



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-280WiL

Representative (Tested) Model:AOK-280WiL(3000K)
AOK-280WiL(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

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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-G
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-280WiL(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	--	284.9	W
Input Current	--	2.384	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9956	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	27809	lm
Initial Lumen Efficacy	--	97.62	lm/w
Correlated color temperature / CCT	3050	--	K
Color rendering index / CRI	72.3		
R9 Value	0	--	
Duv	-0.0021	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		11681	cd
Beam angle (if applicable)		117.3	°
Zonal lumens in the 0°-60° zone		78.3	%
Zonal lumens in the 60°-90° zone	-----	21.5	%
Zonal lumens in the 90°-120° zone		0.1	%
Zonal lumens in the 120°-180° zone		0.1	%

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Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-280WiL(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	283.4	--	W
Input Current	2.373	--	A
Input Voltage (ac)	119.9	--	V
Power Factor	0.9960	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	30135	--	lm
Initial Lumen Efficacy	106.33	--	lm/w
Correlated color temperature / CCT	5720	--	K
Color rendering index / CRI	74.0	--	
R9 Value	0	--	
Duv	-0.0035	--	
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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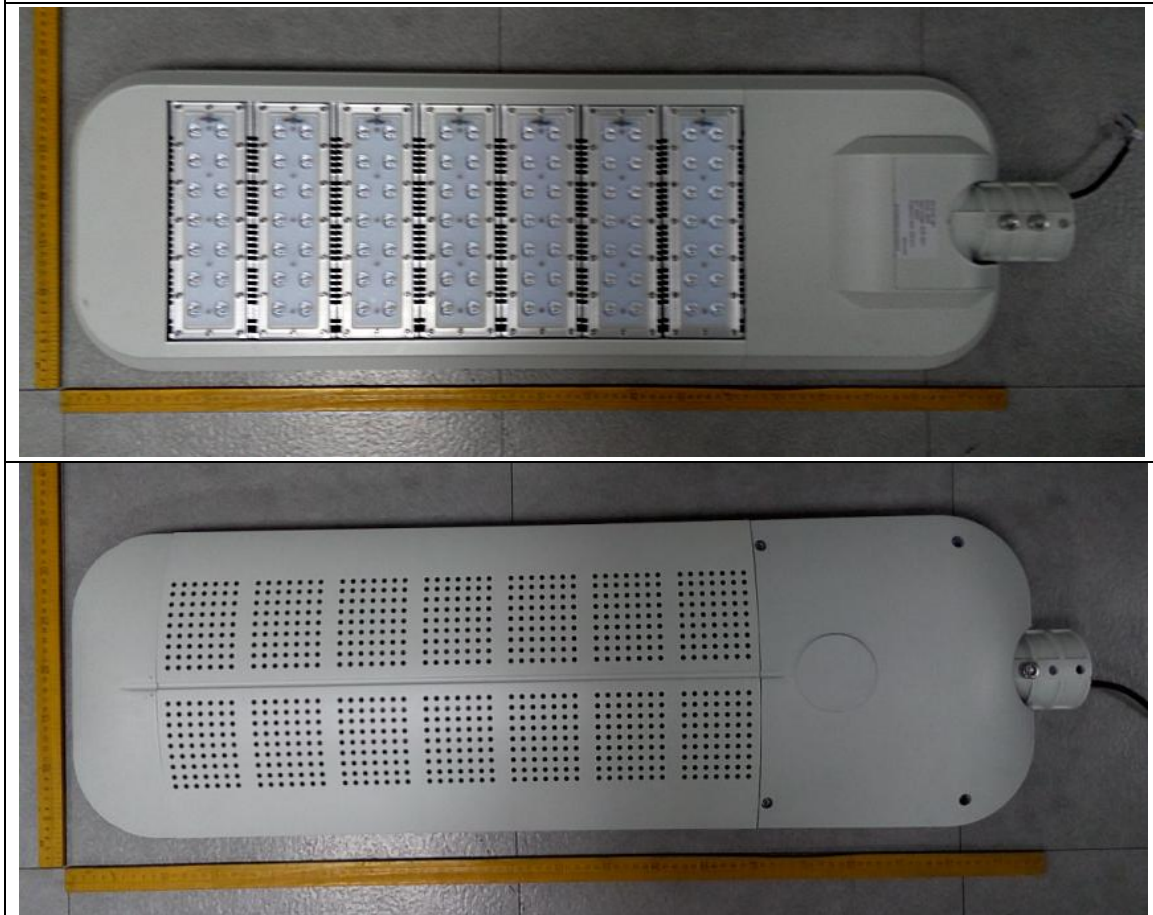
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1. Product Information:

Brand Name	AOK
Model Number	AOK-280WiL
Luminaire Type	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires
Rated Voltage / Frequency	90 ~ 305 Vac, 47-63 Hz
Nominal Power	280W
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	150120-13(3000K),-14(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-280WiL(3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-13	120.0	60	2.384	284.9	0.9956	4.86
	305.0	60	0.9813	281.4	0.9402	11.27

Sphere-Spectroradiometer Method:

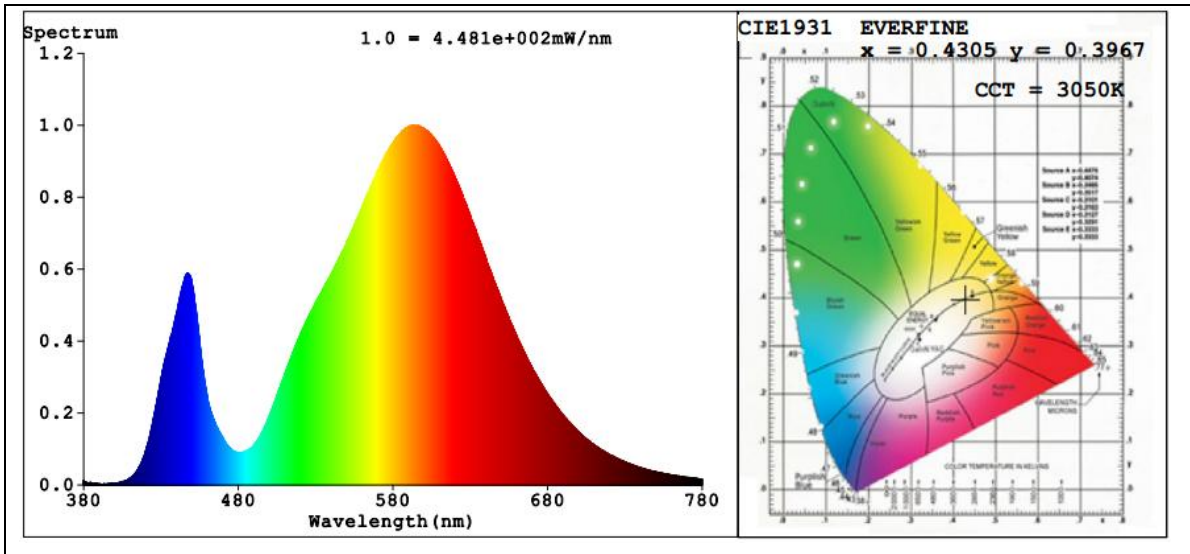
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	72.3
R9	0
CCT (K)	3050
Chromaticity (x, y)	x=0.4305 y=0.3967
Chromaticity (u', v')	u'=0.2496 v'=0.5175
Duv	-0.0021

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	94
R7	79	R15	63
R8	49	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	27809
Luminous Efficacy (lm/W)	97.62
Beam Angle °	117.3
Center Beam Candle Power (cd)	11681
S/MH(C0/180)	2.04
S/MH(C90/270)	0.89

