



Report No.:GZE150120-B

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-80WiL

Representative (Tested) Model:AOK-80WiL(3000K)
AOK-80WiL(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

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<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-B
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	AOK LED LIGHT COMPANY LIMITED	
Brand Name	AOK	
Model Number	AOK-80WiL(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	--	79.05	W
Input Current	--	0.6654	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9900	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	7950.1	lm
Initial Lumen Efficacy	--	100.57	lm/w
Correlated color temperature / CCT	3025	--	K
Color rendering index / CRI	72.1		
R9 Value	0	--	
Duv	-0.0014	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		3664	cd
Beam angle (if applicable)		116.5	°
Zonal lumens in the 0°-60° zone		79	%
Zonal lumens in the 60°-90° zone	-----	20.9	%
Zonal lumens in the 90°-120° zone		0	%
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-80WiL(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	80.26	--	W
Input Current	0.6745	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9916	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	8679	--	lm
Initial Lumen Efficacy	108.14	--	lm/w
Correlated color temperature / CCT	5666	--	K
Color rendering index / CRI	74.1	--	
R9 Value	0	--	
Duv	-0.0031	--	
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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1. Product Information:

Brand Name	AOK
Model Number	AOK-80WiL
Luminaire Type	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires
Rated Voltage / Frequency	90 ~ 305 Vac, 47-63 Hz
Nominal Power	80W
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	150120-3(3000K),-4(5700K)

Photo





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2.1 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)
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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-80WiL(3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-3	120.0	60	0.6654	79.05	0.9900	7.51
	305.0	60	0.2747	78.11	0.9323	12.73

Sphere-Spectroradiometer Method:

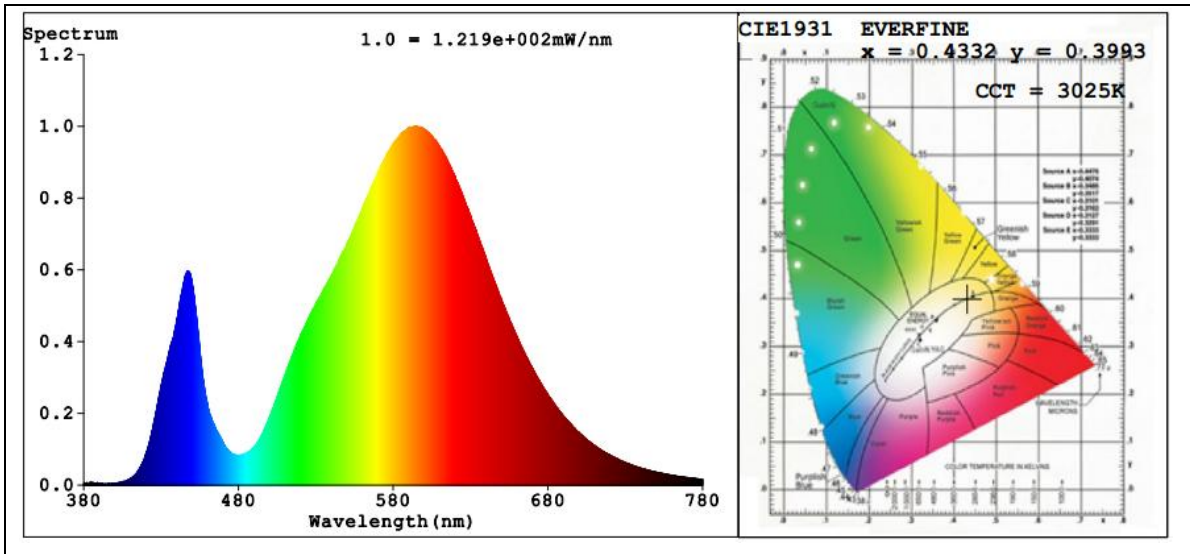
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	72.1
R9	0
CCT (K)	3025
Chromaticity (x, y)	x=0.4332 y=0.3993
Chromaticity (u', v')	u'=0.2502 v'=0.5189
Duv	-0.0014

Special Color Rendering Indices			
R1	69	R9	0
R2	81	R10	55
R3	91	R11	63
R4	69	R12	48
R5	68	R13	71
R6	73	R14	94
R7	79	R15	63
R8	48	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	7950.1
Luminous Efficacy (lm/W)	100.57
Beam Angle °	116.5
Center Beam Candle Power (cd)	3664
S/MH(C0/180)	2.08
S/MH(C90/270)	0.92

