





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	Jun.06,2016
Test Report No.	STD160316NB-2-L
Laboratory Contact Name	Tommy Liang

**Product Information:**

Organization Name	IGT Lighting Inc.	
Brand Name	N/A	
Model Number	IGTWP-0306050	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Non-Cutoff and Semi-Cutoff Wall-mounted Area Luminaires	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	

Electrical Measurements:	Integrating Sphere	Goniophotometer	
	Output	Output	
Input Wattage	--	58.61	W
Input Current	--	0.4924	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9920	
Off-State Power	--	0	W

**Photometric Characteristics**

Total Initial Lumen Output	--	6522	lm
Initial Lumen Efficacy	--	111.28	lm/w
Correlated color temperature / CCT	3009	--	K
Color rendering index / CRI	73.6	--	
R9 Value	0	--	
Duv	-0.0019	--	
<b>Luminous Intensity Distribution</b>			
Center beam candlepower (if applicable)	---	1388	cd
Beam angle (if applicable)		114.9	°
Zonal lumens in the 0°-60° zone		48.5	%
Zonal lumens in the 60°-90° zone		34.9	%
Zonal lumens in the 90°-120° zone		14.3	%
Zonal lumens in the 120°-180° zone		2.3	%

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Date of Receipt	:May.18,2016
Date of Test	:May.19,2016
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 120 Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals.

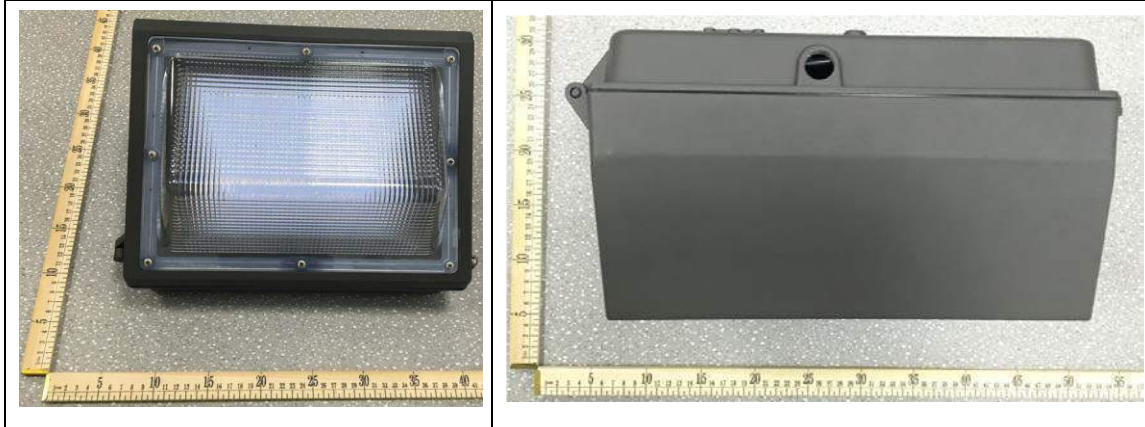
#### 2. Photometric and Electrical Measurements – Integrating Sphere Method:

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.

**1. Product Information:**

Brand Name	N/A
Model Number	IGTWP-0306050
Luminaire Type	Outdoor Non-Cutoff and Semi-Cutoff Wall-mounted Area Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	60W
Rated Initial Lamp Lumen	--
Declared CCT	3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Philips Lumileds
LED Model	L130-2780003000W21
Sample Receipt Date	May.18,2016
Sample Number	STD160316NB-2-L1(3000K),L2(5700K)

