



Report No.:GZE150120-C

NVLAP LAB CODE 201011-0

## LM-79-08 Test Report

For

# AOK LED LIGHT COMPANY LIMITED

**(Brand Name: AOK)**

Building 1, St George's Science and Technology Industrial Park,  
Shajin Street, Shenzhen, Guangdong Province, China Zip 518104

## Outdoor Pole/Arm-Mounted Area and Roadway

### Luminaires

Model name(s):AOK-120WiL

Representative (Tested) Model:AOK-120WiL(3000K)  
AOK-120WiL(5700K)

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

Test & Report By:

*Sean Zhuo*

Engineer: Sean Zhuo

Date: Mar.10,2015

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-A/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	Mar.10,2015
Test Report No.	GZE150120-C
Laboratory Contact Name	Tommy Liang

**Product Information:**

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-120WiL(3000K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-Mounted Area and Roadway 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	--	118.1	W
Input Current	--	0.9894	A
Input Voltage (ac)	--	120.1	V
Power Factor	--	0.9939	
Off-State Power	--	0	W

**Photometric Characteristics**

Total Initial Lumen Output	--	11868	lm
Initial Lumen Efficacy	--	100.49	lm/w
Correlated color temperature / CCT	3038	--	K
Color rendering index / CRI	72.4		
R9 Value	0	--	
Duv	-0.0017	--	
<b>Luminous Intensity Distribution</b>			
Center beam candlepower (if applicable)		5483	cd
Beam angle (if applicable)		120.3	°
Zonal lumens in the 0°-60° zone		77.7	%
Zonal lumens in the 60°-90° zone	-----	22.1	%
Zonal lumens in the 90°-120° zone		0	%
Zonal lumens in the 120°-180° zone		0.1	%

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Test Report No.	GZE150120-C
Laboratory Contact Name	Tommy Liang

**Product Information:**

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-120WiL(5700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-Mounted Area and Roadway 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	118.7	--	W
Input Current	0.9938	--	A
Input Voltage (ac)	119.9	--	V
Power Factor	0.9954	--	
Off-State Power	0	--	W

**Photometric Characteristics**

Total Initial Lumen Output	12903	--	lm
Initial Lumen Efficacy	108.70	--	lm/w
Correlated color temperature / CCT	5663	--	K
Color rendering index / CRI	74.1	--	
R9 Value	0	--	
Duv	-0.0030	--	
<b>Luminous Intensity Distribution</b>			
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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Test Specifications:	
Date of Receipt	: Mar.06, 2015
Date of Test	: Mar.09, 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  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ , 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  $1\text{ }^{\circ}$  vertical intervals and  $22.5\text{ }^{\circ}$  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  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . 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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**1. Product Information:**

Brand Name	AOK
Model Number	AOK-120WiL
Luminaire Type	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires
Rated Voltage / Frequency	90 ~ 305 Vac, 47-63 Hz
Nominal Power	120W
Rated Initial Lamp Lumen	--
Declared CCT	3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Philips
LED Model	LXM8-PW30
Sample Receipt Date	Mar.06, 2015
Sample Number	150120-5(3000K),-6(5700K)

**Photo**



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<b>2.1 Electrical, Photometric and Chromaticity Measurements</b> (Refer to Work Instruction QD25)
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<b>IES LM-79 2008</b>
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<b>Test date</b>	2015-03-09	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As Intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	AOK-120WiL(3000K)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-5	120.1	60	0.9894	118.1	0.9939	7.69
	305.0	60	0.4073	115.70	0.9314	12.18

