



Ningbo TengLi Testing Co., Ltd

2nd floor, Block B, Ningbo Testing and Certification Base, No. 66
Qingyi Road, Ningbo National Hi-Tech Zone, Ningbo, Zhejiang
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LM-79-08 Test Report

For

Antec Lighting Inc

(Brand Name: )

Uniy C, 3979 E Guasti Road, Ontario, CA 91761

Model name(s):

AOK-72WiE-NV-LV2-XX-XX70-T302-P

Report Type: Testing and Report According to IES LM-79-2008

Type of Luminaire: Outdoor Pole/Arm-Mounted Area and Roadway Luminaires

Report Date: 2019-03-20

Ningbo TengLi Testing Co., Ltd

Prepared By: 2nd floor, Block B, Ningbo Testing and Certification Base,
No. 66 Qingyi Road, Ningbo National Hi-Tech Zone,
Ningbo, Zhejiang

Test & Report By:

Xeon Ren

Engineer: Xeon Ren

Review By:

Johnson Sun

Manager: Johnson Sun

Note: 1. The results contained in this report pertain only to the tested samples

2. This report does not imply product certification, approval, or endorsement by A2LA, or any agency of the Federal Government.



1.1 Product Information:		
Model Number	AOK-72WiE-NV-LV2-XX-XX70-T302-P	
Remark	The first “XX” can be “00” =no photocontrol or “PH”=photocontrol provided. The second “XX” could be 27/30/35/40/45/50/57 refers to CCT. This is multiple listed report, the Project Number of the original report is JAE190121-F-R1.	
Representative (Tested) Model	AOK-72WiE-NV-LV2-00-2770-T302-P	
Model Difference	All construction and rating are the same, except CCT	
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	
LED Manufacturer	Lumileds	
LED Model	LUXEON V Family	
Dimming	Dimmable	
Sample Number	JAE190121-F1	
Date of Receipt	Feb.23, 2019	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

1.2 Rated Values:	
Rated Voltage / Frequency	100-277Vac, 50/60Hz
Nominal Power	72W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,3500K,4000K,4500K,5000K, 5700K



1.3 Test Specifications:

Test item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Electrical Parameters
Reference Standard	1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

1.4 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer 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 or rated 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) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.



2.1 Summary of Test Result

Criteria Item	Measured Value			Compliance	Requirement (DLC V4.4)	
Power (W)	2700K	120V	69.03	N/A	N/A	
		277V	67.79			
Power Factor	2700K	120V	0.9973	Pass	$\geq 0.9(-3\%)$	
		277V	0.9231			
THD %	2700K	120V	7.52	Pass	$\leq 20(+5)$	
		277V	9.48			
Luminous Intensity Distribution	Zonal lumens in the 0-90 °		100	Pass	$\geq 100(-1)$	
	Zonal lumens in the 80-90 °		0.5	Pass	$\leq 10(+3)$	
Total Luminous	2700K	120V	8417.9	Pass	$\geq 1000(-10\%)$	
		277V	8452.2			
Luminous Efficacy	2700K	120V	121.95	Pass	Standard: $\geq 95(-3\%)$	Premium: $\geq 115(-3\%)$
		277V	124.68			



2.2 Electrical, Photometric and Chromaticity Measurements

Test date	2019-02-25	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	AOK-72WiE-NV-LV2-00-2770-T3 02-P		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE190121-F1	120.0	60	0.5768	69.03	0.9973	7.52
	277.0	60	0.2651	67.79	0.9231	9.48

Photometric Measurement – Goniophotometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	8417.9	8452.2
Luminous Efficacy (lm/W)	121.95	124.68
Zonal lumens in the 0-90 °	100	--
Zonal lumens in the 80-90 °	0.5	--
Beam Angle (°)	106.7	--
Center Beam Candle Power (cd)	1847	--

