



Report No.:GZE150120-F

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-240WiL

Representative (Tested) Model:AOK-240WiL(3000K)
AOK-240WiL(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

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	Mar.10,2015
Test Report No.	GZE150120-F
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-240WiL(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	--	235.9	W
Input Current	--	1.976	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9950	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	23097	lm
Initial Lumen Efficacy	--	97.91	lm/w
Correlated color temperature / CCT	3057	--	K
Color rendering index / CRI	72.3		
R9 Value	0	--	
Duv	-0.0015	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		11104	cd
Beam angle (if applicable)		119.7	°
Zonal lumens in the 0°-60° zone		77.9	%
Zonal lumens in the 60°-90° zone	-----	21.9	%
Zonal lumens in the 90°-120° zone		0	%
Zonal lumens in the 120°-180° zone		0.2	%

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Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-240WiL(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	235.3	--	W
Input Current	1.973	--	A
Input Voltage (ac)	119.9	--	V
Power Factor	0.9949	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	24989	--	lm
Initial Lumen Efficacy	106.20	--	lm/w
Correlated color temperature / CCT	5644	--	K
Color rendering index / CRI	74.0	--	
R9 Value	0	--	
Duv	-0.0029	--	
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	: 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 ° 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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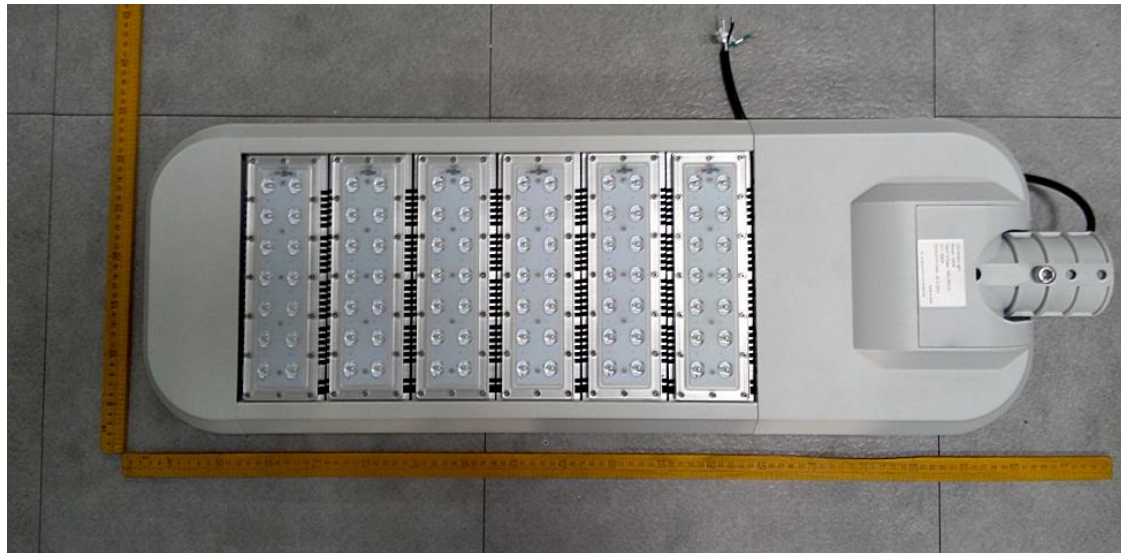
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1. Product Information:

Brand Name	AOK
Model Number	AOK-240WiL
Luminaire Type	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires
Rated Voltage / Frequency	90 ~ 305 Vac, 47-63 Hz
Nominal Power	240W
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	150120-11(3000K),-12(5700K)

Photo



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

Test date	2015-03-09	Test Ambient:	25.2 °C
Test Orientation	As Intended	Stabilization Time (min)	90
Model Number	AOK-240WiL(3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-11	120.0	60	1.976	235.9	0.9950	5.66
	305.0	60	0.8191	234.2	0.9374	9.87

Sphere-Spectroradiometer Method:

