



Report No.: GZE150531-F

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

SSL downlight

Model name(s): CLED8P With TCLD8
CLED8A With TCLD8
CLED8R With TCLD8

Representative (Tested) Model: CLED8A With TCLD8

Model Difference: The construction and ratings of Model CLKT8 are the same as Model CLED8A, except ceiling mounting bracket.

Test & Report By:

Dendi Lin

Engineer: Dendi Lin

Date: Sep.16,2015

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: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

U.S. Department of Energy

Lighting Facts™ Uniform LM-79 Reporting Template
Laboratory Information:

Name of Test Laboratory	Standard-Tech Co. Ltd
Date of Test Report	Sep.16,2015
Test Report No.	GZE150531-F
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	L-TECH CORPORTION	
Brand Name	L-TECH CORP	
Model Number	CLED8A With TCLD8	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	SSL downlight	
Luminaire Aperture (for SSL downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	--	54.60	W
Input Current	--	0.4583	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9929	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	3625.2	lm
Initial Lumen Efficacy	--	66.40	lm/w
Correlated color temperature / CCT	3074	--	K
Color rendering index / CRI	84.2	--	
R9 Value	20	--	
Duv	-0.0027	--	

Luminous Intensity Distribution

Center beam candlepower (if applicable)	-----	2009	cd
Beam angle (if applicable)		82.5	°
Zonal lumens in the 0°-60° zone		89.7	%
Zonal lumens in the 60°-90° zone		10.3	%
Zonal lumens in the 90°-120° zone		0	%
Zonal lumens in the 120°-180° zone		0	%

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

Test Specifications:	
Date of Receipt	: Aug.10,2015
Date of Test	: Sep.10,2015
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry IESNA LM-16-93 Practical Guide to Colorimetry of Light Source IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

Test Methods

1. Photometric and Electrical Measurements – Integrating Sphere Method:

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

1. Product Information:

Brand Name	L-TECH CORP
Model Number	CLED8P With TCLD8 CLED8A With TCLD8 CLED8R With TCLD8
Luminaire Type	SSL downlight
Rated Voltage / Frequency	120~277 Vac, 50/ 60 Hz
Nominal Power	55W
Rated Initial Lamp Lumen	--
Declared CCT	3000K
LED Manufacturer	Seoul Semiconductor.,Ltd
LED Model	STWxC2SB
Sample Receipt Date	Aug.10,2015
Sample Number	GZE150531-F1

Photo

CLED8A With TCLD8



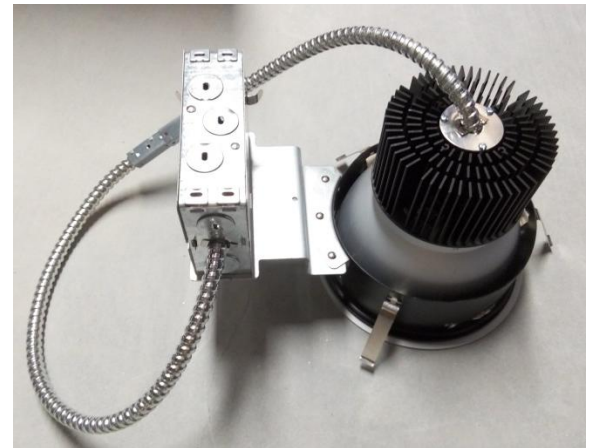
Luminaire CLKT8



CLED8P With TCLD8



CLED8R With TCLD8



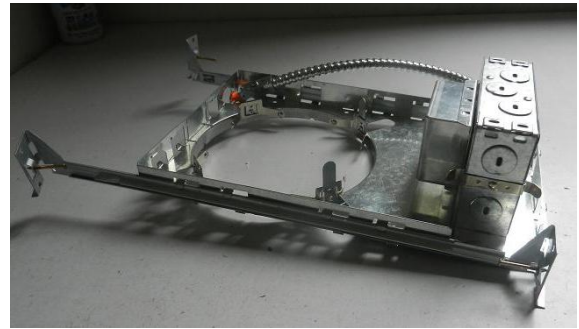
Laboratory: Standard-Tech Co. Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

