LABORATORY DATA PACKAGE

Number of pages in this package ____ ~~[including additional pages ____]~~
(Fill in when using printed copy as record)

CLIENT INFORMATION	
Company Name	Antec Lighting Inc
Address	3979 E GUASTI RD STE C, Ontario, CA 91761-1572 US

AUDIT INFORMATION:				
Description of Tests	Per Standard No.	UL 1598 CSA C22.2 No. 250.0	Edition/ Revision Date	4th / 2018-08-28 4th / 2018-08-28

[X] Tests Conducted by[1]	Feynman Wu 2019-08-01	
[ ] UL Staff conducting or witnessing testing (WTDP, CTF Stage 1 or 2 only) **[ ]** UL Staff supervising UL Staff in training		
[X]Authorized Signatory (~~CTDP~~, TPTDP, ~~TCP, PPP, CTF Stage 3 or 4~~)	Printed Name	Signature. Include date for CTDP, TPTDP, TCP, PPP, CTF Stage 3 or 4

TESTS TO BE CONDUCTED:			
Test No.	Done[3]	Test Name	**[X]** Comments/Parameters **[ ]** Tests Conducted by[2] **[ ]** Link to separate data files[4]
1	X	LED NORMAL TEMPERATURE, SURFACE, GENERAL:	

Instructions -
1 - When all tests are conducted by one person, name can be inserted here instead of including name on each page containing data.
2 - When test conducted by more than one person, name of person conducting the test can be inserted next to the test name instead of including name on each page containing data. Test dates may be recorded here instead of entering test dates on the individual datasheet pages.
3 - Use of this field is optional and may be employed differently. If used to include a date instead of entering the testing date on the individual datasheet pages, the date shall be the date the test was conducted.
4 – Link to separate data files for a test can be inserted here. The link must be to a server that is accessible to UL staff, that provides for backup, required retention periods and a path, including file name, that does not change and result in a broken link. Not applicable to DAP.

Special Instructions -

[X] Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be recorded at the time the test is conducted.

Ambient Temperature, ˚C	25±5	Relative Humidity, %	± NA	Barometric Pressure, mBar	± NA

[ ] No general environmental conditions are specified in the Standard(s) or have been identified that could affect the test results or measurements.

RISK ANALYSIS RELATED TO TESTING PERFORMANCE:

The following types of risks have been identified. Take necessary precautions. This list is not all inclusive.

[X] Electric shock	**[ ]** Radiation
[X] Energy related hazards	**[ ]** Chemical hazards
[X] Fire	**[ ]** Noise
[X] Heat related hazards	**[ ]** Vibration
[X] Mechanical	**[ ]** Other (Specify)__

NMX-J-307/1-ANCE / CSA C22.2 No. 250.0 / UL 1598 is a harmonized tri-national standard. UL 1598 references apply to all three documents. All clause and figure references refer to this standard unless otherwise noted. "CSA C22.2 No." references may be abbreviated to "CSA".

WITNESS TEST DATA PROGRAM (WTDP) INFORMATION: –

Environment:	
Accommodations and Environmental conditions, including proper power source meet the requirements of the test standard or UL default criteria (ISO/IEC 17025:2005 Clauses 5.3.1, 5.3.2. 5.3.3, 5.3.4)	[ ]Yes [ ]No [ ]N/A
Personnel:	
Lab Management shall authorize personnel to operate particular types of equipment used in testing. (ISO/IEC 17025:2005 Clause 5.5.3)	[ ]Yes [ ]No
Equipment:	
Testing is being conducted within the test equipment calibration dates. (See Test Instrument Information Page and ISO/IEC 17025:2005 Clauses 5.5.1, 5.5.2, 5.5.4, 5.5.5, 5.5.8)	[ ]Yes [ ]No
Calibrations for testing equipment is traceable to SI Units. Refer to 00-OP-C0032 (Calibration Certificate Analysis). (ISO/IEC 17025:2005 Clause 5.6.2.2)	[ ]Yes [ ]No
Critical Consumables:	
Critical consumables are compliant with test standard requirements. (ISO/IEC 17025:2005 Clause 4.6)	[ ]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 17025:2005 Clause 5.8.2)	[ ]Yes [ ]No
Additional Requirements:	
Testing at a third party laboratory selected by UL and not part of the Third Party Test Data Program requires a Mutual Nondisclosure (NDA) and Confidentiality Agreement, 00-LE-F0025, or alternate agreement form approved by UL's Legal Department to be stored and included with the Test Package.	[ ]Yes [ ]No [ ]N/A
Summary:	
The test facility [was][was not] deemed to have the environment and capabilities necessary to perform the tests included in this data package.	

