



Report No.: GZE160347-L

NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

LIGHT EFFICIENT DESIGN

(Brand Name:N/A)

188 S. Northwest Highway Cary, IL 60013

LED Lamp

Model name(s): LED-8036M40C-A

Representative (Tested) Model: LED-8036M40C-A

Model Different :N/A

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date: Apr.28,2016

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>

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	Apr.28,2016
Test Report No.	GZE160347-L
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	LIGHT EFFICIENT DESIGN		
Brand Name	N/A		
Model Number	LED-8036M40C-A		
SKU (if available)	N/A		
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Lamp		
Luminaire Aperture (for 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	--	98.72	W
Input Current	--	0.4756	A
Input Voltage (ac)	--	220.0	V
Power Factor	--	0.9434	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	10902	lm
Initial Lumen Efficacy	--	110.43	lm/w
Correlated color temperature / CCT	4035	--	K
Color rendering index / CRI	84.7	--	
R9 Value	17	--	
Duv	-0.0004	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		2913	cd
Beam angle (if applicable)		108.4	°
Zonal lumens in the 0°-60° zone		65.7	%
Zonal lumens in the 60°-90° zone	-----	20.5	%
Zonal lumens in the 90°-120° zone		10.7	%
Zonal lumens in the 120°-180° zone		3.2	%

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>

Test Specifications:	
Date of Receipt	: Apr.01,2016
Date of Test	: Apr.24,2016
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 – Light Distribution 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 220 Volts, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

2. 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 220 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.

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. Product Information:

Brand Name	N/A
Model Number	LED-8036M40C-A
Luminaire Type	LED Lamp
Rated Voltage / Frequency	220~347 Vac, 50/60Hz
Nominal Power	100W
Rated Initial Lamp Lumen	--
Declared CCT	4000K
LED Manufacturer	N/A
LED Model	N/A
Sample Receipt Date	Apr.01,2016
Sample Number	GZE160347-L1(4000K)

Photo



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

Test date	2016-04-24	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED-8036M40C-A		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160347	220.0	60	0.4756	98.72	0.9434	15.73
-L1	347.0	60	0.3141	98.40	0.9027	17.06

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	220.0
Frequency (Hz)	60
Color Rendering Index (CRI)	84.7
R9	17
CCT (K)	4035
Chromaticity (x, y)	x=0.3786 y=0.3749
Chromaticity (u', v')	u'=0.2247 v'=0.5005
Duv	-0.0004

Special Color Rendering Indices			
R1	84	R9	17
R2	92	R10	80
R3	96	R11	81
R4	82	R12	63
R5	83	R13	86
R6	88	R14	98
R7	86	R15	78
R8	67	--	--

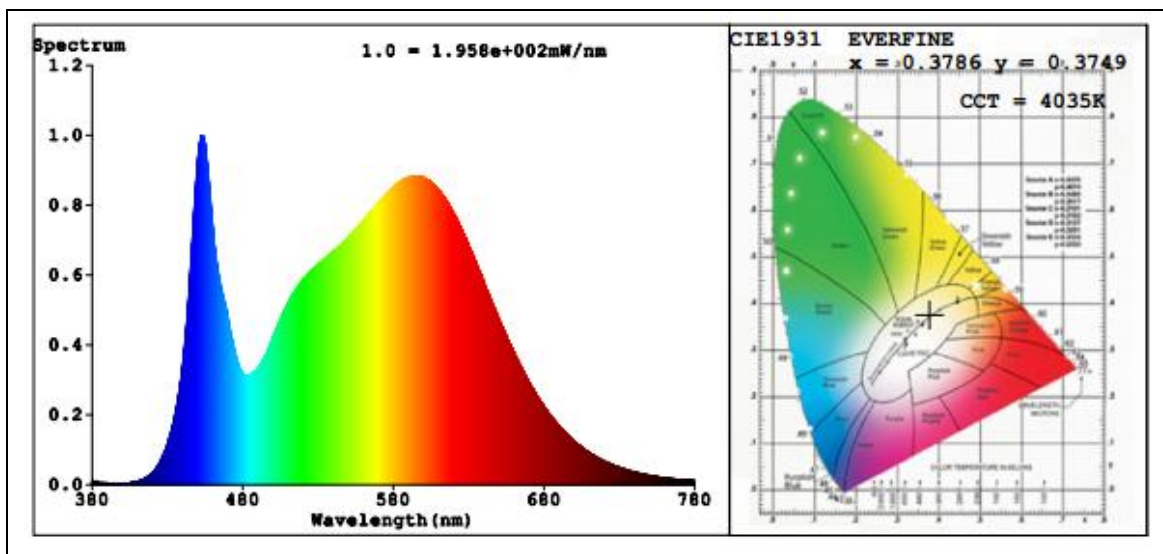
Goniophotometer Method :

