

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): LWP6-75
LWP6-75P

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

Representative (Tested) Model: LWP6-75(2700K)
LWP6-75(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

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<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-K
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA EAEC	
Model Number	LWP6-75(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	--	70.33	W
Input Current	--	0.5947	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9855	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	6863.2	lm
Initial Lumen Efficacy	--	97.59	lm/w
Correlated color temperature / CCT	2741	--	K
Color rendering index / CRI	70.0	--	
R9 Value	0	--	
Duv	0.0013	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		2780	cd
Beam angle (if applicable)		87.5	°
Zonal lumens in the 0°-60° zone	---	83.7	%
Zonal lumens in the 60°-90° zone		16.1	%
Zonal lumens in the 90°-120° zone		0	%
Zonal lumens in the 120°-180° zone		0.2	%

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Test Report No.	STD160203NB-K
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA EAEC	
Model Number	LWP6-75(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	70.56	--	W
Input Current	0.5974	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9843	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	7034	--	lm
Initial Lumen Efficacy	99.69	--	lm/w
Correlated color temperature / CCT	5789	--	K
Color rendering index / CRI	75.0	--	
R9 Value	0	--	
Duv	-0.0034	--	
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			%

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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.

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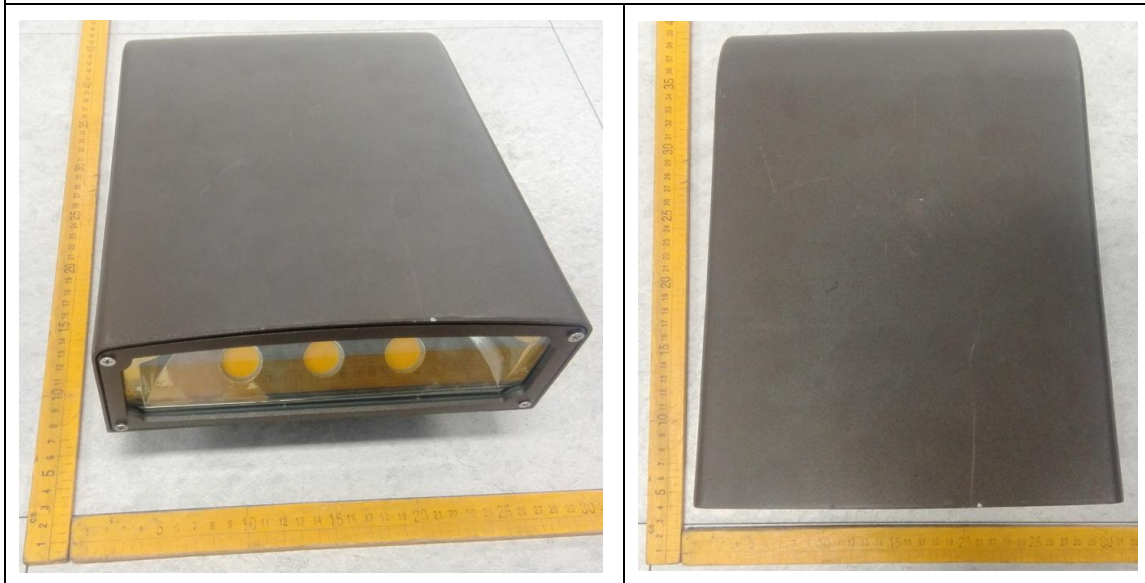
Fax: 8620-32290422

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1. Product Information:

Brand Name	CEA EAEC
Model Number	LWP6-75
Luminaire Type	Outdoor Full-Cutoff Wall-mounted Area Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	75W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Guangzhou Hongli Opto-Electronic Co., Ltd.
LED Model	HL-LM004H384W-20B10C12(Ra2)
Sample Receipt Date	May.25,2016
Sample Number	STD160203NB-K1(2700K),K2(5700K)

Photo



2.1 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-05-27	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LWP6-75(2700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160203	120.0	60	0.5947	70.33	0.9855	9.82
NB-K1	277.0	60	0.2698	67.35	0.9012	15.65

Color Data:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	70.0
R9	0
CCT (K)	2741
Chromaticity (x, y)	x=0.4588 y=0.4140
Chromaticity (u', v')	u'=0.2603 v'=0.5285
Duv	0.0013

