



Report No.: GZE151161-E

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-150WiT

Representative (Tested) Model: AOK-150WiT(3000K)  
AOK-150WiT(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

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

**Performance Assessment:**

Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
AOK-150WiT(3000K)	3000	16507	148.4	111.23
AOK-150WiT(3500K)	3500	16822 <sup>*1</sup>	149.1 <sup>*2</sup>	112.83 <sup>*3</sup>
AOK-150WiT(4000K)	4000	17138 <sup>*1</sup>	149.1 <sup>*2</sup>	114.94 <sup>*3</sup>
AOK-150WiT(4500K)	4500	17453 <sup>*1</sup>	149.1 <sup>*2</sup>	117.06 <sup>*3</sup>
AOK-150WiT(5000K)	5000	17769 <sup>*1</sup>	149.1 <sup>*2</sup>	119.17 <sup>*3</sup>
AOK-150WiT(5700K)	5700	18084	149.8	120.72

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

$$16822 = (18084 - 16507) / 5 + 16507$$

$$17138 = (18084 - 16507) / 5 + 16822$$

$$17453 = (18084 - 16507) / 5 + 17138$$

$$17769 = (18084 - 16507) / 5 + 17453$$

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

$$149.1 = (149.8 + 148.4) / 2$$

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

$$112.83 = 16822 / 149.1$$

$$114.94 = 17138 / 149.1$$

$$117.06 = 17453 / 149.1$$

$$119.17 = 17769 / 149.1$$

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-E
Laboratory Contact Name	Tommy Liang

**Product Information:**

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-150WiT(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**

	Integrating Sphere	Goniophotometer	
	Output	Output	
Input Wattage	--	148.4	W
Input Current	--	1.246	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9927	
Off-State Power	--	0	W

**Photometric Characteristics**

Total Initial Lumen Output	--	16507	lm
Initial Lumen Efficacy	--	111.23	lm/w
Correlated color temperature / CCT	3106	--	K
Color rendering index / CRI	72.9	--	
R9 Value	0	--	
Duv	-0.0027	--	
<b>Luminous Intensity Distribution</b>			
Center beam candlepower (if applicable)		4068	cd
Beam angle (if applicable)		114.2	°
Zonal lumens in the 0°-60° zone		79.5	%
Zonal lumens in the 60°-90° zone	-----	20.3	%
Zonal lumens in the 90°-120° zone		0.1	%
Zonal lumens in the 120°-180° zone		0.2	%

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**Laboratory Information:**

Name of Test Laboratory	Standard-Tech Co. Ltd
Date of Test Report	Jan.27,2016
Test Report No.	GZE151161-E
Laboratory Contact Name	Tommy Liang

**Product Information:**

Organization Name	AOK LED LIGHT COMPANY LIMITED		
Brand Name	AOK		
Model Number	AOK-150WiT(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	149.8	--	W
Input Current	1.256	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9940	--	
Off-State Power	0	--	W

**Photometric Characteristics**

Total Initial Lumen Output	18084	--	lm
Initial Lumen Efficacy	120.72	--	lm/w
Correlated color temperature / CCT	5442	--	K
Color rendering index / CRI	76.3	--	
R9 Value	0	--	
Duv	-0.0034	--	
<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	: 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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals.

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

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at least 5 nm intervals over the range of 380 to 780 nm.

**1. Product Information:**

Brand Name	AOK
Model Number	AOK-150WiT
Luminaire Type	Outdoor Pole/Arm-mounted Area and Roadway Luminaires
Rated Voltage / Frequency	100~ 240/277Vac, 50/60Hz
Nominal Power	150W
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-E1(3000K),E2(5700K)

**Photo**



<b>2.1 Electrical, Photometric and Chromaticity Measurements</b> <i>(Refer to Work Instruction QD25)</i>	<b>IES LM-79 2008</b>
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<b>Test date</b>	2016-01-20	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	AOK-150WiT(3000K)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE151161	120.0	60	1.246	148.4	0.9927	6.36
-E1	277.0	60	0.5849	146.6	0.9049	15.52

**Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	69	R9	0
Frequency (Hz)	60	R2	84	R10	62
Color Rendering Index (CRI)	72.9	R3	94	R11	59
R9	0	R4	66	R12	51
CCT (K)	3106	R5	68	R13	72
Chromaticity (x, y)	x=0.4260 y=0.3936	R6	76	R14	97
Chromaticity (u', v')	u'=0.2480 v'=0.5156	R7	78	R15	64
Duv	-0.0027	R8	47	--	--

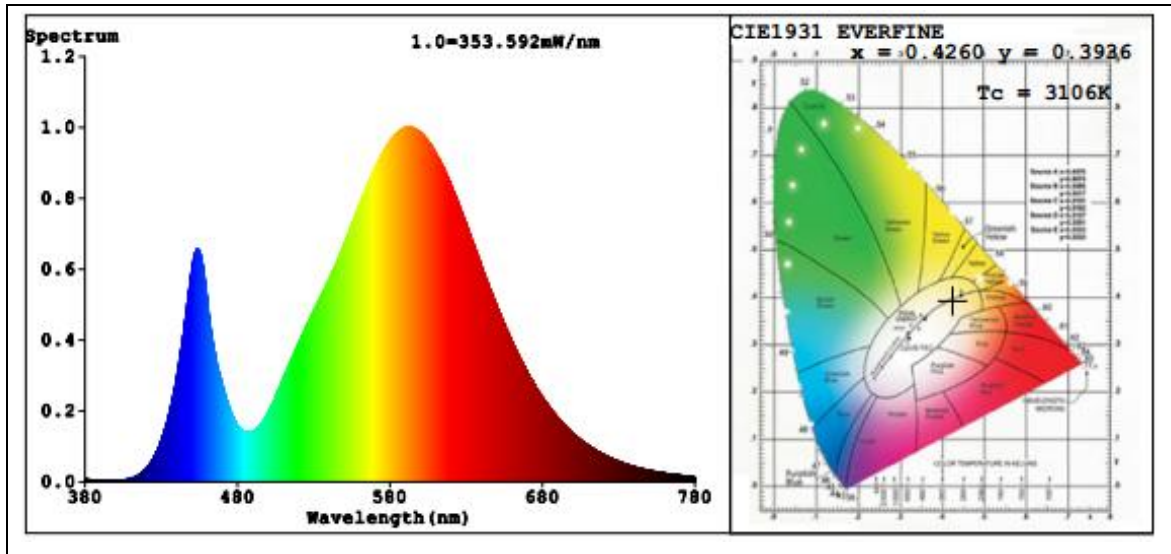
**Goniophotometer Method:**

Parameter	Result
Test Voltage (V)	120.1
Frequency (Hz)	60
Total Luminous (lm)	16507
Luminous Efficacy (lm/W)	111.23
Beam Angle°	114.2
Center Beam Candle Power (cd)	4068

**Goniophotometer Method:**

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	16391
Luminous Efficacy (lm/W)	111.81

**Spectral Power Distribution & Chromaticity Diagram**



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**Zonal Lumen Tabulation**

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	3,464.5	21%
0-40	6,131.1	37.1%
0-60	13,123.6	79.5%
60-90	3,349.8	20.3%
70-100	754.6	4.6%
90-120	9.3	0.1%
0-90	16,473.4	99.8%
90-180	31.3	0.2%
0-180	16,504.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	386.3	2.3%	90-100	0.8	0%
10-20	1,146.5	6.9%	100-110	3.1	0%
20-30	1,931.7	11.7%	110-120	5.4	0%
30-40	2,666.6	16.2%	120-130	6.5	0%
40-50	3,315.9	20.1%	130-140	5.5	0%
50-60	3,676.6	22.3%	140-150	4.2	0%
60-70	2,596.0	15.7%	150-160	3.1	0%
70-80	668.9	4.1%	160-170	1.9	0%
80-90	85.0	0.5%	170-180	0.8	0%