Parameter	Result
Test Voltage (V)	220.0
Frequency (Hz)	60
Total Luminous (lm)	10902
Luminous Efficacy (lm/W)	110.43
Beam Angle°	108.4
Center Beam Candle Power (cd)	2913

Goniophotometer Methodn :

Parameter	Result
Test Voltage (V)	347.0
Frequency (Hz)	60
Total Luminous (lm)	10845
Luminous Efficacy (lm/W)	110.22

Spectral Power Distribution & Chromaticity Diagram



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>

Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,554.2	23.4%
0-40	4,224.8	38.8%
0-60	7,157.4	65.7%
60-90	2,233.2	20.5%
70-100	1,774.1	16.3%
90-120	1,165.7	10.7%
0-90	9,390.6	86.1%
90-180	1,510.6	13.9%
0-180	10,901.2	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	287.4	2.6%	90-100	482.4	4.4%
10-20	898.9	8.2%	100-110	389.2	3.6%
20-30	1,367.9	12.5%	110-120	294.2	2.7%
30-40	1,670.6	15.3%	120-130	176.2	1.6%
40-50	1,660.8	15.2%	130-140	104.0	1%
50-60	1,271.9	11.7%	140-150	45.5	0.4%
60-70	941.5	8.6%	150-160	14.4	0.1%
70-80	743.9	6.8%	160-170	3.7	0%
80-90	547.8	5.0%	170-180	1.0	0%

Laboratory: Standard-Tech Co. Ltd Testing Center

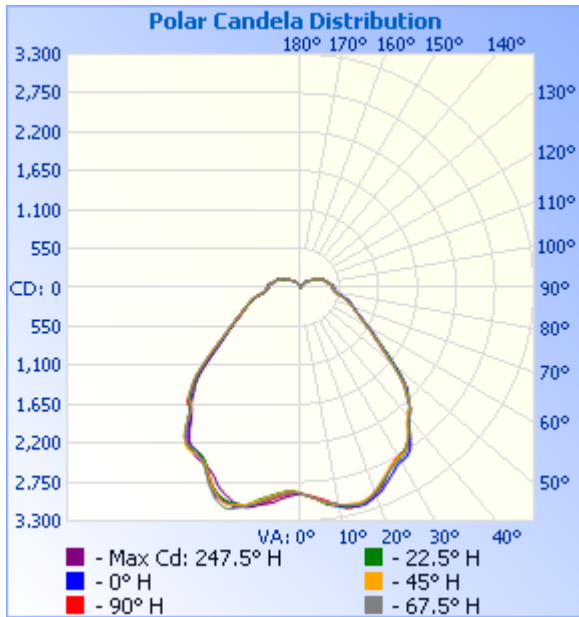
NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

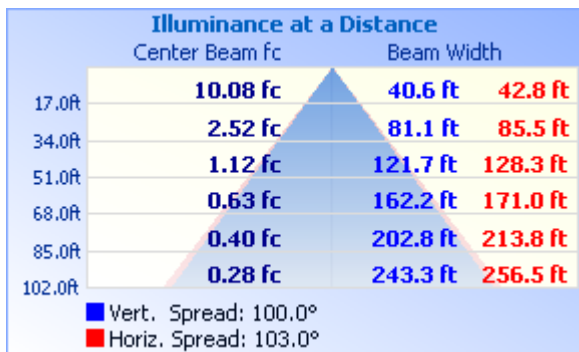
Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