Spectral Power Distribution & Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	1,605.7	20.2%	20.2%
0-40	2,896.1	36.4%	36.4%
0-60	6,275.9	78.9%	79%
60-90	1,663.1	20.9%	20.9%
70-100	311.2	3.9%	3.9%
90-120	2.5	0%	0%
0-90	7,939.0	99.9%	99.9%
90-180	9.7	0.1%	0.1%
0-180	7,948.7	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	179.4	2.3%	90-100	0.2	0%
10-20	532.8	6.7%	100-110	0.8	0%
20-30	893.5	11.2%	110-120	1.5	0%
30-40	1,290.4	16.2%	120-130	1.7	0%
40-50	1,587.9	20.0%	130-140	1.7	0%
50-60	1,791.9	22.5%	140-150	1.5	0%
60-70	1,352.1	17.0%	150-160	1.2	0%
70-80	282.4	3.6%	160-170	0.8	0%
80-90	28.6	0.4%	170-180	0.3	0%

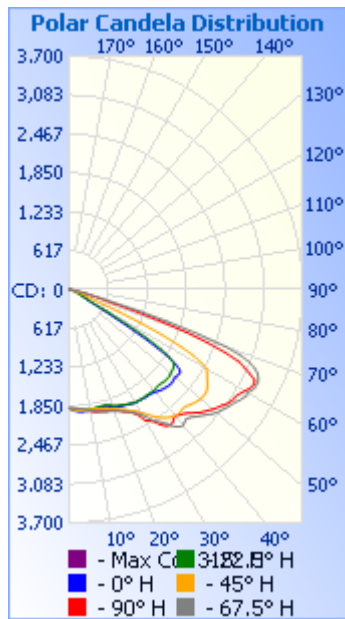
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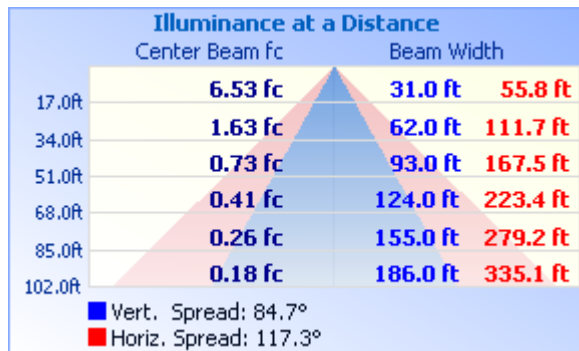
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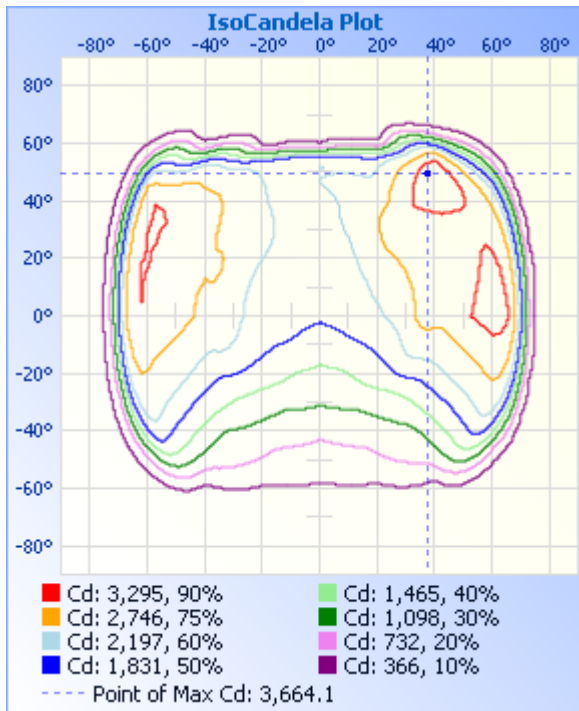
Photometric Data



