



Report No.: GZE151161-D

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-110WiT

Representative (Tested) Model: AOK-110WiT(3000K)
AOK-110WiT(5700K)

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

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date: Jan.27,2016

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-A/2

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

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Performance Assessment:

Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
AOK-110WiT(3000K)	3000	14264	116.8	122.17
AOK-110WiT(3500K)	3500	14492 ^{*1}	117.6 ^{*2}	123.23 ^{*3}
AOK-110WiT(4000K)	4000	14721 ^{*1}	117.6 ^{*2}	125.18 ^{*3}
AOK-110WiT(4500K)	4500	14949 ^{*1}	117.6 ^{*2}	127.12 ^{*3}
AOK-110WiT(5000K)	5000	15178 ^{*1}	117.6 ^{*2}	129.06 ^{*3}
AOK-110WiT(5700K)	5700	15406	118.4	130.12

*1: This value is calculated and the calculation formula is as below:

$$14492 = (15406 - 14264) / 5 + 14264$$

$$14721 = (15406 - 14264) / 5 + 14492$$

$$14949 = (15406 - 14264) / 5 + 14721$$

$$15178 = (15406 - 14264) / 5 + 14949$$

*2: This value is calculated and the calculation formula is as below:

$$117.60 = (118.4 + 116.8) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$123.23 = 14492 / 117.6$$

$$125.17 = 14721 / 117.6$$

$$127.12 = 14949 / 117.6$$

$$129.06 = 15178 / 117.6$$

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	Jan.27,2015
Test Report No.	GZE151161-D
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED		
Brand Name	AOK		
Model Number	AOK-110WiT(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	s	

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	--	116.8	W
Input Current	--	0.9785	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9947	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	14264	lm
Initial Lumen Efficacy	--	122.17	lm/w
Correlated color temperature / CCT	3081	--	K
Color rendering index / CRI	72.9	--	
R9 Value	0	--	
Duv	-0.0022	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		114.4	cd
Beam angle (if applicable)		3519	°
Zonal lumens in the 0°-60° zone	-----	79.3	%
Zonal lumens in the 60°-90° zone		20.5	%
Zonal lumens in the 90°-120° zone		0.1	%
Zonal lumens in the 120°-180° zone		0.1	%

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Laboratory Information:

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Date of Test Report	Jan.27,2016
Test Report No.	GZE151161-D
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED		
Brand Name	AOK		
Model Number	AOK-110WiT(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	s	

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	118.4	--	W
Input Current	0.9909	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9957	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	15406	--	lm
Initial Lumen Efficacy	130.12	--	lm/w
Correlated color temperature / CCT	5450	--	K
Color rendering index / CRI	76.6	--	
R9 Value	0	--	
Duv	-0.0030	--	
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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Test Specifications:	
Date of Receipt	: Dec.14,2015
Date of Test	: Jan.20,2016
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° 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.

1. Product Information:

Brand Name	AOK
Model Number	AOK-110WiT
Luminaire Type	Outdoor Pole/Arm-mounted Area and Roadway Luminaires
Rated Voltage / Frequency	100~ 240/277Vac, 50/60Hz
Nominal Power	110W
Rated Initial Lamp Lumen	--
Declared CCT	3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Philips Lumileds
LED Model	LUXEON 3030 2D
Sample Receipt Date	Dec.14,2015
Sample Number	GZE151161-D1(3000K),D2(5700K)

Photo



2.1 Electrical, Photometric and Chromaticity Measurements <i>(Refer to Work Instruction QD25)</i>	IES LM-79 2008
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Test date	2016-01-20	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	AOK-110WiT(3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE151161	120.0	60	0.9785	116.8	0.9947	6.01
-D1	277.0	60	0.4476	115.4	0.9308	12.89

Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	70	R9	0
Frequency (Hz)	60	R2	84	R10	61
Color Rendering Index (CRI)	72.9	R3	93	R11	60
R9	0	R4	67	R12	50
CCT (K)	3081	R5	68	R13	72
Chromaticity (x, y)	x=0.4282 y=0.3955	R6	76	R14	96
Chromaticity (u', v')	u'=0.2486 v'=0.5166	R7	78	R15	64
Duv	-0.0022	R8	47	--	--