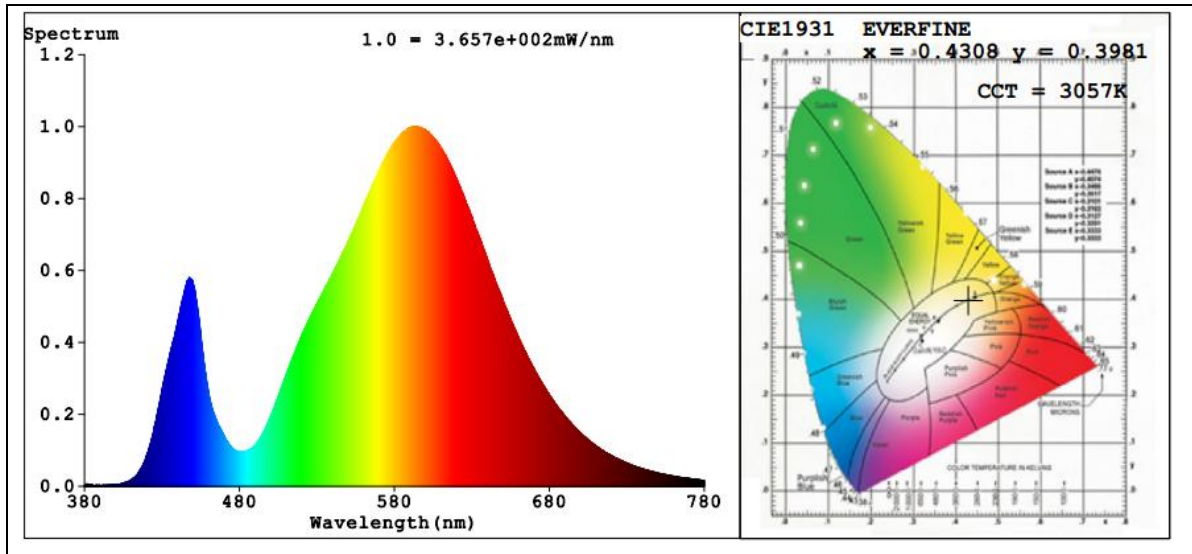
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	72.3
R9	0
CCT (K)	3057
Chromaticity (x, y)	x=0.4308 y=0.3981
Chromaticity (u', v')	u'=0.2492 v'=0.5181
Duv	-0.0015

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

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	23097
Luminous Efficacy (lm/W)	97.91
Beam Angle °	119.7
Center Beam Candle Power (cd)	11104
S/MH(C0/180)	1.94
S/MH(C90/270)	0.90

Spectral Power Distribution & Chromaticity Diagram



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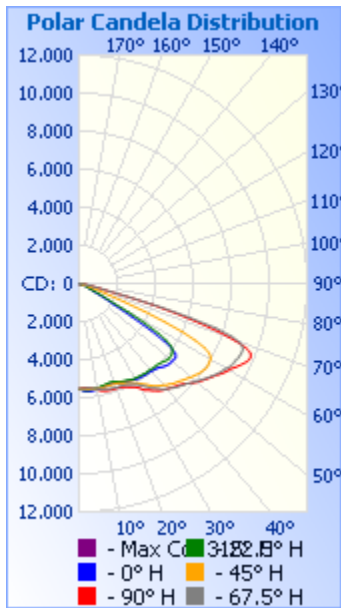
Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

Zonal Lumen Tabulation

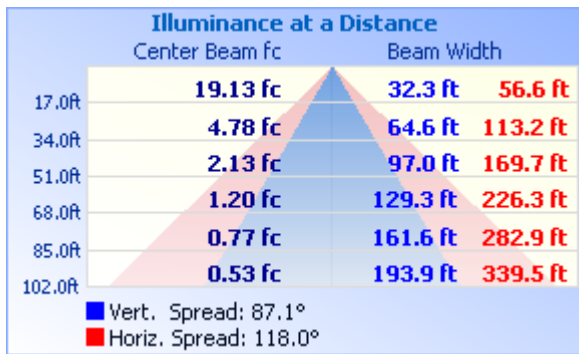
Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	4,635.6	20.1%	20.1%
0-40	8,281.0	35.9%	35.9%
0-60	17,997.3	77.9%	77.9%
60-90	5,064.1	21.9%	21.9%
70-100	1,096.8	4.7%	4.7%
90-120	11.0	0%	0%
0-90	23,061.4	99.8%	99.8%
90-180	35.0	0.2%	0.2%
0-180	23,096.3	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	524.6	2.3%	90-100	1.8	0%
10-20	1,545.8	6.7%	100-110	3.7	0%
20-30	2,565.3	11.1%	110-120	5.5	0%
30-40	3,645.4	15.8%	120-130	6.0	0%
40-50	4,529.3	19.6%	130-140	5.6	0%
50-60	5,187.0	22.5%	140-150	4.9	0%
60-70	3,969.1	17.2%	150-160	4.0	0%
70-80	998.6	4.3%	160-170	2.6	0%
80-90	96.4	0.4%	170-180	0.9	0%