Special Color Rendering Indices			
R1	66	R9	0
R2	81	R10	54
R3	93	R11	54
R4	63	R12	40
R5	63	R13	68
R6	72	R14	96
R7	79	R15	60
R8	43	--	--

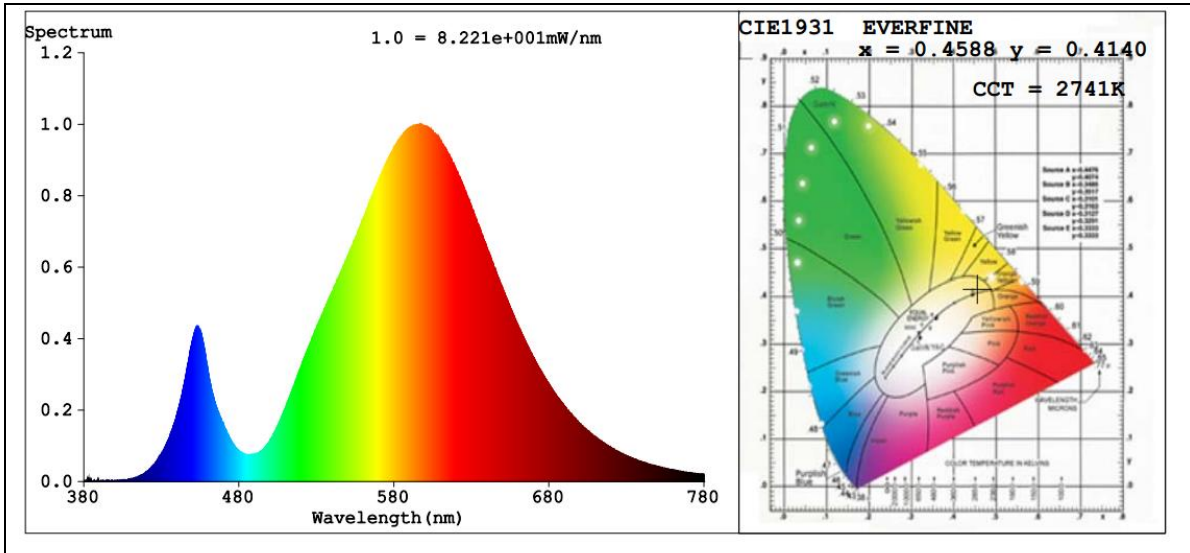
Goniophotometer Method :

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	6863.2
Luminous Efficacy (lm/W)	97.59
Beam Angle °	87.5
Center Beam Candle Power (cd)	2780

Goniophotometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	6535.5
Luminous Efficacy (lm/W)	97.04

Spectral Power Distribution & Chromaticity Diagram



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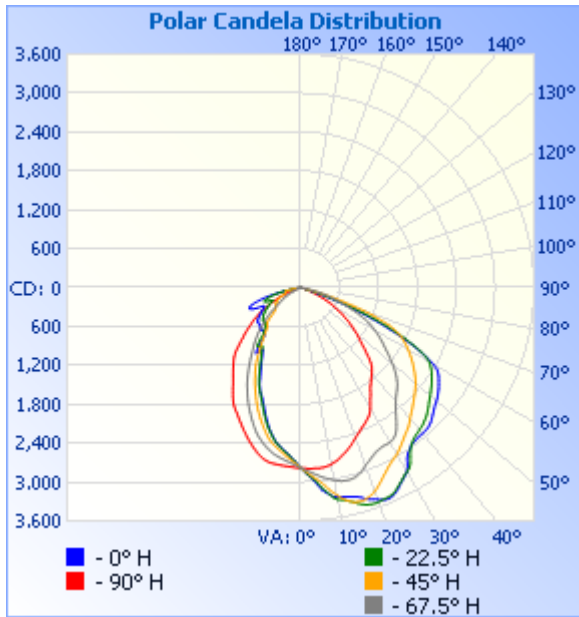
<http://www.standard-tech.com>