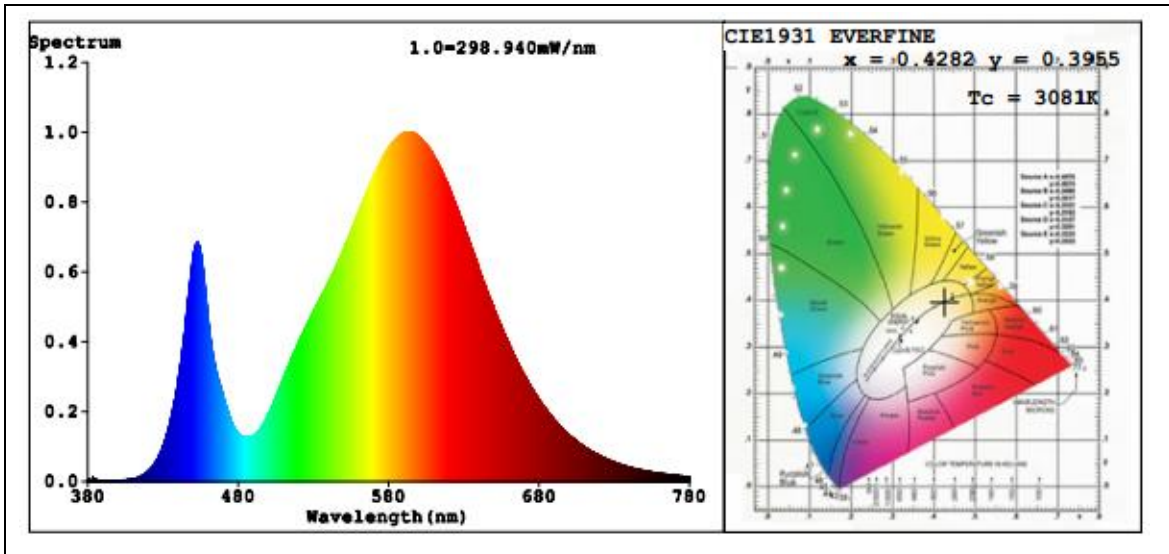
Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.1
Frequency (Hz)	60
Total Luminous (lm)	14264
Luminous Efficacy (lm/W)	122.17
Beam Angle°	114.4
Center Beam Candle Power (cd)	3519

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	14172
Luminous Efficacy (lm/W)	122.76

Spectral Power Distribution & Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,988.7	21%
0-40	5,282.5	37%
0-60	11,313.5	79.3%
60-90	2,924.0	20.5%
70-100	660.4	4.6%
90-120	7.6	0.1%
0-90	14,237.5	99.8%
90-180	25.8	0.2%
0-180	14,263.3	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	334.1	2.3%	90-100	0.5	0%
10-20	990.8	6.9%	100-110	2.5	0%
20-30	1,663.8	11.7%	110-120	4.6	0%
30-40	2,293.8	16.1%	120-130	5.4	0%
40-50	2,856.0	20.0%	130-140	4.6	0%
50-60	3,175.0	22.3%	140-150	3.5	0%
60-70	2,264.1	15.9%	150-160	2.5	0%
70-80	586.7	4.1%	160-170	1.6	0%
80-90	73.1	0.5%	170-180	0.6	0%