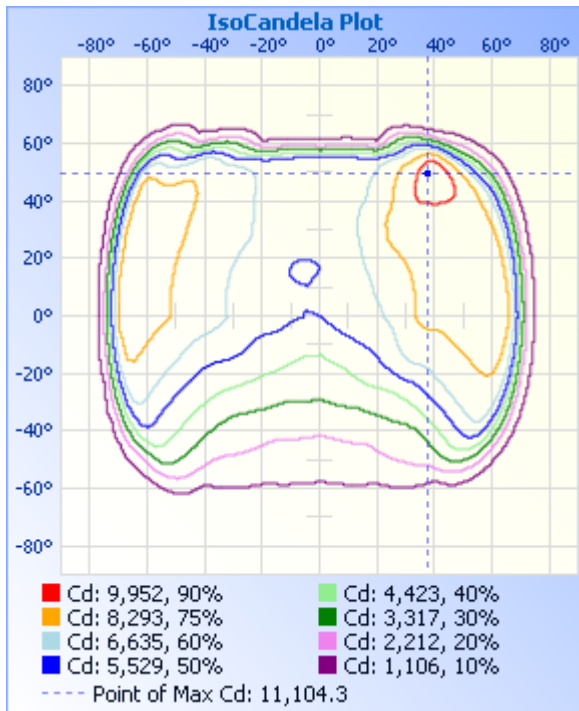
Photometric Data



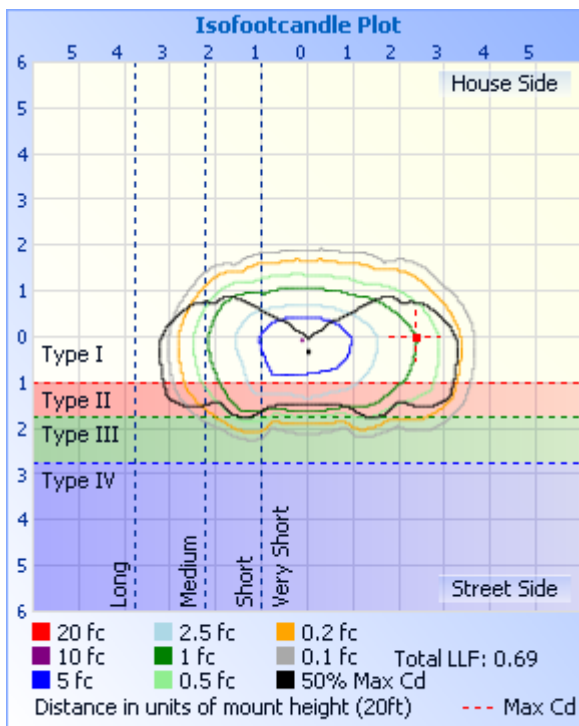
Illuminance Plots



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	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528	5528
1	5579	5559	5532	5520	5503	5479	5468	5463	5469	5489	5525	5540	5560	5582	5583	5581	5579
2	5616	5584	5538	5514	5480	5435	5404	5378	5392	5443	5522	5559	5596	5646	5637	5625	5616
3	5644	5603	5548	5510	5472	5401	5334	5287	5308	5397	5513	5583	5639	5713	5693	5665	5644
4	5663	5614	5556	5513	5478	5372	5261	5191	5213	5347	5501	5602	5685	5774	5748	5698	5663
5	5677	5614	5564	5520	5494	5358	5192	5093	5109	5288	5483	5631	5740	5832	5799	5727	5677
6	5673	5612	5570	5529	5520	5346	5130	4997	5010	5220	5459	5670	5793	5890	5840	5753	5673
7	5667	5598	5578	5546	5548	5333	5084	4909	4917	5150	5437	5706	5834	5946	5879	5771	5667
8	5659	5582	5584	5561	5588	5331	5046	4819	4833	5076	5422	5727	5882	5994	5911	5783	5659
9	5645	5565	5591	5575	5626	5339	5006	4730	4743	5003	5397	5748	5921	6036	5943	5786	5645
10	5632	5556	5593	5592	5663	5356	4978	4668	4656	4934	5367	5769	5954	6077	5974	5785	5632
11	5617	5540	5593	5621	5703	5382	4947	4610	4582	4866	5339	5784	6002	6117	6011	5783	5617
12	5601	5514	5597	5653	5738	5399	4909	4555	4506	4804	5302	5792	6047	6157	6048	5793	5601
13	5584	5498	5593	5682	5762	5414	4880	4500	4425	4742	5264	5806	6096	6204	6093	5806	5584
14	5563	5488	5586	5704	5786	5429	4856	4449	4362	4676	5230	5829	6150	6252	6146	5816	5563
15	5545	5468	5582	5727	5803	5444	4825	4392	4301	4615	5190	5839	6204	6298	6188	5833	5545
16	5541	5454	5577	5742	5821	5451	4786	4341	4229	4559	5145	5853	6250	6356	6228	5840	5541
17	5530	5440	5572	5759	5839	5449	4751	4290	4160	4495	5103	5864	6295	6418	6273	5857	5530
18	5536	5436	5572	5776	5843	5452	4722	4230	4087	4435	5072	5880	6358	6483	6316	5889	5536
19	5552	5450	5580	5788	5837	5443	4694	4167	4018	4374	5045	5900	6424	6550	6383	5938	5552
20	5579	5482	5592	5799	5838	5427	4658	4111	3948	4323	5030	5930	6489	6620	6450	5985	5579
21	5609	5518	5603	5797	5850	5418	4631	4049	3870	4267	5026	5954	6558	6705	6515	6032	5609
22	5631	5554	5639	5802	5868	5417	4602	3981	3799	4202	5029	5985	6636	6784	6586	6072	5631
23	5653	5582	5686	5819	5896	5426	4586	3915	3729	4131	5020	6032	6715	6855	6672	6117	5653
24	5670	5614	5724	5835	5931	5432	4561	3846	3663	4061	5001	6084	6808	6939	6782	6152	5670
25	5693	5642	5752	5863	5981	5458	4521	3785	3585	3995	4986	6144	6907	7040	6885	6189	5693
26	5708	5658	5795	5906	6032	5476	4470	3721	3515	3937	4950	6219	7018	7132	6992	6229	5708
27	5740	5687	5842	5948	6086	5482	4415	3646	3430	3872	4904	6324	7149	7231	7095	6267	5740
28	5763	5723	5892	6002	6152	5496	4366	3574	3364	3801	4846	6412	7295	7323	7199	6313	5763
29	5789	5749	5963	6058	6231	5511	4310	3490	3279	3724	4789	6502	7502	7424	7315	6362	5789