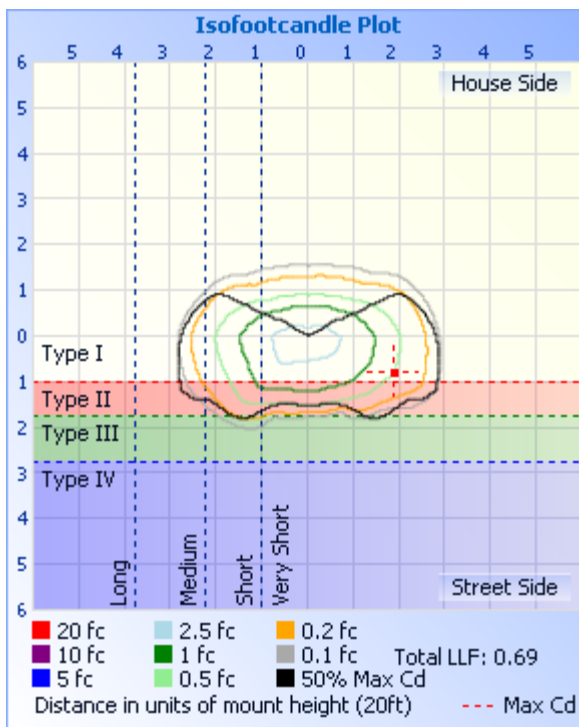
Illuminance Plots



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	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886	1886
1	1906	1898	1898	1887	1887	1882	1872	1864	1862	1871	1876	1885	1884	1896	1901	1904	1906
2	1922	1908	1909	1888	1890	1881	1860	1837	1832	1850	1864	1881	1886	1909	1916	1920	1922
3	1934	1916	1919	1892	1893	1879	1850	1809	1799	1826	1852	1879	1893	1922	1931	1935	1934
4	1941	1923	1926	1895	1902	1875	1839	1780	1763	1797	1839	1877	1905	1936	1946	1948	1941
5	1947	1927	1931	1902	1911	1873	1828	1754	1731	1768	1827	1879	1916	1952	1961	1960	1947
6	1951	1929	1934	1909	1923	1872	1816	1732	1703	1740	1813	1884	1932	1969	1975	1969	1951
7	1952	1929	1937	1921	1933	1876	1807	1714	1677	1715	1799	1893	1948	1986	1989	1976	1952
8	1951	1930	1936	1934	1943	1882	1802	1697	1655	1695	1784	1904	1960	2002	2002	1981	1951
9	1953	1930	1936	1945	1952	1889	1798	1682	1632	1675	1773	1913	1972	2018	2013	1985	1953
10	1956	1931	1936	1955	1963	1896	1793	1667	1610	1655	1763	1919	1989	2034	2023	1988	1956
11	1958	1930	1939	1965	1976	1902	1789	1649	1588	1636	1752	1922	2002	2048	2033	1991	1958
12	1957	1927	1943	1979	1986	1908	1783	1631	1564	1616	1743	1922	2014	2063	2045	1994	1957
13	1952	1924	1946	1991	1991	1912	1777	1611	1541	1595	1737	1922	2028	2081	2060	1994	1952
14	1945	1922	1952	2003	1996	1915	1772	1592	1518	1576	1730	1923	2047	2099	2073	1993	1945
15	1940	1920	1959	2010	2006	1914	1763	1573	1495	1558	1721	1924	2067	2115	2087	1995	1940
16	1937	1921	1967	2019	2014	1912	1750	1554	1473	1538	1708	1923	2085	2132	2103	1999	1937
17	1941	1923	1976	2028	2021	1912	1734	1535	1452	1516	1698	1920	2100	2150	2118	2004	1941
18	1952	1929	1987	2034	2026	1916	1722	1515	1431	1496	1691	1919	2117	2170	2134	2016	1952
19	1968	1943	1999	2042	2035	1920	1712	1492	1409	1475	1686	1922	2133	2192	2152	2032	1968
20	1987	1960	2015	2054	2046	1921	1704	1468	1382	1454	1686	1924	2154	2215	2176	2054	1987
21	2003	1978	2034	2068	2063	1926	1697	1444	1356	1433	1689	1928	2173	2239	2206	2075	2003
22	2013	1991	2054	2083	2079	1939	1691	1421	1330	1408	1690	1938	2192	2267	2238	2093	2013
23	2021	2000	2070	2102	2097	1950	1682	1399	1305	1383	1681	1951	2215	2298	2270	2111	2021
24	2030	2009	2088	2122	2120	1962	1673	1378	1278	1360	1673	1964	2239	2328	2301	2128	2030
25	2036	2021	2109	2144	2140	1974	1657	1356	1250	1338	1662	1981	2268	2362	2332	2147	2036
26	2043	2033	2135	2169	2168	1985	1641	1331	1222	1317	1652	2000	2302	2393	2369	2163	2043
27	2051	2043	2161	2195	2199	1995	1621	1305	1195	1295	1638	2020	2337	2423	2412	2177	2051
28	2060	2055	2184	2227	2233	2009	1601	1278	1169	1268	1620	2049	2378	2456	2457	2192	2060
29	2071	2067	2217	2263	2294	2030	1581	1252	1144	1243	1598	2084	2432	2489	2508	2208	2071