Mounting fitting



2.1 Electrical, Photometric and Chromaticity Measurements <i>(Refer to Work Instruction QD25)</i>	IES LM-79 2008
---	-----------------------

Test date	2015-09-14	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	CLED8P With TCLD8		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE150531 -F1	120.0	60	0.4583	54.60	0.9929	11.65

Sphere-Spectroradiometer Method:

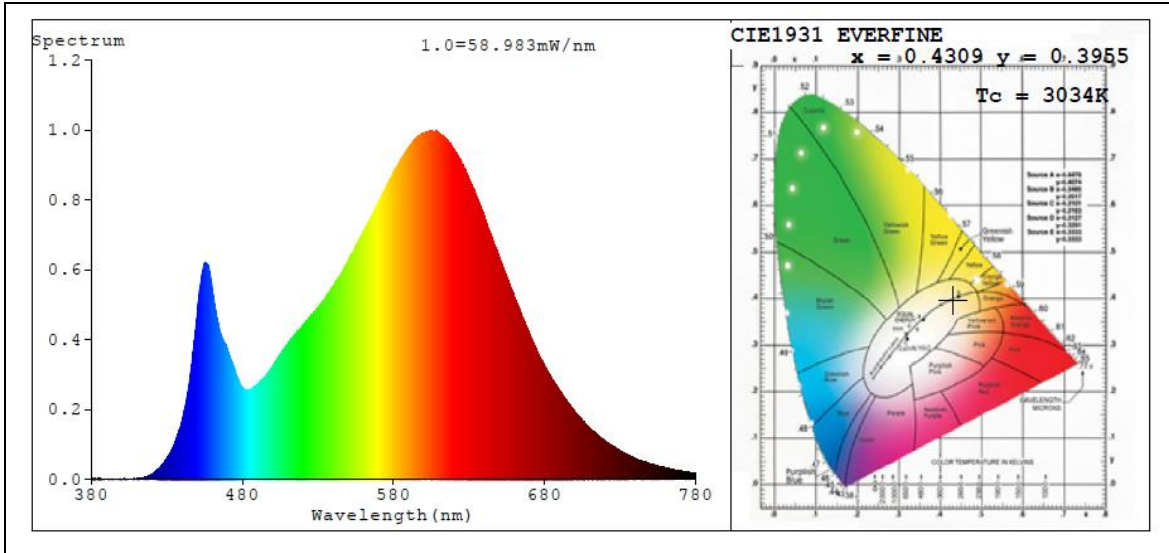
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	84.2
R9	20
CCT (K)	3074
Chromaticity (x, y)	x=0.4281 y=0.3943
Chromaticity (u', v')	u'=0.2490 v'=0.5162
Duv	-0.0027

Special Color Rendering Indices			
R1	84	R9	20
R2	94	R10	86
R3	94	R11	78
R4	80	R12	73
R5	84	R13	87
R6	92	R14	98
R7	83	R15	78
R8	63	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	3625.2
Luminous Efficacy (lm/W)	66.40
Beam Angle °	82.5
Center Beam Candle Power (cd)	2009

Spectral Power Distribution & Chromaticity Diagram



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

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,509.9	41.7%
0-40	2,358.9	65.1%
0-60	3,251.7	89.7%
60-90	372.5	10.3%
70-100	166.6	4.6%
90-120	0.1	0%
0-90	3,624.2	100%
90-180	0.5	0%
0-180	3,624.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	189.3	5.2%	90-100	0.0	0%
10-20	533.8	14.7%	100-110	0.1	0%
20-30	786.8	21.7%	110-120	0.1	0%
30-40	849.1	23.4%	120-130	0.1	0%
40-50	594.3	16.4%	130-140	0.1	0%
50-60	298.4	8.2%	140-150	0.1	0%
60-70	206.0	5.7%	150-160	0.1	0%
70-80	131.2	3.6%	160-170	0.0	0%
80-90	35.4	1.0%	170-180	0.0	0%