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30	5817	5769	6026	6129	6331	5526	4242	3412	3199	3634	4730	6580	7764	7598	7465	6404	5817
31	5845	5785	6109	6217	6467	5545	4195	3332	3119	3540	4638	6668	7970	7806	7625	6446	5845
32	5869	5795	6213	6320	6605	5549	4132	3259	3040	3451	4569	6718	8148	8008	7811	6489	5869
33	5883	5800	6308	6452	6671	5556	4066	3173	2960	3360	4482	6745	8346	8104	8010	6526	5883
34	5893	5813	6409	6590	6759	5538	4001	3086	2873	3261	4395	6760	8501	8234	8187	6560	5893
35	5914	5823	6523	6693	6850	5517	3933	3000	2781	3165	4307	6767	8652	8378	8385	6579	5914
36	5925	5847	6650	6788	6942	5473	3856	2907	2678	3068	4219	6743	8728	8505	8524	6593	5925
37	5936	5863	6746	6889	7039	5427	3778	2817	2569	2972	4135	6688	8809	8610	8711	6594	5936
38	5936	5842	6817	7024	7100	5392	3709	2726	2464	2877	4055	6639	8825	8676	8902	6603	5936
39	5958	5862	6878	7149	7162	5348	3639	2640	2372	2772	3975	6598	8825	8687	9068	6602	5958
40	5977	5874	6953	7214	7215	5310	3573	2562	2284	2677	3895	6579	8817	8670	9168	6601	5977
41	6002	5899	7045	7276	7270	5289	3493	2479	2207	2587	3820	6579	8817	8642	9238	6593	6002
42	6035	5899	7104	7374	7327	5258	3423	2411	2132	2521	3738	6606	8844	8605	9277	6579	6035
43	6058	5918	7192	7449	7398	5234	3344	2336	2062	2448	3673	6641	8899	8589	9303	6562	6058
44	6113	5919	7255	7518	7451	5233	3270	2263	1998	2378	3593	6682	8976	8601	9331	6550	6113
45	6185	5945	7306	7582	7513	5246	3195	2186	1937	2304	3512	6721	9066	8649	9391	6527	6185
46	6242	5982	7364	7656	7595	5257	3120	2121	1874	2239	3437	6761	9148	8700	9479	6527	6242
47	6292	6023	7441	7716	7701	5267	3045	2052	1815	2174	3352	6800	9223	8750	9569	6554	6292
48	6332	6070	7508	7815	7816	5264	2962	1995	1751	2114	3270	6825	9285	8809	9691	6566	6332
49	6352	6117	7576	7910	7940	5278	2881	1947	1695	2071	3194	6865	9373	8866	9810	6565	6352
50	6363	6145	7654	8000	8048	5277	2801	1900	1641	2019	3117	6893	9469	8883	9941	6549	6363
51	6380	6145	7727	8093	8155	5292	2732	1843	1586	1962	3041	6910	9546	8918	10058	6500	6380
52	6383	6150	7781	8184	8239	5301	2652	1792	1531	1908	2965	6926	9615	8970	10205	6422	6383
53	6375	6120	7860	8294	8341	5293	2581	1731	1464	1843	2889	6961	9685	9029	10360	6328	6375
54	6263	6074	7917	8387	8435	5295	2510	1670	1389	1770	2817	6989	9737	9060	10494	6220	6263
55	5977	5990	7956	8482	8534	5288	2437	1601	1306	1685	2752	7004	9779	9092	10578	6105	5977
56	5418	5814	8009	8586	8634	5288	2379	1520	1219	1596	2688	7026	9814	9132	10722	5932	5418
57	4501	5460	8027	8676	8750	5278	2318	1431	1127	1485	2615	7027	9869	9116	10839	5618	4501