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

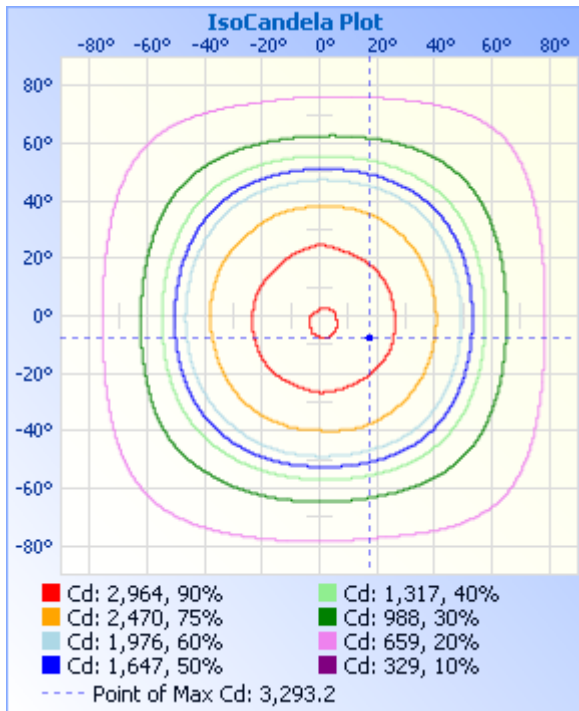
Photometric Data



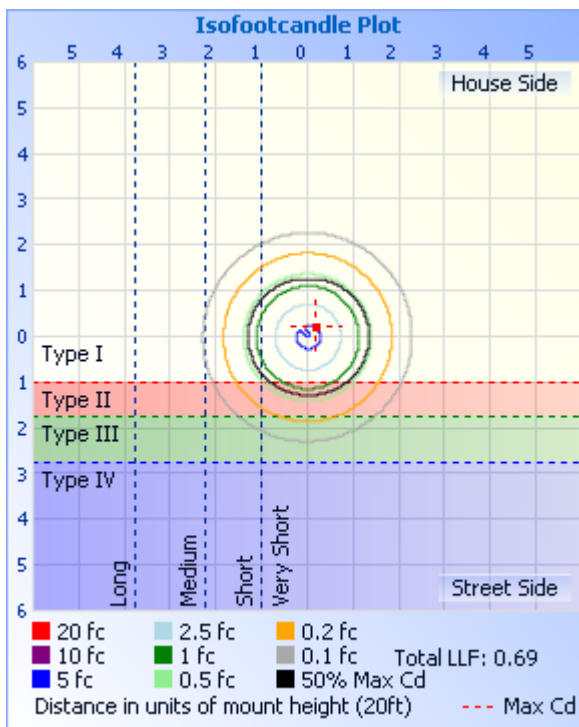
Illuminance Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913	2913
1	2930	2929	2933	2934	2920	2913	2916	2911	2901	2895	2888	2898	2900	2909	2924	2922	2930
2	2943	2954	2950	2945	2937	2925	2912	2899	2895	2880	2886	2895	2904	2918	2932	2937	2943
3	2971	2966	2976	2969	2951	2935	2925	2909	2888	2885	2887	2901	2918	2931	2950	2951	2971
4	2989	2993	2990	2990	2972	2958	2940	2916	2898	2888	2894	2921	2933	2942	2961	2971	2989
5	3014	3024	3020	3006	2991	2971	2959	2926	2914	2905	2913	2933	2955	2960	2974	2994	3014
6	3052	3056	3051	3034	3014	2996	2975	2952	2931	2920	2928	2956	2971	2978	2993	3019	3052
7	3077	3086	3066	3055	3035	3025	3007	2977	2959	2943	2957	2984	2999	3009	3024	3055	3077
8	3105	3098	3086	3070	3067	3051	3029	3001	2987	2971	2980	3009	3030	3037	3038	3076	3105
9	3121	3111	3107	3093	3089	3073	3054	3025	3021	2993	3003	3045	3069	3069	3067	3092	3121
10	3134	3131	3120	3113	3118	3113	3084	3055	3055	3021	3040	3074	3090	3093	3083	3114	3134
11	3164	3139	3131	3132	3154	3147	3129	3099	3100	3048	3064	3099	3115	3129	3108	3130	3164
12	3171	3162	3135	3144	3182	3168	3167	3142	3153	3086	3094	3131	3137	3154	3128	3157	3171
13	3178	3167	3139	3156	3193	3183	3188	3193	3183	3131	3131	3158	3168	3172	3156	3167	3178
14	3188	3157	3144	3173	3187	3192	3211	3213	3199	3165	3158	3193	3184	3177	3180	3171	3188
15	3192	3155	3147	3175	3191	3203	3229	3226	3204	3182	3185	3214	3203	3175	3185	3186	3192
16	3200	3155	3152	3180	3184	3192	3245	3238	3218	3187	3201	3235	3208	3180	3186	3185	3200
17	3193	3148	3136	3161	3179	3183	3239	3228	3233	3195	3213	3268	3216	3188	3179	3180	3193
18	3171	3131	3116	3134	3155	3161	3224	3214	3229	3200	3229	3288	3217	3189	3173	3164	3171
19	3152	3109	3095	3107	3128	3141	3209	3198	3222	3190	3230	3293	3207	3180	3156	3136	3152
20	3128	3085	3061	3073	3102	3122	3188	3176	3212	3181	3225	3274	3194	3158	3136	3115	3128
21	3113	3057	3025	3046	3075	3102	3146	3143	3200	3163	3204	3250	3169	3138	3100	3084	3113
22	3085	3028	2985	3009	3042	3060	3104	3110	3189	3132	3161	3223	3147	3114	3067	3055	3085
23	3043	2990	2949	2973	3005	3019	3062	3077	3141	3101	3119	3172	3108	3074	3028	3018	3043
24	3012	2952	2915	2940	2961	2974	3016	3028	3094	3070	3076	3121	3066	3035	2992	2963	3012
25	2975	2915	2882	2904	2909	2928	2962	2969	3047	3022	3019	3070	3004	2982	2950	2924	2975
26	2943	2873	2853	2882	2860	2878	2915	2914	2988	2960	2964	3003	2950	2948	2915	2890	2943
27	2913	2843	2827	2864	2821	2834	2867	2861	2929	2900	2906	2941	2895	2903	2882	2866	2913
28	2877	2819	2810	2848	2797	2797	2826	2819	2867	2841	2857	2885	2851	2869	2860	2850	2877