**Sphere-Spectroradiometer Method:**

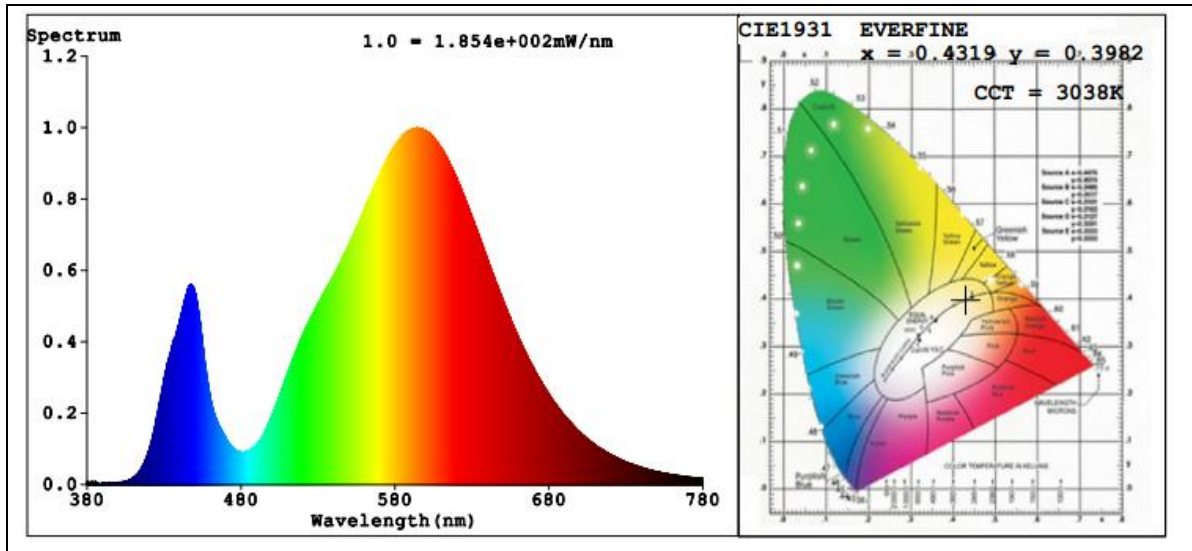
Parameter	Result
Test Voltage (V)	120.1
Frequency (Hz)	60
Color Rendering Index (CRI)	72.4
R9	0
CCT (K)	3038
Chromaticity (x, y)	x=0.4319 y=0.3982
Chromaticity (u', v')	u'=0.2498 v'=0.5183
Duv	-0.0017

Special Color Rendering Indices			
R1	69	R9	0
R2	81	R10	56
R3	91	R11	64
R4	69	R12	50
R5	68	R13	71
R6	73	R14	95
R7	79	R15	63
R8	49	--	--

**Goniophotometer Method:**

Parameter	Result
Test Voltage (V)	120.1
Frequency (Hz)	60
Total Luminous (lm)	11868
Luminous Efficacy (lm/W)	100.49
Beam Angle °	120.3
Center Beam Candle Power (cd)	5483
S/MH(C0/180)	2.01
S/MH(C90/270)	0.92

**Spectral Power Distribution & Chromaticity Diagram**



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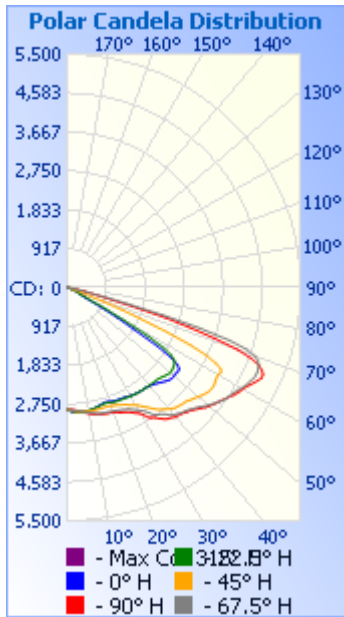


**Zonal Lumen Tabulation**

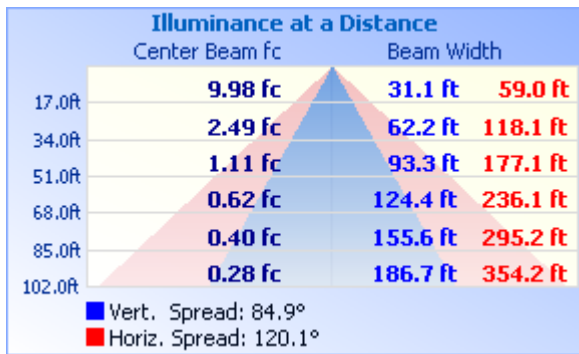
Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	2,401.6	20.2%	20.2%
0-40	4,259.6	35.9%	35.9%
0-60	9,225.1	77.7%	77.7%
60-90	2,628.9	22.2%	22.1%
70-100	535.1	4.5%	4.5%
90-120	4.8	0%	0%
0-90	11,854.1	99.9%	99.9%
90-180	16.3	0.1%	0.1%
0-180	11,870.3	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	274.4	2.3%	90-100	0.6	0%
10-20	805.4	6.8%	100-110	1.6	0%
20-30	1,321.7	11.1%	110-120	2.5	0%
30-40	1,858.0	15.7%	120-130	2.8	0%
40-50	2,310.6	19.5%	130-140	2.7	0%
50-60	2,654.9	22.4%	140-150	2.4	0%
60-70	2,094.5	17.6%	150-160	1.9	0%
70-80	503.2	4.2%	160-170	1.3	0%
80-90	31.2	0.3%	170-180	0.4	0%