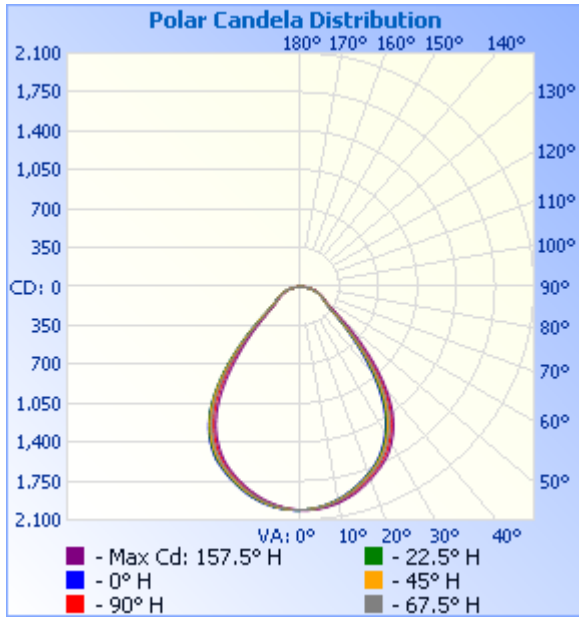
Laboratory: Standard-Tech Co. Ltd Testing Center
 NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

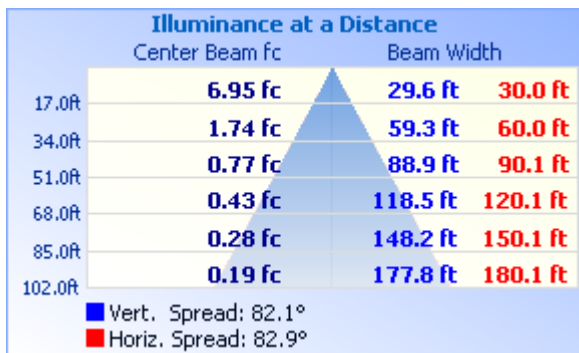
Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

Photometric Data



Illuminance Plots



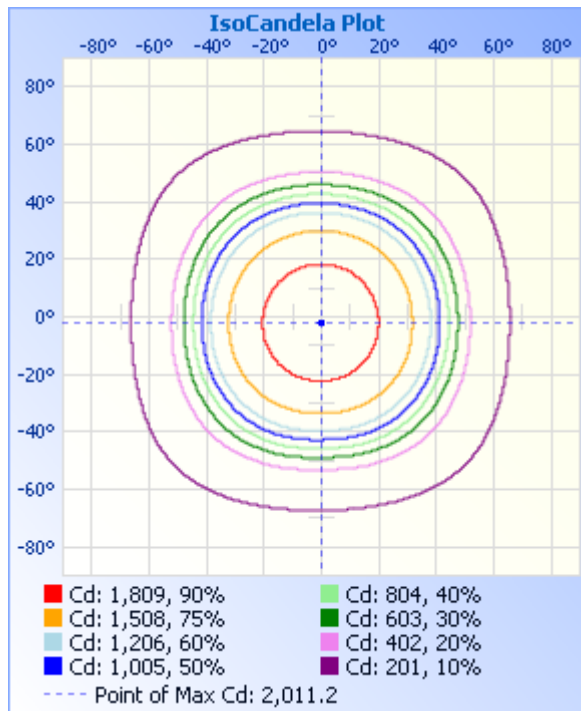
Laboratory: Standard-Tech Co. Ltd Testing Center
 NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