58	3263	4896	8010	8769	8883	5268	2257	1330	1022	1363	2537	7032	9912	9127	10941	5123	3263
59	2106	4046	8001	8835	8995	5254	2181	1216	917	1231	2440	7028	9921	9129	11040	4367	2106
60	1697	2969	7983	8918	9090	5238	2102	1093	812	1089	2319	7005	9903	9109	11104	3235	1697
61	1305	1931	7916	9034	9184	5226	2000	969	711	952	2154	6955	9774	9026	11048	2061	1305

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62	914	1549	7742	9099	9335	5202	1873	844	624	824	1936	6825	9643	8911	10811	1636	914
63	823	1168	7392	9143	9466	5183	1722	731	548	709	1695	6571	9424	8731	10346	1219	823
64	750	787	6811	9176	9601	5161	1546	639	488	616	1426	6144	9066	8454	9581	802	750
65	681	687	6002	9234	9717	5125	1356	567	440	544	1160	5553	8629	8070	8563	700	681
66	619	616	4934	9267	9798	5070	1149	506	399	490	926	4811	7985	7566	7215	619	619
67	558	553	3717	9291	9813	4926	948	460	367	446	747	4002	7180	6972	5618	550	558
68	509	494	2563	9295	9726	4642	775	417	339	407	625	3193	6214	6241	3929	478	509
69	468	433	1737	9197	9397	4186	646	380	316	373	540	2387	5106	5357	2511	411	468
70	413	371	1409	8979	8771	3508	553	352	296	345	481	1715	3919	4333	1589	349	413
71	361	323	1084	8488	7797	2830	486	330	278	324	434	1207	2762	3248	1202	308	361
72	306	290	758	7577	6630	2154	435	309	263	300	396	884	1869	2247	828	277	306
73	267	266	613	6120	5328	1564	392	289	249	283	362	689	1539	1507	647	258	267
74	244	249	494	4526	4025	1131	358	273	236	268	331	578	1225	1191	536	241	244
75	227	239	401	2858	2723	860	327	258	222	253	300	504	911	882	462	230	227
76	208	230	337	1659	1436	699	300	245	202	240	273	449	804	755	403	224	208
77	189	221	291	1250	1111	595	275	233	177	228	250	400	696	657	347	216	189
78	170	207	254	853	900	517	254	221	166	215	231	350	547	566	287	203	170
79	152	190	225	707	704	458	233	208	156	199	213	302	390	471	246	189	152
80	134	175	204	591	544	409	214	196	132	176	193	258	264	377	213	174	134
81	117	159	188	500	432	365	196	172	104	152	172	207	173	287	187	160	117
82	96	144	175	416	332	316	177	148	86	128	144	154	104	206	168	139	96
83	77	124	163	328	223	252	155	125	71	108	105	103	63	132	152	117	77
84	59	105	153	238	140	184	116	104	50	79	58	49	30	74	116	92	59
85	40	80	127	148	63	110	65	62	33	47	21	7	6	24	64	66	40
86	24	53	80	73	16	28	25	37	19	21	3	5	1	2	22	41	24
87	8	30	36	14	6	4	2	9	4	3	2	4	1	1	1	13	8
88	0	8	4	2	6	3	1	1	1	1	1	4	1	1	0	1	0
89	0	0	0	1	5	3	1	0	0	0	1	4	1	0	0	0	0
90	0	0	0	1	4	2	1	0	0	0	1	4	1	0	0	0	0
91	0	0	0	1	4	2	1	1	0	1	2	4	0	0	0	0	0
92	0	0	0	0	4	2	2	1	0	1	2	6	3	4	3	0	0
93	0	0	4	0	4	5	2	1	0	1	2	5	3	3	1	0	0

