ISTMT Test report

Architectural Flood and Spot Luminaires

HD-FL02-1000WD-C3000K

Tested under

Luminaires - ANSI/UL 1598:2008 (Secs. 19.7, 19.10-16)

Applicant:

Shenzhen Huadian Lighting Co.,LTD.

2F Building A Jinkaijin Industrial Park Shuitian Shiyan Town Baoan District 518108 Shenzhen, CHINA

Prepared By:

Shenzhen Belling Efficiency Testing Lab Co.,Ltd
1 Floor, No. 1 Building, Meibaohe Industrial Park, Dalang Street, Longhua District,
Shenzhen, Guangdong Prov. 518101, China

Ike. li

Jasonzhou

Complied by: Ike Li	**Review by: Jason zhou**
Project Engineer	**Technical Manager**

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen Belling Efficiency Testing Lab Co.,Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement By NVLAP, NIST, or any agency of the U.S. Government.

Test description: Only conduct temperature for LED according to UL1598.

Test Lab:	Shenzhen Belling Efficiency Testing Lab Co.,Ltd
Address:	1 Floor, No. 1 Building, Meibaohe Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong Prov. 518101, China.

Environment:	
Accommodations and Environmental conditions, including proper power source meet the requirements of the test standard or UL default criteria (ISO/IEC 17025 Clause 5.3.1, 5.3.2. 5.3.3, 5.3.4)	[X]Yes [ ]No []N/A
Personnel:	
Lab Management shall authorize personnel to operate particular types of equipment used in testing. (ISO/IEC 17025 5.2.5)	[X]Yes [ ]No
Equipment:	
Testing is being conducted within the test equipment calibration dates. (See Test Instrument Information Page and ISO/IEC 17025 5.5.1, 5.5.2, 5.5.4, 5.5.5, 5.5.8,)	[X]Yes [ ]No
Calibrations for testing equipment are traceable to SI Units. Refer to 00-OP-C0032 (Calibration Certificate Analysis). (ISO/IEC 17025 5.6.2.2)	[X]Yes [ ]No
Critical Consumables:	
Critical consumables are compliant with test standard requirements. (ISO/IEC 17025 Clause 4.6)	[X]Yes [ ]No [ ]N/A
Sample Identification:	
Identification of items to be tested has been made (e.g. model no., Serial No., etc.) (See Test Sample Identification page and ISO/IEC 17025 Clause 5.8.2)	[X]Yes [ ]No
Summary:	
The test facility was deemed to have the environment and capabilities necessary to perform the tests included in this data package.	

TEST EQUIPMENT INFORMATION

	BELL #	Equipment Description	Model No.	Manufacturer	Serial No.	Last Cal	Cal Due	Cal Freq
1	BL802	Power meter	PF9811	Everfine	G185824 CM1371140	2018-06-13	2019-06-12	1 year
2	BL804	Hybrid Recorder	34970A	AGILENT	US37033626	2018-06-07	2019-06-06	1 year
3	BL819	Environment Measurer	TA218B	KTJ	N/A	2018-06-24	2019-06-23	1 year
4	BL861	Hybrid Recorder	34970A	KEYSIGHT	MY44095108	2018-06-07	2019-06-06	1 year
5	BL834-1	Thermocouple K	Type K	OMEGA	N/A	2018-06-24	2019-06-23	1 year
6	BL860	Electronic clock	QUARTZ	CHUANGRONG	823	2018-07-20	2019-07-19	1 year

TEST SAMPLE IDENTIFICATION:

The table below is provided to provide correlation of sample numbers to specific product related information. Refer to this table when a test identifies a test sample by "Sample No." only.