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	2853	2800	2787	2833	2771	2772	2789	2790	2816	2795	2819	2841	2811	2837	2823	2834	2853
30	2838	2784	2763	2811	2752	2753	2760	2765	2778	2765	2793	2809	2784	2820	2793	2828	2838
31	2835	2757	2761	2803	2740	2739	2744	2761	2752	2746	2786	2786	2761	2794	2765	2820	2835
32	2825	2736	2753	2780	2740	2739	2742	2767	2739	2741	2778	2764	2742	2775	2751	2805	2825
33	2799	2710	2726	2745	2732	2734	2750	2772	2732	2748	2778	2742	2732	2765	2740	2790	2799
34	2765	2673	2685	2705	2718	2710	2754	2780	2727	2756	2783	2731	2729	2754	2738	2757	2765
35	2705	2641	2628	2646	2687	2669	2746	2768	2716	2758	2779	2732	2733	2733	2712	2721	2705
36	2634	2605	2567	2596	2636	2616	2706	2734	2685	2746	2755	2722	2724	2696	2677	2672	2634
37	2558	2559	2501	2547	2573	2556	2644	2678	2642	2711	2711	2699	2694	2638	2623	2608	2558
38	2482	2501	2438	2488	2495	2490	2558	2595	2580	2661	2664	2654	2639	2572	2553	2553	2482
39	2418	2426	2398	2425	2427	2413	2464	2497	2505	2589	2595	2585	2580	2510	2485	2475	2418
40	2365	2372	2355	2380	2366	2355	2379	2404	2430	2501	2498	2497	2488	2441	2417	2404	2365
41	2337	2331	2326	2367	2336	2338	2326	2348	2365	2417	2397	2406	2410	2380	2361	2350	2337
42	2313	2295	2311	2329	2314	2322	2292	2314	2328	2343	2309	2325	2331	2330	2332	2302	2313
43	2253	2261	2259	2254	2260	2276	2262	2294	2292	2295	2266	2280	2297	2311	2320	2268	2253
44	2194	2201	2195	2171	2181	2231	2213	2269	2248	2251	2244	2264	2293	2304	2275	2214	2194
45	2146	2150	2121	2103	2115	2149	2130	2205	2206	2207	2227	2238	2266	2255	2180	2150	2146
46	2107	2089	2070	2051	2055	2057	2038	2135	2157	2158	2203	2185	2185	2161	2087	2088	2107
47	2047	2012	2018	1978	1991	1979	1980	2050	2094	2093	2128	2128	2108	2075	2059	2048	2047
48	1958	1940	1912	1895	1910	1906	1922	1996	2025	2021	2057	2062	2054	2013	2018	1981	1958
49	1874	1848	1802	1794	1816	1822	1846	1924	1957	1959	2009	1998	1992	1955	1939	1908	1874
50	1777	1760	1722	1710	1727	1743	1760	1834	1856	1878	1925	1924	1908	1889	1846	1820	1777
51	1682	1670	1629	1610	1629	1655	1676	1737	1749	1788	1833	1835	1806	1793	1752	1728	1682
52	1602	1590	1552	1529	1527	1559	1582	1642	1656	1698	1730	1741	1718	1710	1652	1628	1602
53	1522	1511	1474	1449	1457	1474	1485	1544	1559	1611	1647	1649	1630	1619	1573	1549	1522
54	1443	1432	1420	1381	1389	1409	1411	1462	1475	1527	1567	1548	1558	1540	1495	1470	1443
55	1374	1365	1355	1323	1322	1344	1350	1389	1411	1445	1476	1459	1486	1461	1416	1396	1374
56	1314	1299	1292	1271	1266	1289	1282	1318	1346	1373	1402	1394	1407	1394	1350	1331	1314
57	1262	1249	1239	1223	1219	1238	1226	1253	1287	1308	1332	1340	1338	1327	1295	1277	1262
58	1215	1191	1184	1176	1177	1189	1178	1199	1242	1248	1269	1281	1270	1272	1242	1235	1215
59	1164	1143	1136	1125	1125	1144	1134	1156	1191	1192	1216	1231	1209	1225	1193	1186	1164
60	1111	1095	1089	1074	1081	1108	1100	1117	1149	1149	1170	1184	1163	1184	1154	1137	1111

