



Report No.: GZE160771-E

NVLAP LAB CODE 201011-0

## LM-79-08 Test Report

For

### L-TECH CORPORATION

**(Brand Name: L-TECH CORP)**

SHAOGANGTOU DISTRICT.QIAOTOU TOWN.DONGGUAN  
CITY.GUANGDONG PROVINCE,CHINA

### LED Luminaire

Model name(s): LJKT404S-3090

Test & Report By:

*Johnson Sun*

Engineer: Johnson Sun

Date: Jul.27,2016

Review By:

*Tommy Liang*

Manager: Tommy Liang

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>

**1.1 Product Information:**

Organization Name	L-TECH CORPORTION	
Brand Name	L-TECH CORP	
Model Number	LJKT404S-3090	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Luminaire	
Rated Voltage / Frequency	120Vac, 60 Hz	
Nominal Power	11W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K	
LED Manufacturer	N/A	
LED Model	N/A	
Sample Number	GZE160771-E1	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaire Width	--	mm
Number of Units (modular products)	N/A	s

**Photo**


**Laboratory: Standard-Tech Co. Ltd Testing Center**

**NVLAP CODE: 201011-0**

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>

### 1.2 Test Specifications:

Date of Receipt	Jul.20,2016
Date of Test	Jul.21,2016
Test item	<ol style="list-style-type: none"> <li>1. Total Luminous Flux</li> <li>2. Luminous Distribution Intensity</li> <li>3. Luminous Efficacy</li> <li>4. Correlated Color Temperature</li> <li>5. Color Rendering Index</li> <li>6. Chromaticity Coordinate</li> <li>7. Electrical Parameters</li> </ol>
Reference Standard	<ol style="list-style-type: none"> <li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li> <li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li> <li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li> <li>4. CIE 15-2004 Technical Report Colorimetry</li> <li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li> <li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li> </ol>
Reference Work Instruction	QD25

### 1.3 Test Methods

#### 1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals.

#### 2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . 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 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

#### 3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

## 2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

<b>Test date</b>	2016-07-21	<b>Test Ambient:</b>	25.2 ° C
<b>Test Orientation</b>	Horizontal	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	LJKT404S-3090		

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
GZE160771-E1	120.0	60	0.0950	10.70	0.9384

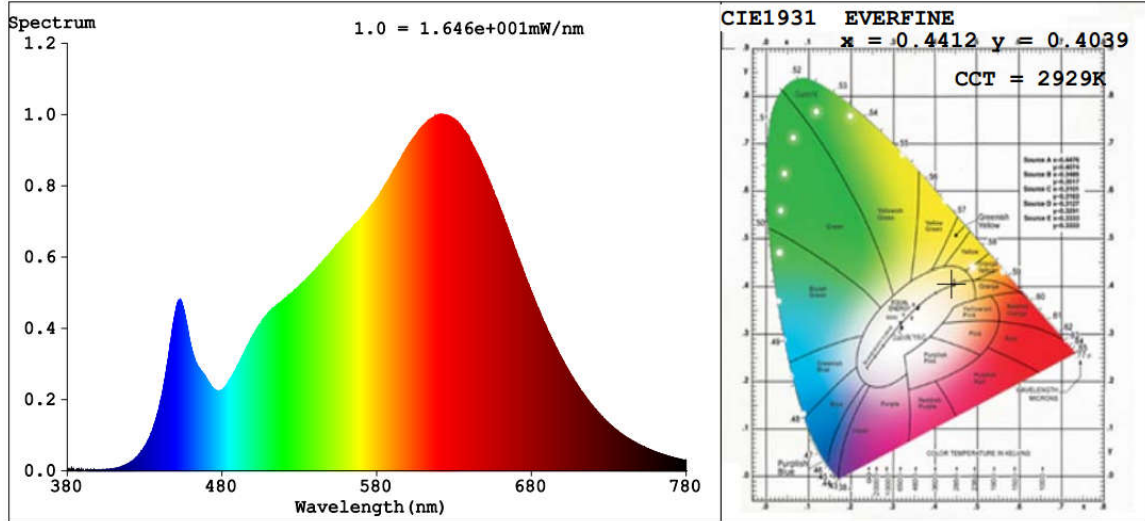
### Chromaticity Measurement - Sphere-Spectroradiometer Method i:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	94	R9	63
Frequency (Hz)	60	R2	98	R10	94
CCT (K)	2929	R3	99	R11	95
Duv	-0.0006	R4	94	R12	85
Chromaticity (x, y)	x=0.4412 y=0.4039	R5	94	R13	95
Chromaticity (u', v')	u'=0.2534 v'=0.5220	R6	97	R14	99
Color Rendering Index (CRI)	94.0	R7	92	R15	90
R9	63	R8	83	--	--