Tested by: _____ Date _____

~~[ ] The CAS Staff as indicated below, (a competent L1, L2 or L3 in a similar CCN/Standard for a similar test method) was utilized to conduct the witnessing of tests on behalf of the project handler.~~ (Please complete the table below to document the rationale and approval.)

~~Name of UL Staff conducting WTDP~~	~~CCN/Standard to be witnessed~~	~~Test(s) to be witnessed~~	~~L1, L2 or L3 Competency~~	~~Similar CCN/Standard Competency~~

~~[ ] The Field Services Staff Member, as indicated below, (with a competent program competency as authorized by the FOM) was informed and utilized to conduct the witnessing of tests on behalf of the project handler.~~ (Please complete the table below to document the information and approval.)

~~Name of UL Staff conducting WTDP~~	~~CCN/Standard to be witnessed~~	~~Test(s) to be witnessed~~	~~FOM Approver (name)~~

TEST LOCATION: (To be completed by Staff Conducting the Testing)					
[]UL or Affiliate	[]WTDP []CTF Stage 1	[]CTDP []CTF Stage 2	[X]TPTDP []CTF Stage 3	[]TCP []CTF Stage 4	[]PPP
Company Name:	Standard-Tech Testing Services				
Address:	Standard Tech Building, No. 6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China.				

TEST EQUIPMENT INFORMATION

[ ] UL test equipment information is recorded on Meter Use.

[ ] UL test equipment information is recorded on <<insert location and local laboratory equipment system identification.>>

Inst. ID No.	Instrument Type	Test Number +, Test Title or Conditioning	Function /Range	Last Cal. Date	Next Cal. Date

+ - If Test Number is used, the Test Number must be identified on the data sheet pages or on the Data Sheet Package cover page.

The following additional information is required when using client's or rented equipment, or when a UL ID Number for an instrument number is not used. The Inst. ID No. below corresponds to the Inst. ID No. above.

Inst. ID No.	Make/Model/Serial Number/Asset No.

TEST SAMPLE IDENTIFICATION:

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

Sample Card No.	Date Received	[] Test No.+	Sample No.	Manufacturer, Product Identification and Ratings
00000	2019-07-31	-	A1	Antec Lighting Inc, Model AOK-150WoHL

+ - If Test Number is used, the Test Number or Numbers the sample was used in must be identified on the data sheet pages or on the Data Sheet Package cover page.

[ ] Sampling Procedure -

[ ] This document contains data or information using color and if printed, should be printed in color to retain legibility and the information represented by the color.

LED NORMAL TEMPERATURE, SURFACE, GENERAL: 15, 19

Note: Clause references from UL 1598/CSA 250.0 unless otherwise noted.

The luminaire was installed as intended per the installation instructions and tested in accordance with the test method(s) selected below:

[X] SURFACE CEILING LUMINAIRES [ ] Intended for non-combustible surfaces only	Clause 15.2 Clause 15.2.5
[ ] SURFACE WALL LUMINAIRES	Clause 15.3
[ ] UNDER-CABINET LUMINAIRES	Clause 15.4
[ ] RACEWAY TEMPERATURE	Clause 15.11

The test was conducted in accordance with the TEST PROCEDURES AND APPARATUS requirements selected below, and as noted in the TEST PARAMETER TABLE:

INSTALLATION AND SUPPORT, GENERAL [ ] ADJUSTABLE LUMINAIRE: _____ [ ] FLOOR-MOUNTED LUMINAIRE [ ] POLE-MOUNTED LUMINAIRE	Clause 19.1.1 Clause 19.1.2 Clause 19.1.3 Clause 19.1.4
TEMPERATURE TEST STABILIZATION	Clause 19.2
VOLTAGE	Clause 19.3
FREQUENCY	Clause 19.4
AMBIENT TEMPERATURE [X] 25 ± 5°C [ ] Elevated: __ °C	Clause 19.5
THERMOCOUPLES	Clause 19.7
BRANCH CIRCUIT CONDUCTOR TEMPERATURE PROBE	Clause 19.9
[X] SURFACE CEILING TEMPERATURE TEST APPARATUS	Clause 19.10
[ ] SURFACE WALL TEMPERATURE TEST APPARATUS	Clause 19.11
[ ] SURFACE-MOUNTED UNDERCABINET LUMINAIRE TEST ALCOVE	Clause 19.12

