

LM-79-19 Test Report

For

AOK Industrial Company Limited

(Brand Name: )

1/F of 1#Building, East Block of 3/F of Building 1, And 2/F of Building 4, ST George's
Science and Technology Industrial Park, Northside of Xinyu Road, Xiangshan
Community, Xinqiao Street Baoan District, 518000 Shenzhen, Guangdong, CHINA

Model name(s):
AOK-300WiLH(XXL)-NV-A5-00-3070-T2-P

Report Type: Testing and Report According to IES LM-79-2019
Type of Luminaire: Outdoor Pole/Arm-Mounted Area and Roadway Luminaires
Report Date: 2026-05-22

Test & Report By:

Ferrum Li

Engineer: Ferrum Li

Review By:

Garman Mo

Manager: Garman Mo

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-300WiLH(XXL)-NV-A5-00-3070-T2-P	
Remark	N/A	
Representative (Tested) Model	AOK-300WiLH(XXL)-NV-A5-00-3070-T2-P	
Model Difference	N/A	
SKU (if available)	--	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires	
LED Manufacturer	Shenzhen Tongyifang Optoelectronic Technology Co., Ltd.	
LED Model	TS1-H50FL-1001BC	
Integral Controls Availability	Yes	
Dimming	Continuous	
Sample Number	JAE260307-A1	
Date of Receipt	2026-05-12	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaire Width	--	mm
Number of Units (modular products)	N/A	s

1.2 Rated Values:	
Rated Voltage / Frequency	120-277Vac, 50/60Hz
Nominal Power	300W
Rated Initial Lamp Lumen	--
Declared CCT	3000K

1.3 Test Specifications:

Test item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	1. IES LM-79-2019 Optical and Electrical Measurements of Solid-State Lighting Products 2. ANSI C78.377-2015 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source 6. 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 $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$, measured at a point not more than 1.5 m from the sample and at the same height as the sample. The humidity should be maintained between 10% and 65%. 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) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$. The humidity should be maintained between 10% and 65%. 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 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) 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 $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$. 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 V6.0)	
Minimum Total Luminous	52725		Pass	$\geq 1000(-10\%)$	
Minimum Luminous Efficacy	174.47		Pass	Standard: $\geq 125(-3\%)$	Premium: $\geq 140(-3\%)$
Minimum Power Factor	0.9954		Pass	$\geq 0.9(-3\%)$	
Maximum THD %	6.40		Pass	$\leq 20(+5)$	
Minimum CRI	70.8		Pass	$\geq 70(-1)$	
Minimum R9	-42		--	--	
Minimum Rg	91		Pass	$\geq 89(-1)$	
Minimum Rf	76		Pass	$\geq 70(-1)$	
Rcs, h1(%)	-18		Pass	-18%-23%(-1%)	
CCT (K)	3000K	2995	Pass	$\leq 5000K$	
Zonal Lumen Requirement(%)	0-90°	100	Pass	$\geq 100(-1)$	
	80-90°	1.1	Pass	$\leq 10(+3)$	
BUG Ratings	B5-U0-G4		--	--	

Note: Decision rule is the rule that describes how measurement uncertainty is accounted for when stating conformity with a specified requirement. When decision rule is applicable, please refer to the most updated version announced in our website:

<https://en.bestway-compliance.com/pages/decision-rule-of-compliance-with-specification>

2.2 Electrical, Photometric and Chromaticity Measurements

Test date	2026-05-15	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	AOK-300WiLH(XXL)-NV-A5-00-3070-T2-P	Total Operating Time (min)	75

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE260307-A1	120.0	60	2.530	302.2	0.9954	6.40

Photometric Measurement – Goniophotometer Method(Test Distance:26.000m):

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	52725
Luminous Efficacy (lm/W)	174.47
Zonal lumens in the 0-90°zone (%)	100
Zonal lumens in the 80-90°zone (%)	1.1
BUG Ratings	B5-U0-G4
Beam Angle (°)	119.6
Center Beam Candle Power (cd)	12309

Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	11,079.9	21%
0-40	19,650.5	37.3%
0-60	39,908.6	75.8%
60-90	12,772.2	24.2%
70-100	4,672.1	8.9%
90-120	0	0%
0-90	52,680.8	100%
90-180	0	0%
0-180	52,680.8	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1,187.3	2.3%	90-100	0	0%
10-20	3,657.1	6.9%	100-110	0	0%
20-30	6,235.5	11.8%	110-120	0	0%
30-40	8,570.7	16.3%	120-130	0	0%
40-50	10,112.5	19.2%	130-140	0	0%
50-60	10,145.6	19.3%	140-150	0	0%
60-70	8,100.1	15.4%	150-160	0	0%
70-80	4,076.1	7.7%	160-170	0	0%
80-90	596.0	1.1%	170-180	0	0%