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94	0	0	2	6	7	4	1	1	0	1	2	5	2	2	0	0	0
95	0	0	0	3	6	3	2	1	0	1	2	5	2	1	0	0	0
96	0	0	0	2	4	3	2	1	0	1	3	6	2	1	0	0	0
97	0	0	0	1	4	4	2	1	0	1	3	6	2	1	0	0	0
98	0	0	0	1	4	4	3	1	0	1	4	7	2	1	0	0	0
99	0	0	0	1	4	5	3	1	0	1	4	7	3	1	0	0	0
100	0	0	0	1	5	5	4	1	0	1	5	8	3	2	0	0	0
101	0	0	0	1	5	6	4	1	0	1	5	9	4	2	0	0	0
102	0	0	0	1	6	6	5	1	1	1	6	9	4	2	0	0	0
103	0	0	0	1	6	7	5	1	1	1	6	10	5	3	0	0	0
104	0	0	0	2	7	8	6	2	1	2	7	10	5	3	1	0	0
105	0	0	0	2	8	8	6	2	1	2	7	11	6	4	1	0	0
106	0	0	0	2	8	9	7	2	1	2	7	11	6	4	1	0	0
107	0	0	0	2	9	9	7	2	1	3	8	11	7	4	1	0	0
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109	0	0	1	3	10	10	8	3	2	3	8	11	7	5	1	0	0
110	0	0	1	3	10	10	8	3	2	4	9	11	8	5	2	0	0
111	0	0	1	4	10	11	8	3	2	4	9	11	8	5	2	1	0
112	0	0	1	4	10	11	8	4	3	4	9	11	8	6	2	1	0
113	0	0	1	4	10	12	8	4	3	5	9	11	8	6	2	1	0
114	0	0	1	5	10	12	8	4	3	5	9	11	8	6	2	1	0
115	1	0	1	5	10	12	8	5	4	6	9	10	8	6	2	1	1
116	1	1	1	5	10	12	9	5	4	6	9	10	8	6	3	1	1
117	1	1	1	5	10	12	9	5	4	6	9	10	8	6	3	1	1
118	1	1	2	5	10	12	9	6	5	7	9	10	9	6	3	1	1
119	1	1	2	5	10	12	9	6	5	7	9	9	10	6	3	2	1
120	1	1	2	5	10	12	9	6	6	7	9	9	10	6	3	2	1
121	2	1	2	6	10	12	9	7	6	8	9	9	10	6	3	2	2
122	2	1	2	6	11	12	9	7	6	8	9	9	10	6	3	2	2
123	2	1	2	6	11	11	9	7	7	8	9	9	10	6	3	2	2
124	2	1	2	6	11	12	9	8	8	8	9	9	10	6	3	2	2
125	2	2	2	6	10	11	10	8	8	8	9	8	10	6	4	2	2

