



NVLAP LAB CODE 201011-0

Report No.: GZE150548-D

LM-79-08 Test Report

For

IGT LIGHTING INC.

3755 Lincoln St. Suite B, Riverside, CA 92503

Outdoor Wall-mounted Area Luminaires

Model name(s): IGTWP-0312050

Test & Report By:

Dendi Lin

Engineer: Dendi Lin

Date: Aug.11,2015

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-H/2

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

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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	Aug.11,2015
Test Report No.	GZE150548-D
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	IGT Lighting Inc.	
Brand Name	IGT	
Model Number	IGTWP-0312050	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Wall-mounted Area Luminaires	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	108.8	--	W
Input Current	0.9100	--	A
Input Voltage (ac)	119.9	--	V
Power Factor	0.9970	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	7764	--	lm
Initial Lumen Efficacy	71.36	--	lm/w
Correlated color temperature / CCT	5267	--	K
Color rendering index / CRI	70.5	--	
R9 Value	0	--	
Duv	0.0072	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)			cd
Beam angle (if applicable)			°
Zonal lumens in the 0°-60° zone	-----		%
Zonal lumens in the 60°-90° zone			%
Zonal lumens in the 90°-120° zone			%
Zonal lumens in the 120°-180° zone			%

Date of Receipt	: Aug.07,2015
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Date of Test	: Aug.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 – 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 120 Volts AC, 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 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.

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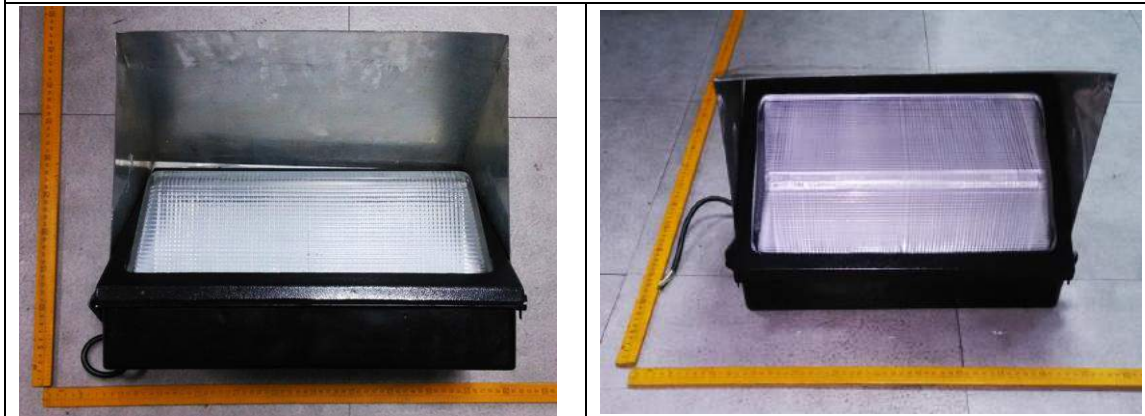
Fax: 8620-32290422

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1. Product Information:

Brand Name	IGT Lighting Inc.
Model Number	IGTWP-0312050
Luminaire Type	Outdoor Wall-mounted Area Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	120W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,4100K,5000K
LED Manufacturer	Nichia Corporation
LED Model	NF2L757DR
Sample Receipt Date	Aug.07,2015
Sample Number	GZE150548-D1(2700K),D2(5000K)

Photo



2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2015-07-30	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	IGTWP-0312050 (5000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE150548	119.9	60	0.9100	108.8	0.9970	10.60
-D2	277.1	60	0.4283	108.1	0.9108	16.09

Sphere-Spectroradiometer Method :