**Photo**



**Zonal Lumen Tabulation**

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,020.6	15.6%
0-40	1,662.8	25.4%
0-60	3,170.9	48.5%
60-90	2,282.0	34.9%
70-100	1,805.0	27.6%
90-120	933.6	14.3%
0-90	5,452.9	83.4%
90-180	1,086.4	16.6%
0-180	6,539.3	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	130.7	2.0%	90-100	359.3	5.5%
10-20	359.5	5.5%	100-110	376.9	5.8%
20-30	530.4	8.1%	110-120	197.4	3%
30-40	642.2	9.8%	120-130	80.1	1.2%
40-50	718.2	11.0%	130-140	42.7	0.7%
50-60	789.8	12.1%	140-150	20.9	0.3%
60-70	836.3	12.8%	150-160	7.6	0.1%
70-80	797.0	12.2%	160-170	1.4	0%
80-90	648.7	9.9%	170-180	0.2	0%

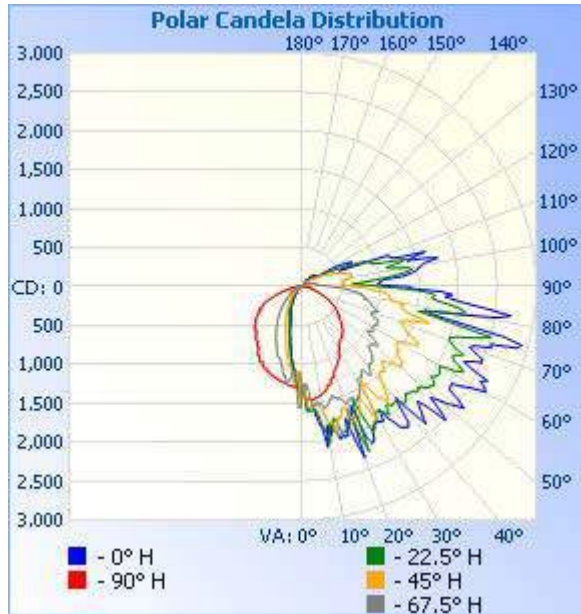
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Report Format Number STD/QR4909 -H/2

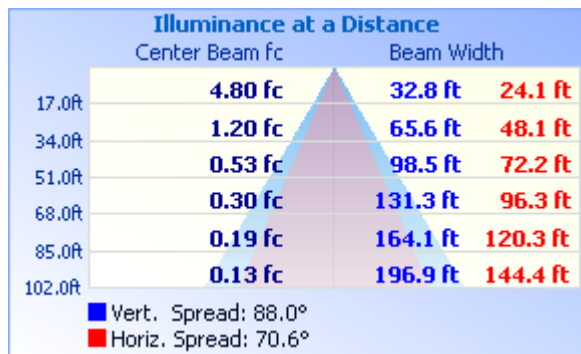
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### Photometric Data