Zonal Lumen Tabulation

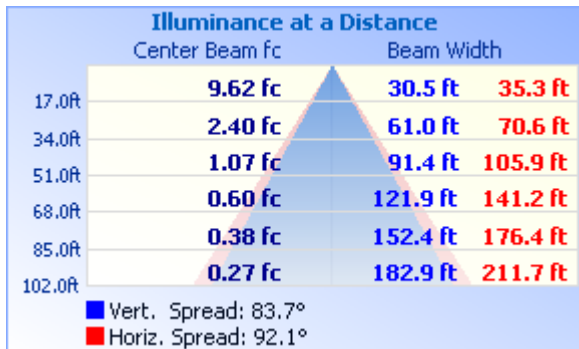
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,145.2	31.3%
0-40	3,376.5	49.2%
0-60	5,747.2	83.7%
60-90	1,104.7	16.1%
70-100	281.2	4.1%
90-120	1.7	0%
0-90	6,851.9	99.8%
90-180	10.9	0.2%
0-180	6,862.9	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	267.4	3.9%	90-100	0.0	0%
10-20	771.0	11.2%	100-110	0.5	0%
20-30	1,106.8	16.1%	110-120	1.2	0%
30-40	1,231.2	17.9%	120-130	1.7	0%
40-50	1,235.5	18.0%	130-140	2.0	0%
50-60	1,135.3	16.5%	140-150	2.0	0%
60-70	823.5	12.0%	150-160	1.8	0%
70-80	266.9	3.9%	160-170	1.2	0%
80-90	14.3	0.2%	170-180	0.5	0%