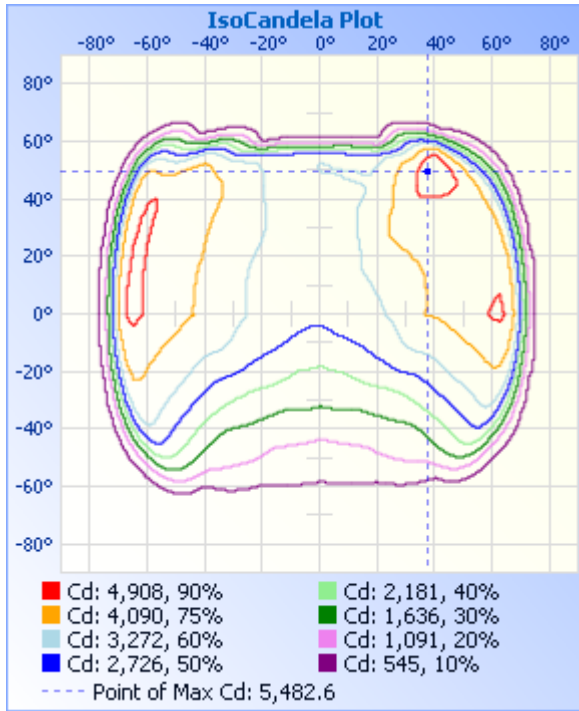
### Photometric Data



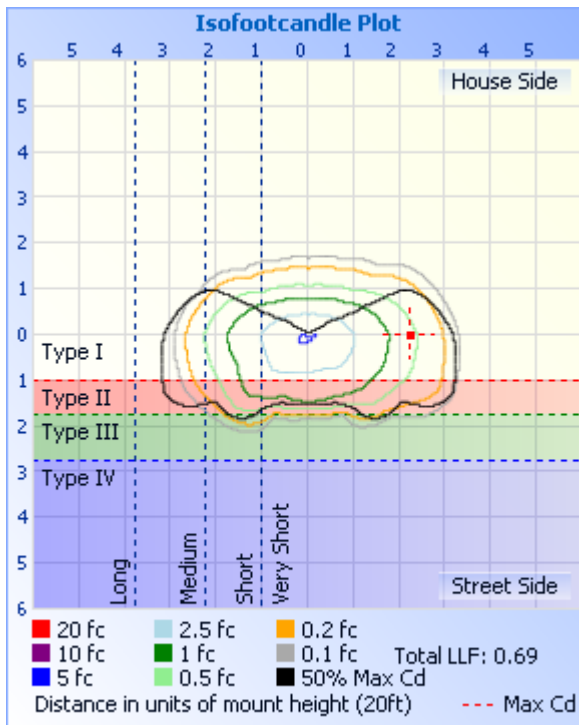
### Illuminance Plots



### 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	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883	2883
1	2911	2905	2895	2886	2884	2877	2854	2850	2852	2859	2872	2884	2888	2896	2911	2915	2911
2	2933	2923	2910	2895	2886	2871	2824	2811	2813	2830	2861	2888	2897	2917	2936	2943	2933
3	2948	2936	2926	2906	2894	2861	2796	2772	2769	2796	2845	2898	2912	2939	2962	2964	2948
4	2958	2947	2938	2919	2906	2854	2770	2729	2719	2761	2830	2908	2933	2964	2993	2980	2958
5	2965	2957	2947	2930	2920	2853	2745	2684	2671	2724	2819	2915	2953	2980	3020	2993	2965
6	2968	2962	2950	2940	2939	2853	2725	2641	2630	2687	2808	2919	2977	2994	3043	3003	2968
7	2969	2965	2954	2954	2964	2855	2707	2600	2587	2649	2799	2927	2996	3011	3063	3009	2969
8	2967	2965	2959	2971	2987	2855	2689	2564	2544	2612	2790	2934	3015	3029	3082	3008	2967
9	2960	2959	2963	2991	3006	2859	2676	2533	2501	2573	2772	2936	3026	3046	3100	3004	2960
10	2954	2949	2966	3008	3023	2860	2667	2501	2461	2535	2744	2937	3029	3064	3115	3000	2954
11	2946	2939	2965	3020	3043	2861	2656	2465	2421	2499	2716	2936	3039	3081	3130	2997	2946
12	2934	2931	2965	3035	3058	2870	2647	2430	2383	2467	2694	2933	3051	3096	3142	2995	2934
13	2918	2921	2967	3059	3072	2883	2639	2400	2344	2437	2678	2932	3069	3115	3153	2987	2918
14	2904	2912	2970	3071	3086	2899	2635	2372	2311	2404	2659	2933	3084	3141	3167	2991	2904
15	2892	2903	2969	3078	3098	2909	2630	2347	2280	2373	2642	2936	3096	3165	3180	2994	2892
16	2877	2893	2968	3085	3106	2914	2625	2320	2243	2344	2625	2939	3115	3184	3193	2993	2877
17	2864	2882	2966	3090	3115	2926	2620	2294	2205	2319	2608	2939	3132	3203	3206	2993	2864
18	2858	2877	2964	3093	3127	2934	2608	2263	2167	2293	2591	2949	3154	3221	3217	2996	2858
19	2858	2882	2967	3105	3134	2937	2589	2233	2132	2262	2580	2952	3181	3240	3232	3006	2858
20	2872	2891	2979	3111	3146	2937	2570	2203	2092	2229	2572	2959	3208	3256	3254	3017	2872
21	2886	2905	2991	3120	3160	2936	2553	2170	2050	2191	2568	2969	3233	3281	3277	3028	2886
22	2893	2920	3003	3133	3181	2941	2535	2137	2013	2154	2560	2977	3256	3312	3306	3036	2893
23	2902	2927	3021	3146	3207	2951	2521	2107	1978	2119	2549	2992	3280	3349	3338	3050	2902
24	2910	2933	3038	3163	3230	2960	2504	2077	1942	2083	2534	3007	3312	3386	3374	3068	2910
25	2914	2932	3058	3185	3249	2966	2485	2051	1908	2049	2510	3012	3351	3418	3418	3085	2914
26	2918	2940	3081	3203	3277	2973	2461	2018	1873	2012	2479	3032	3396	3449	3460	3099	2918
27	2923	2950	3112	3229	3310	2985	2430	1981	1831	1974	2441	3063	3449	3480	3501	3118	2923
28	2932	2952	3144	3268	3354	2998	2399	1945	1790	1935	2399	3094	3512	3519	3551	3138	2932
29	2945	2959	3176	3307	3392	3018	2371	1908	1750	1896	2366	3126	3588	3570	3601	3157	2945