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126	3	2	2	6	10	11	10	8	8	9	9	8	10	6	4	2	3
127	3	2	3	6	10	11	10	9	8	9	9	8	9	6	4	3	3
128	3	2	3	7	10	11	10	9	8	9	9	8	9	6	4	3	3
129	3	2	3	7	10	11	10	9	9	9	9	8	8	6	4	3	3
130	3	2	3	6	10	11	10	10	9	9	9	8	8	6	4	3	3
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139	5	3	4	6	10	11	10	11	10	10	9	8	7	6	5	4	5
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148	6	5	5	6	10	9	10	11	11	11	10	8	7	6	7	6	6
149	6	5	5	6	10	9	10	12	11	11	10	8	7	6	7	7	6
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151	7	5	6	6	10	9	10	12	12	11	10	9	7	6	7	7	7
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156	7	6	6	7	10	9	10	12	12	12	11	9	6	7	8	8	7
157	8	6	6	7	9	9	10	12	12	12	11	9	6	7	8	8	8

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158	8	7	6	7	9	9	10	12	12	12	11	9	7	7	8	8	8
159	9	7	7	7	9	9	10	11	12	12	11	9	7	7	9	9	9
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166	9	8	7	7	9	9	9	11	12	12	11	10	7	7	9	10	9
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168	10	8	7	7	9	9	9	11	11	12	11	10	7	8	9	10	10
169	10	8	7	7	9	9	9	11	11	12	11	10	8	8	9	10	10
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179	9	8	8	8	8	8	8	9	9	9	9	9	8	8	9	8	9
180	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2015-03-09	Test Ambient:	25.1 °C
Test Orientation	As Intended	Stabilization Time (min)	90
Model Number	AOK-240WiL(5700K)		

Electrical Measurement for Bare Lamp:

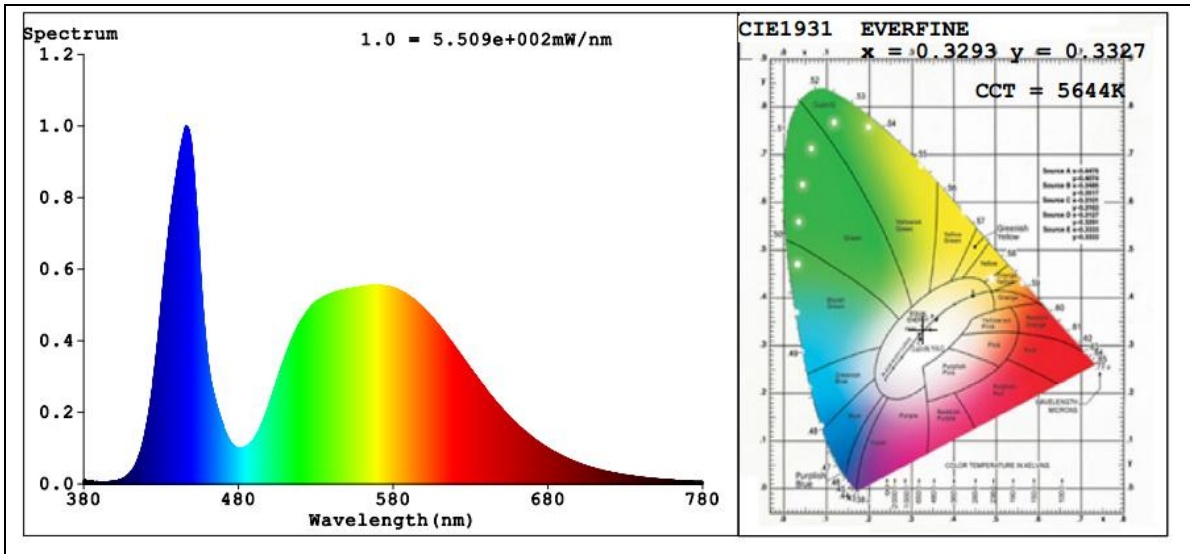
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-12	119.9	60	1.973	235.3	0.9949	4.75
	305.0	60	0.8075	232.4	0.9434	9.53

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	119.9
Frequency (Hz)	60
Color Rendering Index (CRI)	74.0
R9	0
CCT (K)	5644
Chromaticity (x, y)	x=0.3293 y=0.3327
Chromaticity (u', v')	u'=0.2080 v'=0.4728
Duv	-0.0029
Total Initial Lumen Output(lm)	24989
Initial Lumen Efficacy(lm/w)	106.20

Special Color Rendering Indices			
R1	75	R9	0
R2	76	R10	43
R3	76	R11	77
R4	76	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 *******