Photometric Data

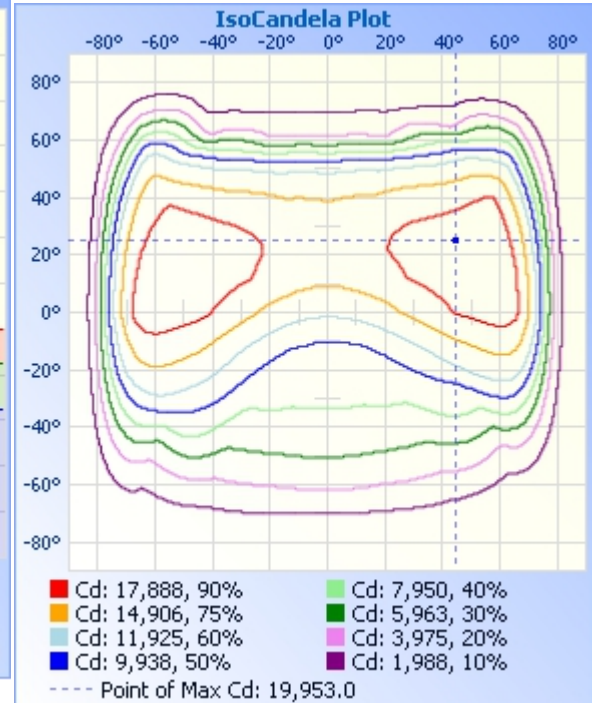
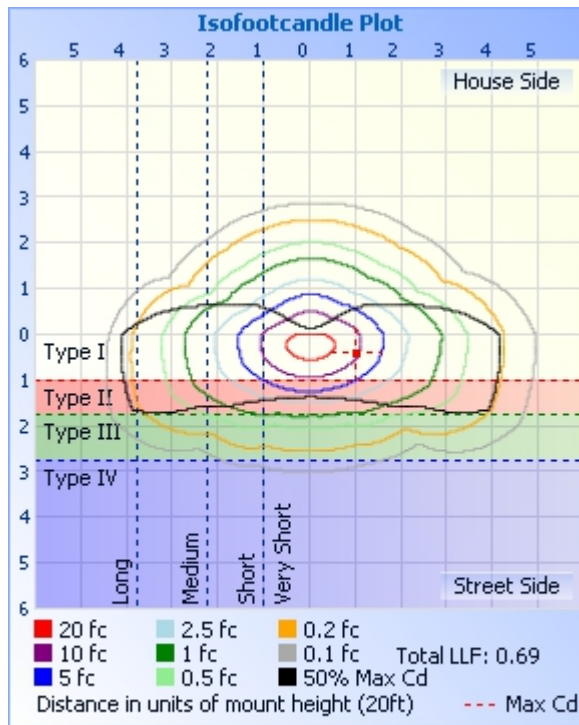
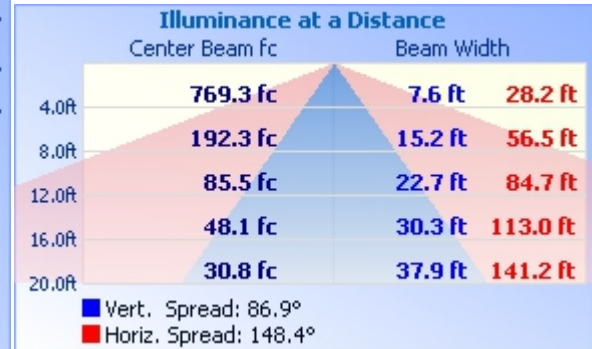
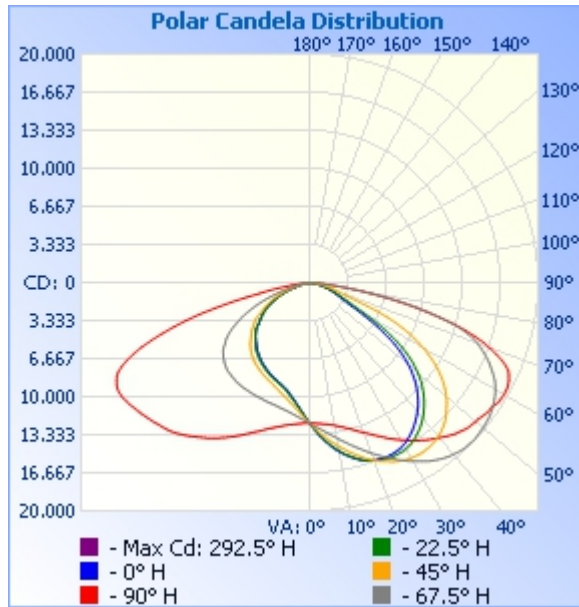
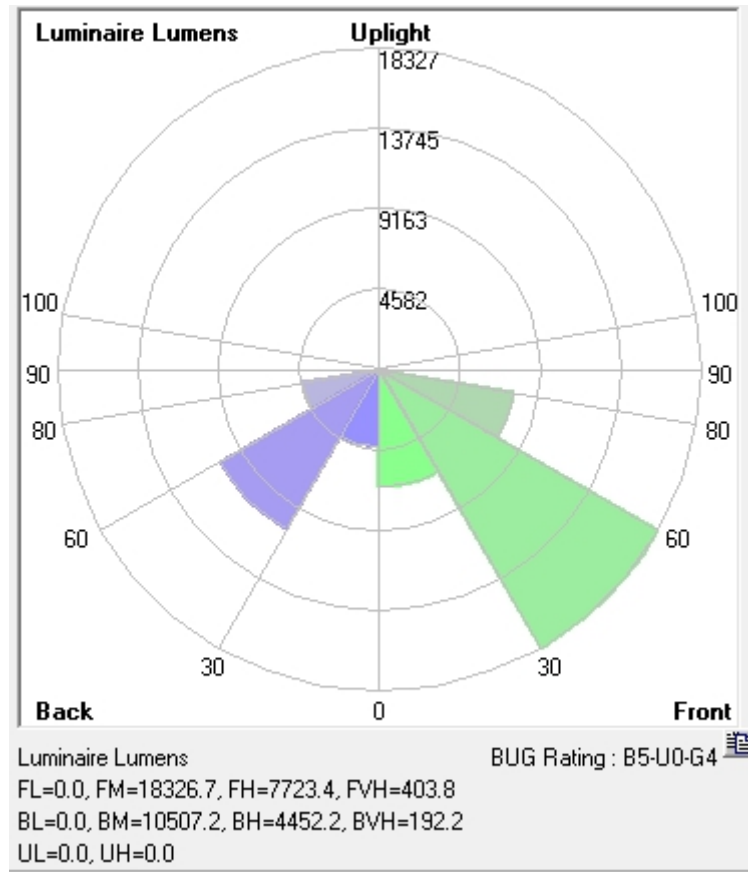


