



Report No.: STD160203NB-I

NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

CEA GROUP INTERNATIONAL CO.,LTD

(Brand Name:CEA EAEC)

Sanjiali Industrial Zone Zhucheng Road Panshi North baixiang Yueqing Zhejiang China

Outdoor Full-Cutoff Wall-mounted Area Luminaires

Model name(s): LWP6-30
LWP6-30P

Remark: The letter “P” on the model name represents the product with photocell.

Representative (Tested) Model: LWP6-30(2700K)
LWP6-30(5700K)

Model Difference: All construction and rating are the same, except CCT.

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Date: Jun.01,2016

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-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>



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.01,2016
Test Report No.	STD160203NB-I
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA EAEC	
Model Number	LWP6-30(2700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-Cutoff 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	--	28.58	W
Input Current	--	0.2402	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9914	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	2718.6	lm
Initial Lumen Efficacy	--	95.12	lm/w
Correlated color temperature / CCT	2793	--	K
Color rendering index / CRI	70.5	--	
R9 Value	0	--	
Duv	0.0004	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		1250	cd
Beam angle (if applicable)		85.7	°
Zonal lumens in the 0°-60° zone		87.5	%
Zonal lumens in the 60°-90° zone	---	12.5	%
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-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>



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.01,2016
Test Report No.	STD160203NB-I
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA EAEC	
Model Number	LWP6-30(5700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-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	28.97	--	W
Input Current	0.2434	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9919	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	2786	--	lm
Initial Lumen Efficacy	96.17	--	lm/w
Correlated color temperature / CCT	5680	--	K
Color rendering index / CRI	75.1	--	
R9 Value	0	--	
Duv	-0.0024	--	
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			%

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>

Date of Receipt	:May.25,2016
Date of Test	: May.27,2016
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 $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, 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 $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. 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.

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>

1. Product Information:

Brand Name	CEA EAEC
Model Number	LWP6-30
Luminaire Type	Outdoor Full-Cutoff Wall-mounted Area Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	30W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Shenzhen TongYiFang Optoelectronic TechnologyCO.,LTD
LED Model	M25-01L-9W-1
Sample Receipt Date	May.25,2016
Sample Number	STD160203NB-I1(2700K),I2(5700K)

Photo



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

Test date	2016-05-27	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LWP6-30(2700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160203	120.0	60	0.2402	28.58	0.9914	9.45
NB-I1	277.0	60	0.1131	28.46	0.9081	12.78

Color Data:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	70.5
R9	0
CCT (K)	2793
Chromaticity (x, y)	x=0.4530 y=0.4100
Chromaticity (u', v')	u'=0.2584 v'=0.5261
Duv	0.0004

Special Color Rendering Indices			
R1	67	R9	0
R2	82	R10	57
R3	94	R11	54
R4	63	R12	44
R5	64	R13	69
R6	73	R14	96
R7	78	R15	61
R8	44	--	--

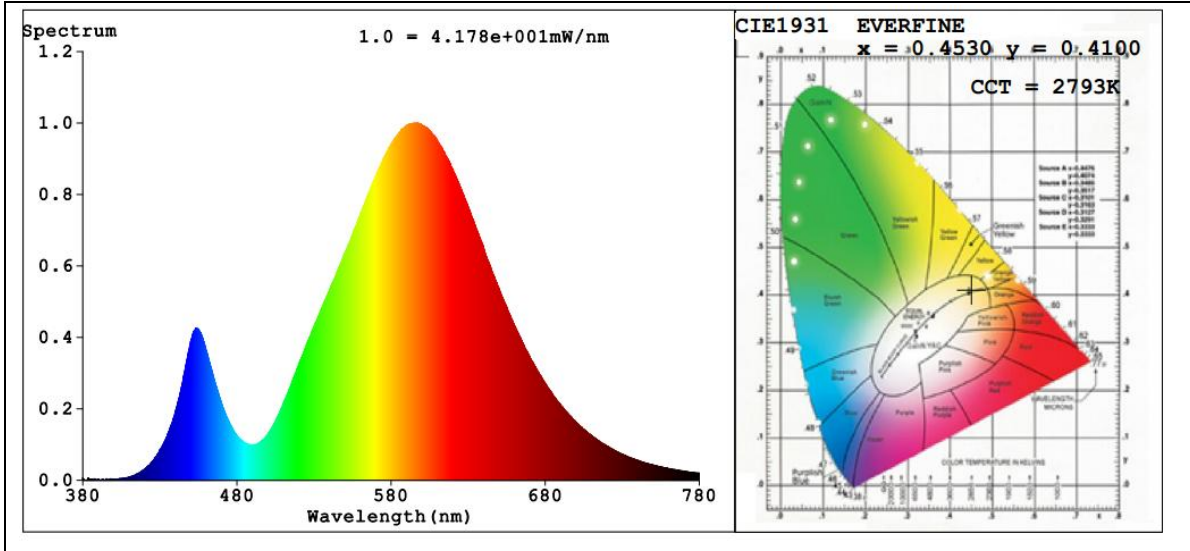
Goniophotometer Method :