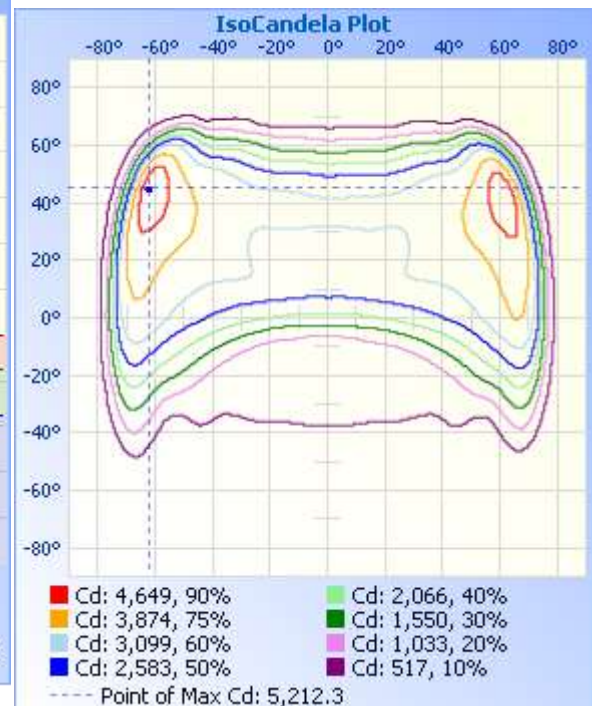
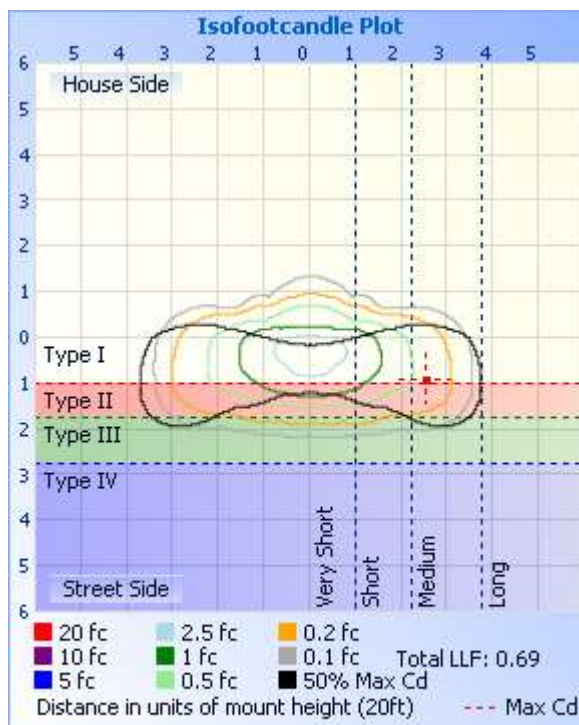
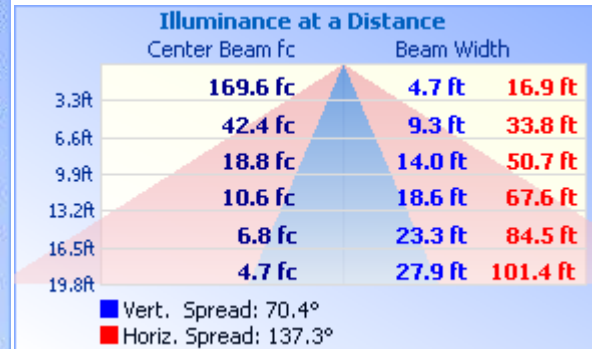
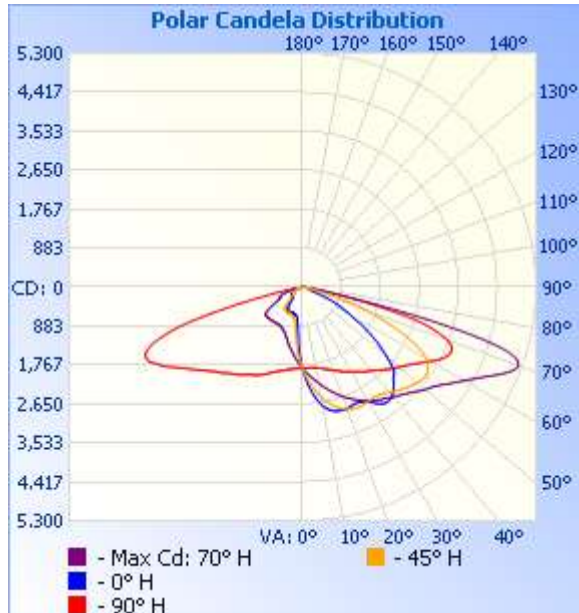