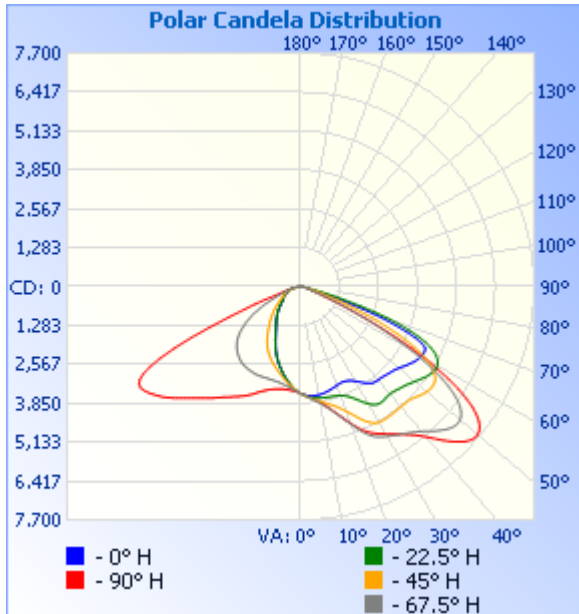
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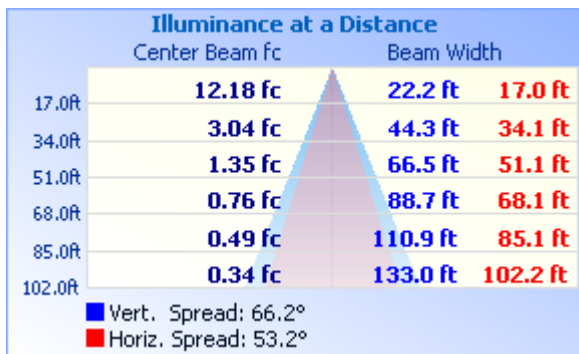
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Photometric Data



Illuminance Plots



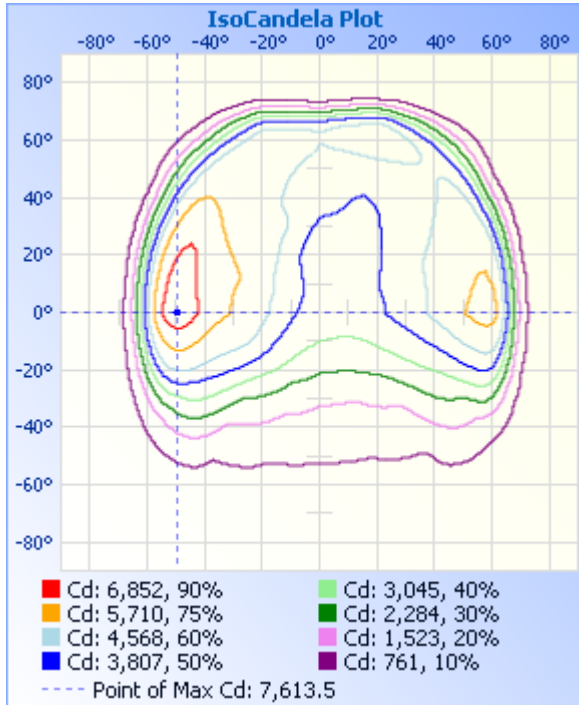
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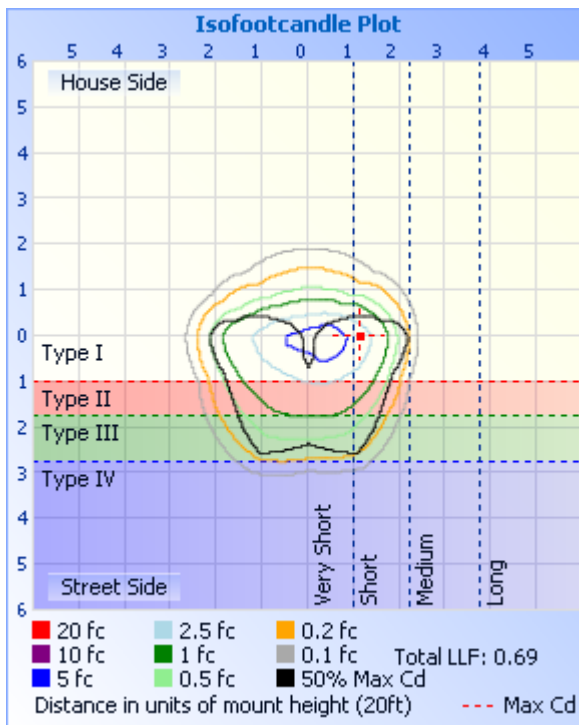
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ISOCANDELA DIAGRAM