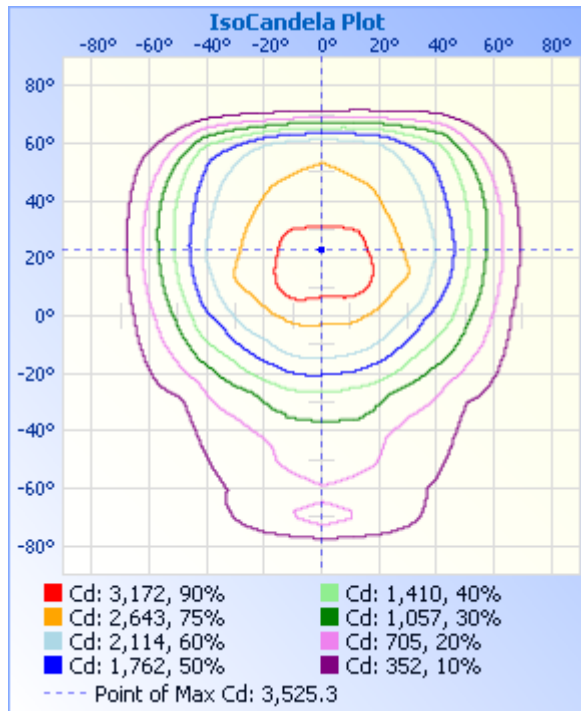
Photometric Data



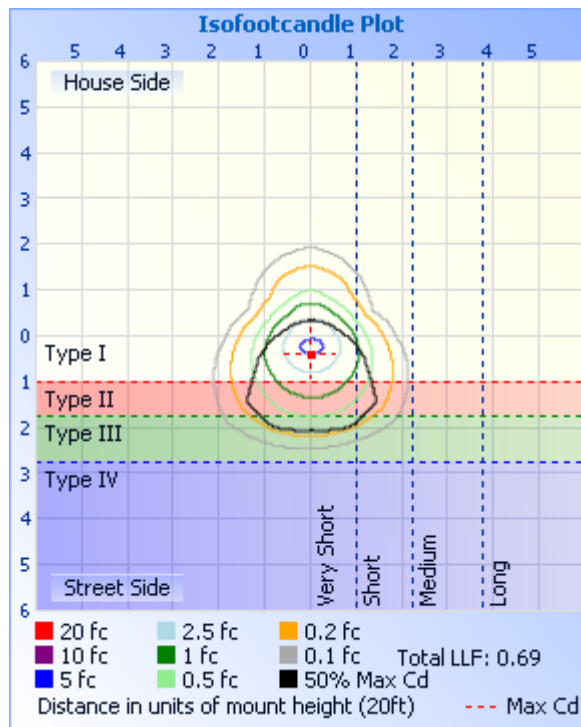
Illuminance Plots



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	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780
1	2828	2825	2818	2804	2785	2767	2748	2733	2724	2727	2739	2757	2778	2797	2812	2822	2828
2	2879	2870	2851	2828	2790	2747	2711	2684	2670	2677	2700	2732	2774	2811	2841	2864	2879
3	2928	2921	2894	2846	2794	2729	2676	2644	2627	2634	2665	2713	2768	2823	2870	2906	2928
4	2987	2967	2935	2873	2795	2711	2648	2608	2583	2593	2634	2693	2763	2839	2900	2956	2987
5	3058	3028	2973	2899	2796	2694	2621	2578	2548	2556	2605	2675	2760	2857	2942	3021	3058
6	3135	3098	3020	2927	2798	2673	2597	2551	2517	2525	2570	2658	2758	2875	2989	3091	3135
7	3179	3159	3078	2952	2795	2652	2571	2521	2484	2491	2540	2639	2753	2892	3045	3151	3179
8	3222	3221	3142	2974	2789	2629	2544	2494	2452	2457	2510	2622	2747	2910	3094	3199	3222
9	3266	3282	3197	2995	2777	2604	2514	2461	2412	2418	2480	2601	2744	2934	3142	3225	3266
10	3274	3319	3252	3015	2761	2577	2477	2422	2362	2374	2449	2573	2737	2958	3190	3250	3274
11	3281	3333	3307	3035	2740	2548	2436	2375	2309	2320	2414	2547	2726	2981	3237	3275	3281
12	3295	3354	3348	3050	2720	2514	2394	2325	2257	2267	2373	2520	2708	3001	3285	3304	3295
13	3309	3380	3380	3054	2694	2479	2349	2271	2197	2215	2324	2486	2683	3013	3327	3330	3309
14	3325	3410	3410	3056	2666	2442	2298	2209	2128	2159	2273	2452	2655	3012	3374	3362	3325
15	3338	3448	3419	3053	2635	2399	2246	2139	2062	2096	2221	2415	2621	3012	3408	3400	3338
16	3365	3476	3422	3043	2605	2350	2192	2070	1992	2030	2167	2376	2588	3002	3431	3433	3365
17	3401	3500	3415	3023	2574	2299	2138	2007	1928	1965	2116	2334	2549	2988	3433	3457	3401
18	3432	3512	3397	2995	2541	2249	2089	1943	1869	1904	2062	2286	2512	2969	3425	3484	3432
19	3456	3520	3372	2960	2500	2198	2037	1879	1812	1843	2006	2236	2475	2949	3415	3506	3456
20	3476	3517	3342	2917	2467	2148	1978	1821	1763	1790	1953	2185	2435	2928	3393	3517	3476
21	3506	3507	3302	2889	2435	2103	1915	1767	1732	1739	1894	2132	2398	2901	3362	3517	3506
22	3523	3505	3256	2860	2404	2061	1849	1719	1674	1686	1834	2077	2357	2868	3326	3511	3523
23	3525	3499	3210	2828	2376	2019	1782	1675	1617	1642	1776	2027	2317	2831	3287	3501	3525
24	3508	3486	3163	2802	2348	1977	1713	1625	1535	1577	1720	1976	2276	2796	3238	3487	3508
25	3479	3459	3122	2782	2324	1936	1649	1562	1466	1519	1666	1924	2240	2763	3179	3465	3479
26	3438	3418	3081	2768	2297	1890	1589	1494	1399	1451	1610	1868	2202	2727	3122	3442	3438
27	3394	3383	3048	2759	2269	1838	1536	1427	1338	1385	1552	1810	2169	2697	3068	3405	3394
28	3353	3346	3018	2756	2239	1788	1486	1365	1280	1326	1495	1756	2139	2681	3019	3363	3353
29	3315	3307	2994	2755	2204	1735	1433	1306	1226	1266	1439	1701	2106	2673	2981	3321	3315