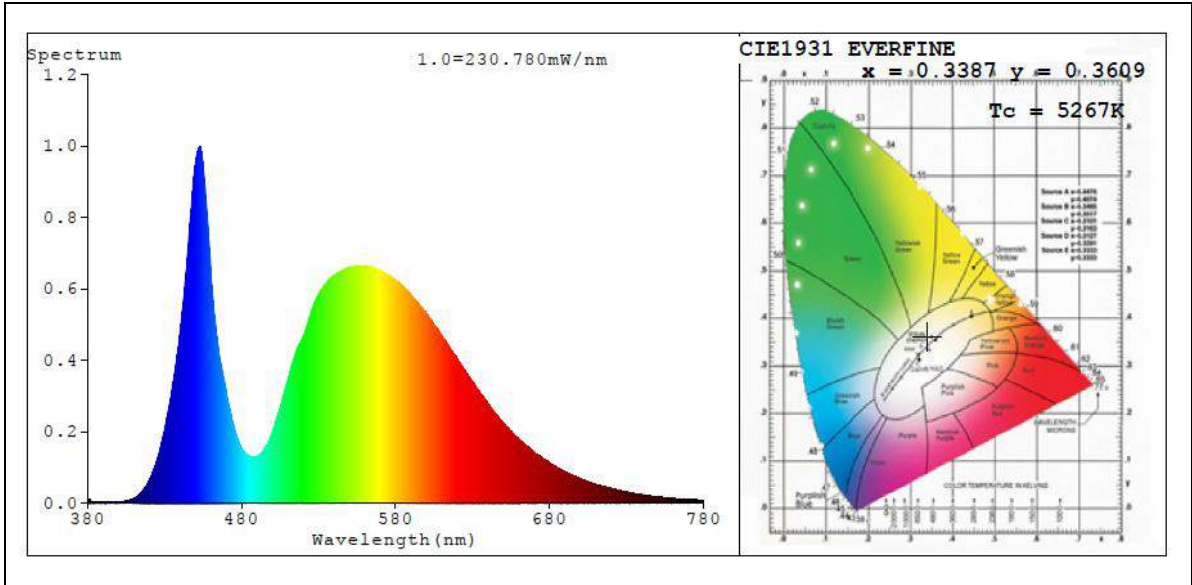
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	70.5
R9	0
CCT (K)	5267
Chromaticity (x, y)	x=0.3387 y=0.3609
Chromaticity (u', v')	u'=0.2036 v'=0.4882
Duv	0.0072
Total Initial Lumen Output(lm)	7764
Initial Lumen Efficacy(lm/w)	71.36

Special Color Rendering Indices			
R1	66	R9	0
R2	76	R10	41
R3	81	R11	64
R4	70	R12	37
R5	67	R13	68
R6	66	R14	89
R7	82	R15	61
R8	55	--	--

Sphere-Spectroradiometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	7701
Initial Lumen Efficacy(lm/w)	71.24

Spectral Power Distribution & Chromaticity Diagram



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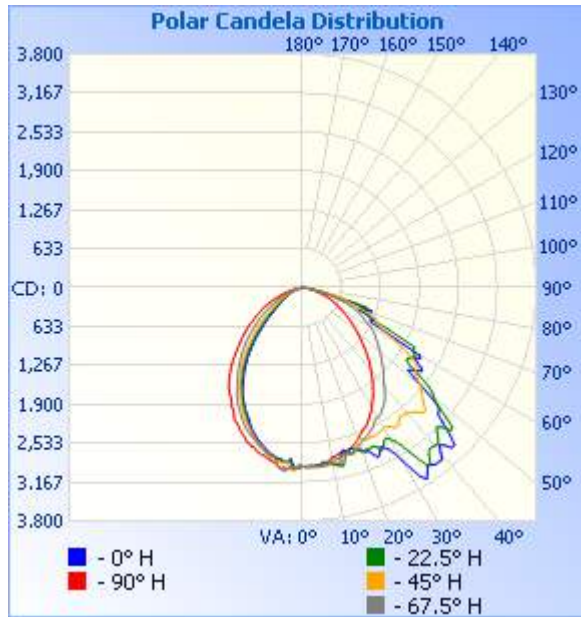
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Zonal Lumen Tabulation