LED NORMAL TEMPERATURE, SURFACE, GENERAL: (CONT'D)

TEST PARAMETER TABLE

	[X] Test #1	[X] Test #2
Luminaire model number or detailed description	AOK-150WoHL	
Luminaire Supply (V/Hz or description)	200V/60Hz	
[X] LED Driver (mfg./cat. No.)	TLD-160-C420-ERS-HTGLB0	
[ ] LED Driver type	[ ] Built-in [ ] Remote	
[ ] Light source(s) description/rating		
[ ] Raceway Temperature	__ AWG Wire __ Test Amps __ Conductors	
[ ] Luminaire Orientation		
[ ] Other Test parameters		

[ ] An incandescent lamp was used to represent the intended SBCFL or SBLED lamp in accordance with UL 1598 CRD dated 2018-10-04
Select the model with the maximum wattage input test

Test Data: 2019-08-01
LED NORMAL TEMPERATURE, SURFACE: (CONT'D)

RESULTS

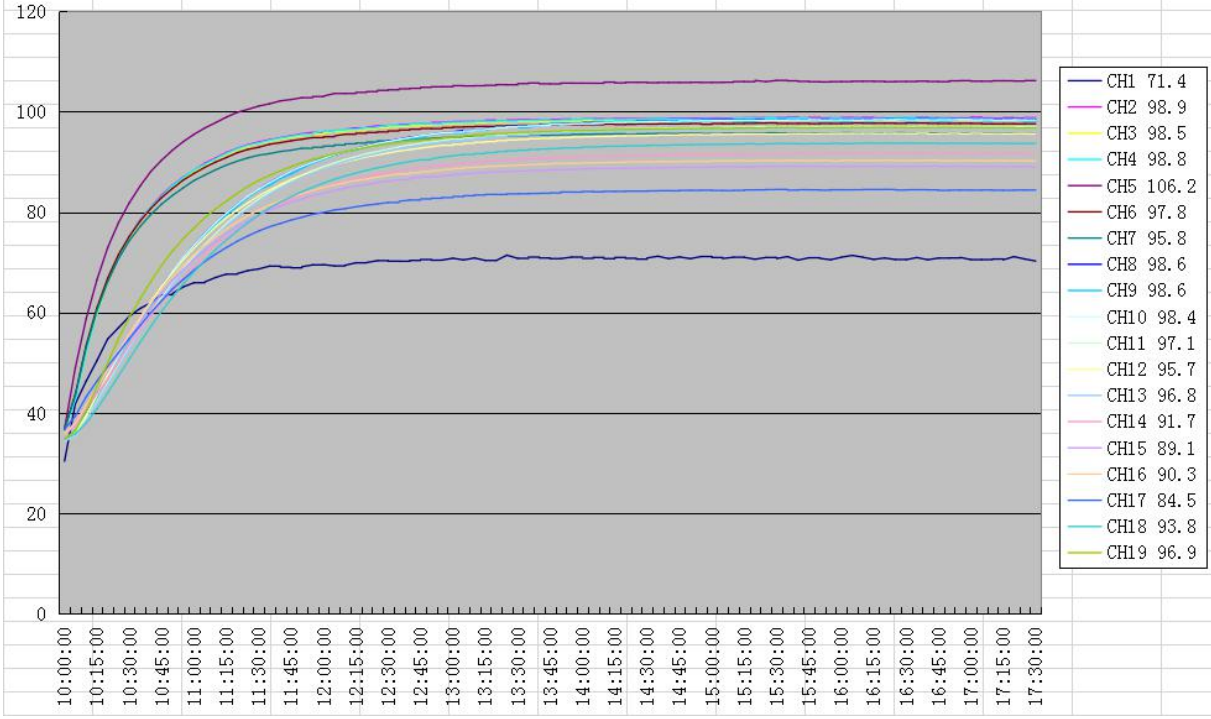
TC #	Thermocouple Location	Test #1 Measurement,70°C	[ ] Test #2	Limit °C
1	Room Ambient	70.0	–	-
2	¼ inch Input wire of LED module1	97.5	–	
3	¼ inch Input wire of LED module2	97.1	–	
4	¼ inch Input wire of LED module3	97.4		
5	LED module, PCB, center, near LED	104.8	–	
6	LED module body, inside	96.4	–	
7	LED module body, heat sink	94.4	–	
8	LED Driver, Tc1	97.2	–	
9	LED Driver, Tc2	97.2		
10	LED Driver, Tc3	97.0		
11	LED Driver, side1	95.7		
12	LED Driver, side2	94.3		
13	LED Driver, side3	95.4		
14	LED Driver, Ta1	90.3		
15	Driver housing, inside	87.7	–	
16	Driver housing, heat sink	88.9		
17	¼ inch power suppy cord	83.1		
18	¼ inch Driver intput cord	92.3		
19	¼ inch Driver output cord	95.5		
20	LED driver, output connector	86.1		
21	Gasket, near LED	93.8		
22	LED module diffuser, inside	95.5		
23	Mounting bracket	81.8		
-	Model no.	AOK-150WoHL	-	-
-	Sample no.	00000-A1	-	-
-	Start date and time	2019-08-01 10:00	-	-
-	End date and time	2019-08-01 17:30	-	-

