

**Verification Services**

Project No.:4787237129-6

Report No.:4787237129-6a

Report Issued Date: 2016-03-09



# Test Report

<b>Customer Company &amp; Address:</b>			
Elec-Tech International Co., Ltd ADD: 1 JINFENG RD TANGJIAWAN TOWN XIANGZHOU DISTRICT ZHUHAIGUANGDONG P.R. CHINA 519085			
<b>Contact Person:</b>	Sean Luo		
<b>Phone Number:</b>	0756-3639678	<b>Email Address:</b>	luolixue@electech.com.cn

<b>Relevant Standards:</b>	IES LM-79-2008		
<b>Product Description:</b>	Luminaire Description: 2-Headed Security Light Amount of Light Source: 40 LEDs of 67-21S Manufacturer Of Light Source: Everlight Electronics Co.,Ltd		
<b>Brand Name:</b>	ETI & DEFIANT		
<b>Tested Model Number:</b>	514011XX		
<b>Product Family:</b>	N/A		
<b>Allowable Variations:</b>	Where "XX" denotes color temperature, XX=41~50 identifies 4000K		
<b>Electrical Specification:</b>	120 V AC, 60 Hz, 20 W		

<b>Test Laboratory &amp; Address:</b>			
UL Verification Services (Guangzhou) Co., Ltd. ADD: Building A1, 1F & 2F, Nansha Science and Technology Innovation Center, No. 25, South Huanshi Avenue , Nansha District, Guangzhou 511458, China			
<b>Telephone:</b>	+86 20 28667188	<b>Fax:</b>	+86 20 83486605

<b>Sample Reception Date:</b>	2016-01-29	<b>Test Date:</b>	2016-02-19
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Tested By	Approved By
 Candy Zhang	 /Derek Zhang
<b>Signatory &amp; Test Personnel Name</b>	<b>Signatory &amp; Approval Name</b>

**The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.**



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## Statement of Results

Test Flow	Test Item	Sample ID (Lab)	Pass/Fail/NA
1	Integrating Sphere Test	2293092-S001	Evaluate by customer
2	Goniophotometer Test	2293092-S001	Evaluate by customer

## Deviation from Test Method (if any)

N/A

## Remark (if any)

This report shall not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the US government.



# Test Report

## Test Flow 1: Integrating Sphere Test

### Environmental Conditions

Temperature: 25.1°C

### Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
GVS-LE-PE003	Integrating Sphere	Before Use	Before Use
GVS-LE-PM009	Digital Power Meter	2015-04-28	2016-04-27
GVS-LE-FS009	Measurement Standard Lamp	2015-08-22	2016-08-21

### Test Sample

2293092-S001

### Test Method

The sample was tested according to the IES LM-79-2008. Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° 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 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 Results

Test Type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	120.09	60	0.159	0.965	18.4

Test Type	CCT (K)	CRI	Lumen Output (lm)	Luminous Efficacy (lm/W)
Output	4105	85.6	1330	72.2