Spectral Power Distribution & Chromaticity Diagram



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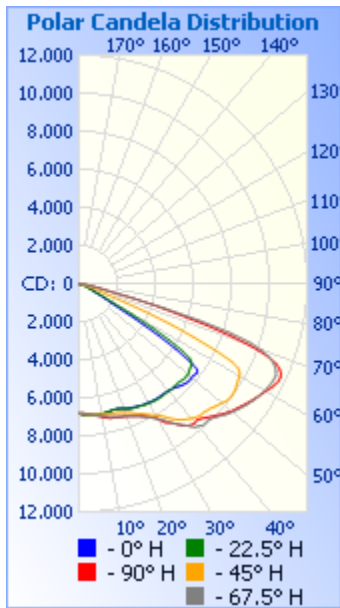
Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

Zonal Lumen Tabulation

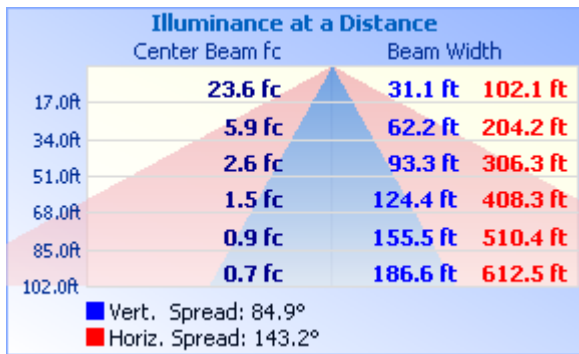
Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	5,697.9	20.5%	20.5%
0-40	10,137.8	36.5%	36.5%
0-60	21,779.1	78.3%	78.3%
60-90	5,980.3	21.5%	21.5%
70-100	1,243.8	4.5%	4.5%
90-120	15.5	0.1%	0.1%
0-90	27,759.4	99.8%	99.8%
90-180	46.4	0.2%	0.2%
0-180	27,805.8	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	646.2	2.3%	90-100	3.8	0%
10-20	1,903.0	6.8%	100-110	4.7	0%
20-30	3,148.7	11.3%	110-120	7.0	0%
30-40	4,439.9	16.0%	120-130	7.7	0%
40-50	5,482.8	19.7%	130-140	7.2	0%
50-60	6,158.6	22.1%	140-150	6.3	0%
60-70	4,740.3	17.0%	150-160	5.1	0%
70-80	1,162.6	4.2%	160-170	3.3	0%
80-90	77.4	0.3%	170-180	1.1	0%