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,553.5	18.5%
0-40	2,786.0	33.1%
0-60	6,000.5	71.3%
60-90	2,417.3	28.7%
70-100	816.7	9.7%
90-120	0	0%
0-90	8,417.8	100%
90-180	0	0%
0-180	8,417.8	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	170.7	2.0%	90-100	0	0%
10-20	514.0	6.1%	100-110	0	0%
20-30	868.7	10.3%	110-120	0	0%
30-40	1,232.5	14.6%	120-130	0	0%
40-50	1,529.9	18.2%	130-140	0	0%
50-60	1,684.6	20.0%	140-150	0	0%
60-70	1,600.6	19.0%	150-160	0	0%
70-80	773.5	9.2%	160-170	0	0%
80-90	43.2	0.5%	170-180	0	0%

Photometric Data





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Table--1

UNIT: ed

C (DEG) y (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847
5	1854	1905	1955	2001	2045	2088	2129	2166	2200	2232	2262	2287	2307	2325	2341	2354	2364	2374	2384
10	1895	1999	2087	2171	2253	2332	2400	2452	2503	2553	2595	2624	2649	2675	2696	2710	2722	2735	2747
15	1966	2120	2238	2352	2465	2568	2639	2689	2739	2787	2822	2841	2859	2876	2890	2896	2900	2905	2910
20	2060	2250	2393	2533	2671	2782	2842	2875	2907	2939	2951	2951	2950	2949	2947	2943	2939	2935	2932
25	2188	2396	2548	2697	2845	2949	2984	2991	2998	3004	2997	2982	2967	2951	2938	2928	2919	2909	2897
30	2292	2511	2673	2833	2991	3084	3082	3047	3014	2983	2981	2989	2997	3004	3007	3008	3007	3007	3004
35	2426	2643	2799	2955	3111	3189	3161	3105	3048	2996	3017	3060	3104	3148	3175	3188	3198	3207	3220
40	2555	2771	2935	3098	3261	3335	3296	3231	3166	3104	3112	3138	3165	3193	3205	3200	3192	3184	3179
45	2724	2937	3096	3256	3413	3482	3439	3374	3309	3245	3209	3179	3151	3124	3090	3047	3003	2960	2911
50	2932	3147	3308	3469	3628	3684	3618	3532	3447	3362	3244	3122	3002	2884	2792	2727	2664	2599	2535
55	3217	3427	3581	3734	3886	3908	3783	3640	3499	3355	3113	2859	2605	2356	2193	2120	2053	1985	1917
60	3594	3808	3961	4114	4263	4209	3934	3638	3348	3060	2731	2395	2058	1721	1515	1437	1367	1296	1222
65	3893	4170	4386	4601	4806	4634	4066	3465	2874	2302	1994	1713	1429	1144	965	896	833	770	705
70	3507	3935	4329	4725	5113	4893	4045	3148	2256	1390	1108	875	640	403	276	259	249	237	225
75	1640	1836	2024	2228	2446	2356	1903	1396	860	315	258	236	213	185	172	169	167	165	163
80	241	253	252	249	244	230	207	182	154	123	124	126	127	128	126	122	117	112	107
85	16.8	23.5	30.3	37.4	44.6	48.7	49.0	49.0	48.5	48.2	52.6	57.3	62.0	66.4	66.6	62.3	57.6	52.8	47.9
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Table--2