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	2718.6
Luminous Efficacy (lm/W)	95.12
Beam Angle °	85.7
Center Beam Candle Power (cd)	1250

Goniophotometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	2732.6
Luminous Efficacy (lm/W)	96.02

Spectral Power Distribution & Chromaticity Diagram



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

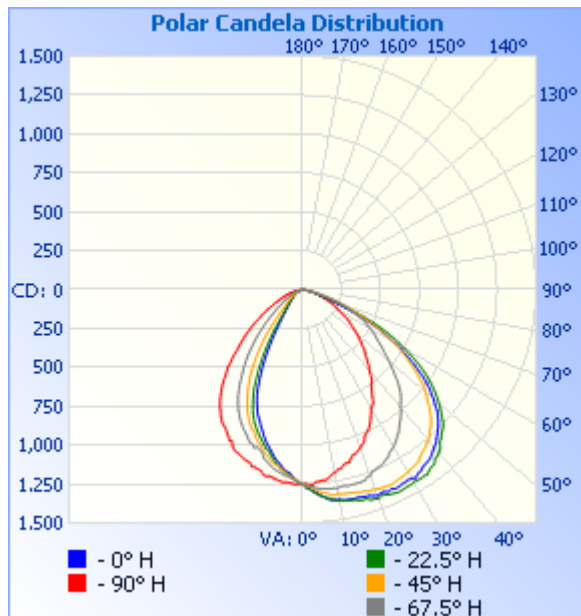
<http://www.standard-tech.com>

Zonal Lumen Tabulation

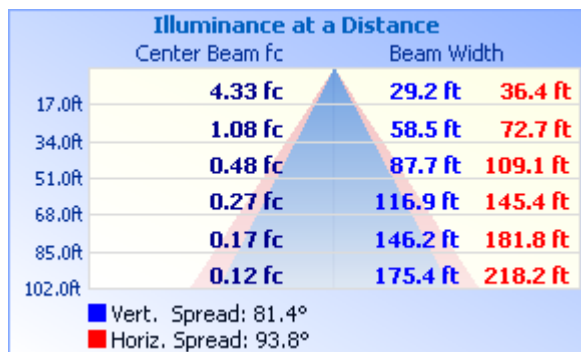
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	930.1	34.2%
0-40	1,459.0	53.7%
0-60	2,377.0	87.5%
60-90	339.6	12.5%
70-100	91.3	3.4%
90-120	0.0	0%
0-90	2,716.6	100%
90-180	0.8	0%
0-180	2,717.4	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	118.2	4.4%	90-100	0	0%
10-20	331.3	12.2%	100-110	0	0%
20-30	480.6	17.7%	110-120	0.0	0%
30-40	528.9	19.5%	120-130	0.1	0%
40-50	503.7	18.5%	130-140	0.2	0%
50-60	414.3	15.2%	140-150	0.2	0%
60-70	248.3	9.1%	150-160	0.2	0%
70-80	81.2	3.0%	160-170	0.1	0%
80-90	10.1	0.4%	170-180	0.1	0%