Table--1

UNIT: X10cd

y (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231			
5	1241	1296	1347	1373	1379	1371	1345	1297	1240	1180	1133	1102	1091	1098	1129	1179			
10	1270	1381	1456	1496	1504	1493	1453	1381	1270	1149	1059	1004	990	1002	1050	1141			
15	1319	1479	1568	1597	1598	1592	1558	1481	1323	1131	1006	942	929	937	992	1118			
20	1391	1585	1664	1668	1655	1659	1655	1590	1397	1129	961	904	892	901	945	1105			
25	1478	1696	1745	1700	1668	1689	1728	1698	1487	1135	929	870	857	867	912	1096			
30	1569	1796	1794	1699	1642	1683	1774	1804	1590	1150	898	834	818	829	879	1089			
35	1653	1884	1811	1655	1572	1632	1782	1899	1686	1174	861	791	774	784	842	1081			
40	1735	1948	1797	1571	1469	1543	1755	1961	1772	1199	817	742	723	734	795	1065			
45	1800	1983	1736	1447	1330	1415	1683	1990	1849	1210	762	680	669	673	733	1039			
50	1846	1994	1627	1280	1140	1242	1564	1981	1896	1183	690	613	596	604	660	987			
55	1894	1977	1472	1032	854	988	1396	1949	1931	1123	616	517	515	510	581	899			
60	1925	1944	1250	666	482	612	1157	1878	1966	997	525	435	426	426	471	765			
65	1850	1833	967	346	289	335	830	1750	1924	783	408	331	320	318	369	587			
70	1476	1497	556	233	200	224	382	1569	1685	516	287	219	189	203	244	376			
75	852	1005	249	144	120	138	211	1192	1183	293	163	116	81.2	92.3	127	197			
80	282	406	129	71.7	58.0	70.3	117	576	545	139	69.8	42.9	31.7	33.9	48.6	85.3			
85	58.3	78.7	35.2	19.0	16.2	20.6	37.2	127	124	48.5	20.0	7.82	1.31	4.01	11.2	22.7			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			
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			