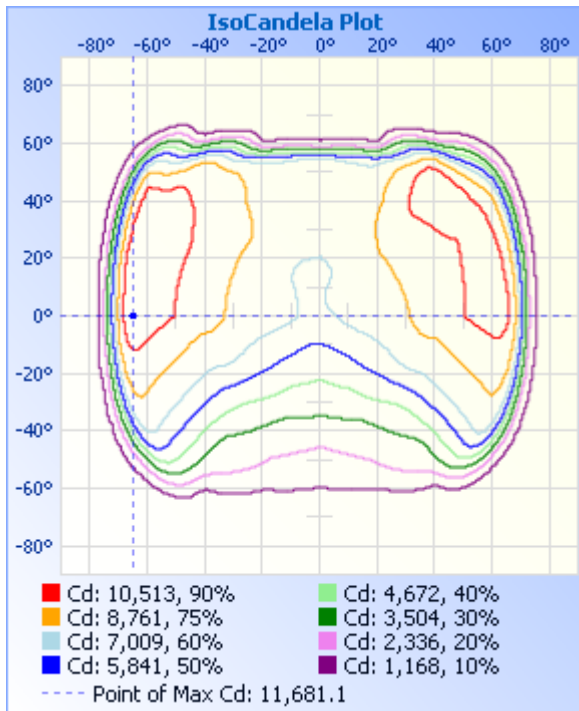
Photometric Data



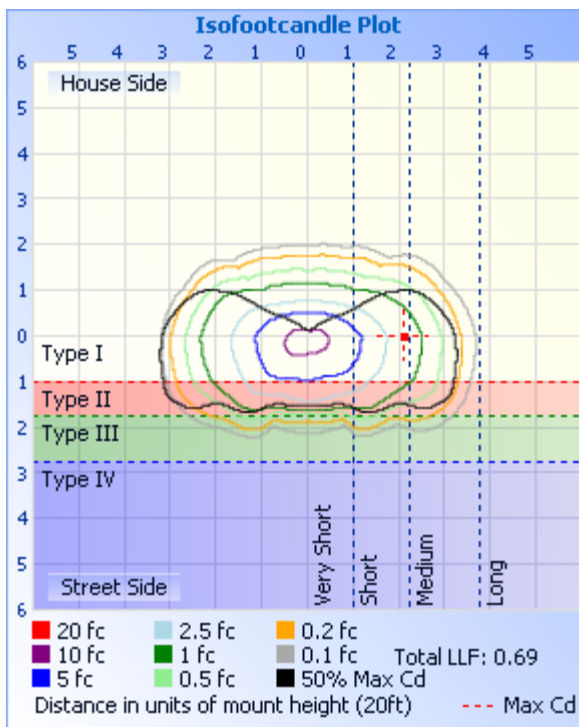
Illuminance Plots



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	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809	6809
1	6859	6851	6838	6812	6808	6781	6757	6738	6742	6750	6784	6807	6825	6845	6857	6868	6859
2	6901	6886	6862	6818	6813	6760	6700	6658	6665	6685	6755	6810	6852	6885	6902	6926	6901
3	6932	6911	6880	6846	6829	6745	6644	6561	6569	6615	6726	6820	6887	6934	6954	6958	6932
4	6958	6931	6891	6869	6849	6743	6585	6447	6453	6524	6696	6838	6922	6991	7001	6990	6958
5	6969	6939	6910	6891	6883	6747	6522	6328	6325	6432	6666	6861	6970	7055	7047	7018	6969
6	6970	6941	6922	6917	6923	6747	6452	6206	6194	6336	6639	6881	7014	7105	7093	7039	6970
7	6970	6944	6932	6951	6964	6761	6394	6097	6076	6248	6601	6903	7058	7157	7138	7048	6970
8	6965	6944	6944	6992	7017	6779	6342	6003	5967	6155	6563	6924	7102	7209	7177	7055	6965
9	6954	6943	6957	7031	7065	6792	6298	5916	5860	6059	6529	6945	7151	7255	7211	7067	6954
10	6951	6932	6969	7062	7114	6807	6265	5837	5756	5968	6492	6954	7200	7295	7250	7078	6951
11	6936	6917	6983	7097	7162	6827	6241	5764	5660	5885	6448	6959	7242	7349	7281	7069	6936
12	6917	6906	6991	7127	7205	6852	6218	5694	5565	5804	6400	6957	7272	7394	7314	7063	6917
13	6901	6891	7009	7166	7239	6860	6188	5623	5474	5722	6345	6963	7314	7451	7353	7066	6901
14	6879	6882	7031	7199	7268	6874	6150	5550	5375	5637	6286	6969	7346	7513	7392	7071	6879
15	6860	6871	7048	7229	7293	6886	6116	5474	5286	5560	6230	6970	7380	7570	7440	7079	6860
16	6861	6872	7063	7262	7308	6888	6076	5409	5203	5488	6178	6971	7427	7640	7501	7096	6861
17	6870	6889	7079	7296	7334	6878	6025	5336	5106	5414	6128	6980	7469	7705	7564	7122	6870
18	6898	6915	7112	7327	7353	6883	5981	5267	5007	5334	6090	6982	7513	7767	7629	7154	6898
19	6930	6953	7154	7365	7373	6889	5943	5201	4923	5265	6055	6973	7553	7834	7696	7200	6930
20	6979	6997	7202	7416	7418	6882	5909	5122	4833	5200	6035	6978	7600	7910	7758	7264	6979
21	7022	7039	7255	7460	7458	6874	5875	5041	4734	5135	6023	6993	7649	7980	7833	7308	7022
22	7058	7098	7318	7507	7501	6866	5851	4953	4646	5060	6007	7009	7704	8035	7913	7352	7058
23	7080	7119	7394	7558	7549	6886	5825	4870	4541	4980	5969	7043	7769	8102	7993	7388	7080
24	7094	7143	7471	7616	7606	6905	5789	4803	4451	4894	5917	7076	7834	8185	8082	7421	7094
25	7123	7167	7536	7698	7665	6920	5744	4715	4362	4803	5871	7106	7915	8275	8198	7454	7123
26	7143	7176	7604	7782	7744	6940	5694	4628	4275	4721	5812	7138	7997	8379	8319	7476	7143
27	7178	7193	7699	7872	7834	6946	5651	4545	4208	4635	5751	7197	8099	8493	8421	7509	7178
28	7210	7233	7798	7964	7928	6972	5580	4462	4124	4558	5689	7277	8210	8591	8535	7546	7210
29	7214	7251	7894	8078	8044	7010	5507	4378	4033	4467	5615	7367	8360	8683	8660	7574	7214