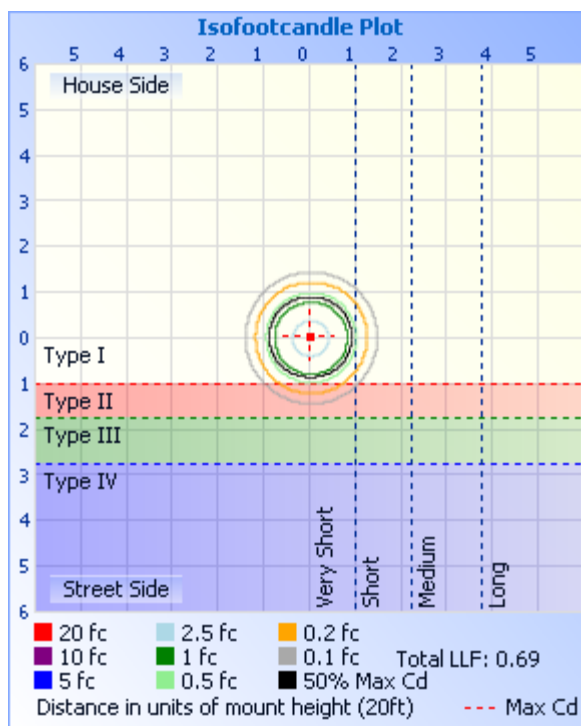
Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, 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	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009
1	2007	2007	2008	2008	2009	2010	2010	2010	2011	2010	2009	2008	2008	2008	2007	2007	2007
2	2004	2004	2005	2007	2008	2010	2011	2011	2011	2010	2008	2007	2006	2005	2004	2004	2004
3	2000	2001	2002	2004	2006	2008	2009	2010	2010	2008	2006	2004	2002	2001	1999	1999	2000
4	1995	1996	1997	2001	2003	2006	2008	2008	2007	2006	2003	2000	1998	1996	1994	1994	1995
5	1989	1990	1992	1996	1999	2003	2004	2005	2005	2002	1999	1995	1992	1989	1988	1987	1989
6	1981	1983	1986	1990	1994	1998	2000	2001	2001	1998	1994	1990	1986	1982	1980	1980	1981
7	1973	1975	1978	1984	1988	1992	1996	1996	1996	1992	1988	1983	1978	1974	1972	1971	1973
8	1963	1966	1970	1975	1980	1986	1989	1990	1990	1986	1980	1975	1969	1965	1962	1962	1963
9	1953	1956	1960	1966	1972	1978	1982	1983	1982	1978	1972	1966	1960	1955	1953	1952	1953
10	1942	1945	1950	1956	1963	1970	1974	1975	1974	1969	1963	1956	1949	1944	1941	1940	1942
11	1930	1933	1938	1946	1953	1960	1965	1966	1964	1960	1953	1945	1938	1933	1929	1928	1930
12	1917	1920	1925	1934	1942	1950	1955	1956	1954	1949	1942	1933	1925	1919	1916	1915	1917
13	1902	1906	1912	1921	1929	1938	1944	1945	1943	1937	1930	1921	1912	1906	1902	1901	1902
14	1888	1892	1898	1908	1917	1926	1932	1933	1931	1925	1917	1908	1898	1891	1887	1887	1888
15	1872	1876	1883	1893	1903	1913	1919	1920	1918	1912	1903	1893	1883	1876	1872	1870	1872
16	1856	1860	1867	1877	1888	1899	1905	1906	1904	1898	1889	1878	1867	1860	1855	1854	1856
17	1840	1844	1851	1862	1873	1884	1890	1891	1890	1883	1873	1862	1851	1843	1838	1837	1840
18	1822	1827	1834	1845	1857	1869	1875	1876	1874	1867	1858	1845	1834	1826	1821	1820	1822
19	1804	1809	1817	1829	1841	1852	1859	1860	1858	1850	1841	1829	1817	1808	1803	1802	1804
20	1786	1790	1799	1811	1824	1836	1842	1843	1841	1834	1824	1811	1799	1790	1785	1783	1786
21	1767	1772	1780	1793	1806	1818	1825	1827	1824	1816	1807	1794	1781	1772	1766	1765	1767
22	1748	1753	1762	1775	1788	1801	1808	1809	1807	1799	1789	1776	1762	1753	1747	1746	1748
23	1726	1733	1742	1756	1771	1783	1790	1791	1789	1782	1771	1759	1743	1732	1725	1724	1726
24	1703	1710	1720	1736	1751	1765	1772	1774	1770	1762	1752	1741	1720	1708	1701	1700	1703
25	1677	1685	1696	1713	1731	1745	1752	1754	1750	1743	1734	1718	1696	1683	1676	1673	1677
26	1650	1659	1671	1689	1712	1724	1732	1734	1731	1724	1711	1693	1670	1657	1648	1647	1650
27	1622	1631	1644	1662	1686	1703	1712	1713	1707	1698	1685	1667	1643	1629	1619	1617	1622
28	1591	1601	1615	1635	1659	1677	1687	1688	1680	1672	1658	1639	1615	1599	1589	1586	1591