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30	2079	2075	2258	2301	2402	2046	1562	1224	1118	1215	1575	2109	2499	2525	2565	2222	2079
31	2084	2078	2300	2353	2432	2047	1544	1198	1089	1188	1550	2127	2625	2574	2625	2236	2084
32	2085	2081	2344	2431	2464	2050	1524	1169	1059	1161	1522	2154	2678	2654	2691	2251	2085
33	2087	2086	2392	2492	2515	2064	1505	1138	1028	1129	1493	2176	2749	2739	2772	2264	2087
34	2091	2088	2439	2530	2588	2064	1484	1108	995	1098	1463	2185	2831	2793	2852	2279	2091
35	2097	2084	2481	2584	2642	2052	1462	1077	961	1069	1431	2167	2924	2852	2935	2289	2097
36	2099	2083	2516	2638	2677	2035	1441	1046	926	1037	1399	2136	2973	2942	3004	2294	2099
37	2099	2085	2553	2713	2683	2011	1422	1018	892	1006	1367	2098	2996	3014	3073	2294	2099
38	2104	2088	2582	2770	2673	1980	1397	992	858	978	1337	2063	2983	3054	3131	2295	2104
39	2114	2089	2595	2805	2636	1960	1371	962	824	949	1308	2039	2954	3058	3190	2301	2114
40	2122	2091	2618	2819	2627	1960	1348	932	794	918	1282	2032	2922	3035	3249	2300	2122
41	2143	2088	2629	2794	2646	1966	1321	905	768	889	1259	2035	2892	2983	3246	2295	2143
42	2159	2083	2629	2775	2668	1973	1295	877	743	860	1234	2042	2905	2947	3232	2288	2159
43	2171	2082	2614	2786	2694	1982	1271	848	722	833	1208	2048	2931	2924	3203	2280	2171
44	2178	2087	2613	2817	2730	1994	1250	822	700	809	1186	2054	2968	2930	3179	2278	2178
45	2188	2093	2624	2857	2775	1999	1227	798	678	788	1159	2062	3012	2957	3180	2277	2188
46	2196	2102	2648	2892	2817	2006	1195	775	658	766	1136	2064	3056	2986	3200	2273	2196
47	2201	2106	2668	2929	2863	2015	1162	755	638	746	1111	2065	3098	3003	3229	2268	2201
48	2202	2106	2684	2970	2896	2028	1131	739	621	727	1086	2067	3141	3018	3272	2262	2202
49	2193	2106	2699	3014	2926	2040	1100	724	604	709	1058	2062	3174	3038	3320	2248	2193
50	2186	2094	2714	3050	2965	2045	1072	708	587	691	1032	2064	3210	3056	3366	2225	2186
51	2193	2085	2723	3072	2997	2051	1047	693	568	675	1005	2060	3236	3077	3414	2195	2193
52	2201	2078	2726	3098	3024	2058	1024	675	546	655	977	2063	3275	3098	3458	2157	2201
53	2205	2074	2722	3123	3053	2061	1001	654	521	632	948	2068	3316	3116	3501	2116	2205
54	2172	2057	2705	3149	3093	2069	981	628	494	607	921	2071	3351	3122	3531	2074	2172
55	2061	2018	2678	3168	3115	2077	957	599	460	578	895	2072	3377	3132	3561	2026	2061
56	1852	1916	2648	3192	3134	2081	932	564	425	544	871	2068	3398	3149	3579	1974	1852
57	1489	1743	2611	3233	3144	2086	909	525	388	503	844	2072	3424	3166	3607	1886	1489
58	1045	1463	2584	3252	3159	2081	883	480	350	458	813	2080	3466	3183	3631	1736	1045
59	649	1081	2553	3284	3190	2082	852	432	311	408	777	2090	3499	3187	3664	1515	649
60	397	687	2524	3270	3224	2086	811	384	274	359	732	2098	3527	3207	3659	1168	397
61	324	410	2398	3313	3263	2098	759	335	241	312	678	2111	3510	3185	3606	800	324