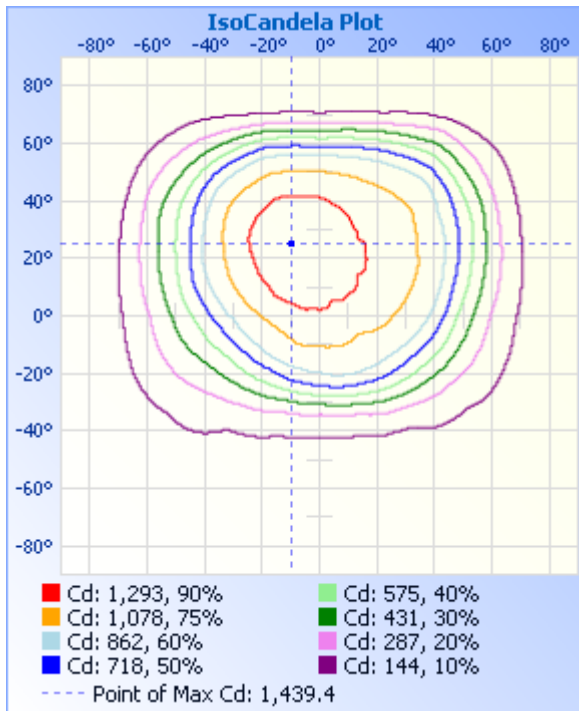
Photometric Data



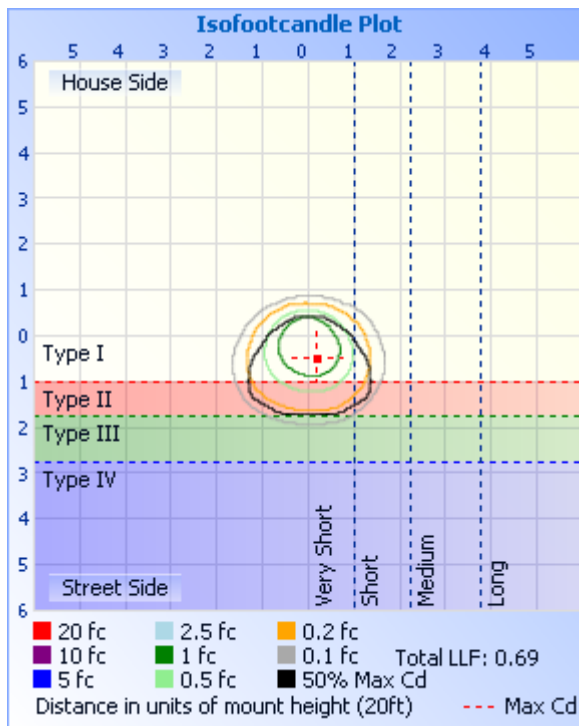
Illuminance Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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>