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30	7232	7275	7985	8191	8169	7060	5440	4272	3933	4364	5540	7429	8585	8802	8805	7603	7232
31	7246	7289	8081	8310	8384	7104	5363	4177	3829	4258	5465	7463	8834	8985	8950	7627	7246
32	7269	7302	8201	8467	8617	7131	5281	4074	3738	4147	5385	7507	8975	9190	9111	7665	7269
33	7277	7326	8357	8665	8697	7150	5197	3976	3634	4025	5312	7554	9115	9290	9308	7687	7277
34	7286	7341	8538	8876	8833	7164	5117	3871	3516	3908	5209	7571	9278	9385	9506	7687	7286
35	7290	7344	8684	9001	9011	7185	5040	3763	3394	3794	5102	7558	9441	9489	9660	7678	7290
36	7294	7344	8833	9150	9237	7158	4945	3649	3267	3685	5008	7504	9585	9676	9790	7679	7294
37	7295	7348	8950	9316	9357	7119	4855	3539	3140	3559	4915	7459	9684	9789	9930	7672	7295
38	7290	7344	9053	9511	9436	7052	4759	3438	3014	3456	4822	7392	9697	9889	10091	7684	7290
39	7306	7348	9135	9705	9509	6999	4678	3336	2886	3355	4731	7351	9732	9969	10236	7702	7306
40	7330	7360	9233	9773	9518	6929	4589	3231	2769	3249	4621	7324	9690	9978	10314	7711	7330
41	7360	7378	9317	9875	9484	6907	4506	3126	2671	3144	4519	7331	9681	9932	10380	7696	7360
42	7394	7371	9384	9907	9543	6902	4406	3021	2573	3038	4437	7357	9744	9886	10401	7680	7394
43	7457	7352	9411	9864	9649	6894	4314	2925	2494	2945	4333	7363	9831	9886	10398	7659	7457
44	7517	7370	9417	9898	9756	6907	4217	2821	2419	2862	4248	7389	9932	9964	10401	7662	7517
45	7581	7366	9454	9969	9866	6923	4126	2735	2344	2771	4169	7420	10038	10051	10453	7658	7581
46	7629	7383	9498	10069	9972	6947	4042	2649	2267	2686	4083	7463	10148	10137	10527	7672	7629
47	7671	7430	9557	10176	10091	6963	3932	2575	2198	2615	3992	7491	10249	10191	10611	7660	7671
48	7710	7451	9639	10302	10215	7003	3833	2507	2130	2554	3889	7513	10335	10266	10727	7640	7710
49	7725	7448	9704	10411	10322	7004	3729	2451	2077	2489	3785	7527	10434	10352	10848	7587	7725
50	7710	7462	9768	10499	10430	7005	3636	2401	2021	2444	3685	7535	10505	10409	10957	7498	7710
51	7705	7422	9866	10594	10516	7045	3535	2354	1965	2387	3590	7556	10575	10445	11054	7416	7705
52	7745	7368	9944	10683	10600	7055	3463	2294	1904	2323	3495	7560	10658	10478	11141	7297	7745
53	7782	7326	9955	10762	10691	7063	3363	2229	1834	2254	3405	7566	10738	10502	11220	7161	7782
54	7677	7306	9950	10850	10786	7082	3279	2164	1757	2187	3310	7579	10804	10535	11277	7024	7677
55	7134	7216	9951	10928	10880	7083	3200	2098	1668	2103	3227	7598	10871	10568	11346	6867	7134
56	6143	7036	9919	11000	10969	7081	3121	2011	1564	2016	3148	7596	10930	10625	11360	6660	6143
57	4977	6503	9868	11081	11052	7084	3042	1912	1450	1900	3068	7597	10994	10677	11394	6165	4977
58	3438	5601	9819	11151	11140	7073	2981	1786	1325	1767	2988	7592	11036	10706	11409	5301	3438
59	2014	4543	9775	11206	11235	7053	2907	1647	1193	1605	2882	7596	11083	10705	11335	4320	2014
60	1643	3147	9740	11272	11322	7046	2817	1493	1060	1432	2773	7611	11136	10786	11132	3088	1643
61	1280	1901	9667	11308	11422	7033	2703	1321	926	1249	2621	7616	11160	10767	10792	1946	1280