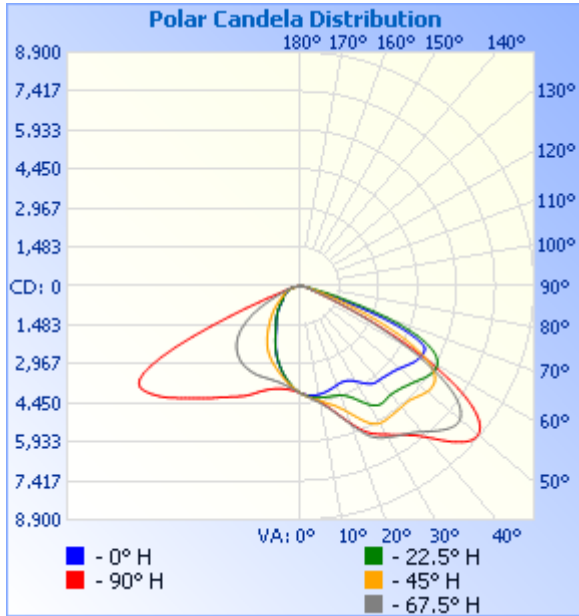
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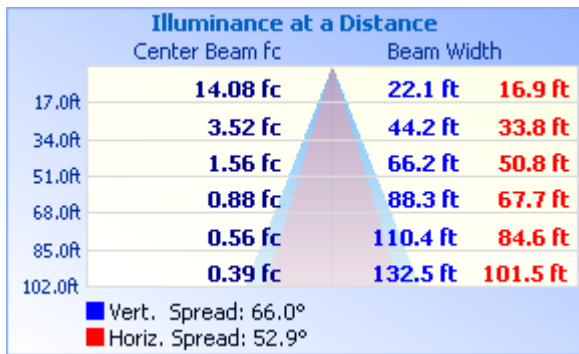
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### Photometric Data



### Illuminance Plots



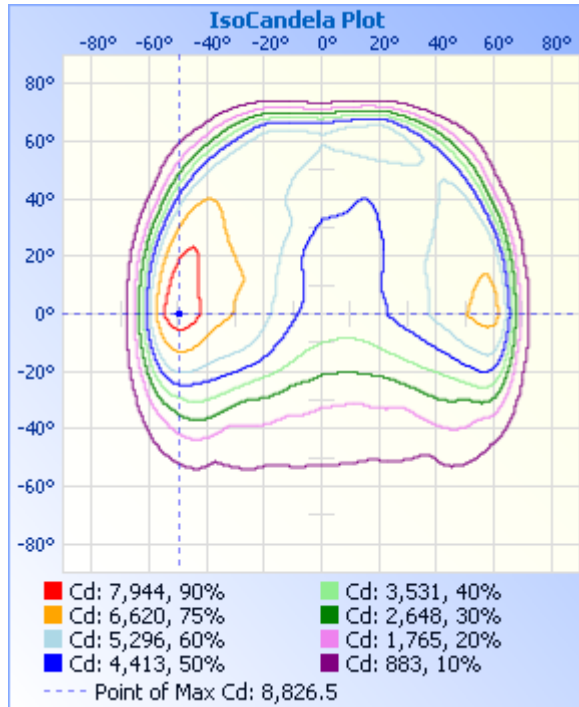
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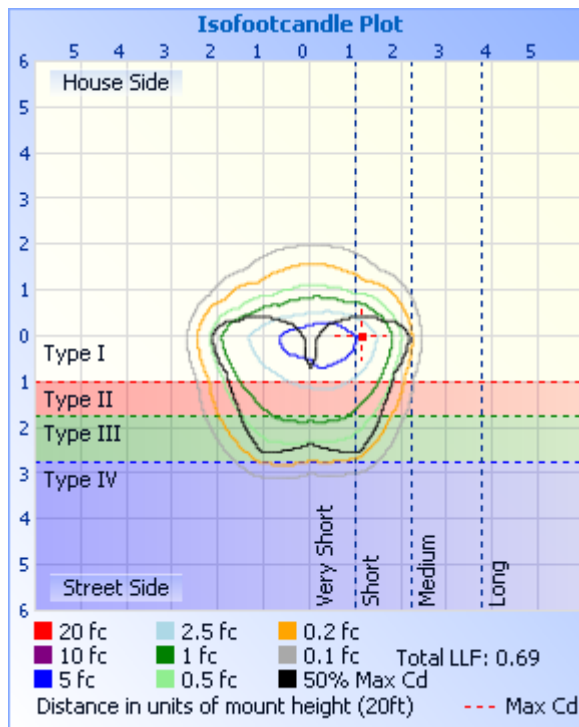
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### ISOCANDELA DIAGRAM