# Test Report

## Test Condition

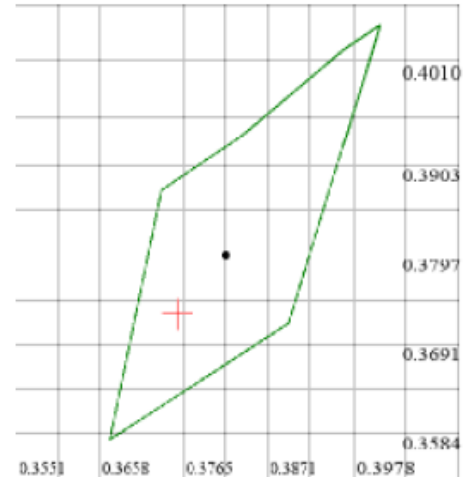
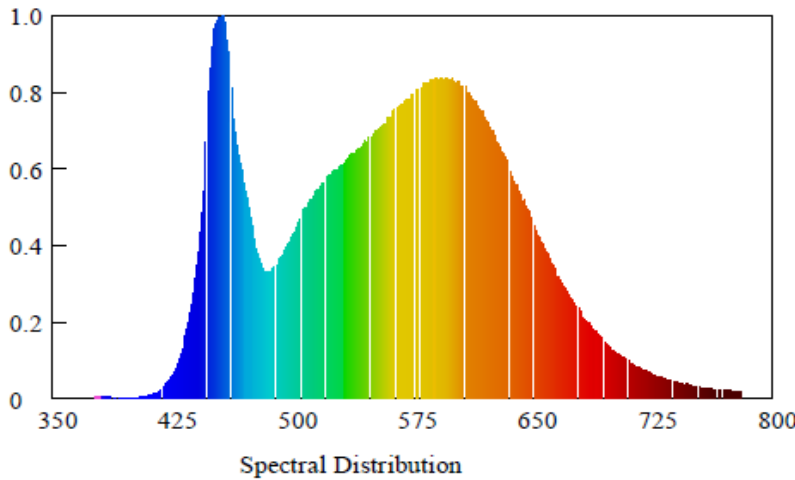
Temperature: 25.1°C

RH: ----%

Spectrum Range: 380-780 nm

Scan Step: 1 nm

## Spectroradiometric Parameters



Nominal CCT:LED\_4000K  
x0=0.3756 y0=0.3727

Chromaticity Coordinates: x=0.3756 y=0.3727 u'=0.2235 v'=0.4991

Correlated Color Temperature: 4105 K

Dominant Wavelength: 577.0 nm(E)

Luminous Flux: 1330.060 lm

Purity: 0.2459

Chromaticity Difference: -0.0005Duv

Peak Wavelength: 456.9 nm

Color Ratio: Kr=37.9% Kg=51.9% Kb=10.1%

Bandwidth: 26.5nm

Radiant Flux: 4.174 W

Rendering Index: Ra=85.6

R1=85 R2=94 R3=96 R4=82 R5=84 R6=90 R7=86 R8=69

R9=24 R10=84 R11=81 R12=63 R13=89 R14=98 R15=80



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# Test Report

## Test Flow 2: Goniophotometer Test

### Environmental Conditions

Temperature: 25.1°C

### Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
GVS-LE-GS001	Goniophotometer	Before Use	Before Use
GVS-LE-PM002	Digital Power Meter	2015-06-09	2016-06-08
GVS-LE-FS009	Measurement Standard Lamp	2015-08-22	2016-08-21

### Test Sample

2293092-S001

### Test Method

The sample was tested according to the IES LM-79-2008.

Photometric parameters were measured using a type C goniophotometer and software.

The ambient temperature shall be maintained at 25° C ± 1° C, measured at a point not more than 1 m from the sample and at the same height as the sample.

The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 0.5° vertical intervals and 22.5° horizontal intervals.

### Test Results

Test Type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	120.06	60	0.159	0.965	18.4

Test Type	Lumen Output (lm)	Center Beam Candle Power (cd)	Zonal Lumen Density (0~85°)	Zonal Lumen Density (>90°)	Luminous Efficacy (lm/W)
Output	1359	907	100%	0%	73.9