### Illuminance Plots



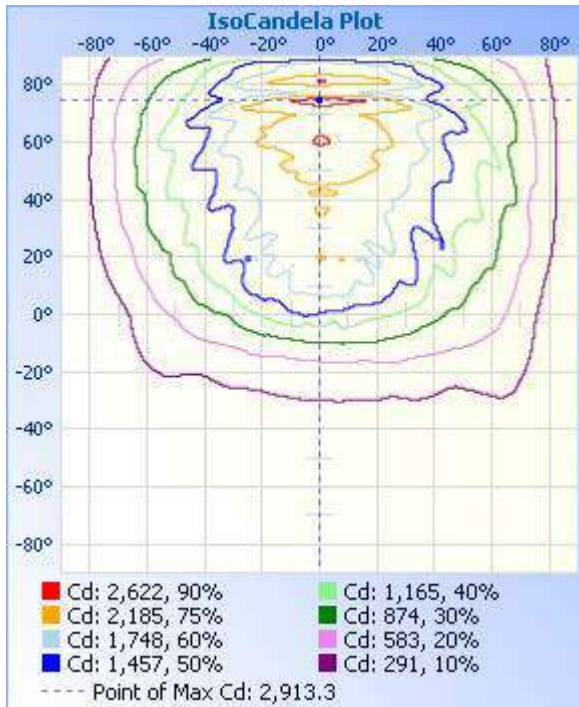
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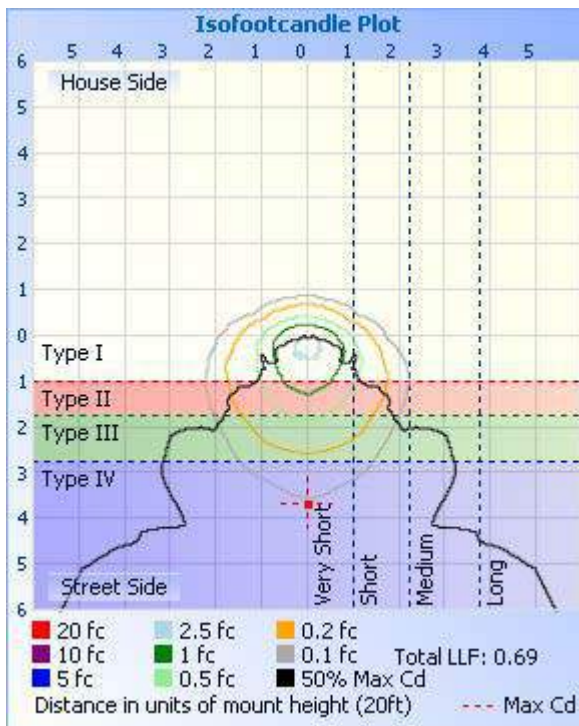
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ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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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	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388	1388
1	1333	1288	1245	1274	1424	1572	1516	1427	1405	1458	1556	1560	1376	1244	1244	1301	1333
2	1586	1597	1491	1249	1446	1461	1170	1110	1107	1105	1215	1547	1342	1245	1524	1601	1586
3	1571	1600	1567	1312	1442	1217	1132	1293	1311	1265	1090	1371	1317	1412	1547	1611	1571
4	1553	1598	1567	1460	1457	1110	1292	1234	1240	1225	1260	1198	1300	1553	1542	1620	1553
5	1535	1595	1555	1544	1463	1109	1203	1161	1124	1177	1247	1108	1287	1530	1536	1629	1535
6	1663	1593	1542	1510	1452	1195	1170	1051	1055	1067	1217	1097	1287	1540	1531	1638	1663
7	1774	1655	1529	1502	1437	1255	1077	1061	1020	1065	1132	1143	1280	1540	1525	1688	1774
8	1842	1794	1546	1522	1432	1212	1018	959	961	976	1069	1220	1283	1551	1627	1850	1842
9	2084	1856	1609	1525	1416	1163	1022	938	920	943	1024	1270	1269	1562	1657	1913	2084
10	1815	2041	1682	1568	1410	1145	943	875	841	898	1028	1222	1258	1574	1783	1905	1815
11	1943	1786	1780	1579	1389	1096	919	805	785	829	954	1165	1259	1506	1821	1890	1943
12	1811	1897	1779	1555	1375	1051	875	761	746	782	930	1165	1247	1506	1970	1865	1811
13	1879	1739	1935	1524	1361	1004	828	727	688	737	898	1133	1239	1516	1774	1788	1879
14	2019	1770	1813	1485	1308	983	772	668	662	700	846	1076	1244	1528	1821	1888	2019
15	1988	1946	1739	1455	1305	960	731	642	612	652	810	1051	1233	1553	1806	1986	1988
16	2003	1951	1758	1474	1307	936	698	592	580	626	765	1009	1229	1584	1718	1937	2003
17	2007	1932	1702	1514	1251	914	671	567	540	583	726	980	1216	1639	1700	1952	2007
18	1785	1897	1640	1506	1228	873	626	532	505	556	692	963	1207	1656	1802	1989	1785
19	2108	1871	1635	1540	1230	838	598	500	468	522	660	954	1215	1636	1855	1764	2108
20	2331	1678	1741	1592	1173	833	566	462	441	495	620	945	1202	1673	1857	1948	2331
21	1737	2024	1853	1606	1150	812	531	435	418	460	595	923	1181	1769	1841	2350	1737
22	1652	2280	1870	1574	1140	760	508	413	400	433	573	879	1188	1721	1827	1825	1652
23	2103	1706	1860	1557	1113	733	492	395	383	411	540	847	1165	1620	1862	1596	2103
24	2204	1579	1822	1563	1095	711	476	377	372	393	519	819	1154	1619	1640	1873	2204
25	2179	1879	1761	1614	1065	689	449	362	362	378	496	808	1156	1578	1621	2170	2179
26	2055	2086	1625	1627	1047	652	424	351	349	363	474	773	1147	1553	1971	2095	2055
27	2010	2039	1565	1588	1032	630	405	340	333	355	459	756	1130	1546	2085	2016	2010
28	1992	1974	1746	1561	1007	632	389	323	319	344	441	726	1099	1480	1636	2002	1992