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62	918	1511	9479	11359	11531	7017	2544	1153	802	1069	2435	7670	11168	10714	10407	1547	918
63	848	1135	9016	11397	11619	6992	2362	989	696	915	2188	7682	11104	10649	9693	1162	848
64	780	758	7961	11417	11671	6988	2142	849	609	781	1895	7560	10967	10500	8479	777	780
65	686	675	6666	11432	11681	6989	1885	734	538	675	1572	7240	10754	10244	7151	680	686
66	611	604	5413	11348	11625	6937	1603	644	483	597	1250	6652	10378	9828	5810	596	611
67	557	525	3994	11201	11463	6761	1308	573	441	535	977	5856	9823	9336	4412	516	557
68	512	461	2625	10993	11168	6367	1043	515	403	484	778	4824	8947	8661	3030	446	512
69	469	408	1627	10689	10604	5751	840	469	374	439	643	3824	7775	7799	1941	379	469
70	416	350	1247	10230	9708	4909	700	428	350	404	558	2825	6388	6713	1516	317	416
71	347	300	880	9527	8531	3958	604	394	330	379	499	1834	4806	5335	1103	277	347
72	282	269	741	8362	7090	3006	533	371	314	356	454	1225	3200	3766	691	254	282
73	250	254	592	6626	5405	2060	478	349	298	336	416	867	1932	2327	526	240	250
74	235	244	465	4649	4136	1431	433	332	282	318	381	693	1575	1800	421	230	235
75	216	237	367	2823	2867	1023	398	315	265	298	349	595	1248	1302	349	224	216
76	199	231	309	1575	1623	802	364	294	237	282	322	527	921	805	300	217	199
77	180	221	269	1218	1285	669	333	275	205	266	295	471	802	674	262	207	180
78	158	205	240	885	1054	577	304	260	194	253	273	397	605	583	234	191	158
79	139	187	221	739	782	499	280	249	186	240	250	313	377	475	209	176	139
80	119	167	201	593	471	417	258	238	163	215	224	241	206	342	190	158	119
81	99	148	187	439	274	337	234	213	124	187	184	175	104	209	169	139	99
82	79	128	174	293	156	257	199	186	102	161	128	112	55	121	142	117	79
83	65	109	157	193	92	180	141	152	84	128	73	39	20	57	108	99	65
84	50	94	123	112	47	94	85	111	54	83	29	9	3	9	65	76	50
85	34	65	83	48	13	13	33	63	30	38	7	8	2	2	22	51	34
86	14	40	39	5	9	8	8	23	16	12	6	7	2	2	2	20	14
87	1	13	5	2	8	7	7	7	6	5	5	6	2	2	1	1	1
88	0	1	1	2	8	6	6	5	5	4	3	5	1	1	1	0	0
89	0	0	1	2	7	5	3	2	0	1	4	10	2	2	1	0	0
90	0	0	1	1	6	7	6	2	0	1	4	10	6	11	15	1	0
91	0	0	5	7	14	15	5	2	0	2	3	7	5	9	12	3	0
92	0	2	16	13	12	10	3	4	0	4	3	6	4	5	5	1	0
93	0	0	10	8	10	7	2	5	0	3	4	6	3	3	1	0	0