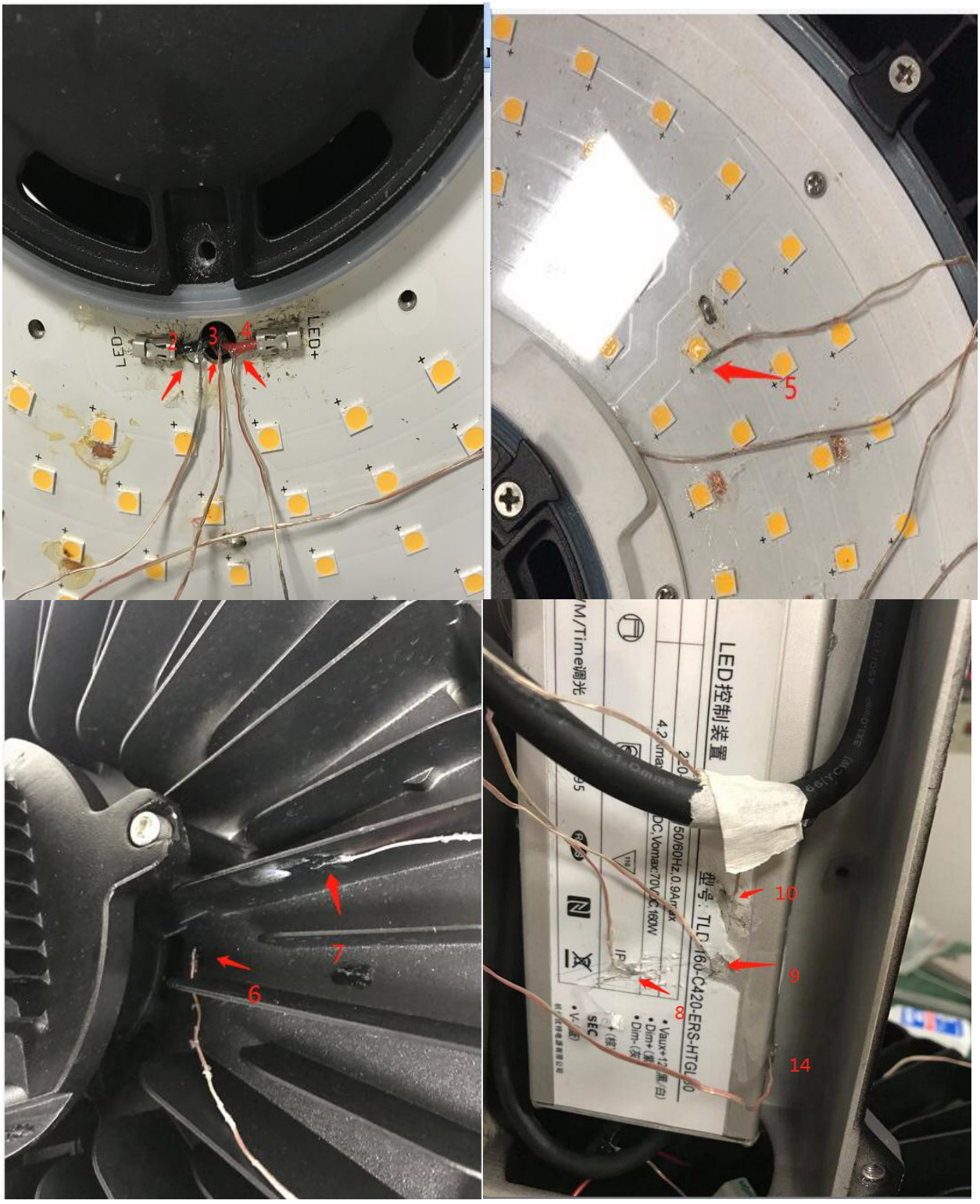
File No.:			Project No.:				Test by:			
Model No.: AOK-150WoHL			Sample No.:00000-A1				Date: 2019-08-01			
NORMAL TEMPERATURE:1										