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	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519
1	3546	3553	3557	3552	3545	3532	3515	3500	3488	3481	3478	3486	3496	3510	3520	3536	3546
2	3568	3584	3593	3588	3571	3546	3511	3476	3450	3439	3438	3456	3476	3503	3521	3549	3568
3	3589	3612	3626	3624	3599	3559	3506	3451	3410	3394	3397	3426	3458	3497	3524	3562	3589
4	3603	3638	3659	3661	3629	3575	3500	3418	3363	3344	3355	3399	3444	3495	3526	3571	3603
5	3615	3658	3689	3698	3663	3594	3492	3383	3314	3293	3313	3373	3435	3496	3529	3577	3615
6	3622	3677	3721	3737	3699	3614	3483	3347	3260	3238	3273	3352	3429	3498	3530	3579	3622
7	3624	3694	3752	3781	3739	3636	3473	3307	3200	3180	3231	3330	3427	3502	3532	3580	3624
8	3624	3707	3783	3826	3785	3661	3463	3267	3140	3121	3186	3311	3427	3508	3534	3577	3624
9	3622	3717	3815	3875	3835	3688	3452	3227	3080	3063	3141	3291	3429	3512	3533	3572	3622
10	3616	3726	3849	3927	3890	3716	3442	3182	3018	3004	3095	3273	3431	3519	3533	3564	3616
11	3609	3735	3884	3986	3952	3750	3433	3137	2954	2944	3051	3256	3438	3525	3533	3554	3609
12	3600	3742	3922	4051	4017	3786	3421	3091	2889	2881	3007	3243	3448	3537	3533	3544	3600
13	3586	3747	3962	4124	4092	3824	3411	3046	2823	2817	2963	3233	3461	3551	3533	3533	3586
14	3572	3754	4003	4204	4176	3871	3401	2999	2756	2749	2920	3226	3480	3569	3532	3517	3572
15	3556	3761	4050	4288	4266	3920	3391	2951	2691	2683	2878	3222	3502	3589	3532	3502	3556
16	3539	3768	4100	4383	4362	3972	3382	2903	2626	2615	2835	3218	3527	3610	3533	3484	3539
17	3522	3778	4155	4481	4462	4026	3374	2853	2560	2549	2796	3214	3554	3631	3533	3467	3522
18	3504	3789	4219	4588	4567	4083	3364	2801	2492	2484	2755	3216	3585	3654	3534	3446	3504
19	3487	3802	4291	4701	4678	4140	3358	2747	2420	2418	2716	3216	3621	3680	3537	3427	3487
20	3470	3820	4371	4820	4789	4198	3346	2687	2345	2349	2676	3217	3662	3713	3542	3409	3470
21	3455	3846	4455	4941	4903	4257	3331	2623	2265	2276	2636	3220	3709	3754	3549	3390	3455
22	3443	3881	4547	5067	5010	4314	3312	2555	2186	2202	2596	3224	3761	3802	3557	3371	3443
23	3436	3926	4649	5194	5118	4366	3288	2486	2105	2125	2553	3230	3818	3859	3569	3355	3436
24	3435	3979	4750	5307	5213	4410	3260	2415	2025	2050	2508	3235	3875	3919	3585	3342	3435
25	3442	4044	4855	5408	5296	4447	3225	2342	1947	1977	2461	3239	3933	3982	3607	3334	3442
26	3457	4118	4949	5491	5369	4477	3175	2268	1872	1904	2413	3241	3988	4042	3633	3335	3457
27	3479	4201	5028	5557	5432	4493	3125	2192	1801	1832	2364	3242	4040	4099	3664	3346	3479
28	3510	4291	5093	5609	5491	4498	3075	2117	1734	1765	2313	3240	4089	4149	3700	3363	3510