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30	3279	3282	2967	2754	2150	1678	1368	1248	1178	1215	1380	1645	2068	2666	2946	3289	3279
31	3199	3249	2936	2744	2086	1617	1302	1195	1130	1164	1312	1586	2024	2660	2912	3257	3199
32	3098	3197	2900	2723	2028	1553	1249	1145	1113	1118	1245	1527	1973	2652	2874	3214	3098
33	3041	3108	2865	2691	1979	1492	1189	1100	1174	1080	1177	1465	1921	2636	2837	3141	3041
34	3009	3027	2828	2641	1926	1434	1128	1067	1223	1071	1118	1405	1869	2607	2795	3047	3009
35	2968	2976	2795	2577	1876	1378	1066	1070	1181	1106	1054	1348	1818	2562	2753	2978	2968
36	2954	2937	2764	2510	1838	1327	1006	1087	1058	1125	991	1293	1772	2501	2718	2932	2954
37	2945	2905	2735	2446	1804	1282	956	1070	929	1105	938	1239	1731	2431	2683	2889	2945
38	2936	2885	2705	2380	1769	1235	907	986	904	1018	889	1191	1692	2357	2649	2865	2936
39	2933	2870	2669	2326	1739	1185	860	877	907	903	843	1145	1653	2285	2618	2851	2933
40	2932	2855	2629	2281	1709	1130	816	820	862	874	803	1103	1617	2224	2583	2839	2932
41	2928	2842	2592	2241	1675	1073	795	783	866	839	779	1056	1582	2173	2539	2824	2928
42	2921	2824	2559	2206	1642	1020	785	761	879	808	771	1007	1546	2136	2496	2806	2921
43	2908	2804	2529	2175	1588	966	760	738	889	787	760	961	1511	2109	2449	2787	2908
44	2888	2781	2496	2143	1521	913	738	731	889	779	731	914	1473	2082	2413	2764	2888
45	2861	2754	2466	2110	1446	860	709	728	877	774	693	863	1430	2054	2373	2738	2861
46	2830	2724	2434	2066	1380	805	670	727	858	772	636	810	1374	2019	2339	2710	2830
47	2802	2695	2405	2021	1314	749	592	721	850	772	577	760	1309	1979	2305	2678	2802
48	2774	2663	2375	1969	1254	692	561	716	850	776	542	713	1245	1932	2269	2646	2774
49	2750	2632	2345	1918	1202	632	532	709	849	772	517	660	1189	1878	2237	2613	2750
50	2731	2605	2315	1860	1151	575	511	702	850	760	500	608	1136	1822	2208	2579	2731
51	2711	2579	2281	1798	1101	523	492	697	848	745	492	557	1086	1762	2180	2550	2711
52	2686	2551	2244	1741	1045	471	477	691	840	734	489	504	1034	1704	2150	2523	2686
53	2660	2527	2204	1684	993	418	458	681	827	721	478	455	989	1648	2119	2494	2660
54	2632	2499	2163	1626	942	372	446	660	805	704	473	413	942	1590	2082	2466	2632
55	2602	2470	2125	1577	888	329	440	635	783	683	466	386	896	1539	2043	2436	2602
56	2571	2439	2086	1526	834	302	431	611	757	664	459	356	849	1490	2005	2405	2571
57	2539	2409	2045	1479	783	275	415	593	736	643	450	328	800	1438	1964	2371	2539
58	2505	2372	2004	1431	729	250	405	574	717	622	439	300	751	1389	1925	2337	2505
59	2458	2336	1958	1380	675	229	393	553	698	598	433	274	700	1337	1885	2299	2458
60	2370	2291	1916	1328	631	202	378	536	677	578	425	249	651	1291	1843	2260	2370
61	2240	2214	1873	1274	578	170	361	520	654	563	417	219	596	1243	1798	2209	2240