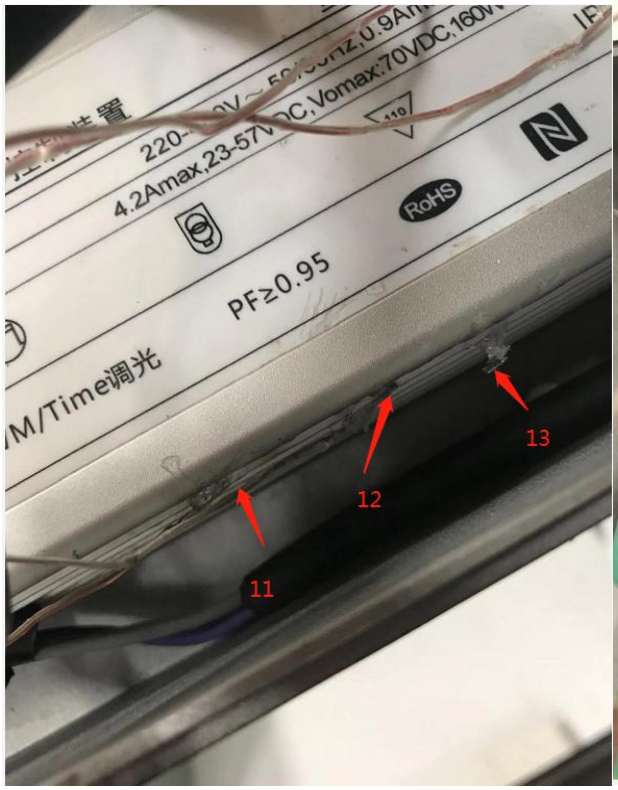
Channel Number:	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	CH9	CH10
Highest Temp ℃	71.4	98.9	98.5	98.8	106.2	97.8	95.8	98.6	98.6	98.4
Ambient Temp ℃	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
Max Temp Normalized to 70℃	70.0	97.5	97.1	97.4	104.8	96.4	94.4	97.2	97.2	97.0

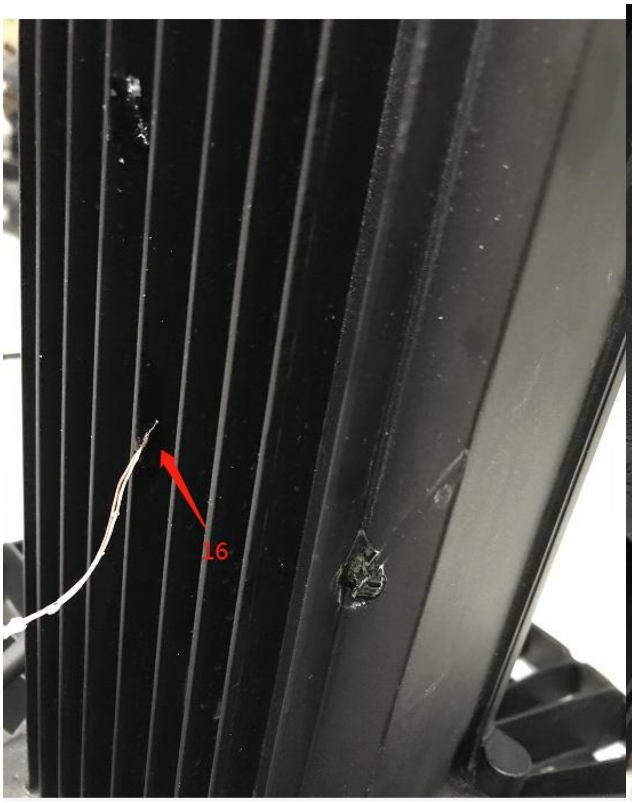
Channel Number:	CH11	CH12	CH13	CH14	CH15	CH16	CH17	CH18	CH19	CH20
Highest Temp ℃	97.1	95.7	96.8	91.7	89.1	90.3	84.5	93.8	96.9	87.6
Ambient Temp ℃	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
Max Temp Normalized to 70℃	95.7	94.3	95.4	90.3	87.7	88.9	83.1	92.3	95.5	86.1