### 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	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068	4068
1	4098	4108	4112	4107	4096	4081	4065	4046	4031	4025	4022	4030	4041	4056	4070	4087	4098
2	4124	4143	4154	4148	4127	4096	4062	4018	3987	3975	3975	3995	4018	4047	4072	4101	4124
3	4147	4175	4194	4190	4159	4113	4054	3987	3940	3924	3927	3962	3997	4040	4073	4116	4147
4	4165	4204	4230	4230	4194	4130	4047	3952	3886	3867	3880	3930	3982	4038	4077	4126	4165
5	4177	4229	4266	4274	4233	4152	4037	3912	3827	3806	3831	3902	3971	4038	4081	4132	4177
6	4185	4250	4301	4322	4276	4174	4028	3870	3767	3744	3785	3877	3965	4042	4084	4137	4185
7	4188	4268	4337	4371	4325	4201	4015	3823	3701	3681	3737	3855	3963	4047	4085	4135	4188
8	4188	4282	4373	4422	4375	4230	4004	3778	3634	3613	3687	3832	3962	4053	4086	4132	4188
9	4185	4295	4409	4479	4431	4260	3993	3730	3565	3546	3635	3811	3964	4059	4087	4127	4185
10	4179	4306	4447	4540	4494	4295	3982	3680	3493	3479	3583	3791	3968	4066	4087	4118	4179
11	4170	4314	4488	4608	4567	4333	3972	3629	3419	3410	3532	3773	3976	4075	4085	4108	4170
12	4158	4322	4532	4683	4643	4374	3961	3577	3345	3338	3483	3758	3987	4088	4086	4096	4158
13	4145	4329	4577	4767	4731	4421	3948	3524	3269	3264	3433	3748	4005	4107	4085	4084	4145
14	4128	4337	4627	4861	4828	4475	3938	3470	3192	3185	3384	3739	4025	4128	4084	4066	4128
15	4111	4345	4681	4961	4933	4533	3927	3416	3115	3106	3334	3736	4050	4150	4085	4048	4111
16	4091	4356	4738	5070	5045	4596	3916	3361	3039	3027	3287	3730	4080	4175	4086	4026	4091
17	4074	4368	4806	5189	5164	4659	3907	3305	2963	2951	3240	3726	4114	4200	4088	4005	4074
18	4054	4382	4880	5316	5292	4728	3901	3245	2883	2874	3193	3727	4151	4227	4091	3983	4054
19	4033	4398	4967	5454	5422	4796	3892	3176	2801	2798	3146	3729	4192	4259	4094	3961	4033
20	4015	4420	5059	5594	5557	4867	3882	3107	2713	2718	3099	3730	4240	4297	4104	3941	4015
21	3998	4453	5163	5741	5690	4938	3865	3038	2622	2636	3053	3733	4296	4348	4113	3920	3998
22	3984	4495	5275	5890	5818	5007	3845	2960	2529	2549	3006	3740	4358	4404	4125	3900	3984
23	3978	4550	5397	6043	5943	5072	3818	2880	2435	2460	2957	3750	4424	4474	4138	3883	3978
24	3979	4615	5521	6181	6055	5127	3787	2798	2344	2374	2905	3756	4492	4545	4158	3871	3979
25	3989	4693	5645	6301	6154	5172	3747	2716	2253	2288	2852	3761	4560	4618	4184	3867	3989
26	4007	4784	5762	6399	6242	5208	3699	2629	2166	2204	2796	3766	4626	4689	4217	3869	4007
27	4036	4886	5859	6477	6317	5227	3643	2543	2085	2121	2740	3766	4685	4754	4255	3882	4036
28	4075	4993	5937	6540	6384	5234	3579	2454	2007	2043	2681	3764	4744	4815	4298	3905	4075