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29	1980	1959	1958	1527	956	594	371	309	299	327	421	702	1109	1462	1429	1960	1980
30	2007	1882	1785	1453	947	557	350	298	280	310	406	672	1109	1475	1525	1888	2007
31	2012	1857	1485	1385	920	535	330	281	262	298	386	669	1073	1521	1773	1890	2012
32	1870	1886	1426	1377	874	514	314	264	248	282	364	636	1052	1563	1854	1927	1870
33	2021	1927	1542	1399	867	504	302	247	235	266	357	606	1055	1614	1841	1949	2021
34	2093	1983	1732	1344	855	468	291	233	223	251	335	599	1026	1630	1841	1898	2093
35	2217	1870	1749	1313	848	446	278	220	211	236	324	566	998	1617	1761	1943	2217
36	2228	1867	1806	1332	831	423	264	207	199	223	301	558	957	1560	1727	1975	2228
37	2258	1913	1833	1420	822	405	250	195	187	210	288	534	964	1472	1748	2016	2258
38	2210	1894	1753	1432	820	394	239	184	175	198	276	502	944	1375	1712	2037	2210
39	1982	1907	1645	1360	813	370	228	173	162	187	263	481	914	1342	1634	2017	1982
40	1868	1924	1558	1334	781	363	220	163	150	176	250	478	918	1287	1569	2048	1868
41	2137	1986	1495	1306	780	337	212	152	140	166	240	454	912	1263	1572	1972	2137
42	2365	1982	1486	1320	770	328	202	142	133	156	229	434	894	1205	1561	1963	2365
43	2252	1952	1479	1318	757	312	192	133	127	145	220	422	873	1207	1541	2098	2252
44	2169	1906	1518	1282	719	297	181	125	122	136	211	392	862	1198	1563	2185	2169
45	2091	1928	1471	1272	712	284	171	118	116	127	203	377	835	1279	1572	2154	2091
46	2209	1952	1424	1226	691	267	163	112	111	119	194	358	827	1335	1581	1965	2209
47	2519	1964	1400	1174	675	253	155	107	106	112	185	336	826	1460	1625	1999	2519
48	2381	2002	1432	1139	666	242	145	102	101	106	175	320	800	1486	1567	2171	2381
49	2181	1966	1518	1139	615	230	137	98	95	101	167	309	815	1425	1614	2166	2181
50	2253	2005	1552	1157	608	220	130	94	89	96	160	297	803	1224	1614	2128	2253
51	2393	2064	1635	1176	600	209	122	88	84	91	151	273	792	1151	1647	2152	2393
52	2475	2082	1632	1220	592	203	114	83	78	86	143	264	759	1112	1638	2174	2475
53	2591	2108	1599	1182	561	196	108	79	72	82	135	247	750	1116	1617	2218	2591
54	2473	2088	1519	1082	554	189	100	73	67	76	127	240	757	1121	1569	2259	2473
55	2300	2017	1488	1028	544	182	94	68	62	72	121	226	724	1122	1555	2276	2300
56	2294	2061	1467	1008	517	176	88	62	57	67	114	213	731	1121	1533	2237	2294
57	2291	2081	1458	1070	508	170	82	57	52	62	107	203	688	1126	1540	2169	2291
58	2423	2082	1415	1071	488	163	76	52	48	56	100	195	686	1138	1546	2175	2423
59	2522	2047	1412	1034	459	156	70	47	44	52	94	189	655	1151	1539	2162	2522