UNIT: ed

C (DEG) γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847
5	2374	2364	2353	2339	2321	2300	2278	2252	2222	2190	2157	2119	2077	2033	1987	1940	1889	1836	1782
10	2736	2725	2715	2701	2677	2649	2620	2589	2543	2491	2438	2383	2311	2229	2143	2056	1964	1857	1748
15	2904	2898	2894	2887	2875	2861	2846	2830	2792	2735	2677	2617	2539	2431	2315	2198	2075	1916	1738
20	2936	2940	2945	2950	2954	2958	2961	2963	2949	2908	2865	2823	2754	2637	2493	2348	2200	2004	1760
25	2908	2917	2926	2934	2948	2965	2982	2999	3005	2994	2982	2970	2929	2814	2652	2489	2323	2108	1818
30	3004	3001	2999	2996	2994	2991	2987	2983	2988	3018	3050	3083	3081	2976	2800	2621	2442	2214	1890
35	3207	3196	3186	3173	3144	3099	3054	3010	2989	3047	3108	3170	3199	3107	2927	2746	2567	2337	1983
40	3196	3217	3238	3253	3239	3201	3160	3122	3104	3166	3231	3295	3332	3246	3064	2882	2698	2469	2088
45	2975	3034	3093	3150	3183	3196	3210	3225	3250	3312	3376	3439	3479	3399	3223	3046	2868	2644	2226
50	2621	2708	2794	2878	2971	3072	3175	3281	3385	3467	3548	3629	3689	3616	3430	3243	3057	2823	2368
55	2008	2100	2191	2287	2458	2705	2954	3205	3441	3565	3687	3811	3915	3861	3670	3476	3282	3040	2521
60	1313	1401	1487	1582	1807	2164	2522	2881	3225	3480	3734	3992	4228	4235	4032	3825	3618	3357	2686
65	783	860	936	1019	1223	1544	1864	2180	2514	3033	3569	4114	4628	4748	4494	4231	3966	3650	2865
70	240	257	270	293	439	713	987	1259	1576	2425	3299	4180	5014	5212	4798	4373	3950	3499	2725
75	166	169	173	177	209	266	319	368	458	1181	1898	2591	3227	3351	3032	2717	2424	2139	1649
80	113	120	126	132	136	137	137	137	140	205	264	316	361	388	397	406	414	413	327
85	54.7	61.3	67.9	74.1	75.3	71.6	67.7	63.7	60.0	60.5	60.8	60.5	59.6	55.8	49.5	43.3	37.3	31.8	27.3
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Table--3

UNIT: ed

C (DEG) T (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847
5	1728	1675	1623	1571	1519	1467	1420	1377	1333	1290	1250	1219	1197	1179	1163	1146	1130	1119	1169
10	1637	1524	1410	1295	1180	1066	962	902	863	827	793	767	750	743	735	728	720	730	740
15	1558	1376	1222	1099	992	887	790	731	708	690	673	659	650	647	644	641	638	642	647
20	1515	1271	1070	950	872	798	727	679	666	655	644	634	629	627	625	624	622	625	628
25	1527	1238	996	868	810	755	703	664	653	644	635	627	623	623	622	622	621	623	625
30	1566	1241	966	824	776	732	689	656	647	640	633	627	624	625	627	628	629	628	627
35	1628	1273	961	804	762	723	685	653	642	633	623	614	605	598	590	583	575	583	591
40	1706	1325	982	807	765	725	685	643	597	550	503	458	432	424	417	411	405	410	416
45	1807	1387	1003	784	704	625	545	470	432	396	362	330	315	315	316	317	318	317	315
50	1909	1451	1020	755	629	507	384	280	277	280	282	285	288	291	295	298	301	297	293
55	1995	1467	966	668	554	444	336	243	244	248	252	256	260	264	268	272	276	270	264
60	2008	1326	677	347	304	270	238	212	217	222	228	233	238	240	243	246	249	244	239
65	2079	1294	547	189	182	183	184	185	189	192	196	199	198	195	192	189	186	186	186
70	1964	1212	492	147	144	147	149	150	145	139	133	127	121	114	107	100	93.2	97.1	101
75	1179	726	306	103	97.9	96.0	94.1	91.4	79.6	67.6	55.5	43.6	34.7	28.7	23.4	17.7	12.0	14.9	17.9
80	240	158	84.8	47.9	42.8	38.8	34.8	30.5	23.8	17.3	10.9	4.81	1.71	1.21	0.83	0.44	0.05	0.36	0.66
85	22.7	18.4	14.4	11.1	8.34	5.72	3.22	0.94	0.53	0.33	0.20	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Certificate#4703.02

Ningbo TengLi Testing Co., Ltd

2nd floor, Block B, Ningbo Testing and Certification Base, No. 66
Qingyi Road, Ningbo National Hi-Tech Zone, Ningbo, Zhejiang
Tel: 86574-8783 6802
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Table--4