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30	2960	2967	3207	3346	3439	3035	2342	1868	1706	1857	2329	3129	3708	3628	3661	3176	2960
31	2970	2975	3248	3392	3522	3057	2313	1823	1664	1816	2291	3141	3793	3722	3732	3195	2970
32	2979	2984	3308	3449	3627	3077	2281	1777	1624	1772	2257	3147	3842	3812	3809	3210	2979
33	2984	2992	3364	3523	3665	3077	2250	1734	1585	1721	2216	3144	3915	3859	3890	3222	2984
34	2991	2994	3418	3621	3707	3084	2221	1689	1541	1671	2169	3121	3991	3895	3981	3239	2991
35	2999	2998	3488	3674	3778	3087	2190	1643	1490	1617	2131	3097	4046	3950	4053	3262	2999
36	3006	3002	3553	3706	3839	3082	2154	1595	1434	1568	2092	3073	4096	4004	4114	3271	3006
37	3008	3004	3615	3754	3893	3067	2122	1550	1378	1528	2049	3046	4119	4047	4198	3283	3008
38	3003	3006	3651	3804	3917	3046	2092	1503	1321	1480	2006	3014	4118	4093	4282	3274	3003
39	3017	3024	3693	3885	3950	3023	2055	1457	1265	1431	1967	3004	4140	4097	4345	3273	3017
40	3031	3020	3748	3926	3994	3004	2018	1412	1214	1380	1928	3002	4140	4105	4401	3280	3031
41	3049	3022	3787	3954	4001	2989	1981	1370	1171	1335	1895	3006	4155	4123	4442	3279	3049
42	3068	3029	3822	3999	4016	2997	1945	1326	1129	1292	1859	3013	4191	4112	4471	3277	3068
43	3097	3033	3839	4021	4050	2998	1907	1286	1089	1251	1822	3023	4244	4118	4474	3266	3097
44	3129	3038	3859	4040	4083	2994	1865	1244	1050	1217	1782	3032	4279	4130	4489	3261	3129
45	3162	3048	3874	4078	4112	2996	1825	1207	1014	1184	1739	3049	4330	4146	4519	3263	3162
46	3194	3066	3886	4125	4158	3005	1786	1169	984	1149	1694	3063	4370	4169	4578	3269	3194
47	3225	3087	3918	4165	4208	3026	1747	1133	956	1121	1650	3069	4415	4194	4647	3277	3225
48	3259	3109	3954	4211	4258	3046	1704	1100	928	1098	1607	3069	4463	4212	4707	3285	3259
49	3275	3131	3982	4273	4319	3058	1662	1077	902	1076	1570	3068	4513	4231	4771	3293	3275
50	3274	3152	4020	4331	4364	3065	1617	1054	876	1052	1529	3067	4556	4245	4832	3293	3274
51	3269	3154	4060	4379	4404	3080	1579	1031	850	1023	1484	3062	4587	4269	4901	3275	3269
52	3275	3149	4096	4435	4447	3092	1542	1004	821	992	1444	3057	4632	4298	4962	3245	3275
53	3285	3135	4132	4481	4485	3106	1505	976	789	958	1407	3051	4675	4307	5029	3196	3285
54	3264	3124	4157	4536	4527	3112	1469	943	751	915	1373	3048	4721	4313	5102	3135	3264
55	3181	3095	4168	4578	4570	3108	1430	911	706	874	1337	3041	4783	4327	5185	3075	3181
56	2964	3040	4167	4613	4617	3114	1395	870	654	824	1302	3029	4813	4339	5255	3001	2964