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	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250
1	1272	1270	1259	1257	1247	1249	1300	1232	1239	1243	1238	1241	1247	1250	1289	1254	1272
2	1281	1283	1264	1262	1258	1234	1280	1222	1222	1230	1221	1229	1253	1253	1294	1261	1281
3	1298	1301	1278	1271	1255	1231	1249	1211	1204	1215	1211	1217	1248	1259	1296	1288	1298
4	1308	1317	1295	1278	1239	1222	1255	1184	1181	1197	1200	1208	1244	1254	1280	1301	1308
5	1329	1328	1305	1284	1237	1216	1208	1174	1174	1181	1189	1200	1241	1264	1279	1307	1329
6	1341	1341	1316	1287	1230	1202	1190	1155	1159	1175	1170	1197	1243	1273	1269	1311	1341
7	1357	1350	1317	1288	1232	1190	1210	1140	1139	1159	1158	1184	1236	1267	1270	1321	1357
8	1366	1356	1334	1292	1219	1179	1192	1126	1120	1138	1140	1177	1232	1255	1293	1330	1366
9	1367	1372	1337	1291	1201	1168	1184	1106	1103	1124	1138	1167	1223	1262	1312	1343	1367
10	1369	1376	1331	1296	1194	1152	1175	1092	1082	1101	1125	1152	1216	1261	1312	1338	1369
11	1379	1379	1339	1289	1178	1142	1138	1077	1055	1079	1108	1140	1222	1257	1313	1348	1379
12	1380	1386	1339	1288	1177	1126	1072	1058	1036	1056	1090	1123	1215	1262	1297	1341	1380
13	1382	1389	1340	1294	1159	1103	1056	1020	1017	1048	1078	1110	1195	1273	1292	1339	1382
14	1383	1392	1346	1292	1149	1075	1028	1005	992	1027	1061	1075	1188	1269	1311	1346	1383
15	1382	1401	1348	1293	1150	1068	997	988	968	1007	1036	1065	1183	1266	1307	1347	1382
16	1386	1406	1354	1293	1127	1043	989	960	940	988	1022	1053	1183	1243	1310	1341	1386
17	1390	1406	1353	1292	1109	1025	959	928	917	968	1007	1062	1160	1245	1308	1344	1390
18	1391	1420	1363	1290	1106	1002	909	893	889	947	987	1044	1159	1250	1293	1350	1391
19	1401	1423	1361	1274	1094	983	904	870	869	927	958	1037	1152	1245	1279	1357	1401
20	1409	1428	1365	1271	1081	968	884	836	846	906	953	1023	1143	1233	1277	1353	1409
21	1401	1417	1370	1251	1067	942	861	813	813	879	933	1002	1132	1231	1295	1360	1401
22	1399	1421	1372	1248	1054	917	818	780	785	854	913	985	1128	1228	1290	1353	1399
23	1412	1431	1372	1242	1020	888	792	747	754	821	889	974	1120	1214	1289	1339	1412
24	1402	1434	1377	1237	1008	863	754	711	715	787	866	955	1106	1215	1291	1333	1402
25	1411	1439	1376	1229	997	837	711	675	669	752	842	938	1074	1193	1277	1336	1411
26	1410	1439	1369	1216	977	810	686	637	623	712	810	919	1077	1190	1287	1334	1410
27	1403	1437	1365	1210	958	781	654	595	578	668	783	897	1054	1177	1270	1326	1403
28	1401	1432	1364	1188	931	747	627	558	533	623	753	878	1038	1172	1266	1326	1401
29	1398	1435	1357	1176	907	720	601	518	487	576	721	854	1020	1167	1267	1324	1398