BUG Ratings



2.3 Electrical, Photometric and Chromaticity Measurements

Test date	2026-05-15	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	AOK-300WiLH(XXL)-NV-A5-00-3070-T2-P	Total Operating Time (min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE260307-A1	120.0	60	2.534	302.9	0.9962	3.11
	277.0	60	1.097	303.5	0.9985	5.76

Chromaticity Measurement - Sphere-Spectroradiometer

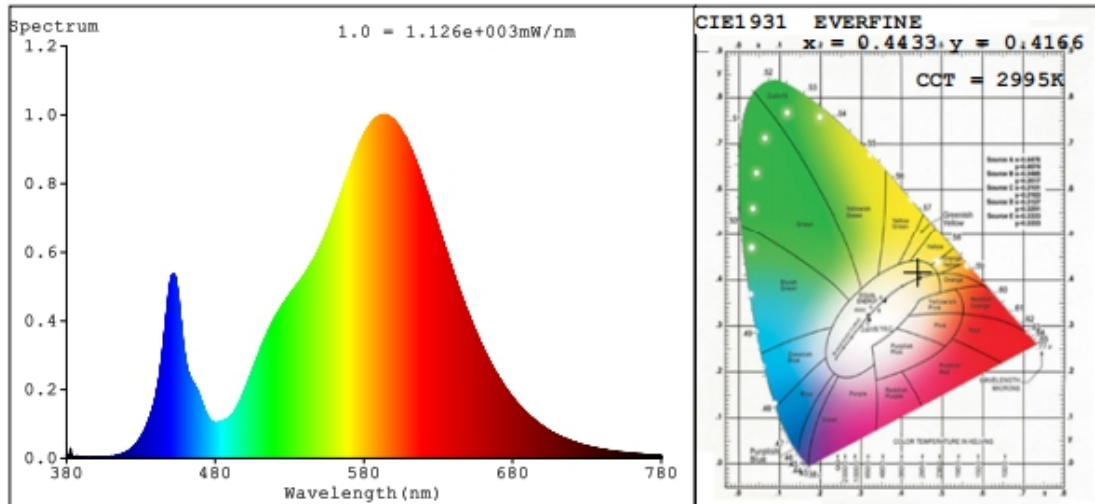
Method(Self-absorption:1.1604) (4π geometry):

Parameter	Result	Parameter	Result
Test Voltage (V)	120	Color Rendering Index (CRI)	70.8
Frequency (Hz)	60	R9	-42
CCT (K)	2995	Rg	91
Duv	0.0040	Rf	76
Chromaticity (x, y)	x=0.4433 y=0.4166	Rcs,h1(%)	-18
Chromaticity (u', v')	u'=0.2493 v'=0.5271		

Photometric Measurement –Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	277
Frequency (Hz)	60	60
Total Luminous (lm)	52881	53456
Luminous Efficacy (lm/W)	174.58	176.13