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	1062	1047	1043	1037	1043	1070	1065	1079	1107	1112	1121	1136	1119	1135	1110	1089	1062
62	1022	1006	1000	998	1012	1034	1030	1050	1071	1068	1069	1086	1080	1089	1068	1049	1022
63	985	963	957	957	975	1002	995	1022	1034	1026	1033	1047	1043	1046	1030	1011	985
64	946	927	922	925	939	963	958	987	1000	991	1003	1012	1016	1007	992	971	946
65	913	898	896	897	907	928	927	951	965	955	971	985	982	971	958	939	913
66	886	870	871	870	877	895	901	914	931	924	934	948	944	941	931	913	886
67	862	844	844	843	849	874	879	890	900	895	896	915	912	912	905	883	862
68	833	820	818	819	827	851	855	872	881	871	872	887	883	884	877	854	833
69	814	801	801	804	807	822	832	850	861	848	854	868	859	861	855	833	814
70	800	780	780	784	784	797	805	822	833	823	832	848	836	840	832	816	800
71	777	760	758	765	767	777	785	794	802	795	809	821	815	814	808	797	777
72	757	742	738	747	749	758	768	775	775	771	783	796	793	790	788	776	757
73	737	723	720	725	732	737	751	760	754	751	766	771	773	768	766	754	737
74	719	695	695	701	704	716	735	745	738	729	748	751	754	745	747	735	719
75	702	674	675	677	683	691	712	726	724	710	731	730	733	728	728	712	702
76	681	652	649	650	659	668	689	708	709	693	713	710	713	708	703	689	681
77	657	629	624	621	632	643	668	687	685	671	685	688	686	687	679	664	657
78	626	602	596	593	602	616	640	659	659	649	664	663	663	663	656	638	626
79	596	574	568	565	573	588	608	625	631	627	639	641	637	638	628	610	596
80	568	545	543	541	544	559	576	590	599	599	612	611	607	611	599	581	568
81	544	522	524	519	519	536	547	561	568	568	581	581	577	585	569	555	544
82	523	507	511	502	501	519	527	540	540	540	554	553	547	556	544	532	523
83	512	500	501	489	489	508	517	524	522	519	531	528	522	530	525	515	512
84	505	493	493	479	482	502	515	514	508	505	514	510	504	509	513	503	505
85	502	488	487	471	475	496	514	508	500	496	503	497	491	499	503	493	502
86	497	481	479	463	469	492	508	502	495	488	496	486	484	492	500	483	497
87	490	471	469	455	460	483	497	493	490	479	486	475	477	488	494	473	490
88	482	461	461	450	452	473	483	481	485	469	476	464	472	481	487	465	482
89	472	453	457	452	446	468	470	471	480	459	468	454	464	477	478	458	472
90	470	457	460	457	447	474	463	467	472	449	460	447	456	472	467	453	470
91	471	461	462	459	447	472	463	467	473	447	456	447	452	474	466	457	471
92	470	462	458	461	448	468	461	465	470	451	456	455	456	476	467	459	470