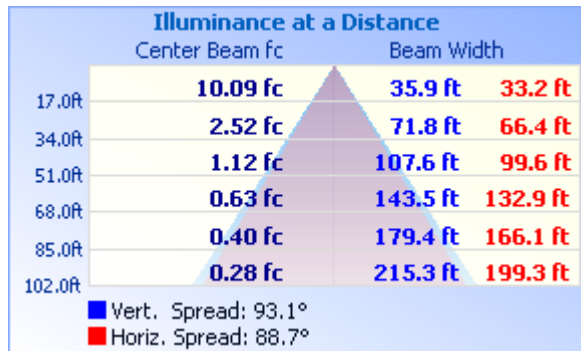
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,202.5	29.8%
0-40	3,629.3	49%
0-60	6,231.7	84.2%
60-90	1,139.2	15.4%
70-100	379.5	5.1%
90-120	7.7	0.1%
0-90	7,370.9	99.6%
90-180	30.3	0.4%
0-180	7,401.2	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	275.6	3.7%	90-100	3.7	0%
10-20	772.5	10.4%	100-110	2.0	0%
20-30	1,154.5	15.6%	110-120	2.0	0%
30-40	1,426.8	19.3%	120-130	3.0	0%
40-50	1,446.7	19.5%	130-140	5.0	0.1%
50-60	1,155.7	15.6%	140-150	5.9	0.1%
60-70	763.4	10.3%	150-160	4.6	0.1%
70-80	344.0	4.6%	160-170	3.1	0%
80-90	31.8	0.4%	170-180	1.0	0%