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94	0	0	2	5	8	5	3	4	1	3	5	6	2	5	1	0	0
95	0	0	1	3	6	5	4	4	1	2	5	6	2	1	1	0	0
96	0	0	0	1	5	5	5	3	1	2	6	7	2	1	0	0	0
97	0	0	0	1	5	6	6	3	1	2	6	8	2	1	1	0	0
98	0	0	0	1	5	7	6	3	1	2	6	8	2	1	1	0	0
99	0	0	0	1	6	7	7	3	1	2	6	9	3	2	1	0	0
100	0	0	0	1	6	8	7	3	1	2	7	10	3	2	1	0	0
101	0	0	0	1	7	9	7	3	1	2	7	10	4	3	1	0	0
102	0	0	0	1	8	9	7	3	1	2	8	11	5	3	1	0	0
103	0	0	0	1	8	10	8	3	1	2	8	12	5	3	1	0	0
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105	0	0	0	2	10	11	9	3	1	2	9	12	6	4	1	0	0
106	0	0	0	2	10	12	9	3	1	3	9	12	6	5	2	0	0
107	0	0	1	3	10	12	9	3	2	3	9	12	7	5	2	1	0
108	0	0	1	3	10	13	10	3	2	3	10	12	7	5	2	1	0
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110	1	0	1	4	11	14	10	4	2	4	10	12	8	6	3	1	1
111	1	0	1	4	12	14	10	4	2	5	11	12	9	7	3	1	1
112	1	1	1	5	12	14	10	5	3	6	11	12	10	7	3	1	1
113	1	1	5	6	13	15	10	5	3	6	11	12	11	7	4	1	1
114	1	1	2	7	13	15	10	5	4	7	11	12	11	8	4	1	1
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116	1	1	2	8	13	15	10	6	5	8	12	12	11	8	4	2	1
117	2	1	2	8	13	15	11	7	5	8	12	12	11	9	4	2	2
118	2	1	2	8	13	15	11	7	6	9	12	12	11	9	4	2	2
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120	2	2	2	8	13	14	11	8	7	9	12	12	11	10	5	2	2
121	2	2	2	8	13	14	11	8	7	9	12	12	11	10	5	3	2
122	2	2	2	8	13	14	11	9	8	10	12	12	11	10	5	3	2
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124	3	2	3	9	13	13	11	10	9	10	12	12	11	10	5	3	3
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126	3	2	3	9	13	13	12	10	10	11	12	12	12	10	6	3	3
127	3	2	4	9	13	13	12	11	10	11	12	11	12	10	6	4	3
128	4	3	4	8	13	13	12	11	10	11	12	11	12	9	6	4	4
129	4	3	4	8	13	13	12	11	10	12	12	11	12	9	7	4	4
130	4	3	5	8	13	12	13	12	11	12	12	11	12	9	7	4	4
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135	5	4	5	7	12	12	13	13	12	12	12	11	10	8	7	5	5
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137	5	4	5	7	12	12	13	13	13	13	12	11	10	8	7	5	5
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139	6	5	5	7	12	12	13	13	13	13	12	11	10	8	7	6	6
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144	6	6	6	7	12	12	13	14	14	14	12	11	10	8	8	7	6
145	7	6	6	7	12	12	13	14	14	14	12	11	10	8	9	7	7
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147	8	6	6	7	12	12	13	14	14	14	13	11	9	8	9	8	8
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152	9	7	7	8	12	12	13	15	15	15	13	12	8	9	10	9	9
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156	9	8	8	8	11	12	13	14	15	15	14	12	8	10	11	10	9
157	10	8	8	8	11	12	13	14	15	15	14	12	9	10	11	11	10