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62	2084	2100	1827	1220	529	131	345	502	637	547	402	179	544	1195	1753	2135	2084
63	1910	1961	1778	1164	481	89	325	483	629	521	385	136	491	1145	1704	2029	1910
64	1720	1796	1726	1096	427	69	308	471	640	493	364	112	438	1097	1654	1890	1720
65	1523	1612	1660	1022	376	57	291	471	736	472	343	92	388	1041	1604	1732	1523
66	1325	1428	1571	945	324	51	270	497	813	474	322	78	340	977	1554	1556	1325
67	1128	1243	1482	867	279	47	255	518	845	510	303	65	291	907	1486	1379	1128
68	928	1048	1346	790	235	42	241	546	854	564	285	56	249	831	1402	1202	928
69	738	857	1190	714	198	38	223	554	846	596	270	47	213	757	1299	1014	738
70	562	678	1024	642	166	34	204	553	821	590	257	42	179	681	1174	830	562
71	408	510	855	574	140	30	190	537	780	576	245	39	151	607	1033	653	408
72	276	368	694	511	117	27	190	512	732	546	238	36	128	539	885	491	276
73	177	249	540	456	97	25	188	475	668	515	244	33	108	480	736	350	177
74	116	162	396	401	78	22	185	430	601	474	245	30	92	429	588	235	116
75	89	112	270	343	63	19	178	380	526	423	241	27	78	384	448	152	89
76	69	85	170	279	51	17	166	330	438	374	239	24	67	338	322	105	69
77	40	55	104	213	42	16	149	274	354	317	224	22	55	287	218	79	40
78	25	32	66	153	34	13	129	217	267	259	200	20	46	229	142	51	25
79	16	21	42	100	25	12	109	157	174	204	166	18	39	179	87	29	16
80	12	14	24	60	18	11	88	99	92	148	134	15	33	132	51	18	12
81	10	11	16	32	13	9	66	53	50	91	99	13	25	91	32	13	10
82	8	9	11	17	9	8	44	30	38	47	72	10	18	57	19	10	8
83	6	6	9	10	6	6	22	18	21	29	52	9	12	31	13	8	6
84	4	4	6	6	4	4	9	11	13	16	31	7	9	15	10	6	4
85	2	2	3	4	2	2	5	7	9	10	14	6	6	8	7	4	2
86	1	1	1	2	1	1	3	4	5	7	8	4	4	5	5	2	1
87	1	0	1	0	0	0	1	2	4	4	4	3	2	3	2	1	1
88	0	0	0	0	0	0	0	1	1	2	2	1	1	2	1	0	0
89	0	0	0	0	0	0	0	0	0	0	1	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

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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	1	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
102	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0
103	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
104	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0
105	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0
106	0	0	0	0	0	1	1	1	1	1	2	1	0	0	0	0	0
107	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0
108	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0
109	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0
110	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0
111	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0
112	0	0	0	0	0	1	2	2	2	2	2	2	0	0	0	0	0
113	0	0	0	0	0	2	2	2	3	3	3	2	0	0	0	0	0
114	0	0	0	0	0	2	2	3	3	3	3	2	0	0	0	0	0
115	0	0	0	0	0	2	3	3	3	3	3	2	0	0	0	0	0
116	0	0	0	0	1	2	3	3	3	3	3	2	1	0	0	0	0
117	0	0	0	0	1	2	3	3	4	3	3	2	1	0	0	1	0
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119	0	0	0	0	1	2	3	3	4	3	3	3	1	0	0	1	0
120	1	0	0	0	1	2	3	3	4	3	3	3	1	0	0	1	1
121	1	0	0	0	1	2	3	3	4	3	3	3	1	0	0	1	1
122	1	0	0	0	1	2	3	3	4	3	3	3	2	0	0	0	1
123	1	0	0	0	1	2	3	4	4	3	4	3	2	0	0	0	1
124	1	0	0	0	1	3	3	4	4	3	4	3	2	0	0	0	1
125	1	0	0	0	1	3	3	4	4	4	4	3	2	0	0	0	1

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Report Format Number STD/QR4909-H/2

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126	1	0	0	0	1	3	3	4	4	4	4	3	2	1	0	1	1
127	1	0	0	0	1	3	4	4	4	4	4	3	2	1	0	0	1
128	1	0	0	0	1	3	4	4	5	4	4	3	2	1	0	0	1
129	1	1	0	1	2	3	4	5	5	4	4	3	2	1	0	1	1
130	1	1	0	1	2	3	4	5	5	4	4	3	2	1	1	1	1
131	1	1	0	1	2	3	4	5	5	5	4	3	2	1	1	1	1
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139	1	1	1	1	2	3	4	6	6	6	4	4	3	2	1	1	1
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141	1	1	1	2	3	4	4	6	6	6	4	4	3	2	1	1	1
142	1	1	1	2	3	4	4	6	6	6	5	4	3	2	1	1	1
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147	1	1	1	2	3	4	5	6	6	6	5	4	3	2	2	2	1
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149	2	2	2	2	3	4	5	6	6	6	5	4	4	3	2	2	2
150	2	2	2	2	3	4	5	6	6	6	6	4	4	3	2	2	2
151	2	2	2	2	3	4	5	6	5	6	6	5	4	3	2	2	2
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155	2	2	3	3	3	4	5	6	6	6	6	5	4	3	3	3	2
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157	3	3	3	3	3	4	5	5	6	5	6	5	4	3	3	3	3