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	467	460	456	458	445	463	460	462	465	456	455	458	456	473	461	458	467
94	461	452	453	452	442	459	458	458	461	455	453	457	450	464	450	457	461
95	452	442	445	443	436	454	450	452	457	450	449	450	444	456	444	451	452
96	444	429	432	428	429	447	440	445	451	442	442	444	438	449	437	443	444
97	430	419	421	414	419	440	429	438	442	432	434	437	431	441	431	430	430
98	418	411	410	404	407	432	419	427	429	424	424	427	426	434	425	415	418
99	408	400	401	397	400	423	409	416	417	416	417	419	417	425	416	401	408
100	402	392	394	389	396	413	399	404	406	406	408	406	407	418	403	389	402
101	392	384	384	383	393	401	385	395	397	395	401	393	398	416	390	382	392
102	379	378	376	376	390	396	378	385	386	387	394	384	385	408	376	376	379
103	371	375	366	371	384	396	378	377	377	379	383	377	375	396	367	370	371
104	368	373	359	365	376	393	380	374	372	374	372	370	371	387	364	366	368
105	364	367	353	356	367	385	379	373	370	370	361	363	370	382	367	363	364
106	360	358	345	348	362	373	369	369	370	364	355	357	365	375	367	360	360
107	352	352	337	344	359	363	361	361	364	359	347	351	357	370	360	355	352
108	343	347	334	342	351	351	359	353	354	352	340	345	347	362	351	351	343
109	338	339	331	337	339	342	357	349	344	345	334	342	341	355	350	349	338
110	336	331	326	333	329	334	347	348	340	336	327	340	336	344	342	345	336
111	334	322	320	326	322	325	339	339	338	326	322	333	331	329	335	338	334
112	324	314	313	316	317	314	333	330	332	319	315	325	327	316	332	330	324
113	313	307	307	309	311	308	322	321	317	310	310	320	323	306	325	322	313
114	307	298	300	303	303	304	312	312	305	297	308	309	317	298	315	313	307
115	301	289	292	296	292	292	305	304	296	284	302	302	307	294	304	301	301
116	291	277	278	285	280	278	299	295	287	271	291	294	296	292	294	295	291
117	280	269	269	278	270	265	287	291	275	264	281	288	285	283	282	288	280
118	272	261	261	269	258	256	276	279	263	258	269	279	272	270	271	280	272
119	263	250	251	259	245	249	264	269	257	251	264	270	262	259	261	272	263
120	250	236	238	245	233	237	253	260	249	243	255	261	249	250	247	262	250
121	236	225	225	229	219	225	242	249	237	234	244	252	235	240	237	251	236
122	223	217	211	217	210	213	228	237	225	225	232	243	225	228	228	237	223
123	211	207	198	204	204	201	216	222	212	219	221	227	214	215	216	223	211
124	200	194	184	191	196	194	207	211	199	210	208	212	206	203	209	212	200