Model No.	Date Received	Test No.+	Sample No.	Ratings
HD-FL02-1000WD-C3000K	2018-11-20	1	S1	100-277V, 50/60Hz, 1000W 3000K

Date of Test:	2018-12-26	Date of issue:	2018-12-29	Technician:	Ike Li
Applicant:	Shenzhen Huadian Lighting Co.,LTD.				
Address:	2F Building A Jinkaijin Industrial Park Shuitian Shiyan Town Baoan District 518108 Shenzhen, CHINA				
Product Description:	Architectural Flood and Spot Luminaires				

NORMAL TEMPERATURE MEASUREMENT UL 1598; Cl. 19

METHOD

GENERAL REQUIREMENTS PERTAINING TO SURFACE MOUNTED LUMINAIRES

Unless otherwise noted under METHOD, General requirements are applied.

The test was conducted in a draft-free room as specified in clause 19.10.3 or 19.11.3.

The rated wattage of any lamp used for the temperature test was the highest wattage rating marked on the luminaire.

INSTALLATION AND SUPPORT (Clause 19.1)

The luminaire was installed or supported to simulate intended usage, in accordance with the manufacturer's instructions. Where more than one installation methods are specified the luminaire was installed to result in the maximum operating temperatures.

A luminaire part designed to be adjustable by the user was positioned or adjusted to cause maximum heating of the luminaire, mounting surface, or both.

A luminaire part that was marked in accordance with Table 20.1.1, Item 2.31, was positioned for the temperature test in accordance with the marking.

TEMPERATURE TEST STABILIZATION (Clause 19.2)

Temperatures were measured after they stabilized, when:

The test was run for a minimum of 7.5 h. or the test was run for a minimum of 3 h, and then three successive readings taken at 15 min intervals were within 1°C of one another and not rising. (Temperature shall be measured **after** the test has been running for a minimum of 3 h)

FREQUENCY (Clause 19.4)

Frequency-sensitive equipment was tested at rated frequency, and equipment marked with more than one frequency was tested at the frequency that produced the maximum temperature rise.

AMBIENT TEMPERATURE (Clause 19.5)

The tests were conducted in an ambient temperature of 25 ± 5°C. Ambient temperature variations above or below 25°C were respectively subtracted from or added to temperatures recorded at points on the luminaire.

The ambient temperature was measured by means of a thermocouple or thermometer.

The thermocouple intended to measure ambient temperature was immersed in
0.5 oz (15 ml) of mineral oil in a glass container or attached to a metal mass of approximately 1 oz (30 g) that was within a cylindrical metal shield open at the top and bottom. The glass container or cylindrical metal shield was placed in the horizontal plane passing through the midpoint of the luminaire's vertical axis at a horizontal distance from the luminaire equal to at least 3 times the luminaire diameter.

[ ] Tests were conducted in an elevated ambient temperature with a source of heated air providing the elevated temperature for which the luminaire was marked. The maximum airflow past the luminaire was less than 9.1 m/min (30 ft/min). Maximum variations of 5°C from the intended ambient temperature was added to or subtracted from the observed temperature readings.

THERMOCOUPLES:

Reference Section 19.7 of UL 1598.

THERMOCOUPLES CONTACT:

Thermocouples were in contact with the TMP LED location described in LM-80 test report. In order to gain the maximum temperature, if appropriate, more than one thermocouple were contact in these locations. For details information, please refer to clause 3.3 for the photo of thermocouple contact.