### Photometric Measurement – Goniophotometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	880.15	--
Luminous Efficacy (lm/W)	82.26	--
Beam Angle (°)	107.3	--
Center Beam Candle Power (cd)	313	--

**Spectral Power Distribution & Chromaticity Diagram**

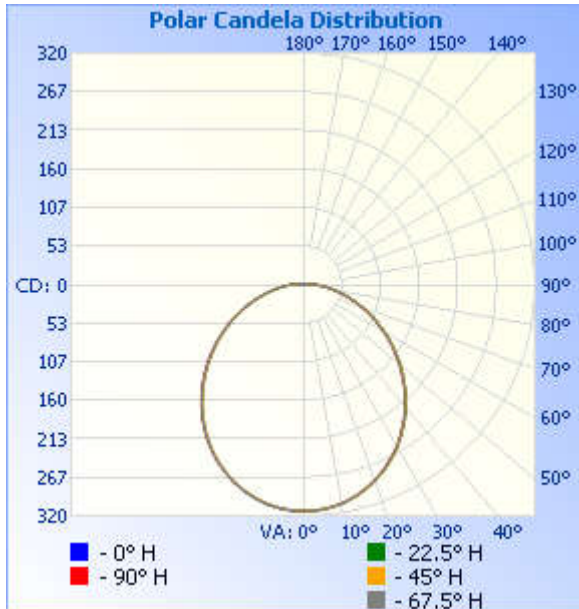


**Zonal Lumen Tabulation**

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	240.0	27.3%
0-40	389.6	44.3%
0-60	675.6	76.8%
60-90	198.6	22.6%
70-100	99.2	11.3%
90-120	4.7	0.5%
0-90	874.1	99.3%
90-180	6.0	0.7%
0-180	880.1	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	29.6	3.4%	90-100	3.4	0.4%
10-20	84.2	9.6%	100-110	0.8	0.1%
20-30	126.2	14.3%	110-120	0.5	0.1%
30-40	149.5	17.0%	120-130	0.3	0%
40-50	151.6	17.2%	130-140	0.3	0%
50-60	134.4	15.3%	140-150	0.3	0%
60-70	102.8	11.7%	150-160	0.2	0%
70-80	64.8	7.4%	160-170	0.1	0%
80-90	31.0	3.5%	170-180	0.0	0%

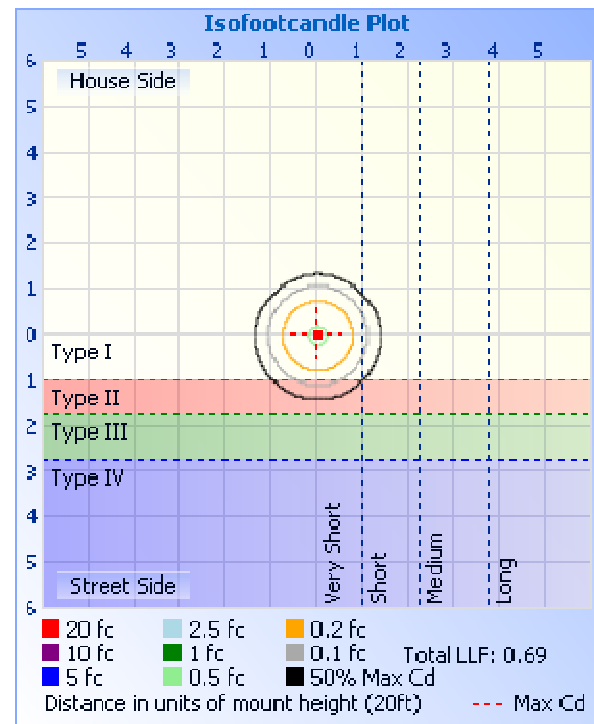
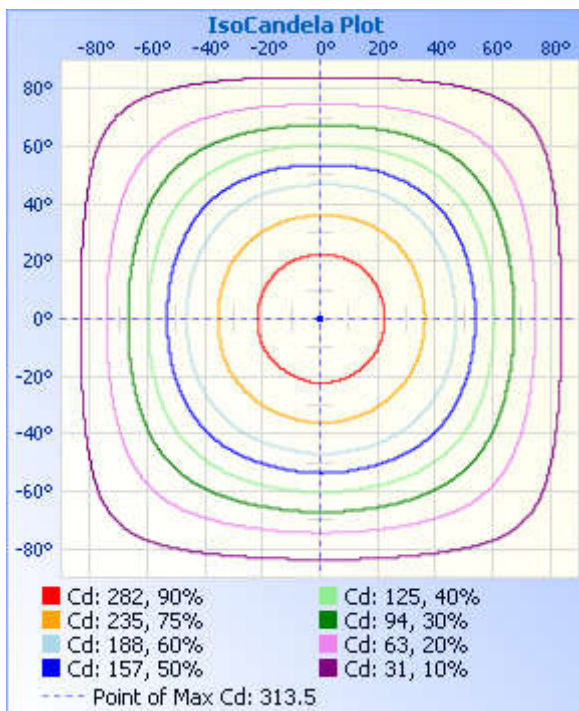
**Photometric Data**