# Test Report



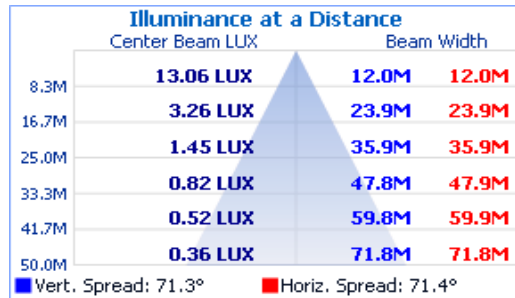
NVLAP Lab Code: 200952-0



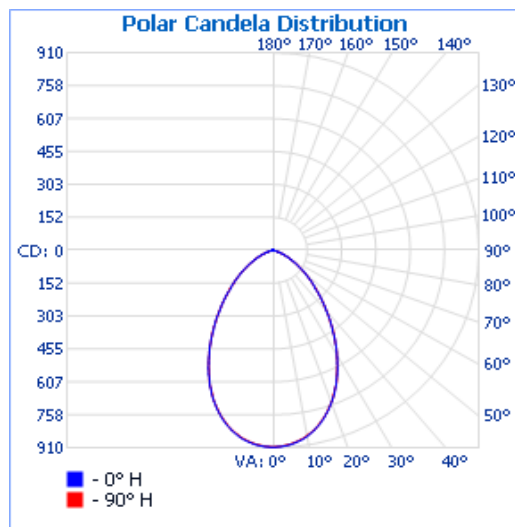
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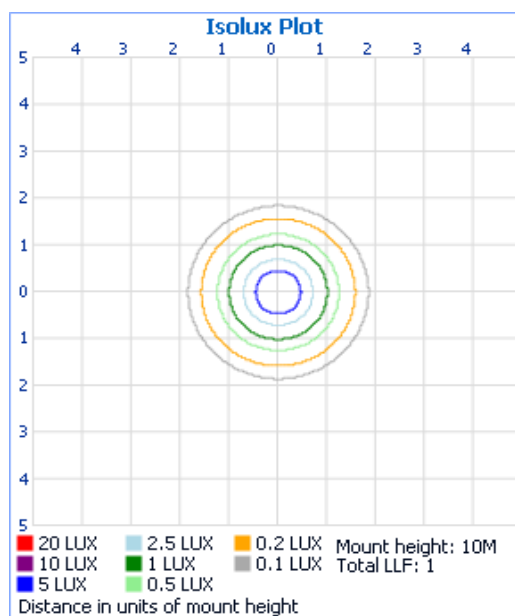
### Illuminance at a Distance



### Polar Candela Distribution



### Isolux Plot





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# Test Report

## Zonal Lumen Tabulation

### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	618.8	45.5%
0-40	909.8	67%
0-60	1,274.1	93.8%
60-90	84.5	6.2%
70-100	17.3	1.3%
90-120	0.0	0%
0-90	1,358.6	100%
90-180	0.3	0%
0-180	1,358.9	100%

### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-5	21.6	1.6%	90-95	0.0	0%
5-10	63.2	4.7%	95-100	0	0%
10-15	100.3	7.4%	100-105	0.0	0%
15-20	129.6	9.5%	105-110	0.0	0%
20-25	148.5	10.9%	110-115	0.0	0%
25-30	155.7	11.5%	115-120	0.0	0%
30-35	151.7	11.2%	120-125	0.0	0%
35-40	139.3	10.3%	125-130	0.0	0%
40-45	121.5	8.9%	130-135	0.0	0%
45-50	101.1	7.4%	135-140	0.0	0%
50-55	81.3	6.0%	140-145	0.0	0%
55-60	60.4	4.4%	145-150	0.0	0%
60-65	41.5	3.1%	150-155	0.0	0%
65-70	25.7	1.9%	155-160	0.0	0%
70-75	12.8	0.9%	160-165	0.0	0%
75-80	3.9	0.3%	165-170	0.0	0%
80-85	0.5	0.0%	170-175	0.0	0%
85-90	0.1	0.0%	175-180	0.0	0%