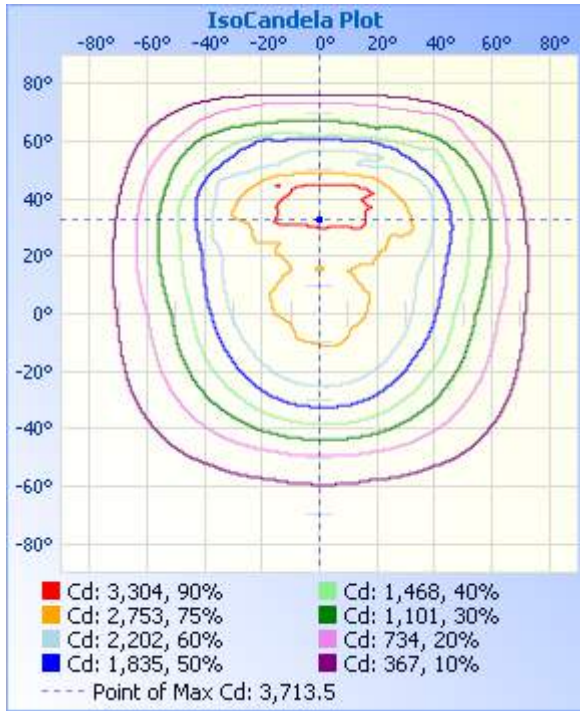
Photometric Data



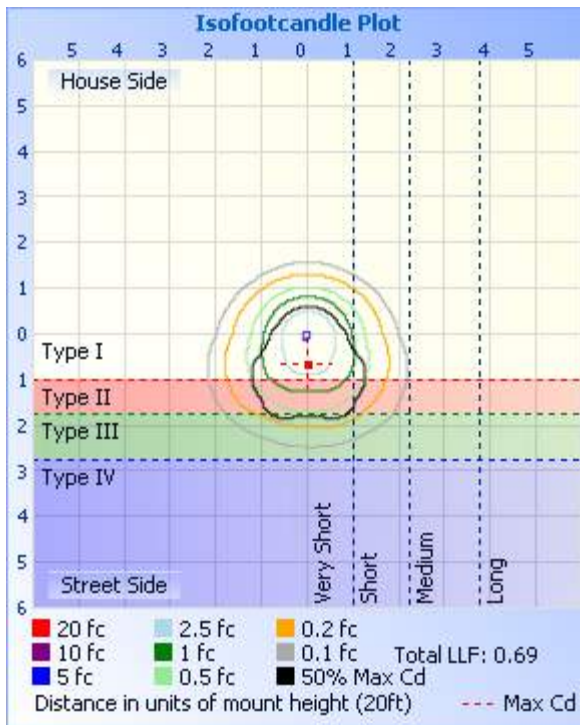
Illuminance Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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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	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917	2917
1	2923	2914	2912	2914	2905	2885	2871	2870	2878	2889	2904	2926	2937	2924	2926	2925	2923
2	2920	2927	2924	2911	2906	2864	2889	2934	2943	2954	2942	2931	2952	2939	2951	2927	2920
3	2918	2926	2917	2911	2900	2856	2942	2926	2896	2957	2995	2921	2937	2945	2961	2928	2918
4	2915	2923	2916	2931	2905	2882	2882	2793	2794	2833	2941	2931	2941	2958	2966	2937	2915
5	2910	2904	2929	2933	2918	2940	2777	2817	2830	2867	2835	2976	2955	2968	2963	2923	2910
6	2886	2910	2926	2929	2902	2960	2802	2805	2831	2846	2846	3004	2944	2969	2972	2932	2886
7	2853	2874	2912	2923	2894	2918	2830	2793	2822	2841	2874	2976	2962	2987	2987	2896	2853
8	2897	2884	2934	2905	2869	2855	2806	2773	2810	2823	2851	2923	2930	2998	2969	2918	2897
9	2887	2922	2911	2869	2839	2777	2796	2772	2791	2815	2849	2822	2881	2961	2917	2916	2887
10	2900	2921	2876	2842	2805	2747	2793	2740	2763	2789	2837	2755	2868	2918	2936	2907	2900
11	2944	2921	2890	2845	2794	2734	2773	2742	2774	2777	2803	2748	2848	2882	2942	2927	2944
12	2949	2965	2902	2832	2773	2726	2748	2731	2718	2774	2767	2759	2827	2873	2919	2992	2949
13	2765	2975	2859	2802	2766	2710	2691	2683	2684	2725	2722	2735	2805	2878	2910	2952	2765
14	2721	2850	2809	2801	2756	2686	2667	2648	2653	2692	2676	2699	2795	2859	2892	2810	2721
15	2778	2744	2800	2808	2761	2669	2643	2612	2628	2651	2660	2678	2777	2827	2894	2794	2778
16	2735	2787	2829	2823	2747	2642	2602	2591	2592	2630	2631	2647	2745	2789	2883	2827	2735
17	2734	2815	2845	2812	2722	2626	2560	2563	2556	2598	2595	2609	2715	2781	2798	2790	2734
18	2788	2762	2803	2777	2692	2597	2519	2531	2510	2566	2549	2581	2709	2768	2679	2803	2788
19	2781	2802	2697	2753	2663	2556	2477	2486	2473	2517	2516	2556	2688	2749	2647	2866	2781
20	2816	2842	2629	2721	2628	2519	2435	2448	2435	2469	2475	2531	2662	2725	2679	2859	2816
21	2863	2831	2634	2689	2587	2471	2396	2408	2384	2424	2437	2501	2621	2695	2707	2864	2863
22	2868	2833	2661	2657	2550	2419	2354	2361	2323	2377	2398	2465	2587	2668	2698	2881	2868
23	2948	2831	2684	2643	2508	2382	2318	2295	2281	2319	2355	2427	2555	2656	2718	2889	2948
24	3022	2823	2674	2620	2489	2351	2270	2245	2241	2265	2309	2386	2518	2642	2764	2929	3022
25	2968	2864	2673	2590	2470	2303	2227	2203	2199	2221	2265	2343	2479	2628	2767	3031	2968
26	2889	2951	2680	2569	2425	2260	2182	2163	2149	2175	2219	2293	2446	2623	2749	3038	2889
27	2916	2905	2673	2538	2381	2214	2137	2120	2106	2130	2177	2248	2432	2616	2758	2908	2916
28	2984	2826	2661	2487	2338	2160	2086	2069	2062	2082	2132	2210	2378	2580	2764	2884	2984
29	3080	2797	2651	2447	2298	2106	2032	2021	2012	2035	2081	2175	2314	2552	2754	2953	3080