57	2539	2926	4156	4629	4677	3119	1360	818	599	761	1268	3026	4852	4363	5321	2888	2539
58	1857	2683	4131	4662	4719	3117	1325	757	540	694	1224	3018	4901	4370	5388	2706	1857
59	1398	2237	4121	4705	4759	3120	1285	691	481	623	1176	3009	4950	4367	5446	2372	1398
60	939	1557	4119	4757	4793	3122	1246	620	424	549	1106	3001	4974	4372	5474	1806	939
61	481	1045	4149	4795	4836	3131	1195	546	367	474	1021	2999	5002	4391	5483	1167	481

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62	416	535	4112	4834	4896	3131	1132	471	317	406	915	2978	5019	4394	5449	716	416
63	375	383	3955	4862	4952	3137	1044	402	276	346	792	2922	5014	4364	5349	581	375
64	341	333	3657	4899	5014	3134	946	344	242	299	662	2805	4940	4290	5096	452	341
65	309	297	3214	4912	5063	3131	827	300	215	262	536	2584	4810	4175	4704	323	309
66	280	265	2594	4915	5063	3127	698	266	195	234	423	2277	4576	4005	4150	281	280
67	254	238	1871	4905	4998	3030	568	237	177	211	341	1902	4236	3771	3451	248	254
68	234	213	1391	4874	4875	2833	447	215	164	192	282	1510	3762	3464	2600	214	234
69	217	191	915	4825	4650	2531	357	195	152	175	245	1116	3227	3056	1758	181	217
70	185	164	438	4722	4284	2144	296	178	142	162	218	799	2562	2536	1228	152	185
71	147	140	369	4477	3665	1713	255	165	134	152	198	550	1875	1929	706	130	147
72	123	122	316	4021	3045	1282	223	155	127	143	181	393	1436	1474	455	116	123
73	109	111	255	3260	2420	898	199	145	120	135	166	305	1004	1023	306	106	109
74	100	104	200	2366	1594	609	179	137	113	128	151	257	573	571	231	99	100
75	90	99	160	1452	991	431	163	129	103	119	138	229	470	441	189	93	90
76	80	96	131	982	674	333	148	121	87	109	128	207	415	379	152	89	80
77	71	90	112	520	536	276	136	111	68	95	120	187	358	336	126	85	71
78	62	81	99	396	441	234	124	99	61	87	109	163	281	296	105	78	62
79	50	73	88	319	344	202	114	90	58	81	97	140	200	248	88	68	50
80	42	62	79	248	218	174	104	82	50	72	82	114	127	191	74	61	42
81	30	53	72	192	142	145	90	72	40	69	68	88	68	131	65	49	30
82	21	38	68	143	82	116	74	67	32	59	56	66	39	80	55	34	21
83	11	27	63	94	52	88	54	54	22	42	36	39	21	42	40	19	11
84	3	13	47	61	33	61	35	37	10	20	17	10	7	17	19	6	3
85	0	3	24	34	13	28	19	14	3	7	4	2	1	2	3	0	0
86	0	0	7	11	3	2	5	2	0	1	0	2	0	0	0	0	0
87	0	0	0	1	3	1	0	0	0	0	0	2	0	0	0	0	0
88	0	0	0	0	2	1	0	0	0	0	0	1	0	0	0	0	0
89	0	0	0	0	2	1	0	0	0	0	0	1	0	0	0	0	0
90	0	0	0	0	2	1	0	0	0	0	0	2	0	0	0	0	0
91	0	0	0	0	2	1	0	0	0	0	0	2	0	1	0	0	0
92	0	0	0	0	2	3	0	0	0	0	0	2	1	1	0	0	0
93	0	0	1	2	3	2	0	0	0	0	0	2	1	1	0	0	0

