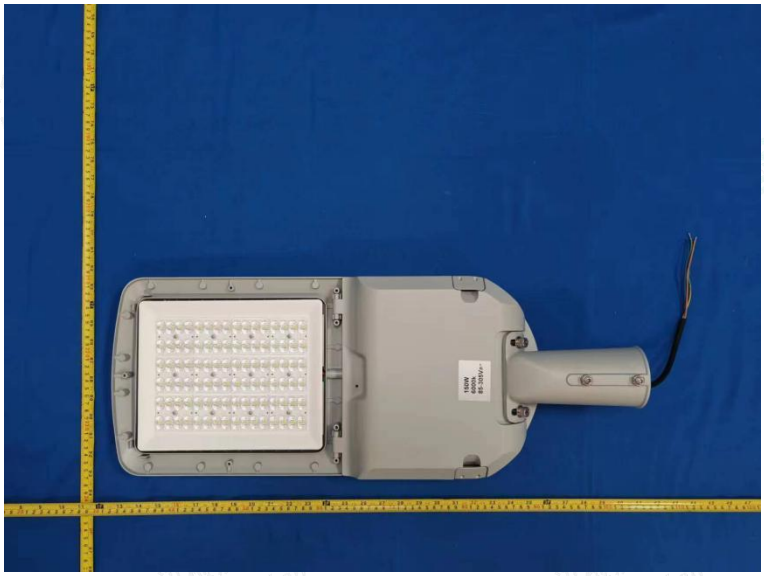
5. UUT temperature monitoring point, Tb

Photo document
Photos of MSL-F150 

6. Photo of sample

Photo document

Photos of MSL-F150



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