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60	2711	2041	1425	1037	425	150	65	42	39	47	88	182	661	1147	1593	2208	2711
61	2676	2233	1462	1040	425	143	60	37	34	42	83	176	631	1197	1610	2399	2676
62	2593	2337	1567	1079	394	137	56	33	29	38	76	167	600	1286	1612	2463	2593
63	2665	2271	1661	1062	380	130	51	28	24	34	71	161	627	1210	1598	2396	2665
64	2435	2169	1647	1061	348	124	47	23	18	30	66	155	554	1110	1631	2360	2435
65	2288	2124	1570	1074	329	118	43	17	13	25	63	148	565	1064	1714	2301	2288
66	2355	2153	1482	1056	303	113	39	12	8	20	58	141	550	1094	1612	2207	2355
67	2499	2239	1452	988	272	106	34	6	4	14	53	135	512	1039	1518	2222	2499
68	2488	2124	1421	947	260	102	30	4	4	8	49	130	493	1041	1507	2255	2488
69	2376	2053	1382	960	235	97	26	4	5	3	46	123	468	1027	1480	2178	2376
70	2285	2006	1340	949	220	92	23	4	5	3	42	118	438	1033	1478	2122	2285
71	2329	2006	1348	993	202	88	18	4	5	3	38	112	398	1057	1455	2088	2329
72	2547	2086	1410	1027	188	84	15	4	5	3	35	107	373	1095	1561	2196	2547
73	2530	2240	1524	977	174	81	14	4	6	3	32	103	348	1224	1557	2258	2530
74	2862	2391	1687	942	160	77	13	4	6	4	28	98	320	1180	1638	2387	2862
75	2913	2505	1573	925	151	73	12	4	6	4	27	93	292	1046	1743	2673	2913
76	2663	2085	1381	918	141	70	12	4	6	4	27	89	266	932	1651	2551	2663
77	2044	1766	1334	890	131	67	11	4	5	4	25	84	239	905	1545	2068	2044
78	1689	1526	1298	860	124	64	10	4	5	4	23	81	217	902	1333	1688	1689
79	1599	1665	1292	812	115	61	9	4	3	4	22	78	197	961	1222	1565	1599
80	2075	1983	1324	817	107	59	9	4	3	4	20	75	181	1006	1282	1843	2075
81	2543	2118	1215	801	100	57	8	4	3	4	18	72	167	980	1369	2149	2543
82	2698	2050	1131	766	93	55	8	4	3	4	18	70	154	946	1427	2283	2698
83	2442	1917	1133	761	86	53	7	5	3	4	17	68	142	876	1347	2178	2442
84	2153	1751	1113	708	80	51	7	5	4	4	16	66	129	822	1235	1978	2153
85	1963	1668	1087	658	73	49	7	5	4	4	15	63	119	768	1164	1809	1963
86	1838	1705	1054	594	67	47	6	5	4	4	15	60	103	726	1084	1753	1838
87	1920	1665	943	560	61	45	6	5	4	4	14	57	92	670	1036	1790	1920
88	1779	1522	879	515	57	43	5	4	4	4	13	55	82	604	958	1562	1779
89	1416	1272	789	439	54	41	5	4	3	3	12	52	72	538	842	1277	1416
90	1372	1040	700	379	49	39	4	3	3	3	11	49	66	498	726	1073	1372