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29	3548	4378	5140	5654	5549	4499	3015	2042	1672	1701	2259	3238	4136	4192	3739	3389	3548
30	3595	4459	5167	5697	5608	4497	2948	1970	1616	1640	2200	3235	4184	4230	3775	3422	3595
31	3649	4531	5178	5743	5671	4490	2877	1900	1566	1583	2142	3230	4232	4263	3804	3460	3649
32	3709	4588	5180	5791	5739	4481	2801	1833	1519	1531	2082	3225	4282	4294	3832	3504	3709
33	3775	4628	5180	5834	5805	4468	2723	1770	1476	1483	2020	3221	4336	4327	3854	3550	3775
34	3836	4647	5177	5877	5874	4451	2644	1709	1436	1438	1958	3214	4392	4360	3869	3596	3836
35	3892	4652	5173	5925	5949	4429	2563	1651	1397	1396	1895	3206	4453	4395	3879	3637	3892
36	3937	4644	5169	5973	6033	4402	2479	1597	1359	1356	1832	3198	4515	4433	3885	3671	3937
37	3968	4629	5164	6028	6120	4372	2394	1544	1319	1318	1770	3180	4588	4478	3888	3695	3968
38	3986	4612	5163	6088	6223	4339	2309	1493	1279	1281	1710	3162	4657	4524	3893	3706	3986
39	3996	4606	5161	6157	6341	4307	2223	1442	1240	1245	1650	3144	4727	4571	3902	3716	3996
40	4001	4606	5158	6232	6476	4275	2137	1390	1200	1208	1592	3118	4798	4617	3914	3725	4001
41	4007	4616	5160	6323	6619	4239	2053	1343	1161	1171	1537	3095	4873	4662	3930	3742	4007
42	4017	4632	5165	6418	6780	4205	1969	1293	1120	1134	1484	3068	4949	4705	3950	3763	4017
43	4033	4652	5172	6507	6936	4167	1886	1242	1079	1094	1433	3037	5025	4745	3971	3789	4033
44	4052	4675	5188	6596	7091	4123	1804	1192	1037	1055	1382	3004	5106	4782	3991	3822	4052
45	4071	4700	5216	6680	7236	4074	1724	1140	997	1015	1332	2968	5196	4820	4014	3861	4071
46	4090	4728	5253	6754	7368	4021	1646	1090	956	976	1284	2926	5288	4861	4034	3903	4090
47	4107	4760	5296	6816	7477	3962	1568	1039	918	935	1237	2882	5389	4905	4051	3946	4107
48	4129	4797	5339	6858	7562	3892	1495	991	883	897	1188	2834	5489	4950	4072	3990	4129
49	4160	4838	5377	6875	7607	3809	1422	944	848	861	1140	2781	5593	4986	4099	4040	4160
50	4192	4881	5411	6859	7614	3720	1350	901	817	828	1092	2723	5693	5016	4128	4096	4192
51	4232	4926	5438	6809	7580	3619	1280	861	788	797	1043	2657	5789	5045	4162	4155	4232
52	4280	4973	5450	6719	7495	3505	1211	825	762	770	994	2585	5875	5065	4198	4225	4280
53	4326	5026	5454	6587	7365	3376	1143	793	740	744	947	2506	5955	5079	4241	4302	4326
54	4372	5080	5445	6408	7167	3216	1080	764	720	722	902	2420	6033	5087	4283	4386	4372
55	4417	5124	5414	6177	6920	3056	1015	739	703	702	859	2328	6107	5087	4326	4470	4417
56	4465	5163	5354	5893	6592	2895	956	719	688	686	817	2228	6171	5078	4372	4557	4465
57	4506	5193	5267	5560	6212	2712	899	701	674	672	778	2124	6222	5054	4415	4648	4506
58	4542	5215	5147	5170	5764	2520	848	686	660	659	743	2015	6243	5010	4454	4738	4542
59	4567	5220	4987	4740	5271	2317	801	672	646	647	712	1899	6217	4939	4484	4824	4567