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>



30	1400	1429	1356	1169	878	693	574	471	442	531	687	830	1009	1150	1255	1298	1400
31	1412	1429	1347	1152	871	662	545	427	394	489	655	807	1000	1142	1254	1305	1412
32	1395	1433	1342	1137	856	631	512	390	351	443	619	776	983	1165	1249	1301	1395
33	1392	1428	1337	1117	824	606	481	355	316	400	584	748	967	1129	1219	1294	1392
34	1379	1432	1332	1105	797	581	454	321	281	359	546	718	943	1104	1225	1278	1379
35	1370	1418	1315	1081	771	556	421	289	250	318	511	684	925	1107	1223	1274	1370
36	1366	1407	1302	1060	749	530	392	262	225	281	475	656	903	1087	1205	1273	1366
37	1360	1406	1293	1045	739	507	366	237	203	248	438	631	881	1083	1206	1250	1360
38	1346	1382	1281	1024	720	484	339	213	186	219	401	602	855	1057	1202	1245	1346
39	1330	1374	1268	1007	688	463	312	195	172	195	364	571	830	1054	1169	1235	1330
40	1316	1363	1256	979	665	443	288	180	160	177	329	543	803	1035	1155	1214	1316
41	1307	1348	1242	961	650	420	268	168	149	165	295	511	774	1023	1144	1202	1307
42	1286	1317	1219	944	623	398	245	155	140	155	263	481	741	1005	1156	1188	1286
43	1270	1306	1207	925	603	379	228	147	132	144	232	452	714	989	1138	1171	1270
44	1251	1286	1187	902	581	360	210	138	124	134	207	425	691	964	1122	1165	1251
45	1233	1272	1168	876	565	345	193	130	118	126	185	397	652	929	1115	1145	1233
46	1212	1257	1138	848	549	330	177	122	111	118	167	369	624	917	1102	1143	1212
47	1186	1231	1118	815	522	316	163	115	106	111	152	342	588	893	1087	1127	1186
48	1164	1202	1086	786	509	303	153	110	100	105	141	316	555	868	1075	1106	1164
49	1126	1175	1057	759	481	291	142	104	95	99	132	292	529	842	1050	1077	1126
50	1101	1147	1035	730	470	275	133	99	90	94	124	269	505	816	1038	1054	1101
51	1065	1116	1008	704	449	262	126	94	85	89	117	248	480	803	987	1042	1065
52	1037	1085	976	677	427	251	120	89	80	84	109	228	456	773	960	1018	1037
53	997	1053	935	651	408	236	112	85	76	80	102	209	427	741	943	986	997
54	961	1017	901	630	386	223	108	80	72	76	96	193	405	721	940	949	961
55	912	982	866	606	369	210	100	75	69	72	91	179	380	694	917	927	912
56	870	942	828	583	356	197	96	71	65	69	86	164	352	658	891	887	870
57	823	900	788	564	339	183	91	68	62	65	81	152	329	645	866	850	823
58	781	854	755	545	316	171	86	64	59	62	77	141	311	617	831	812	781
59	737	807	710	523	297	157	82	61	56	59	73	132	284	589	802	772	737
60	679	759	670	501	276	146	78	58	53	56	69	125	266	562	761	732	679
61	633	711	623	483	262	133	73	54	50	53	65	117	253	530	722	690	633

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>



62	584	663	579	461	249	123	68	51	48	50	61	109	228	495	684	644	584
63	535	614	534	439	235	113	65	48	45	48	58	101	211	467	642	598	535
64	474	558	490	414	215	105	60	45	43	45	54	93	198	441	605	555	474
65	415	499	450	388	201	98	57	42	40	43	51	87	183	405	558	505	415
66	354	439	409	362	187	93	53	40	37	40	48	81	169	375	515	453	354
67	301	375	370	337	172	87	49	37	35	37	45	76	155	340	465	396	301
68	249	319	333	313	156	81	46	34	33	35	42	71	146	312	433	339	249
69	207	265	300	288	142	75	42	31	30	32	39	68	137	283	396	282	207
70	172	216	269	260	129	71	39	29	28	30	36	62	126	255	361	234	172
71	144	174	242	231	119	67	36	27	26	27	33	57	116	230	316	189	144
72	122	142	211	203	108	61	32	24	24	25	30	53	107	205	276	152	122
73	103	119	180	174	100	55	29	22	22	23	27	49	98	182	230	126	103
74	87	101	150	148	92	50	25	20	20	21	25	45	91	165	186	107	87
75	73	85	124	126	83	46	22	17	18	19	22	41	83	148	146	90	73
76	61	71	101	109	76	41	19	16	16	16	19	37	74	131	117	75	61
77	50	58	84	95	68	36	16	14	15	15	16	33	66	112	96	62	50
78	40	47	71	82	61	31	14	12	13	13	14	29	59	95	80	50	40
79	31	37	58	70	54	27	11	10	11	12	12	25	52	79	65	40	31
80	24	29	47	59	47	22	9	9	10	10	10	21	47	66	52	31	24
81	18	21	36	50	40	17	7	8	8	9	8	17	41	54	41	23	18
82	12	14	26	40	33	13	6	6	7	7	6	13	35	44	30	16	12
83	6	8	17	32	28	8	4	5	6	6	5	9	28	36	22	10	6
84	1	2	9	24	21	5	3	4	4	4	4	6	22	27	14	4	1
85	0	0	3	16	15	2	2	2	3	3	2	3	17	19	7	0	0
86	0	0	0	7	8	1	1	1	1	2	1	1	11	11	0	0	0
87	0	0	0	0	1	0	0	0	0	0	0	0	4	3	0	0	0
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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