Laboratory: Standard-Tech Co. Ltd Testing Center

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158	3	3	3	3	3	4	5	5	6	5	6	5	4	3	3	3	3
159	3	3	3	3	3	4	5	5	6	5	6	5	4	3	3	3	3
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162	3	3	3	3	3	4	5	5	5	5	5	5	3	3	4	3	3
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169	4	4	4	4	4	4	5	6	6	6	6	6	4	4	5	4	4
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174	5	5	5	5	4	4	6	7	7	7	6	6	4	5	6	5	5
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176	6	5	6	5	4	4	5	6	7	7	6	6	4	5	6	5	6
177	6	5	6	5	4	4	5	6	6	6	6	6	4	5	6	6	6
178	6	6	6	5	4	4	5	6	6	6	6	6	4	5	6	6	6
179	6	6	6	5	4	4	5	6	6	6	6	6	4	5	6	6	6
180	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-05-27	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LWP6-75(5700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160203	120.0	60	0.5974	70.56	0.9843	8.53
NB-K2	277.0	60	0.2710	67.57	0.9001	10.43

Sphere-Spectroradiometer Method :

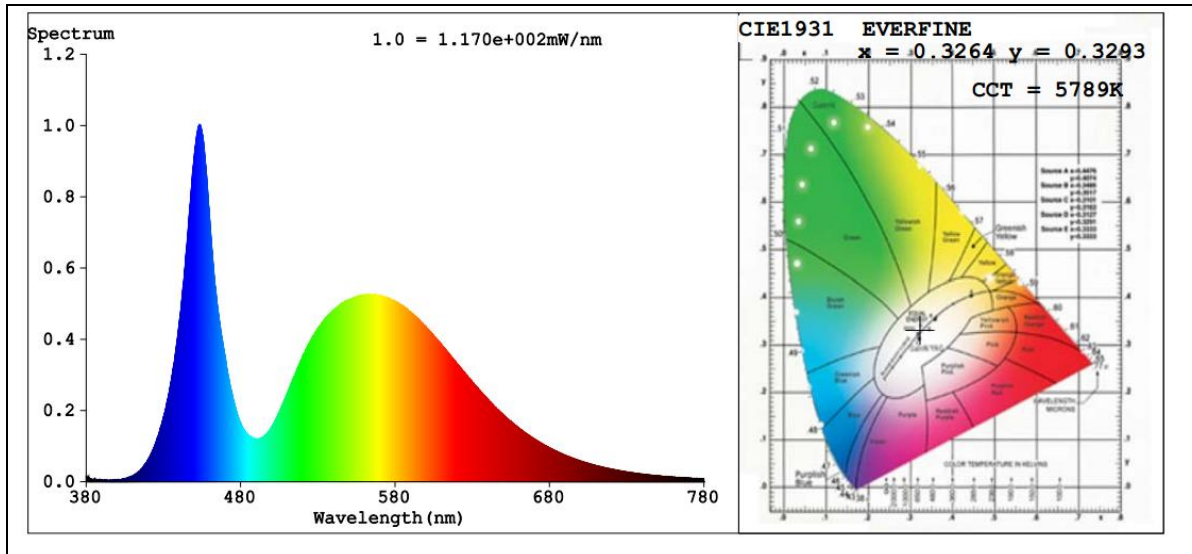
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	75.0
R9	0
CCT (K)	5789
Chromaticity (x, y)	x=0.3264 y=0.3293
Chromaticity (u', v')	u'=0.2073 v'=0.4705
Duv	-0.0034
Total Initial Lumen Output(lm)	7034
Initial Lumen Efficacy(lm/w)	99.69

Special Color Rendering Indices			
R1	74	R9	0
R2	81	R10	50
R3	81	R11	68
R4	74	R12	43
R5	73	R13	75
R6	70	R14	89
R7	84	R15	72
R8	63	--	--

Sphere-Spectroradiometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	6698
Initial Lumen Efficacy(lm/w)	99.13

Spectral Power Distribution & Chromaticity Diagram



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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 *******