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29	4121	5098	5995	6589	6451	5235	3508	2369	1936	1969	2617	3761	4799	4866	4346	3938	4121
30	4180	5201	6028	6639	6521	5231	3433	2285	1870	1899	2550	3757	4855	4909	4387	3978	4180
31	4247	5287	6040	6686	6595	5224	3350	2204	1813	1833	2482	3751	4910	4946	4424	4026	4247
32	4320	5356	6042	6740	6671	5211	3258	2128	1760	1773	2413	3745	4967	4983	4459	4078	4320
33	4398	5404	6039	6789	6748	5197	3166	2055	1709	1718	2341	3738	5027	5019	4486	4134	4398
34	4474	5429	6028	6835	6823	5179	3074	1985	1663	1666	2268	3730	5093	5058	4503	4187	4474
35	4542	5435	6021	6886	6910	5153	2982	1918	1619	1617	2195	3719	5164	5098	4513	4238	4542
36	4594	5426	6015	6939	7006	5122	2885	1854	1573	1571	2122	3705	5234	5142	4521	4277	4594
37	4633	5407	6007	6999	7104	5085	2785	1793	1528	1527	2050	3694	5318	5193	4525	4306	4633
38	4653	5386	6003	7066	7223	5045	2686	1733	1481	1483	1981	3670	5399	5246	4528	4320	4653
39	4663	5374	6000	7143	7356	5007	2586	1673	1436	1441	1911	3648	5481	5299	4537	4331	4663
40	4667	5374	5997	7233	7514	4970	2486	1614	1390	1399	1845	3620	5564	5353	4553	4343	4667
41	4674	5383	5995	7329	7679	4929	2387	1559	1344	1358	1781	3592	5651	5404	4573	4360	4674
42	4683	5400	5999	7434	7864	4887	2289	1501	1298	1314	1719	3562	5737	5454	4594	4385	4683
43	4701	5422	6004	7537	8047	4843	2193	1441	1250	1269	1659	3525	5828	5499	4619	4415	4701
44	4723	5447	6021	7636	8224	4791	2098	1382	1202	1222	1602	3486	5921	5542	4643	4456	4723
45	4746	5475	6052	7730	8393	4736	2004	1322	1154	1177	1544	3444	6023	5584	4668	4500	4746
46	4769	5507	6096	7814	8545	4677	1913	1264	1108	1130	1489	3396	6130	5632	4687	4550	4769
47	4788	5545	6144	7882	8674	4607	1823	1206	1063	1084	1433	3345	6245	5681	4708	4600	4788
48	4813	5583	6190	7932	8769	4525	1737	1149	1022	1040	1378	3289	6362	5732	4730	4652	4813
49	4847	5630	6234	7946	8820	4427	1651	1094	983	997	1321	3220	6485	5774	4759	4709	4847
50	4883	5677	6272	7923	8827	4325	1568	1045	946	958	1265	3150	6600	5807	4794	4773	4883
51	4930	5728	6300	7862	8782	4206	1486	998	913	923	1209	3080	6713	5839	4832	4843	4930
52	4980	5779	6309	7753	8681	4072	1406	956	883	890	1153	2997	6811	5863	4874	4925	4980
53	5034	5840	6308	7599	8526	3923	1328	919	857	862	1099	2903	6905	5878	4922	5010	5034
54	5085	5896	6293	7387	8297	3755	1252	885	835	836	1046	2804	6995	5885	4968	5105	5085
55	5136	5947	6253	7113	8002	3572	1179	857	815	815	996	2695	7079	5883	5018	5202	5136
56	5190	5987	6179	6778	7622	3356	1108	834	798	796	947	2580	7154	5871	5070	5301	5190
57	5232	6017	6076	6385	7174	3139	1043	814	782	780	902	2459	7209	5842	5118	5400	5232
58	5270	6035	5934	5931	6654	2922	983	797	766	767	861	2330	7226	5784	5161	5501	5270
59	5292	6035	5744	5429	6071	2679	929	781	751	752	825	2195	7192	5698	5189	5599	5292