# Test Report

## Intensity Data(cd)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
1	906	906	906	906	905	906	906	906	906	906	906	906	905	906	906	906	906
2	905	905	905	905	903	905	905	905	905	905	905	905	903	905	905	905	905
3	903	903	903	903	901	903	903	903	903	903	903	903	901	903	903	903	903
4	901	901	901	901	899	901	901	901	901	901	901	901	899	901	901	901	901
5	898	898	898	897	896	897	898	898	898	898	898	898	897	896	897	898	898
6	894	894	894	893	891	893	894	894	894	894	894	893	891	893	894	894	894
7	889	889	889	888	886	888	889	889	889	889	889	888	886	888	889	889	889
8	884	883	883	883	881	883	883	883	884	883	883	883	881	883	883	883	884
9	877	873	872	867	875	877	878	877	877	880	881	888	875	877	878	877	877
10	870	869	870	869	866	869	870	869	870	869	870	869	866	869	870	869	870
11	861	862	862	861	858	861	862	861	862	862	862	861	858	861	862	862	861
12	853	853	853	853	850	853	853	853	853	853	853	853	850	853	853	853	853
13	841	842	844	843	841	843	844	842	841	842	844	843	841	843	844	842	841
14	832	831	834	833	829	833	834	831	832	831	834	833	829	833	834	831	832
15	820	820	821	821	817	821	820	820	820	820	821	821	817	821	821	820	820
16	808	807	810	809	806	809	810	807	808	807	810	809	806	809	810	807	808
17	794	795	798	797	793	797	798	795	794	795	798	797	793	797	798	795	794
18	781	780	785	781	778	781	785	780	781	780	785	781	778	781	785	780	781
19	766	766	769	766	764	766	769	766	766	766	769	766	764	766	769	766	766
20	751	749	755	752	750	752	755	749	751	749	755	752	750	752	755	749	751
25	663	664	669	666	666	666	669	664	663	664	669	666	666	666	669	664	663
30	567	565	570	565	565	565	570	565	567	565	570	565	565	565	570	565	567
35	466	463	468	466	468	466	468	463	466	463	468	466	468	466	468	463	466
40	371	370	375	371	373	371	375	370	371	370	375	371	373	371	375	370	371
45	289	285	289	287	287	287	289	285	289	285	289	287	287	287	289	285	289
50	219	217	219	216	218	216	219	217	219	217	219	216	218	216	219	217	219
55	159	157	159	158	159	158	159	157	159	157	159	158	159	158	159	157	159
60	107	105	107	104	106	104	107	105	107	105	107	104	106	104	107	105	107
65	68	67	69	69	67	69	69	67	68	67	69	69	67	69	69	67	68
70	37	36	36	36	38	36	36	36	37	36	36	36	38	36	36	36	37
75	14	14	15	14	15	14	15	14	14	14	15	14	15	14	15	14	14
80	2	2	2	2	4	2	2	2	2	2	2	2	4	2	2	2	2
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



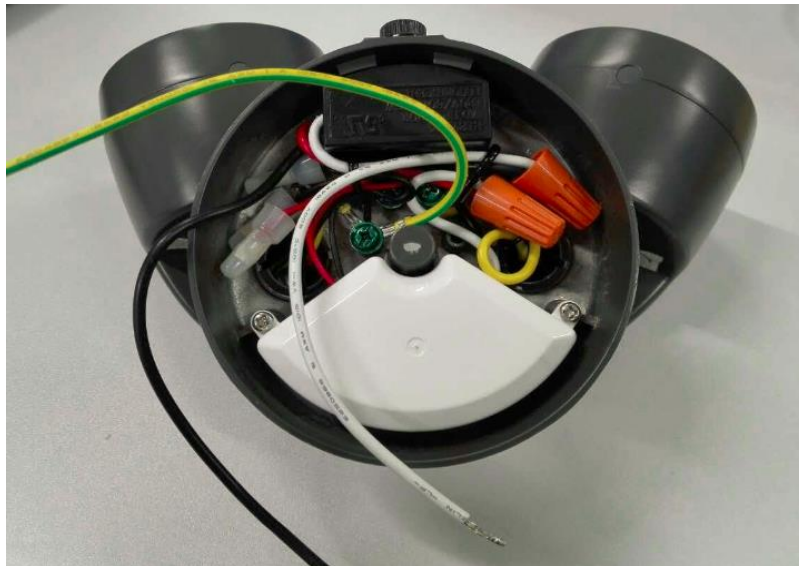


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## Photos of sample



**End of Test Report**