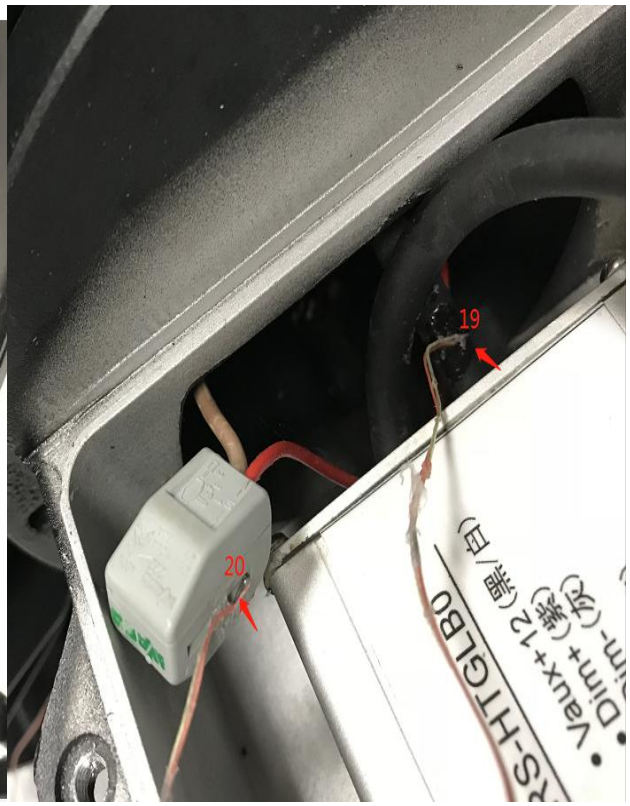
Channel Number:	CH21	CH22	CH23
Highest Temp ℃	95.2	97.0	83.2
Ambient Temp ℃	71.4	71.4	71.4
Max Temp Normalized to 70℃	93.8	95.5	81.8