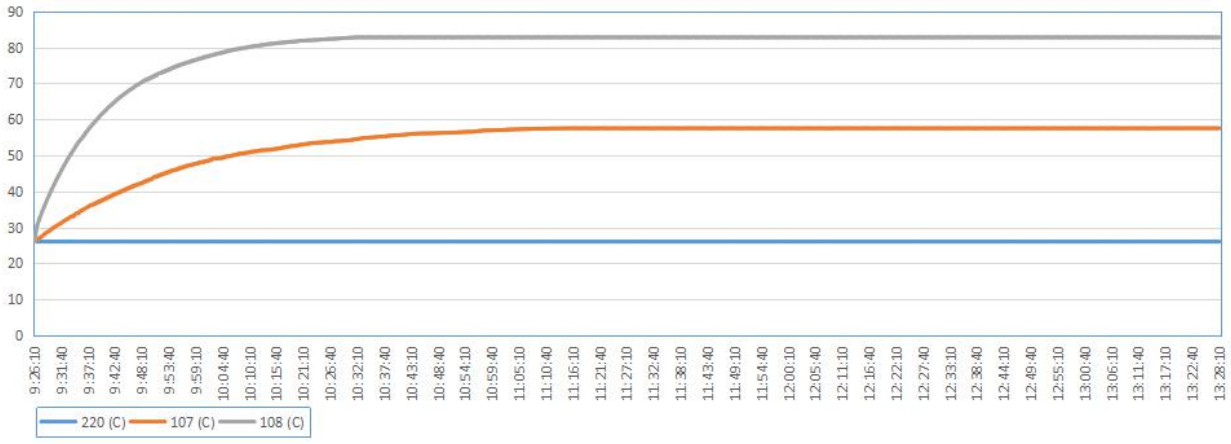
Project No.: BLTMT181226-04

TEST RESULTS

Test Model No.:	HD-FL02-1000WD-C3000K
LED Driver Model No.:	4 × HLG-240H-48AB
LED Package/Module No.:	L130-3080003000W2C
Rating of LED Package/Module	120mA
Manufacturer of LED Package/ Module	Lumileds

Input Voltage (V)	120
Input Power (W)	1001
LED Board Input Current (mA)	4944
Single LED Input Current (mA)	96

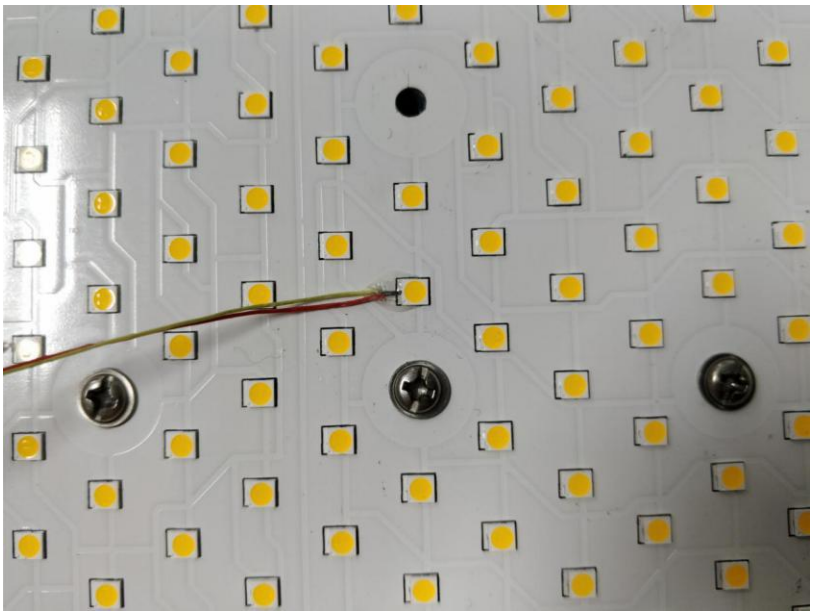
LED Ts/°C (Temperature at soldering board)	81.68
LED Driver/°C (Temperature at Tc)	56.50
Ambient °C	25.00