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30	3262	2846	2650	2440	2254	2056	1983	1971	1954	1991	2023	2123	2274	2520	2752	3036	3262
31	3445	2916	2641	2433	2199	2003	1939	1914	1897	1943	1969	2078	2248	2442	2779	3123	3445
32	3628	3022	2663	2407	2150	1949	1891	1852	1834	1887	1920	2015	2185	2365	2792	3268	3628
33	3713	3190	2718	2373	2109	1900	1835	1790	1771	1827	1871	1957	2141	2307	2778	3415	3713
34	3638	3358	2729	2343	2052	1851	1776	1731	1711	1768	1818	1903	2114	2263	2734	3562	3638
35	3541	3526	2725	2309	1994	1799	1716	1670	1650	1707	1762	1850	2081	2249	2706	3544	3541
36	3567	3540	2671	2275	1941	1744	1658	1607	1586	1646	1707	1801	2042	2221	2710	3431	3567
37	3600	3420	2633	2224	1893	1691	1597	1544	1521	1583	1654	1750	1996	2222	2754	3372	3600
38	3599	3344	2637	2167	1838	1638	1535	1480	1455	1519	1598	1698	1947	2210	2842	3370	3599
39	3603	3341	2642	2119	1775	1587	1475	1416	1389	1453	1540	1644	1903	2184	2900	3375	3603
40	3501	3356	2659	2067	1722	1537	1414	1349	1318	1388	1475	1591	1843	2143	2973	3373	3501
41	3391	3364	2691	2009	1671	1489	1355	1283	1249	1321	1413	1541	1788	2099	3063	3389	3391
42	3454	3303	2720	1967	1621	1437	1293	1215	1178	1251	1353	1490	1741	2053	3095	3305	3454
43	3561	3207	2769	1932	1565	1385	1234	1148	1109	1183	1292	1438	1681	2022	3050	3237	3561
44	3561	3149	2828	1897	1503	1331	1175	1082	1038	1117	1229	1386	1621	1999	2932	3320	3561
45	3401	3213	2829	1855	1450	1277	1118	1017	969	1050	1169	1333	1559	1971	2830	3402	3401
46	3174	3348	2749	1809	1398	1226	1060	952	902	984	1110	1281	1500	1951	2754	3406	3174
47	3007	3332	2680	1761	1340	1173	1002	888	839	919	1050	1224	1444	1922	2680	3250	3007
48	2998	3126	2613	1723	1287	1120	948	828	778	858	992	1167	1388	1893	2631	3041	2998
49	2901	2914	2559	1686	1239	1069	894	768	720	798	934	1115	1345	1858	2554	2876	2901
50	2621	2794	2512	1652	1190	1017	841	714	663	740	879	1064	1297	1829	2495	2837	2621
51	2347	2725	2432	1608	1142	967	789	662	613	687	826	1011	1244	1798	2461	2719	2347
52	2180	2603	2346	1568	1095	917	738	613	567	636	772	959	1196	1774	2458	2452	2180
53	2224	2367	2290	1533	1048	869	688	569	526	589	722	911	1148	1716	2449	2236	2224
54	2300	2162	2276	1500	998	821	641	527	491	545	673	863	1103	1654	2397	2127	2300
55	2374	2071	2273	1461	952	774	597	487	462	504	626	816	1053	1612	2280	2117	2374
56	2327	2056	2237	1431	910	728	553	450	436	465	581	769	1002	1573	2167	2191	2327
57	2218	2094	2136	1401	867	684	513	418	411	430	538	723	951	1531	2070	2266	2218
58	2150	2150	2011	1361	820	642	473	389	388	399	499	679	907	1489	1939	2248	2150
59	2239	2129	1880	1318	778	600	437	362	365	370	460	635	858	1462	1820	2123	2239
60	2194	2067	1751	1272	741	559	403	339	342	344	425	594	814	1436	1691	2070	2194
61	1772	2075	1621	1218	706	520	371	316	320	321	392	553	771	1401	1608	2051	1772