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60	5307	6014	5506	4878	5449	2437	882	766	734	738	794	2055	7080	5555	5204	5691	5307
61	5325	5969	5217	4298	4774	2187	840	752	714	724	767	1906	6856	5333	5194	5778	5325
62	5331	5892	4882	3710	4069	1942	804	739	690	710	742	1756	6493	5033	5151	5847	5331
63	5319	5782	4501	3122	3401	1708	772	725	658	694	719	1601	5973	4638	5062	5898	5319
64	5254	5622	4071	2573	2732	1496	743	710	615	676	698	1451	5314	4147	4912	5915	5254
65	5061	5416	3607	2051	2066	1304	717	693	606	658	678	1305	4542	3587	4694	5873	5061
66	4743	5156	3131	1588	1589	1141	695	674	603	638	660	1168	3721	2972	4394	5762	4743
67	4336	4836	2651	1252	1215	1002	675	653	601	613	642	1044	2925	2364	4018	5581	4336
68	3834	4450	2196	920	941	886	654	630	597	584	622	933	2230	1798	3569	5304	3834
69	3273	4008	1780	710	739	793	632	603	591	550	600	838	1679	1450	3074	4918	3273
70	2657	3501	1482	567	606	718	609	573	583	519	578	758	1334	1109	2558	4383	2657
71	2039	2939	1189	478	514	657	583	542	570	492	551	691	993	768	2054	3735	2039
72	1561	2366	895	427	456	607	553	512	542	470	522	634	809	637	1601	3015	1561
73	1087	1814	711	396	415	562	517	479	517	443	488	587	690	576	1261	2301	1087
74	613	1432	575	369	383	521	471	450	487	421	448	545	607	543	923	1627	613
75	402	1050	472	343	354	480	415	426	452	404	404	506	543	510	671	1183	402
76	315	669	384	314	328	440	359	401	415	384	359	465	489	461	479	745	315
77	278	498	314	280	302	400	303	372	376	354	307	421	437	401	366	532	278
78	255	391	259	245	273	357	252	338	334	316	254	373	386	340	301	423	255
79	231	325	215	213	242	310	212	298	290	277	207	314	332	283	254	390	231
80	209	271	176	186	211	259	179	257	247	239	171	257	279	227	209	367	209
81	186	226	142	161	179	213	150	214	206	202	141	206	228	177	170	335	186
82	147	174	110	138	150	169	125	171	164	163	116	154	182	134	130	291	147
83	100	122	82	114	124	116	101	129	124	124	92	106	142	103	92	228	100
84	64	80	58	90	99	84	78	92	84	86	69	78	107	79	60	156	64
85	34	46	39	69	76	66	54	55	44	49	47	60	77	58	37	93	34
86	12	21	22	48	55	49	34	19	11	16	27	43	50	39	20	37	12
87	2	3	9	28	34	33	17	5	4	5	13	26	26	20	6	3	2
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89	1	1	1	1	0	0	0	1	0	1	0	0	1	1	1	1	1
90	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1