UNIT: ed

C (DEG) t (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355			
0	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847	1847			
5	1188	1209	1233	1266	1307	1350	1395	1439	1486	1538	1591	1644	1696	1749	1802			
10	749	759	777	808	846	885	929	993	1101	1219	1337	1455	1569	1679	1788			
15	651	656	667	683	703	723	750	816	925	1042	1161	1292	1447	1621	1794			
20	631	635	642	652	664	677	692	748	832	919	1010	1139	1341	1581	1821			
25	627	629	634	643	653	663	675	722	785	851	920	1057	1306	1599	1894			
30	627	626	629	637	645	653	664	704	755	808	865	1015	1298	1629	1962			
35	598	606	615	625	635	645	656	694	742	789	840	1007	1330	1695	2062			
40	422	429	455	499	547	593	639	687	735	783	833	1018	1373	1766	2161			
45	313	312	326	357	390	425	463	544	632	720	808	1036	1431	1862	2293			
50	289	285	281	277	273	269	271	380	510	639	771	1050	1500	1979	2457			
55	259	253	248	244	239	235	234	336	454	573	698	1015	1547	2107	2664			
60	234	230	224	217	211	205	200	232	272	314	366	722	1417	2146	2871			
65	187	188	186	182	179	175	171	171	172	172	181	566	1365	2206	3049			
70	105	109	113	118	122	127	131	132	132	132	137	483	1204	1960	2727			
75	20.1	23.5	30.2	41.3	52.4	63.6	74.4	77.5	80.1	82.6	87.6	239	555	902	1267			
80	0.95	1.34	3.79	8.51	13.5	18.6	23.8	26.6	29.3	32.0	35.2	55.9	97.4	144	195			
85	0.00	0.00	0.00	0.02	0.04	0.06	0.16	1.18	2.41	3.80	5.43	7.29	9.42	11.8	14.3			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			



2.4 Performance Assessment:

Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
AOK-72WiE-NV-LV2-00-2770-T302-P	2700K	8417.9	69.03	121.95
AOK-72WiE-NV-LV2-00-3070-T302-P	3000K	8465.4	69.03	122.63
AOK-72WiE-NV-LV2-00-3570-T302-P	3500K	8543.6	69.03	123.77
AOK-72WiE-NV-LV2-00-4070-T302-P	4000K	8621.1	69.03	124.89
AOK-72WiE-NV-LV2-00-4570-T302-P	4500K	8695.2	69.03	125.96
AOK-72WiE-NV-LV2-00-5070-T302-P	5000K	8772.6	69.03	127.08
AOK-72WiE-NV-LV2-00-5770-T302-P	5700K	8820.6	69.03	127.78

According to the test report JAE190121-A-R

Scaled Methodology Explanation:

$18W\ 3000K\ eff / 18W\ 2700K\ eff = 132.02 / 131.29 = 1.0056$

$18W\ 3500K\ eff / 18W\ 2700K\ eff = 133.24 / 131.29 = 1.0149$

$18W\ 4000K\ eff / 18W\ 2700K\ eff = 134.45 / 131.29 = 1.0241$

$18W\ 4500K\ eff / 18W\ 2700K\ eff = 135.61 / 131.29 = 1.0329$

$18W\ 5000K\ eff / 18W\ 2700K\ eff = 136.82 / 131.29 = 1.0421$

$18W\ 5700K\ eff / 18W\ 2700K\ eff = 137.56 / 131.29 = 1.0478$

$3000K\ eff = 2700K\ eff * 1.0056$

$3500K\ eff = 2700K\ eff * 1.0149$

$4000K\ eff = 2700K\ eff * 1.0241$

$4500K\ eff = 2700K\ eff * 1.0329$

$5000K\ eff = 2700K\ eff * 1.0421$

$5700K\ eff = 2700K\ eff * 1.0478$



3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-714	Goniophotometer system	Verified by D908S standard lamp	
ST-R-710	Standard Lamp	2019-02-12	2020-02-11
ST-R-711	Power Meter for Goniophotometer	2019-01-06	2020-01-05
Uncertainty: Photometric Measurement(Goniophotometer):1.62%			

4. Product Photo



***** END OF REPORT *****