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

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

29	1558	1569	1584	1605	1631	1650	1660	1660	1652	1644	1630	1610	1584	1567	1556	1553	1558
30	1523	1535	1551	1574	1601	1620	1631	1630	1622	1613	1599	1578	1551	1533	1520	1518	1523
31	1486	1498	1516	1541	1568	1590	1601	1599	1589	1581	1566	1544	1516	1496	1483	1479	1486
32	1445	1459	1479	1505	1534	1557	1568	1566	1555	1547	1532	1508	1479	1457	1442	1438	1445
33	1402	1417	1438	1467	1497	1521	1533	1531	1517	1510	1495	1469	1439	1414	1398	1393	1402
34	1355	1371	1394	1424	1458	1484	1496	1492	1476	1470	1455	1427	1394	1368	1351	1346	1355
35	1303	1321	1346	1379	1416	1442	1455	1451	1432	1428	1412	1383	1347	1318	1299	1294	1303
36	1248	1267	1295	1331	1368	1398	1412	1407	1383	1381	1366	1334	1296	1265	1244	1237	1248
37	1189	1211	1240	1278	1318	1349	1365	1358	1330	1331	1314	1280	1242	1208	1186	1179	1189
38	1128	1150	1182	1222	1263	1297	1313	1306	1274	1277	1260	1224	1183	1148	1124	1116	1128
39	1064	1088	1120	1161	1205	1241	1259	1251	1214	1219	1201	1163	1122	1086	1060	1053	1064
40	1000	1025	1058	1100	1142	1180	1200	1191	1152	1158	1140	1100	1058	1023	997	987	1000
41	934	959	993	1035	1077	1117	1138	1130	1087	1095	1075	1034	993	957	931	923	934
42	869	894	927	968	1010	1050	1074	1066	1022	1029	1008	966	926	891	866	857	869
43	808	831	862	901	942	982	1007	1001	954	962	941	900	860	827	804	796	808
44	747	769	799	837	875	915	940	935	888	896	874	833	797	763	741	735	747
45	686	706	736	772	808	847	874	869	823	829	807	768	733	699	679	674	686
46	629	647	672	708	743	781	808	803	757	765	743	704	670	638	620	617	629
47	575	591	614	648	681	716	744	740	694	702	680	643	610	581	564	564	575
48	524	537	557	590	622	657	682	678	633	642	622	586	554	526	512	513	524
49	476	488	506	535	566	599	624	619	575	585	566	532	501	477	465	466	476
50	434	443	460	485	514	546	568	562	521	531	514	482	454	433	422	424	434
51	396	404	418	441	468	496	517	510	472	483	468	438	412	393	385	387	396
52	363	371	382	402	425	452	469	462	429	438	425	399	376	361	354	355	363
53	336	342	351	368	388	412	426	419	391	399	388	365	347	334	328	329	336
54	314	319	326	340	357	376	389	383	359	365	355	337	322	312	306	307	314
55	295	299	306	317	331	347	356	351	333	336	329	314	302	293	289	289	295
56	280	283	288	298	310	322	329	325	311	313	306	295	285	278	274	275	280
57	267	270	274	282	292	302	307	304	293	294	288	279	271	265	262	262	267
58	258	259	262	268	277	285	289	287	278	278	273	265	259	254	252	253	258
59	250	251	253	258	264	270	274	272	265	265	260	255	250	246	244	245	250