Spectral Power Distribution & Chromaticity Diagram



Special Color Rendering Indices

R1 =66	R2 =81	R3 =95	R4 =66	R5 =65	R6 =75	R7 =77	
R8 =40	R9 =-42	R10=58	R11=61	R12=45	R13=69	R14=97	R15=57

TM30

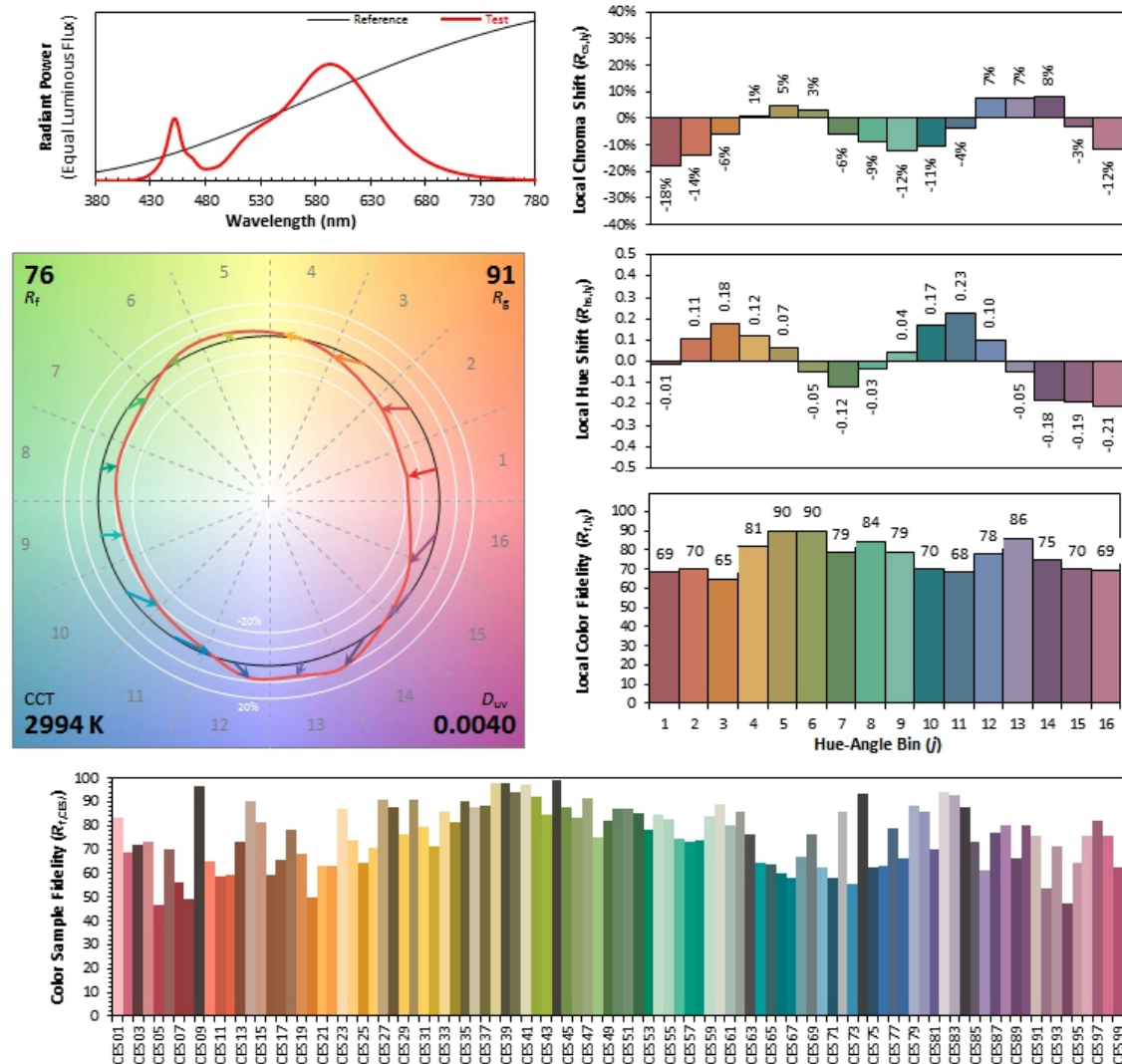
ANSI/IES TM-30-18 Color Rendition Report

Source: TS1-H50FL-1001BC

Manufacturer: AOK Industrial Company Limited

Date: 2026-05-15

Model: AOK-300WILH(XXL)-NV-A5-00-3070-T2-P



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4433
 y 0.4165
 u' 0.2494
 v' 0.5271

CIE 13.3-1995
(CRI)

R_a 71
 R_g -42

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-S-451	2 meter Integrating Sphere	Verified by D204 standard lamp	
ST-R-S-327	Spectral analysis system HAAS-2000	Verified by D204 standard lamp	
ST-R-S-452	Standard Lamp D204	2025-05-30	2028-05-29
ST-R-S-453	Power Meter for Integrating Sphere	2025-05-21	2026-05-20
ST-R-S-405	Hygrothermograph	2025-05-29	2026-05-28
ST-R-355	Goniophotometer system	Verified by D908S standard lamp	
ST-R-359	Standard Lamp D908S	2025-05-30	2028-05-29
ST-R-S-357	AC Power Source	2025-12-22	2026-12-21
ST-R-S-422	Power Meter for Goniophotometer	2025-05-21	2026-05-20
ST-R-S-354	hygrothermograph for Goniophotometer	2025-05-21	2026-05-20
Uncertainty: Photometric Measurement (Sphere):2.94%, k=2 Chromaticity Measurement(Sphere):45.06K, k=2 Photometric Measurement(Goniophotometer):3.32%, k=2			

4. Product Photo



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