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60	4582	5206	4789	4275	4738	2107	761	659	631	634	685	1781	6129	4820	4498	4910	4582
61	4603	5174	4541	3771	4165	1894	724	647	614	622	660	1654	5940	4637	4493	4988	4603
62	4614	5112	4260	3270	3557	1684	693	635	594	610	639	1524	5633	4382	4464	5054	4614
63	4611	5024	3928	2762	2948	1486	665	623	566	597	619	1392	5199	4045	4391	5106	4611
64	4562	4895	3562	2279	2343	1303	641	610	529	582	600	1261	4635	3624	4269	5129	4562
65	4405	4722	3163	1819	1831	1139	618	596	521	566	583	1136	3977	3138	4087	5103	4405
66	4132	4506	2752	1482	1409	995	598	579	518	548	567	1016	3272	2619	3835	5017	4132
67	3785	4235	2339	1149	1083	874	580	561	516	527	551	910	2585	2084	3517	4867	3785
68	3363	3908	1938	815	832	773	562	542	514	502	534	814	1982	1597	3131	4645	3363
69	2878	3531	1626	626	653	689	543	518	508	473	516	729	1611	1244	2707	4319	2878
70	2354	3090	1315	497	531	624	523	492	501	446	496	659	1247	894	2257	3865	2354
71	1810	2608	1005	414	450	569	501	465	489	423	474	599	883	680	1818	3305	1810
72	1388	2105	793	369	396	524	475	439	465	403	448	550	715	559	1486	2689	1388
73	967	1626	628	341	360	484	444	411	444	380	419	507	606	502	1156	2057	967
74	547	1236	505	318	331	448	404	385	418	361	385	471	530	472	826	1598	547
75	360	848	412	296	305	413	356	365	388	346	347	436	473	444	598	1138	360
76	276	605	334	271	283	378	309	343	356	329	309	401	424	402	425	678	276
77	239	444	272	241	259	343	260	318	322	303	264	364	379	349	321	476	239
78	219	345	224	211	235	306	219	289	285	270	218	322	333	297	262	371	219
79	198	283	185	184	208	265	181	255	247	237	178	271	287	246	222	337	198
80	180	236	152	159	181	222	153	219	210	204	146	221	242	198	182	317	180
81	160	196	122	138	155	183	128	182	175	172	121	177	197	154	148	291	160
82	128	151	95	118	130	144	107	145	139	139	99	133	157	116	113	254	128
83	87	107	71	97	107	99	86	110	104	106	79	91	123	89	80	200	87
84	56	70	50	77	86	72	66	78	71	73	59	67	92	68	52	138	56
85	31	41	34	59	65	56	46	46	37	41	40	51	66	50	33	83	31
86	10	18	19	42	47	42	28	16	10	14	23	37	43	34	18	34	10
87	1	3	8	24	28	28	14	4	3	4	11	23	22	17	6	3	1
88	1	1	1	10	8	8	5	2	2	3	3	3	2	3	1	1	1
89	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1
90	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

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91	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
92	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
94	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0
95	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0
96	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0
97	0	0	0	0	1	0	2	2	1	2	1	0	0	0	0	0	0
98	0	0	0	0	1	1	2	3	2	2	1	0	0	0	0	0	0
99	0	0	0	0	1	1	2	3	2	3	1	0	0	0	0	0	0
100	0	0	0	1	2	1	3	4	3	3	1	1	0	0	0	0	0
101	0	0	0	1	2	2	3	4	3	4	2	1	1	0	0	0	0
102	0	0	0	1	2	2	3	4	4	4	2	1	1	1	0	0	0
103	0	0	0	1	3	2	4	4	4	4	3	2	2	1	0	0	0
104	0	0	0	1	4	3	4	5	4	4	3	2	2	1	0	0	0
105	0	0	0	1	4	4	4	5	4	5	4	2	3	1	0	0	0
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107	0	0	0	2	5	4	5	5	5	5	5	3	4	2	0	0	0
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109	0	0	0	2	6	5	5	5	6	5	5	4	6	2	0	0	0
110	0	0	0	3	7	5	5	5	6	5	5	5	6	3	0	0	0
111	1	0	0	3	7	6	5	5	6	6	6	6	7	3	0	0	1
112	0	0	1	3	7	6	6	5	6	6	6	6	7	3	1	0	0
113	1	0	1	4	7	7	6	6	6	6	6	6	8	4	1	0	1
114	1	0	1	4	7	7	6	6	7	7	6	7	8	4	1	0	1
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121	1	1	1	5	9	8	7	8	8	8	8	8	11	6	2	1	1