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62	1516	2059	1512	1172	669	482	340	295	298	299	361	514	733	1363	1555	1800	1516
63	1265	1778	1422	1123	633	445	312	275	276	279	331	475	697	1308	1547	1539	1265
64	1229	1538	1365	1079	600	412	286	256	254	260	303	438	655	1242	1545	1279	1229
65	1243	1299	1340	1038	568	380	260	238	233	242	277	402	612	1159	1521	1166	1243
66	1254	1208	1326	998	538	349	238	219	212	224	253	368	571	1077	1466	1104	1254
67	1159	1149	1279	952	505	320	217	201	192	207	231	336	530	1003	1377	1092	1159
68	1050	1113	1211	894	471	292	197	183	173	190	210	305	489	935	1209	1062	1050
69	977	1075	1121	841	433	265	179	166	155	172	190	274	450	881	1045	999	977
70	1062	1016	995	784	399	239	163	149	137	155	172	245	412	815	928	970	1062
71	1196	1019	879	722	366	214	147	132	120	138	154	217	374	742	861	1010	1196
72	1105	1115	797	659	333	190	132	115	104	121	137	192	337	659	820	1035	1105
73	822	1058	753	591	301	167	118	98	87	104	121	167	301	580	816	895	822
74	582	793	713	528	269	145	104	82	71	87	106	146	266	512	816	647	582
75	494	554	677	462	237	125	90	65	55	70	92	124	236	454	769	475	494
76	427	432	629	405	210	106	77	50	48	54	78	106	209	405	618	440	427
77	358	395	534	351	184	89	64	44	43	44	65	90	182	363	431	412	358
78	243	357	392	301	160	75	52	38	37	39	52	74	156	309	289	335	243
79	197	262	262	253	137	61	39	33	32	34	40	61	132	252	236	237	197
80	154	199	196	209	115	49	32	29	28	29	29	49	108	201	201	186	154
81	107	142	161	165	93	38	25	25	24	25	23	38	86	156	147	122	107
82	67	84	116	124	72	28	20	21	21	21	18	28	65	115	94	75	67
83	31	47	73	86	53	20	15	18	18	17	14	20	47	77	54	38	31
84	9	20	41	53	36	14	12	15	15	14	11	13	30	44	28	12	9
85	4	7	20	26	21	9	10	13	13	12	8	8	16	19	11	4	4
86	1	2	6	10	10	6	8	10	10	9	6	4	5	6	3	1	1
87	0	0	1	1	3	3	6	9	9	7	4	3	2	3	0	0	0
88	0	0	0	0	0	1	4	8	8	6	4	4	3	6	0	0	0
89	0	0	0	0	0	0	1	0	0	1	2	4	5	9	3	0	0
90	0	0	0	0	0	0	0	0	0	0	3	6	7	9	3	0	0
91	0	0	0	0	1	2	1	0	0	0	4	8	10	11	2	0	0
92	0	0	0	1	3	4	2	0	0	0	5	10	12	10	3	0	0
93	0	0	1	3	5	5	3	0	0	1	6	11	13	9	5	0	0