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
17.0ft	1.08 fc	46.1 ft	46.1 ft
34.0ft	0.27 fc	92.2 ft	92.2 ft
51.0ft	0.12 fc	138.3 ft	138.3 ft
68.0ft	0.07 fc	184.4 ft	184.4 ft
85.0ft	0.04 fc	230.6 ft	230.5 ft
102.0ft	0.03 fc	276.7 ft	276.6 ft

■ Vert. Spread: 107.2°  
■ Horiz. Spread: 107.2°



Laboratory: Standard-Tech Co. Ltd Testing Center  
 NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

**Candela Table - Type C**

	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	313	313	313	313	313	313	313	313	313	313	313	313	313	313	313	313	313
1	313	313	313	313	313	313	313	312	313	313	313	313	313	313	313	313	313
2	313	313	313	313	313	312	312	312	313	313	313	312	313	312	313	312	313
3	313	313	313	312	312	312	312	312	313	312	312	312	312	312	312	312	313
4	313	313	312	312	312	312	312	311	312	312	312	312	312	312	312	312	313
5	312	312	312	312	311	311	311	311	312	311	311	311	311	311	311	311	312
6	311	311	311	311	311	310	310	310	311	311	310	310	310	310	311	311	311
7	311	311	310	310	310	310	309	309	310	310	309	309	310	310	310	310	311
8	310	310	309	309	309	309	308	308	309	309	308	308	308	309	309	309	310
9	309	309	309	308	308	308	307	307	308	308	307	307	308	308	308	308	309
10	308	308	307	307	307	306	306	305	307	306	306	306	306	306	307	307	308
11	306	306	306	305	305	305	304	304	305	305	304	305	305	305	306	306	306
12	305	305	305	304	304	303	303	303	304	303	303	303	303	304	305	304	305
13	303	303	303	302	302	302	301	301	302	301	301	301	302	302	303	303	303
14	302	302	301	301	301	300	300	299	300	300	300	300	300	301	301	301	302
15	300	300	300	299	299	298	298	297	299	298	298	298	298	298	300	299	300
16	298	298	298	297	297	297	296	296	297	296	296	296	296	297	297	297	298
17	296	296	296	295	295	294	294	293	294	294	294	294	294	295	296	296	296
18	294	294	294	293	292	292	291	291	292	292	291	292	292	293	293	294	294
19	291	292	291	291	290	290	289	289	290	290	289	289	290	290	292	292	291
20	289	289	289	288	288	287	287	286	288	287	287	287	288	288	289	290	289
21	286	286	286	286	285	285	284	284	285	284	284	284	285	286	286	287	286
22	284	284	284	283	283	282	281	281	282	282	281	282	282	283	284	285	284
23	281	281	281	280	280	279	278	278	280	279	279	279	280	280	281	282	281
24	278	279	278	277	277	277	276	275	276	276	276	276	277	277	279	279	278
25	275	276	275	275	274	274	273	272	273	273	273	273	274	275	276	276	275
26	272	273	272	271	271	271	270	269	270	270	269	270	271	272	273	273	272
27	269	270	269	268	268	267	267	266	267	267	267	267	267	269	270	271	269
28	266	266	266	265	264	265	263	263	264	263	263	264	264	265	266	267	266