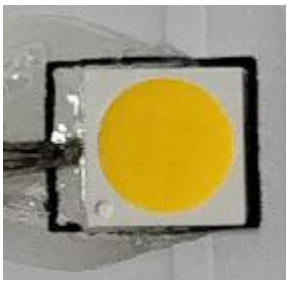


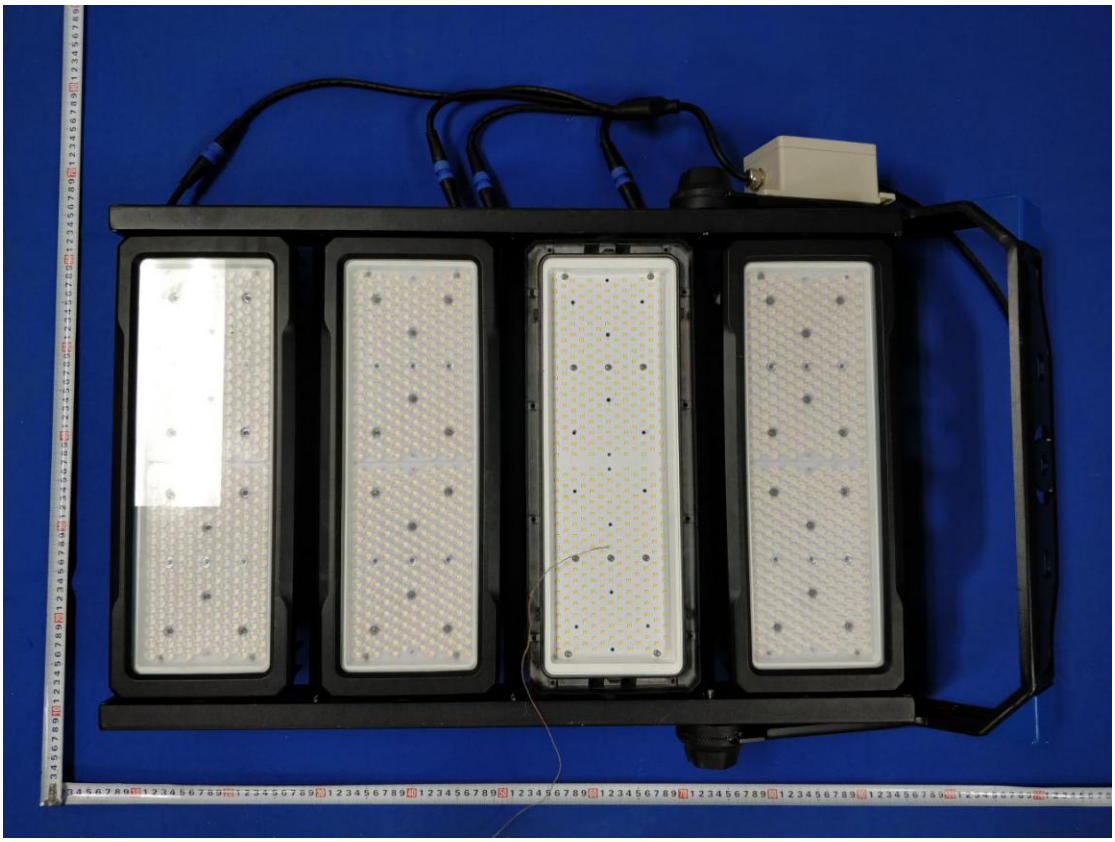
时间	220 (C)	107 (C)	108 (C)
13:28:10	26.06	57.56	82.74

Thermocouple location:

HD-FL02-1000WD-C3000K

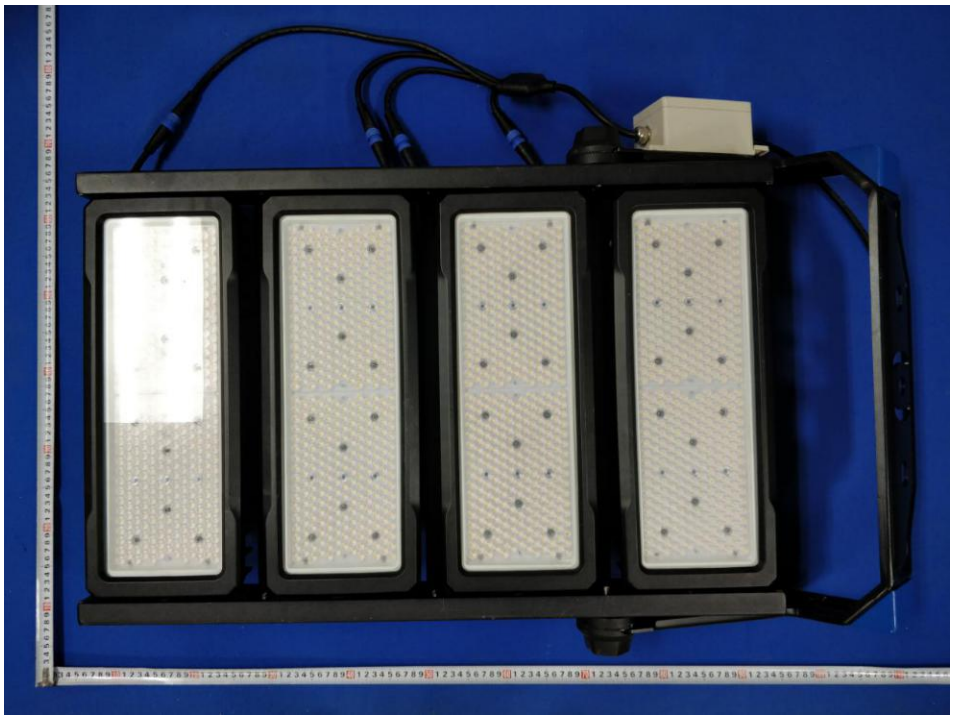


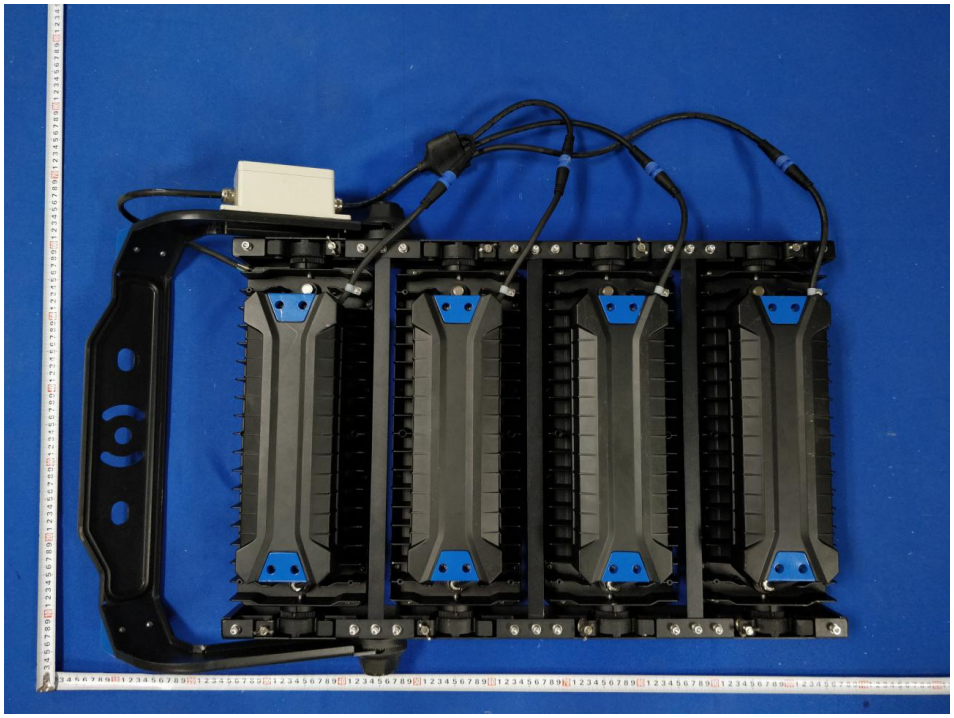





OUTPUT
INPUT
(GREEN / YELLOW)
ACL (BROWN)
ACN (BLUE)
MEAN WELL
HLG-240H-48AB
LED
INPUT
100-240V~ 4.0A 50/60Hz
277V~ 1.2A 50/60Hz
(277V~ for North America only)
OUTPUT
+48V
Rated Power: 240W
Suitable for use in Dry, Damp and Wet Locations
TAIWAN
IP65 SELV
Vo ADJ.
Io ADJ.
OUTPUT
(BLACK) Vo-
(RED) Vo+
(BLUE) DIM+
(WHITE) DIM-

EUT PHOTO





End of Report