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>



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
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

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>

126	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
127	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0
130	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
131	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
132	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
133	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
134	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
135	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
136	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
137	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
138	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
139	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
140	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
141	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
142	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
143	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
144	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
145	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
146	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
147	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
148	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
149	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
150	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
151	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
152	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
153	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
154	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
155	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
156	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
157	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0

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>

158	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
159	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
160	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
161	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
162	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
163	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
164	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0
165	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
166	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0
167	0	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0
168	0	0	0	1	1	0	1	1	1	1	1	1	0	0	1	0	0
169	0	0	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
170	0	0	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
171	0	0	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
172	1	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	1
173	0	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
174	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1
175	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	3	1
176	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	3	1
177	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	1
178	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	1
179	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	1
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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

Test date	2016-05-27	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LWP6-30(5700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160203	120.0	60	0.2434	28.97	0.9919	9.42
NB-I2	277.0	60	0.1146	28.85	0.9086	12.74

Sphere-Spectroradiometer Method :

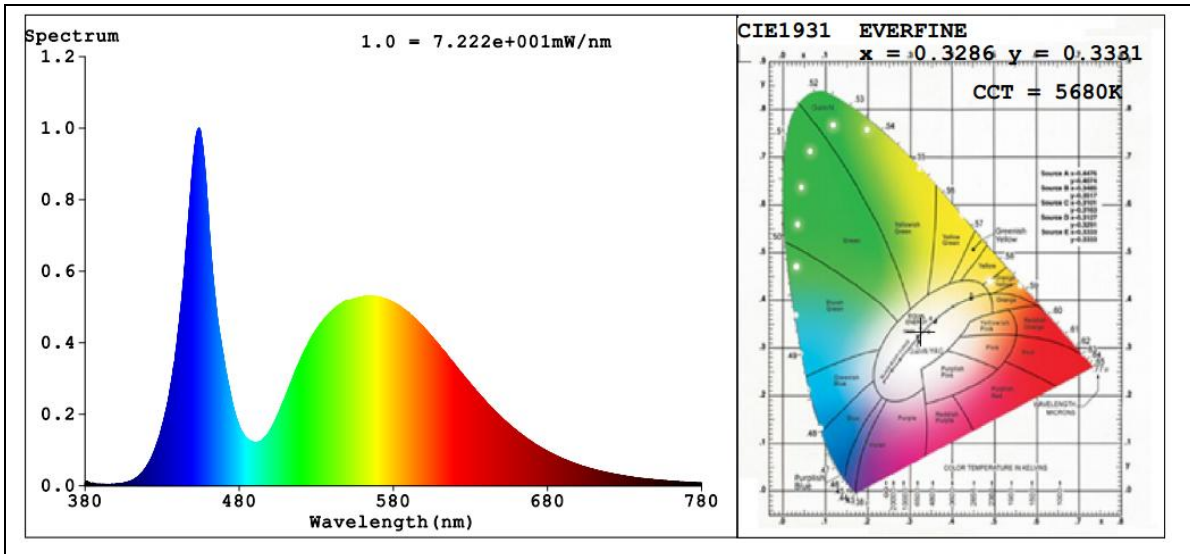
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	75.1
R9	0
CCT (K)	5680
Chromaticity (x, y)	x=0.3286 y=0.3331
Chromaticity (u', v')	u'=0.2073 v'=0.4729
Duv	-0.0024
Total Initial Lumen Output(lm)	2786
Initial Lumen Efficacy(lm/w)	96.17

Special Color Rendering Indices			
R1	73	R9	0
R2	81	R10	50
R3	82	R11	67
R4	73	R12	43
R5	74	R13	75
R6	72	R14	90
R7	84	R15	71
R8	62	--	--

Sphere-Spectroradiometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	2801
Initial Lumen Efficacy(lm/w)	97.09

Spectral Power Distribution & Chromaticity Diagram



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>

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 *******