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91	1	1	0	0	0	0	0	1	0	1	0	0	0	0	1	1
92	1	1	0	0	0	0	0	1	0	1	0	0	0	0	1	1
93	0	1	0	0	0	0	1	1	1	1	0	0	0	0	1	0
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96	0	0	0	0	1	1	1	2	1	2	1	0	0	0	0	0
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98	0	0	0	0	1	1	2	3	2	3	1	0	0	1	0	0
99	0	0	0	0	2	1	3	4	3	3	2	1	1	1	0	0
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101	0	0	0	1	3	2	3	5	4	4	2	1	1	1	0	0
102	0	0	0	1	3	3	4	5	4	5	3	1	2	1	0	0
103	0	0	0	1	4	3	4	5	5	5	3	2	2	1	0	0
104	0	0	0	1	5	4	5	5	5	5	4	2	3	1	0	0
105	0	0	0	2	5	4	5	6	5	6	4	3	4	2	0	0
106	0	0	0	2	6	5	5	6	6	6	5	3	4	2	0	0
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111	1	1	1	4	8	7	6	6	7	7	7	6	9	4	1	1
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122	1	1	2	6	10	9	8	9	10	10	9	10	14	7	2	1	1
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<b>2.2 Electrical, Photometric and Chromaticity Measurements</b> <i>(Refer to Work Instruction QD25)</i>	<b>IES LM-79 2008</b>
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<b>Test date</b>	2016-01-20	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	AOK-150WiT(5700K)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE151161	120.0	60	1.256	149.8	0.994	6.80
-E2	277.0	60	0.5920	148.2	0.9038	15.31

**Sphere-Spectroradiometer Method:**

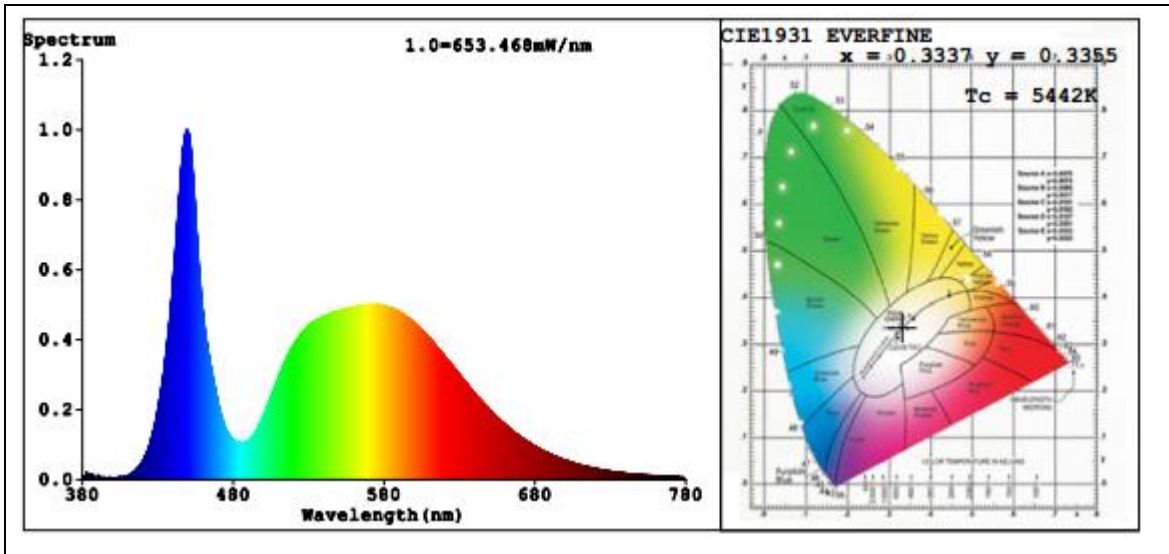
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	76.3
R9	0
CCT (K)	5442
Chromaticity (x, y)	x=0.3337 y=0.3355
Chromaticity (u', v')	u'=0.2099 v'=0.4749
Duv	-0.0034
Total Luminous (lm)	18084
Luminous Efficacy (lm/W)	120.72

Special Color Rendering Indices			
R1	76	R9	0
R2	80	R10	50
R3	80	R11	75
R4	78	R12	48
R5	76	R13	76
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)	17948
Initial Lumen Efficacy(lm/w)	121.11

**Spectral Power Distribution & Chromaticity Diagram**



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<b>3. Test Equipment</b>
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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 \*\*\*\*\***

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