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>

29	263	262	263	261	261	261	259	259	260	260	260	260	261	262	263	264	263
30	259	260	259	258	258	257	256	255	257	256	256	257	258	259	260	261	259
31	256	256	255	255	255	254	252	251	253	252	252	253	254	255	256	257	256
32	252	252	252	251	251	250	249	248	249	249	249	250	251	252	253	253	252
33	249	248	248	247	247	246	245	244	246	245	245	246	247	248	249	250	249
34	245	244	244	243	242	243	241	241	242	242	242	242	243	244	246	246	245
35	240	241	241	240	239	239	237	236	239	237	237	239	239	240	242	242	240
36	236	237	236	235	235	234	234	233	234	233	233	234	235	236	237	238	236
37	233	233	232	232	231	231	229	229	230	230	230	231	231	232	234	234	233
38	228	229	228	228	227	226	225	224	226	225	225	226	227	228	230	230	228
39	225	225	224	223	222	222	220	219	222	221	221	222	222	224	226	226	225
40	220	221	220	219	219	218	217	216	218	217	217	218	219	220	221	222	220
41	215	216	216	215	214	213	212	211	213	212	212	213	214	215	217	218	215
42	212	212	212	211	210	210	208	206	208	208	208	209	210	211	213	214	212
43	207	207	207	206	205	205	203	202	205	203	203	205	206	207	208	209	207
44	203	203	203	201	201	200	198	197	200	199	199	200	202	203	205	204	203
45	198	198	198	197	197	196	194	193	196	195	195	196	197	198	200	201	198
46	193	193	193	192	192	191	189	188	191	190	190	191	192	193	195	196	193
47	189	189	190	188	188	186	186	183	186	186	186	187	188	189	191	192	189
48	184	185	185	183	183	182	180	179	182	181	181	182	183	184	186	187	184
49	180	181	181	178	179	177	175	175	177	175	177	177	178	180	182	182	180
50	175	176	175	174	174	173	171	170	173	171	171	173	174	175	177	178	175
51	171	172	170	169	170	169	166	166	168	166	166	168	169	170	172	173	171
52	166	167	166	165	164	164	162	161	162	162	162	164	165	166	168	168	166
53	161	162	161	160	159	159	157	156	158	157	157	158	159	161	162	164	161
54	157	158	157	156	155	155	153	152	153	152	153	153	154	157	158	158	157
55	151	153	152	151	150	149	148	147	149	148	148	149	150	151	153	154	151
56	147	149	148	146	146	145	144	143	144	143	143	144	145	146	148	149	147
57	142	144	143	142	141	140	139	137	139	139	139	140	141	142	144	144	142
58	138	139	138	136	137	136	133	133	135	133	134	135	136	137	139	140	138
59	133	134	133	132	131	131	129	128	129	128	129	130	131	133	135	135	133
60	129	129	128	127	126	126	124	124	124	124	124	126	127	128	130	131	129

Laboratory: Standard-Tech Co. Ltd Testing Center  
 NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>