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

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126	1	0	1	3	5	5	4	4	4	4	4	5	5	4	2	1	1
127	1	0	1	3	5	5	4	4	4	4	4	4	5	4	2	1	1
128	1	0	1	3	5	5	4	4	4	4	4	4	5	4	2	1	1
129	1	1	1	3	5	5	4	5	4	4	4	4	5	3	2	1	1
130	1	1	1	3	5	5	4	5	4	5	4	4	4	4	2	1	1
131	1	1	1	3	5	5	5	5	4	5	4	4	4	3	2	1	1
132	1	1	1	3	5	5	5	5	5	5	4	4	4	3	2	1	1
133	1	1	1	3	5	5	5	5	5	5	4	4	4	3	2	1	1
134	1	1	1	3	5	5	5	5	5	5	4	4	4	3	2	1	1
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136	2	1	1	3	5	5	5	5	5	5	4	4	4	3	2	2	2
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138	2	1	1	3	5	5	4	5	5	5	4	4	4	3	2	2	2
139	2	1	1	3	5	5	4	5	5	5	4	4	4	3	2	2	2
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141	2	1	1	3	5	5	4	6	5	5	4	4	4	3	2	2	2
142	3	1	1	3	5	5	4	6	5	5	4	4	4	3	2	2	3
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146	3	2	2	3	5	5	5	6	5	5	5	4	4	3	3	3	3
147	3	2	2	3	5	5	5	6	5	5	5	4	4	3	3	3	3
148	3	2	2	3	5	5	5	6	6	5	5	4	4	3	3	3	3
149	3	2	2	3	5	5	5	6	6	6	5	4	4	3	3	3	3
150	3	2	2	3	5	5	5	6	6	6	5	4	4	3	3	3	3
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152	3	2	2	3	5	5	5	6	6	6	5	4	3	3	4	4	3
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154	4	3	3	3	5	5	5	6	6	6	5	5	3	3	4	4	4
155	4	3	3	3	5	5	5	6	6	6	5	5	3	3	4	4	4
156	4	3	3	3	4	5	5	6	6	6	5	5	3	3	4	4	4
157	4	3	3	3	4	5	5	6	6	6	5	5	3	3	4	4	4

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158	4	3	3	3	4	5	5	6	6	6	5	5	3	3	4	4	4
159	4	3	3	3	4	5	5	6	6	6	5	5	3	4	4	4	4
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162	5	4	3	3	4	4	5	6	6	6	5	5	4	4	4	5	5
163	5	4	3	3	5	4	5	6	6	6	5	5	4	4	4	5	5
164	5	4	3	3	5	4	5	5	6	6	5	5	4	4	4	5	5
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166	5	4	3	3	5	4	5	5	6	6	5	5	4	4	4	5	5
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172	5	4	4	4	5	5	5	5	5	5	5	5	4	4	5	5	5
173	5	4	4	4	5	5	5	5	5	5	5	5	4	4	5	5	5
174	5	4	4	4	5	5	5	5	5	5	5	5	4	4	5	5	5
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176	4	4	4	4	4	5	5	5	5	5	5	5	4	5	5	4	4
177	5	4	4	4	4	5	5	5	5	5	5	5	4	5	5	4	5
178	5	4	4	4	4	4	5	5	5	5	4	4	4	5	5	4	5
179	5	4	4	4	4	4	5	5	4	4	4	4	4	5	5	4	5
180	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