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91	1041	907	575	326	48	37	4	4	3	4	10	47	59	441	610	947	1041
92	967	775	535	301	45	35	4	4	3	4	10	44	54	402	587	823	967
93	988	643	490	256	43	33	4	5	4	5	9	41	50	364	559	700	988
94	1011	767	497	251	40	31	4	6	4	5	9	38	47	336	557	740	1011
95	1033	876	524	217	38	29	4	6	4	6	8	35	45	288	572	997	1033
96	1305	1066	538	207	36	26	4	6	5	6	8	32	42	288	601	1200	1305
97	1399	1208	538	199	35	24	4	6	5	6	7	30	41	284	647	1340	1399
98	1466	1343	536	191	34	22	4	7	6	6	7	28	39	280	672	1450	1466
99	1507	1422	577	185	34	20	4	7	7	7	6	26	38	278	722	1540	1507
100	1547	1376	636	183	34	19	4	7	9	7	6	24	37	287	745	1490	1547
101	1588	1290	653	178	34	17	4	7	9	7	5	22	36	285	722	1409	1588
102	1766	1145	649	174	34	16	4	7	8	7	5	21	36	287	762	1374	1766
103	1648	1109	640	164	34	14	4	7	7	6	4	20	35	274	815	1288	1648
104	1385	1268	640	151	33	13	4	7	7	6	3	19	34	269	770	1256	1385
105	1464	1367	639	144	32	12	4	7	7	6	3	18	32	253	738	1412	1464
106	1634	1196	592	134	30	11	4	7	6	6	3	16	30	242	700	1422	1634
107	1283	1025	566	123	28	9	4	7	7	6	3	13	27	228	665	1160	1283
108	1204	948	576	112	26	7	4	7	8	6	3	11	23	213	674	1025	1204
109	1186	925	556	104	22	6	4	7	8	6	3	10	19	195	686	996	1186
110	1166	924	524	98	19	6	4	7	8	6	3	10	16	178	645	998	1166
111	889	922	489	93	17	6	4	7	8	6	3	10	14	162	582	992	889
112	703	843	450	88	16	6	4	7	8	6	3	10	14	148	534	959	703
113	520	785	409	85	15	6	4	7	9	6	3	11	16	136	502	870	520
114	613	690	392	83	16	7	4	7	10	6	3	11	18	127	477	777	613
115	645	608	367	81	17	7	4	7	10	6	3	12	20	121	457	672	645
116	687	544	340	81	19	7	4	7	9	6	3	13	22	116	434	592	687
117	700	495	330	80	20	8	4	7	9	6	3	14	25	113	409	534	700
118	652	452	316	79	22	8	4	7	9	6	3	15	27	110	381	484	652
119	589	418	286	78	23	8	4	7	8	6	3	15	29	105	349	440	589
120	552	371	271	76	24	8	4	7	8	6	3	14	31	100	315	398	552
121	502	319	253	74	25	8	4	7	8	6	3	13	31	96	295	342	502