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94	0	0	3	4	6	6	3	0	0	1	6	11	13	9	5	0	0
95	0	0	3	4	6	5	3	1	0	1	6	10	13	8	4	0	0
96	0	0	2	4	6	4	3	2	0	2	6	9	13	7	4	0	0
97	0	0	2	3	5	4	3	2	0	2	5	8	12	7	3	0	0
98	0	0	1	3	5	3	3	2	0	2	5	7	12	6	3	0	0
99	0	0	1	2	4	3	2	2	1	2	4	7	11	5	2	0	0
100	0	0	1	2	4	2	2	2	1	2	3	6	10	5	2	0	0
101	0	0	0	1	3	2	2	2	1	2	3	5	9	4	2	0	0
102	0	0	0	1	3	2	2	2	1	2	3	5	9	4	1	0	0
103	0	0	0	1	3	2	2	2	1	2	2	4	8	4	1	0	0
104	0	0	0	1	3	2	2	2	1	2	2	4	7	3	1	0	0
105	0	0	0	0	3	2	2	2	1	2	2	3	7	3	1	0	0
106	0	0	0	0	3	2	2	2	2	2	2	3	6	2	1	0	0
107	0	0	0	0	3	2	2	2	2	2	2	3	6	2	0	0	0
108	0	0	0	0	3	2	3	2	2	2	2	3	6	2	0	0	0
109	0	0	0	0	3	2	3	2	2	2	2	2	5	2	0	0	0
110	0	0	0	0	3	2	3	2	2	2	2	2	5	1	0	0	0
111	0	0	0	1	3	2	3	3	2	2	2	2	5	1	0	0	0
112	0	0	0	2	3	2	3	3	2	2	2	2	5	1	0	0	0
113	0	0	0	3	3	2	3	3	2	2	2	2	4	2	0	0	0
114	0	0	0	4	3	2	3	3	2	2	2	2	4	3	0	0	0
115	0	0	0	4	3	2	3	3	2	2	2	2	4	4	0	0	0
116	0	0	0	5	3	3	3	3	3	2	2	2	4	4	0	0	0
117	0	0	0	5	4	3	3	3	3	2	2	2	4	5	0	0	0
118	0	0	0	6	4	3	3	3	3	3	2	2	4	6	0	0	0
119	0	0	0	6	4	3	3	3	3	3	2	2	4	6	0	0	0
120	0	0	0	6	4	3	3	3	3	3	2	3	4	6	0	0	0
121	0	0	0	7	4	3	3	3	3	3	2	3	4	7	0	0	0
122	0	0	0	7	4	3	3	4	3	3	2	3	4	7	0	0	0
123	0	0	0	7	4	4	3	4	3	3	2	3	4	8	0	0	0
124	0	0	0	8	5	4	3	4	3	3	2	4	5	8	0	0	0
125	0	0	1	8	5	4	3	4	3	3	2	4	5	8	0	0	0