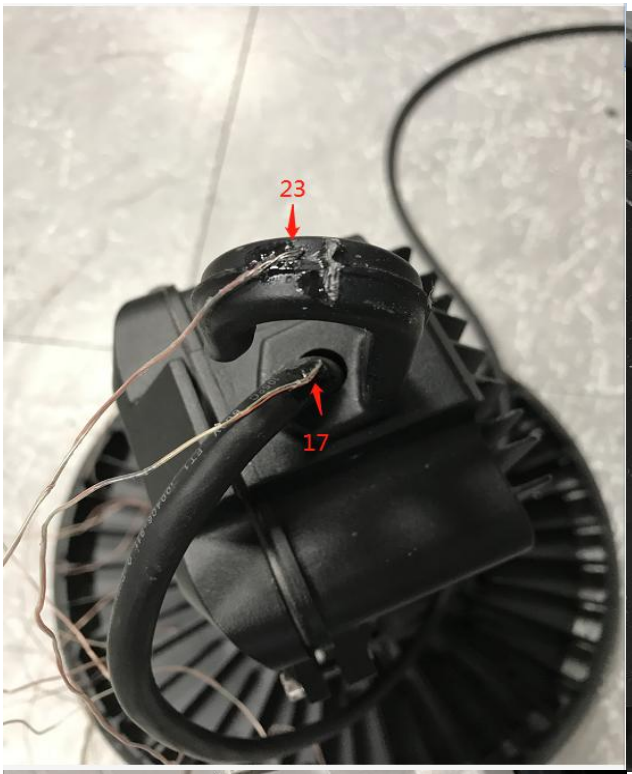


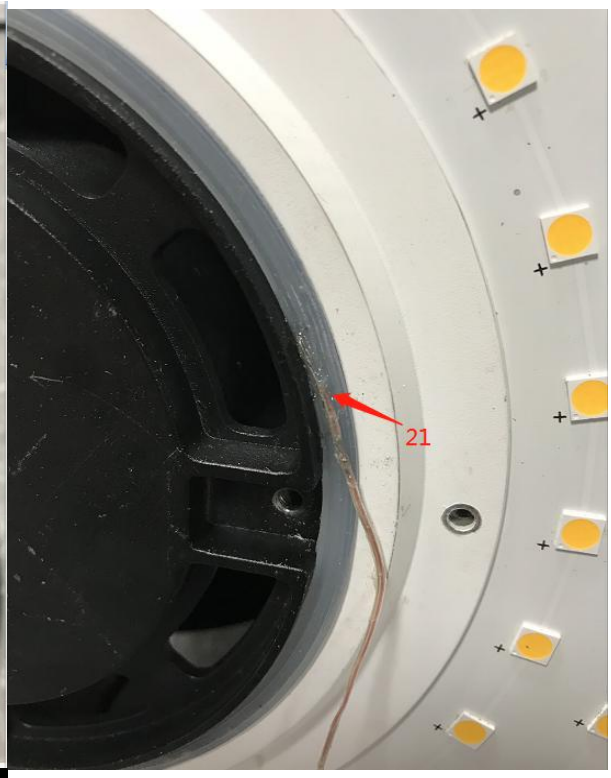


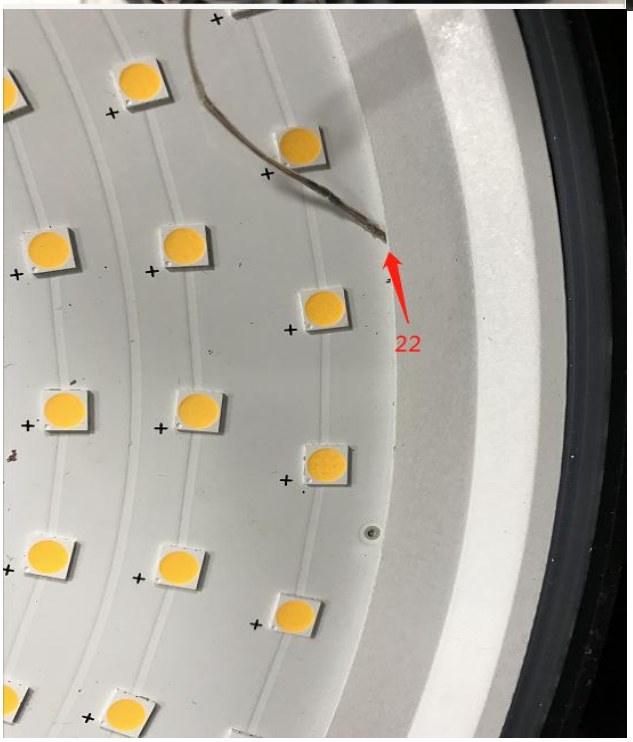












Test Data: 2019-08-01
LED NORMAL TEMPERATURE, SURFACE: (CONT'D)

The input current and voltage was measured and recorded in the table below both at the beginning and end of the temperature test:

	Test #1	[ ] Test #2
Input Voltage (V) at start of test:	200.3	
Input Current (A) at start of test:	0.764	
Input Wattage (W) at start of test:	152.9	
Input Voltage (V) at end of test:	200.1	
Input Current (A) at end of test:	0.762	
Input Wattage (W) at end of test:	151.8	
Test Start Date (YYYY-MM-DD):	2019-08-01	
Test Start Time (HH:MM):	10:00	
Test Stop Date (YYYY-MM-DD):	2019-08-01	
Test Stop time (HH:MM):	17:30	

The ending current measurement **[**was**]** **[**was not**]** within 10 percent of the beginning current measurement.

LAB TECH: Contact engineer if there is a 10% or greater difference in the current measurements.

[ ] The results of the above tests are considered acceptable since the temperature did not exceed the limits as specified in the Standard, and any thermal protector or supplementary protective device did not operate.

[ ] There was no breakdown as a result of the dielectric test.

[ ] The results of the above tests were considered unacceptable since one or more of the following occurred:

[ ] The temperatures exceeded the limits as specified in the Standard.
[ ] The thermal protector or supplementary protective device operated.
[ ] There was a dielectric breakdown as a result of the applied test voltage.

Note: Charts, printouts or additional data showing temperature stabilization for 3 successive readings at not less than 15 min. intervals shall be included with this package.

Ambient Temperature, C	25.3	Relative Humidity, %	56.6	Date	2019-08-02

END OF DATASHEET PACKAGE. THIS PAGE INTENTIONALLY LEFT BLANK