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

Report Format Number STD/QR4909 -H/2

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

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122	437	272	236	72	25	7	4	7	7	6	3	13	31	91	275	289	437
123	341	236	214	70	25	7	4	7	7	6	3	12	30	88	260	250	341
124	267	216	200	67	23	6	4	7	7	6	3	11	29	85	243	228	267
125	206	205	185	65	22	6	4	7	7	6	3	10	27	82	226	215	206
126	179	205	171	63	21	6	4	7	7	6	3	10	26	78	207	211	179
127	181	198	160	61	20	5	4	6	7	6	3	9	25	74	191	208	181
128	182	194	150	59	19	5	4	6	7	5	3	8	24	71	177	202	182
129	191	187	141	57	18	5	3	6	6	5	3	8	23	69	164	198	191
130	203	180	132	55	16	4	3	6	6	5	3	7	21	66	152	192	203
131	214	173	124	53	15	4	3	6	6	5	3	7	20	65	141	185	214
132	214	169	116	51	14	4	3	5	6	5	2	6	19	63	131	181	214
133	211	164	108	49	13	4	3	5	6	4	2	6	18	60	121	177	211
134	213	157	101	47	13	4	3	5	5	4	2	5	17	58	113	169	213
135	212	150	95	44	12	3	3	5	5	4	2	5	16	56	106	163	212
136	203	144	90	42	11	3	3	5	5	4	2	5	15	53	100	157	203
137	192	138	85	40	10	3	3	5	4	4	2	4	14	51	94	152	192
138	181	133	82	37	9	3	3	5	4	3	2	4	13	49	88	145	181
139	170	128	78	35	8	3	3	4	4	3	2	3	12	46	84	139	170
140	160	124	73	32	7	3	3	4	4	3	2	3	11	44	80	134	160
141	152	120	69	30	7	3	3	4	3	3	2	3	10	41	77	129	152
142	143	116	65	27	6	3	3	4	3	3	2	3	9	39	73	123	143
143	135	111	63	24	6	3	3	4	3	3	2	2	8	35	69	117	135
144	126	105	60	22	5	3	3	4	3	3	2	2	7	32	66	111	126
145	119	100	57	19	5	3	3	4	3	3	2	2	7	29	63	105	119
146	112	94	54	17	4	2	3	4	3	3	2	2	6	26	60	99	112
147	106	87	52	14	4	2	3	4	3	3	2	2	6	23	57	92	106
148	100	80	49	12	4	2	3	4	3	3	2	2	5	19	54	86	100
149	93	75	46	10	3	3	3	4	3	3	2	2	5	17	51	79	93
150	85	70	43	8	3	2	3	4	3	3	2	2	4	14	49	74	85
151	78	67	40	7	3	2	3	4	3	3	2	2	4	11	46	69	78
152	72	62	37	6	3	2	3	4	3	3	3	2	4	9	42	65	72

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

Report Format Number STD/QR4909 -H/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>

153	68	58	34	5	3	2	3	4	4	3	3	2	3	8	39	61	68
154	63	54	30	4	3	2	3	4	4	3	3	2	3	6	35	56	63
155	58	50	27	3	3	2	3	4	4	3	3	2	3	5	32	52	58
156	54	46	24	2	3	2	3	4	4	4	3	2	2	4	27	48	54
157	50	42	21	2	3	2	3	4	4	4	3	2	2	4	20	44	50
158	46	39	16	2	3	3	3	4	4	4	3	2	2	3	14	40	46
159	42	36	11	1	3	3	3	4	4	4	3	2	2	3	9	37	42
160	39	33	7	1	3	3	3	4	4	4	3	2	2	2	5	34	39
161	36	30	3	1	3	3	3	4	4	4	3	2	2	2	3	29	36
162	32	26	1	1	3	3	3	3	4	4	3	2	2	2	2	21	32
163	25	19	1	1	3	3	3	3	4	4	3	2	2	2	2	12	25
164	17	10	1	1	3	3	3	3	4	4	3	2	2	2	2	6	17
165	8	4	1	1	3	3	3	3	4	3	3	2	2	2	2	2	8
166	4	2	1	1	3	3	3	3	4	3	3	2	2	2	2	2	4
167	2	2	1	1	3	3	3	3	4	3	3	2	2	2	2	2	2
168	2	2	1	1	3	3	3	3	3	3	3	2	2	2	2	2	2
169	2	2	1	1	3	3	3	3	3	3	3	2	3	2	2	2	2
170	2	2	1	1	3	3	3	3	3	3	3	2	3	2	2	2	2
171	2	2	1	1	3	3	3	3	3	3	3	2	3	2	2	2	2
172	2	2	1	2	3	3	3	3	3	3	3	2	3	2	2	2	2
173	2	2	1	2	3	3	3	3	3	3	3	2	3	2	2	2	2
174	2	2	1	2	3	3	3	3	3	3	3	2	3	2	2	2	2
175	2	2	1	2	3	3	3	3	3	3	2	2	3	3	2	2	2
176	2	2	2	2	3	3	3	3	3	3	2	2	3	3	2	2	2
177	2	2	2	2	3	3	3	3	3	3	2	2	3	3	2	2	2
178	2	2	2	2	3	3	3	3	3	3	2	2	3	3	2	2	2
179	2	2	2	2	3	3	3	3	3	2	2	2	3	3	2	3	2
180	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