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126	0	0	3	8	5	4	3	4	4	3	3	4	5	9	0	0	0
127	0	0	5	8	5	4	3	4	4	3	3	4	5	9	3	0	0
128	0	1	6	9	5	5	3	4	4	3	3	5	5	9	4	0	0
129	0	0	7	9	5	5	3	4	4	3	3	5	5	9	6	0	0
130	0	0	9	9	6	5	4	4	4	3	3	5	6	10	7	0	0
131	0	0	10	10	6	6	4	4	4	3	3	5	6	10	8	0	0
132	0	1	10	10	6	6	4	4	4	4	3	5	6	10	9	0	0
133	0	2	11	10	6	6	4	4	4	4	3	6	6	11	10	1	0
134	1	5	11	11	7	6	4	4	5	4	4	6	6	11	10	3	1
135	1	7	12	11	7	6	4	4	5	4	4	6	6	11	11	5	1
136	4	8	12	11	7	6	5	5	5	4	4	6	6	11	11	7	4
137	6	9	13	12	7	6	5	5	5	4	4	6	7	11	11	8	6
138	8	11	13	12	7	6	5	5	5	4	4	6	7	11	12	10	8
139	9	12	14	12	8	6	5	5	5	4	4	6	7	11	12	11	9
140	11	13	14	12	8	7	5	5	5	4	5	6	7	11	12	12	11
141	12	14	14	12	8	7	6	5	5	4	5	6	7	12	13	13	12
142	13	14	14	12	8	7	6	5	5	5	5	6	7	12	13	13	13
143	14	15	14	12	8	7	6	6	5	5	6	6	7	12	11	13	14
144	14	15	14	12	8	7	7	6	5	5	6	6	7	12	10	14	14
145	15	15	15	12	9	7	7	6	6	5	6	6	7	12	9	14	15
146	15	15	15	12	9	7	7	6	6	5	6	6	8	12	10	14	15
147	16	16	15	12	9	8	7	6	6	5	6	6	8	12	12	15	16
148	16	16	15	12	9	8	7	7	6	6	6	6	8	12	13	15	16
149	16	11	15	12	9	8	7	7	6	6	6	6	8	12	14	13	16
150	16	8	15	12	9	8	7	7	6	6	6	6	8	12	14	7	16
151	11	8	15	12	10	9	7	7	7	6	6	6	8	12	14	5	11
152	4	11	15	12	10	9	7	7	7	6	6	6	8	12	14	5	4
153	4	15	16	12	10	9	7	7	7	6	6	6	8	12	15	12	4
154	9	16	16	12	10	9	7	7	7	6	6	6	8	12	15	15	9
155	15	17	17	12	10	9	7	7	6	6	5	6	8	12	16	16	15
156	17	17	17	12	10	9	7	7	6	6	5	7	8	12	16	16	17
157	17	17	17	11	10	9	7	7	6	6	5	7	8	12	16	17	17

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158	17	17	16	11	10	9	7	7	6	6	5	7	8	12	16	17	17
159	17	17	16	11	10	10	8	7	6	5	5	7	8	12	16	17	17
160	17	18	15	12	10	10	8	7	6	5	5	7	9	12	15	17	17
161	17	18	15	12	10	10	9	7	6	5	5	7	9	12	15	17	17
162	17	18	14	12	10	10	9	7	6	5	5	7	9	12	15	17	17
163	17	18	14	12	11	10	9	7	6	5	5	7	10	12	14	17	17
164	17	17	14	11	11	10	9	8	6	5	5	7	10	12	14	17	17
165	17	17	14	11	11	10	9	8	6	5	5	7	10	12	14	17	17
166	16	17	14	11	11	10	10	9	7	5	5	7	10	12	14	17	16
167	16	16	14	11	11	10	10	9	7	5	5	7	10	11	14	16	16
168	15	15	14	11	11	11	10	9	7	5	5	7	10	11	14	16	15
169	15	15	14	11	11	11	10	9	7	6	5	6	10	11	14	15	15
170	14	15	13	11	11	11	10	9	7	6	5	6	10	11	13	15	14
171	14	14	13	12	11	11	10	9	7	6	6	7	10	11	13	14	14
172	13	13	13	12	11	11	10	9	7	7	6	7	10	11	13	13	13
173	13	13	12	11	11	11	10	9	8	8	7	8	10	11	13	13	13
174	13	12	12	11	11	11	10	9	10	10	9	9	10	11	12	13	13
175	12	12	12	11	11	11	10	10	10	10	10	9	10	11	12	12	12
176	12	12	12	11	11	11	10	10	10	10	10	9	10	11	11	12	12
177	11	11	11	10	11	11	10	10	10	10	10	9	10	11	11	11	11
178	11	11	11	10	11	11	10	10	10	10	10	10	10	10	11	11	11
179	10	10	10	9	11	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 *******