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	187	184	172	179	188	184	198	201	187	202	198	200	202	194	201	198	187
126	176	177	164	170	178	175	190	191	178	193	184	188	196	186	191	184	176
127	166	172	158	164	170	168	183	179	171	183	171	178	184	179	180	173	166
128	159	165	154	158	165	162	174	169	164	175	165	171	174	171	170	167	159
129	154	158	149	155	161	158	166	162	155	168	161	166	166	163	164	163	154
130	152	152	146	153	160	156	164	159	151	159	156	163	161	156	159	159	152
131	151	151	144	149	157	153	162	157	150	153	151	161	159	152	157	158	151
132	149	149	138	142	153	149	157	155	149	149	146	158	157	151	156	156	149
133	144	144	133	136	150	144	152	151	145	148	143	153	153	147	151	150	144
134	137	138	127	130	141	137	147	143	139	148	139	146	150	142	147	144	137
135	130	133	123	125	131	133	139	137	133	145	134	138	145	137	142	137	130
136	124	126	117	120	124	128	133	134	128	139	130	133	138	131	136	130	124
137	119	119	110	112	118	120	127	129	124	132	125	129	130	128	129	125	119
138	114	112	104	105	111	112	119	121	120	123	120	124	121	122	122	120	114
139	108	104	98	97	102	104	111	111	113	115	115	117	114	115	115	113	108
140	101	96	90	89	95	96	101	102	106	107	107	109	107	108	107	105	101
141	93	88	84	84	87	90	94	95	99	102	101	102	99	100	98	95	93
142	86	81	80	79	81	84	88	87	94	96	95	94	93	93	91	88	86
143	80	76	74	72	74	77	82	82	88	88	89	88	86	86	86	83	80
144	75	70	67	65	68	71	75	78	81	81	84	83	80	79	79	78	75
145	69	64	61	60	62	61	68	72	75	74	77	78	73	73	73	71	69
146	63	59	57	56	57	59	62	65	69	69	70	72	68	68	67	65	63
147	58	54	53	52	53	55	57	60	63	63	64	66	63	64	62	60	58
148	53	49	49	48	49	51	53	55	58	59	60	60	58	59	58	56	53
149	50	45	45	44	45	46	49	51	54	54	56	57	54	55	53	52	50
150	46	42	41	40	41	42	45	46	49	50	51	52	50	51	49	47	46
151	42	38	38	37	37	39	41	42	45	45	47	48	46	47	45	44	42
152	39	34	34	33	34	35	37	38	41	41	43	44	43	43	41	40	39
153	35	31	31	31	31	32	33	35	37	37	39	41	39	40	37	36	35
154	32	28	28	28	28	29	30	31	34	34	35	37	35	36	34	33	32
155	29	26	25	25	25	26	27	28	30	30	32	34	32	33	31	30	29
156	27	24	23	23	23	23	24	25	27	27	29	31	29	30	28	27	27

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	25	22	22	22	21	21	22	23	25	25	26	28	27	27	26	25	25
158	23	21	20	20	19	19	20	21	22	23	24	26	25	25	24	23	23
159	21	19	19	19	18	18	19	19	21	21	22	24	23	23	22	22	21
160	19	17	17	17	16	16	17	17	19	20	20	21	21	21	20	20	19
161	18	16	16	16	15	15	16	16	17	18	18	20	20	20	19	18	18
162	16	14	14	14	13	14	14	14	16	16	17	18	18	18	17	16	16
163	15	13	13	13	12	12	13	13	14	15	15	16	16	16	15	15	15
164	13	12	11	11	11	11	11	11	12	13	13	15	14	14	13	13	13
165	11	11	11	11	10	10	10	10	11	11	12	13	12	13	12	11	11
166	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	10	10
167	10	10	10	10	10	10	10	10	10	10	11	11	11	11	10	10	10
168	10	10	10	10	10	10	10	10	10	11	11	11	11	11	10	10	10
169	10	10	10	10	10	10	10	10	10	11	11	11	11	10	10	10	10
170	10	10	10	10	11	10	10	11	10	11	11	11	10	10	10	10	10
171	10	10	10	10	11	10	10	11	10	11	11	10	10	10	10	10	10
172	10	10	10	10	11	10	10	11	10	11	11	8	10	10	10	10	10
173	10	10	10	10	10	10	10	11	10	11	11	11	10	10	10	10	10
174	10	10	10	10	10	10	10	10	10	11	11	11	10	10	10	10	10
175	10	10	10	10	10	10	10	10	11	10	11	11	10	10	10	10	10
176	10	10	10	11	10	10	10	10	10	10	10	10	10	10	10	10	10
177	10	10	10	11	10	10	10	10	10	10	10	10	10	10	10	10	10
178	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
179	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
180	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

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 *******