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<b>2.2 Electrical, Photometric and Chromaticity Measurements</b> (Refer to Work Instruction QD25)	<b>IES LM-79 2008</b>
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<b>Test date</b>	2015-03-09	<b>Test Ambient:</b>	25.1 °C
<b>Test Orientation</b>	As Intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	AOK-120WiL(5700K)		

### Electrical Measurement for Bare Lamp:

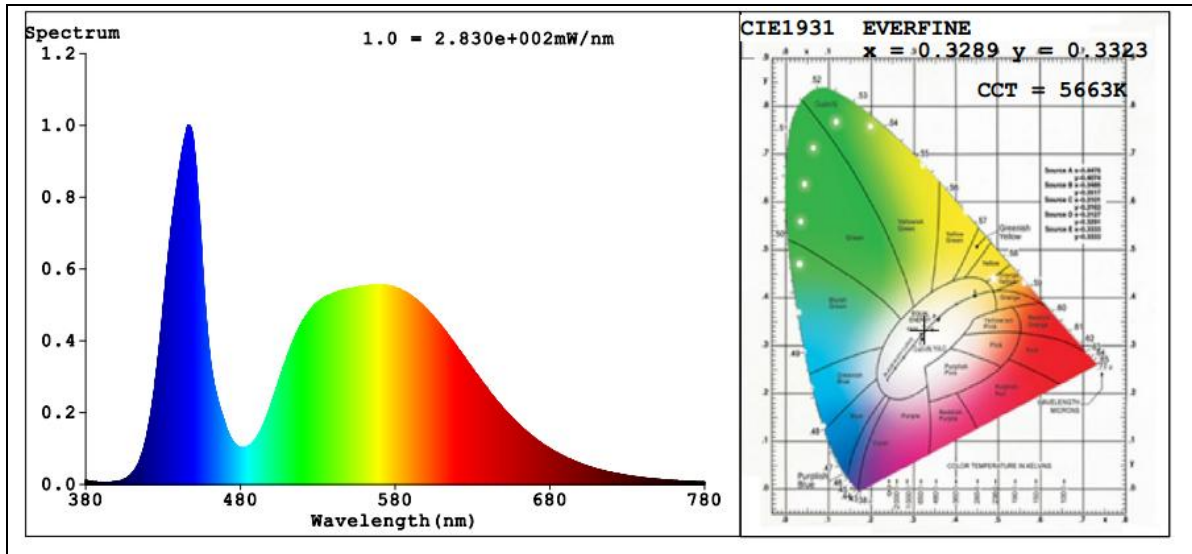
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-6	119.9	60	0.9938	118.7	0.9954	7.18
	305.0	60	0.4119	116.80	0.9298	12.75

### Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	119.9
Frequency (Hz)	60
Color Rendering Index (CRI)	74.1
R9	0
CCT (K)	5663
Chromaticity (x, y)	x=0.3289 y=0.3323
Chromaticity (u', v')	u'=0.2079 v'=0.4725
Duv	-0.0030
Total Initial Lumen Output(lm)	12903
Initial Lumen Efficacy(lm/w)	108.70

Special Color Rendering Indices			
R1	75	R9	0
R2	77	R10	43
R3	76	R11	77
R4	77	R12	50
R5	76	R13	74
R6	69	R14	86
R7	79	R15	71
R8	65	--	--

**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	2014-07-01	2015-06-30
ST-R-331	Spectral analysis system HAAS-2000	2014-07-01	2015-06-30
D204	Standard Lamp	2014-07-01	2015-06-30
PF2010	Power Meter for Integrating Sphere	2014-07-01	2015-06-30
EE-09	Goniophotometer system	2014-07-01	2015-06-30
D908S	Standard Lamp	2014-07-01	2015-06-30
PF210	Power Meter for Goniophotometer	2014-07-01	2015-06-30
ST-R-181A	Temperature Tester	2014-07-01	2015-06-30

**\*\*\*\*\* END OF DATASHEET PACKAGE \*\*\*\*\***