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

Report Format Number STD/QR4909 -H/2

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<b>2.2 Electrical, Photometric and Chromaticity Measurements</b> <i>(Refer to Work Instruction QD25)</i>	<b>IES LM-79 2008</b>
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<b>Test date</b>	2016-05-19	<b>Test Ambient:</b>	25.2 ° C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	IGTWP-0306050		

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160316	120.0	60	0.4912	58.73	0.9964	4.87
NB-2-L2	277.0	60	0.2306	57.86	0.9058	13.65

### Sphere-Spectroradiometer Method :

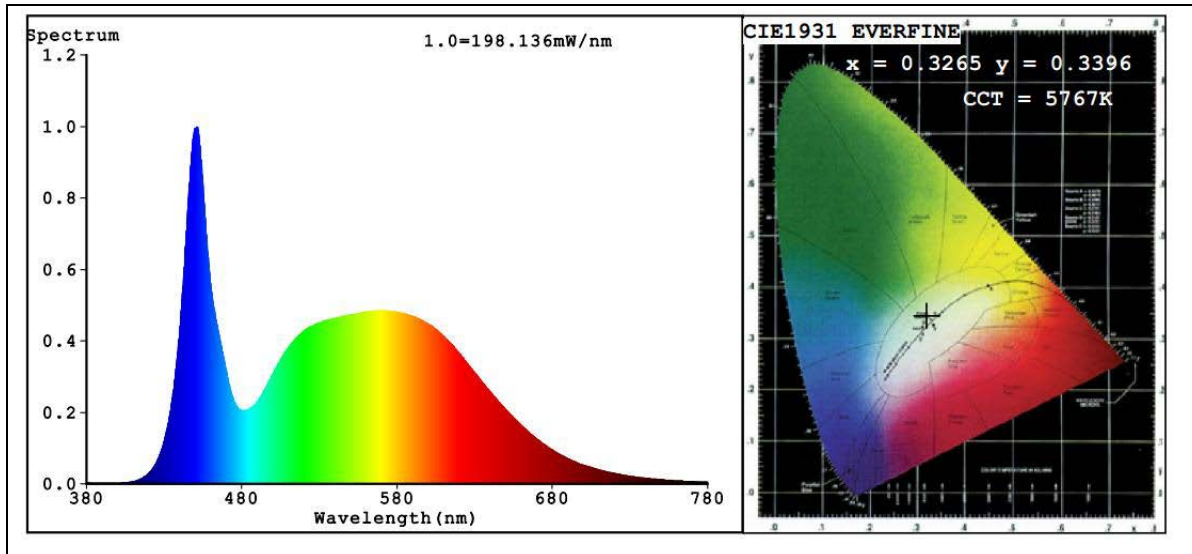
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	83.0
R9	10
CCT (K)	5767
Chromaticity (x, y)	x=0.3265 y=0.3396
Chromaticity (u', v')	u'=0.2034 v'=0.4759
Duv	0.0019
Total Initial Lumen Output(lm)	6641
Initial Lumen Efficacy(lm/w)	113.08

Special Color Rendering Indices			
R1	82	R9	10
R2	87	R10	69
R3	90	R11	83
R4	83	R12	58
R5	82	R13	83
R6	82	R14	95
R7	88	R15	77
R8	70	--	--

### Sphere-Spectroradiometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	6520
Initial Lumen Efficacy(lm/w)	112.69

**Spectral Power Distribution & Chromaticity Diagram**



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

Report Format Number STD/QR4909 -H/2

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**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 \*\*\*\*\***