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122	1	1	1	5	9	8	7	8	8	8	8	9	11	6	2	1	1
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126	1	1	2	6	9	8	6	7	8	8	8	10	13	8	2	1	1
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147	3	3	3	5	6	6	5	6	6	7	8	9	10	6	4	3	3
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149	3	3	3	5	6	6	6	6	6	7	8	8	9	6	5	4	3
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151	3	3	4	5	6	6	6	6	6	6	8	8	8	6	5	4	3
152	3	4	4	5	6	5	6	6	6	6	8	8	8	6	5	4	3

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153	4	4	4	5	5	5	6	6	6	6	8	7	8	6	6	4	4
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178	7	7	7	6	2	6	6	7	6	7	7	7	6	7	7	7	7
179	7	7	7	6	6	6	6	7	6	7	7	7	6	7	7	6	7
180	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7

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2.2 Electrical, Photometric and Chromaticity Measurements <i>(Refer to Work Instruction QD25)</i>	IES LM-79 2008
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Test date	2016-01-20	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	AOK-110WiT(5700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE151161	120.0	60	0.9909	118.4	0.9957	6.41
-D2	277.0	60	0.4542	117.2	0.9316	12.83

Sphere-Spectroradiometer Method:

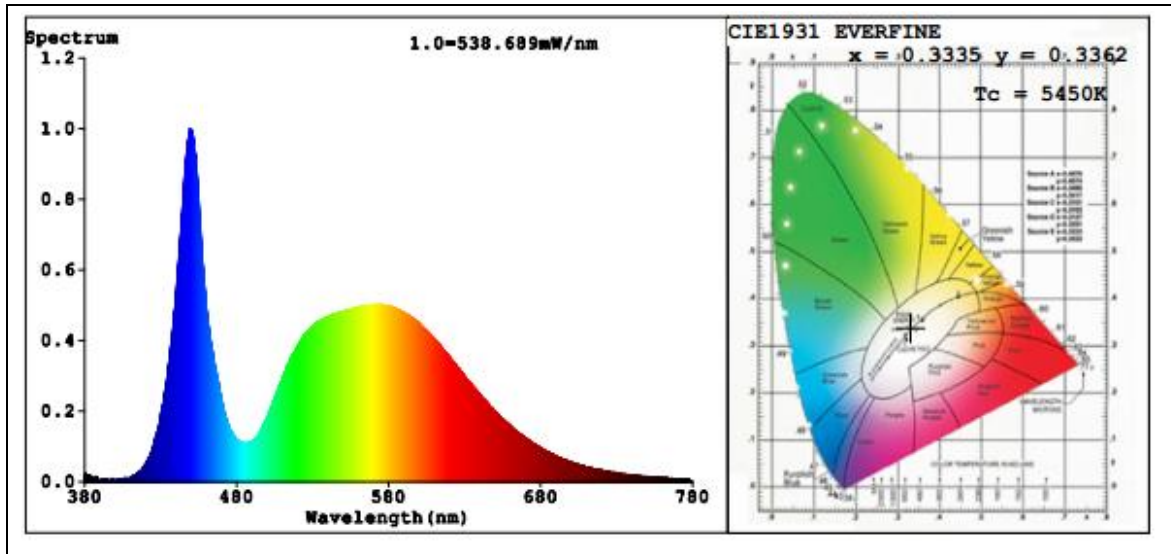
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	76.6
R9	0
CCT (K)	5450
Chromaticity (x, y)	x=0.3335 y=0.3362
Chromaticity (u', v')	u'=0.2095 v'=0.4752
Duv	-0.0030
Total Luminous (lm)	15406
Luminous Efficacy (lm/W)	130.12

Special Color Rendering Indices			
R1	76	R9	0
R2	81	R10	51
R3	81	R11	75
R4	78	R12	47
R5	76	R13	77
R6	72	R14	89
R7	83	R15	73
R8	65	--	--

Sphere-Spectroradiometer Method :

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	15359
Initial Lumen Efficacy(lm/w)	131.05

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 *******