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

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

60	242	243	245	249	254	259	261	260	256	254	250	246	242	238	237	237	242
61	234	235	237	242	246	250	251	250	249	246	242	239	234	230	229	229	234
62	226	227	229	234	238	242	243	242	241	238	234	231	226	223	221	221	226
63	218	219	221	226	230	234	235	234	232	230	226	223	218	215	213	213	218
64	209	210	213	218	222	226	227	226	224	222	218	215	210	207	205	205	209
65	201	202	205	210	214	218	219	218	216	214	210	207	202	199	197	197	201
66	193	194	197	202	206	210	211	210	208	205	202	199	194	191	189	189	193
67	185	186	189	194	198	202	203	202	200	197	194	191	186	183	181	181	185
68	177	178	181	186	190	194	195	194	192	189	186	183	178	175	172	173	177
69	168	170	173	177	182	186	187	185	184	181	178	175	170	167	164	165	168
70	160	161	164	169	174	178	178	177	175	173	170	167	162	158	156	156	160
71	151	153	156	161	166	169	170	169	167	164	162	158	154	150	148	148	151
72	142	144	148	153	158	161	162	160	158	156	153	150	145	142	139	139	142
73	134	136	139	144	149	153	153	152	149	147	145	142	137	133	131	131	134
74	125	127	131	136	141	144	144	143	140	138	136	133	129	125	122	122	125
75	116	118	122	127	132	135	136	134	131	129	128	124	120	116	114	113	116
76	107	109	114	119	124	127	127	124	121	120	119	116	112	108	105	104	107
77	98	100	105	110	115	118	118	115	112	110	110	107	103	99	96	95	98
78	88	91	96	102	106	109	109	105	102	101	101	99	94	90	88	86	88
79	78	81	87	93	98	101	100	95	92	91	91	90	86	82	79	77	78
80	68	72	78	84	89	92	90	85	82	81	82	81	77	73	70	67	68
81	58	62	69	75	80	83	81	75	72	70	72	72	68	65	61	57	58
82	47	51	60	67	71	74	71	64	61	60	62	63	60	56	51	47	47
83	37	41	49	57	62	64	60	53	48	48	52	54	51	46	41	36	37
84	26	30	39	48	52	55	50	40	35	36	42	44	42	37	32	26	26
85	16	20	29	39	43	46	39	28	24	25	31	35	33	29	22	17	16
86	7	10	19	30	34	35	27	17	13	14	19	25	24	20	13	8	7
87	4	7	9	20	23	24	15	5	2	3	8	15	16	11	9	4	4
88	0	3	4	9	11	12	3	0	0	0	1	5	10	8	4	0	0
89	0	0	0	5	0	0	0	0	0	0	0	0	5	4	0	0	0
90	0	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: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	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
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	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
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	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
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	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
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	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
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	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
121	0	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: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	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	0
125	0	0	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	0	0
127	0	0	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	0	0
129	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
131	0	0	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	0	0
133	0	0	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	0	0
135	0	0	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	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	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	0	0
140	0	0	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	0	0
142	0	0	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	0	0	0	0	0	0	0
144	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
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
149	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
151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	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: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

153	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
154	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
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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
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	0	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	0	0	0	0	0	0
169	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
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	0	0	0	0	0	0	0	0	0	0
174	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
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	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

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

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, 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	2015-07-01	2016-06-30
ST-R-331	Spectral analysis system HAAS-2000	2015-07-01	2016-06-30
D204	Standard Lamp	2015-07-01	2016-06-30
PF2010	Power Meter for Integrating Sphere	2015-07-01	2016-06-30
EE-09	Goniophotometer system	2015-07-01	2016-06-30
D908S	Standard Lamp	2015-07-01	2016-06-30
PF210	Power Meter for Goniophotometer	2015-07-01	2016-06-30
ST-R-181A	Temperature Tester	2015-07-01	2016-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

******* END OF DATASHEET PACKAGE *******

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

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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