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158	10	9	8	9	11	12	13	14	15	15	14	12	9	10	11	11	10
159	10	9	8	9	11	11	13	14	15	15	14	12	9	10	12	11	10
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179	11	11	10	10	11	11	11	11	11	11	11	11	11	11	11	10	11
180	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

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

Test date	2015-03-09	Test Ambient:	25.1 °C
Test Orientation	As Intended	Stabilization Time (min)	90
Model Number	AOK-280WiL(5700K)		

Electrical Measurement for Bare Lamp:

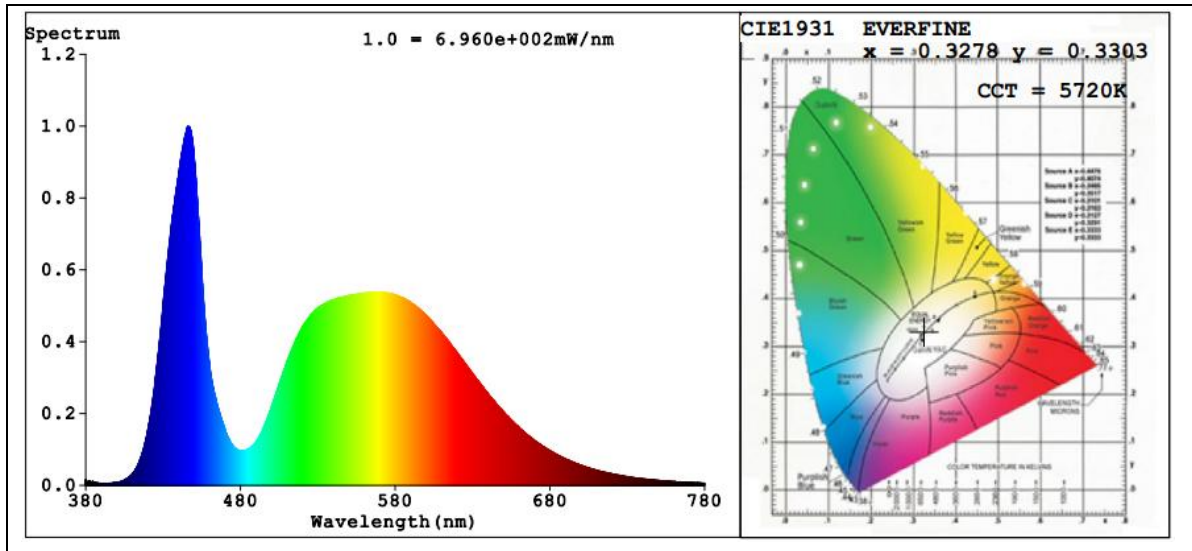
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-14	119.9	60	2.373	283.4	0.9960	5.68
	305.0	60	0.9708	278.5	0.9406	10.84

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	119.9
Frequency (Hz)	60
Color Rendering Index (CRI)	74.0
R9	0
CCT (K)	5720
Chromaticity (x, y)	x=0.3278 y=0.3303
Chromaticity (u', v')	u'=0.2079 v'=0.4713
Duv	-0.0035
Total Initial Lumen Output(lm)	30135
Initial Lumen Efficacy(lm/w)	106.33

Special Color Rendering Indices			
R1	75	R9	0
R2	76	R10	43
R3	75	R11	78
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 *******