61	124	125	124	123	122	122	120	119	120	119	119	121	122	123	125	126	124
62	119	120	119	118	117	117	115	114	115	115	115	117	117	119	120	121	119
63	115	116	115	113	113	113	111	110	111	110	110	112	112	114	115	117	115
64	110	111	110	109	108	108	106	105	106	105	106	107	107	110	111	112	110
65	106	107	105	104	103	104	101	101	101	101	101	103	103	105	106	108	106
66	101	102	101	100	99	99	97	96	97	96	96	98	99	100	102	103	101
67	97	97	96	95	94	94	92	91	93	93	93	93	94	96	98	98	97
68	92	93	92	90	91	90	88	88	89	88	88	89	90	91	93	94	92
69	87	88	88	87	86	85	84	83	84	83	83	84	85	86	88	89	87
70	83	85	83	82	82	81	79	79	79	79	79	81	81	83	84	84	83
71	79	80	79	78	77	77	75	74	76	75	75	76	77	78	79	81	79
72	75	75	75	74	73	72	71	71	71	70	71	72	72	74	76	76	75
73	70	72	71	70	69	69	67	66	68	67	67	68	69	70	71	72	70
74	66	67	67	66	65	64	63	62	63	63	63	64	64	65	67	68	66
75	63	64	63	61	61	61	59	59	59	59	59	60	61	62	63	64	63
76	58	60	59	58	57	57	55	55	56	55	55	56	57	58	59	60	58
77	55	56	55	54	53	54	51	51	52	51	52	52	53	54	56	56	55
78	51	52	52	51	50	50	48	47	49	48	48	49	49	51	52	53	51
79	47	48	48	47	46	46	44	44	45	44	44	45	46	47	48	49	47
80	44	45	45	43	43	43	41	41	41	41	41	42	43	44	45	46	44
81	40	42	41	40	40	39	38	37	38	38	38	39	39	40	41	42	40
82	38	39	38	37	37	36	35	35	35	34	35	35	36	37	38	39	38
83	34	35	35	34	34	33	32	32	32	32	32	33	33	34	35	36	34
84	32	33	32	31	30	30	29	29	29	29	29	30	30	31	32	33	32
85	29	30	30	29	28	28	27	26	26	27	26	27	28	28	29	30	29
86	26	27	26	26	25	25	24	24	24	24	24	24	25	25	27	27	26
87	24	25	24	23	23	23	21	22	22	21	21	22	22	23	24	24	24
88	21	22	22	21	20	20	19	19	20	19	19	20	20	21	22	22	21
89	19	19	19	19	18	18	17	17	17	17	17	17	18	18	19	20	19
90	16	17	16	15	16	16	15	15	15	15	15	16	16	16	17	17	16
91	8	8	4	6	7	8	4	9	13	12	11	13	14	13	12	13	8
92	1	1	1	0	1	1	1	2	5	4	1	5	5	4	1	3	1

Laboratory: Standard-Tech Co. Ltd Testing Center  
 NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

93	1	1	0	0	0	1	0	0	1	1	1	1	1	1	1	1
94	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1	0
95	0	0	2	1	0	0	3	0	1	1	1	1	1	1	1	0
96	1	1	2	4	1	2	3	1	1	1	2	1	1	1	2	1
97	4	1	1	5	4	5	2	1	1	1	1	3	1	3	2	1
98	6	1	1	4	5	4	1	1	4	1	1	5	4	5	2	1
99	5	1	1	3	3	3	1	1	4	1	1	4	4	3	1	1
100	4	1	0	2	2	2	0	1	4	1	1	3	3	3	1	1
101	3	1	0	1	2	1	0	1	3	1	0	2	2	2	1	1
102	3	1	0	1	1	1	0	0	3	1	0	1	2	1	1	1
103	2	0	0	0	1	0	0	0	2	1	0	1	1	1	0	1
104	0	0	0	0	0	0	0	0	2	1	1	1	1	1	1	0
105	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1
106	2	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1
107	1	0	0	0	0	0	0	0	2	1	1	0	0	0	1	1
108	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
109	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
110	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
111	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1	1
112	1	1	0	0	0	0	0	1	1	1	0	0	0	0	1	1
113	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1
114	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1
115	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1
116	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1
117	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
118	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1
119	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
120	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1
121	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
122	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Laboratory: Standard-Tech Co. Ltd Testing Center  
 NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	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
131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	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
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	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
141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
144	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
149	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
152	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
153	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
154	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
156	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

157	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	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
166	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
169	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
174	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
176	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
178	0	1	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0
179	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	1	0	0	1	1	0	0	0	1	0	0	1	1	0	0	0

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

### 3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2016-07-01	2017-06-30
ST-R-331	Spectral analysis system HAAS-2000	2016-07-01	2017-06-30
D204	Standard Lamp	2016-07-01	2017-06-30
PF2010	Power Meter for Integrating Sphere	2016-07-01	2017-06-30
EE-09	Goniophotometer system	2016-07-01	2017-06-30
D908S	Standard Lamp	2016-07-01	2017-06-30
PF210	Power Meter for Goniophotometer	2016-07-01	2017-06-30
ST-R-181A	Temperature Tester	2016-07-01	2017-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

**\*\*\*\*\* END OF REPORT \*\*\*\*\***