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62	296	299	2233	3337	3288	2111	698	292	211	270	614	2114	3507	3159	3524	555	296
63	273	260	1987	3340	3298	2122	627	252	187	233	539	2089	3482	3124	3389	371	273
64	252	234	1643	3341	3278	2125	547	219	166	204	456	2008	3429	3057	3204	288	252
65	232	212	1257	3317	3164	2082	458	194	149	180	373	1873	3353	2955	2919	247	232
66	210	192	862	3277	3051	1973	372	173	135	161	304	1666	3219	2819	2531	220	210
67	192	175	569	3203	2936	1785	300	155	125	146	248	1413	3019	2653	2076	198	192
68	178	158	387	3095	2676	1536	246	141	115	134	208	1134	2727	2446	1564	177	178
69	163	141	316	2917	2361	1261	207	129	107	123	180	865	2381	2181	1152	156	163
70	146	126	274	2634	1976	977	180	120	100	115	160	636	1950	1855	740	136	146
71	128	114	234	2175	1533	715	159	111	95	107	145	449	1493	1456	509	118	128
72	114	103	196	1637	1084	504	142	103	89	100	134	322	1035	1056	367	107	114
73	100	97	160	1178	743	364	128	97	81	94	124	245	578	656	278	98	100
74	91	93	134	721	537	279	117	92	75	88	113	203	390	415	222	93	91
75	84	90	116	485	417	228	107	85	69	81	104	178	310	299	184	89	84
76	77	86	104	368	333	193	98	80	60	75	97	159	274	251	154	85	77
77	68	81	96	298	268	166	89	75	52	71	87	141	246	223	131	81	68
78	58	74	89	238	193	147	81	70	48	66	78	126	214	202	113	74	58
79	48	65	84	189	128	132	72	64	40	60	71	111	172	181	99	66	48
80	39	55	79	149	94	120	65	54	32	50	64	99	131	155	84	56	39
81	31	45	74	120	75	110	56	45	23	44	56	87	95	129	70	46	31
82	23	36	66	97	62	101	46	37	16	37	48	72	63	100	58	35	23
83	16	27	55	81	48	93	37	27	10	27	38	54	38	74	44	25	16
84	10	19	41	67	32	79	26	16	4	16	22	34	23	46	29	16	10
85	2	10	27	52	18	52	17	8	1	7	9	13	11	23	15	3	2
86	0	0	17	27	8	14	7	3	0	2	2	1	1	4	1	0	0
87	0	0	3	8	2	1	1	0	0	0	0	1	0	0	0	0	0
88	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
89	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
90	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
91	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
92	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
93	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0

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94	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
95	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
96	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
97	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
98	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
99	0	0	0	0	1	1	1	0	0	0	0	2	0	0	0	0	0
100	0	0	0	0	1	1	1	0	0	0	1	2	0	0	0	0	0
101	0	0	0	0	2	2	1	0	0	0	1	2	0	0	0	0	0
102	0	0	0	0	2	2	1	0	0	0	1	2	0	0	0	0	0
103	0	0	0	0	2	2	2	0	0	0	1	3	0	0	0	0	0
104	0	0	0	0	2	3	2	0	0	0	1	3	1	1	0	0	0
105	0	0	0	0	3	3	2	0	0	0	2	3	1	0	0	0	0
106	0	0	0	0	3	3	2	0	0	0	2	3	1	1	0	0	0
107	0	0	0	0	3	3	2	0	0	0	2	3	1	1	0	0	0
108	0	0	0	0	3	3	2	0	0	0	2	3	2	1	0	0	0
109	0	0	0	0	3	3	2	0	0	0	2	4	2	1	0	0	0
110	0	0	0	0	3	4	2	0	0	0	2	4	2	1	0	0	0
111	0	0	0	0	3	4	2	0	0	1	2	4	2	1	0	0	0
112	0	0	0	1	3	4	2	1	0	1	2	4	2	1	0	0	0
113	0	0	0	1	4	4	2	1	0	1	2	4	2	1	0	0	0
114	0	0	0	1	3	4	2	1	0	1	2	4	2	2	0	0	0
115	0	0	0	1	3	4	2	1	1	1	2	4	2	2	0	0	0
116	0	0	0	1	4	4	2	1	1	1	3	3	2	2	0	0	0
117	0	0	0	1	4	4	3	1	1	2	3	3	2	2	0	0	0
118	0	0	0	1	4	4	3	1	1	2	3	3	3	2	0	0	0
119	0	0	0	1	4	4	3	1	1	2	3	3	3	2	0	0	0
120	0	0	0	1	4	4	3	1	1	2	3	3	3	2	0	0	0
121	0	0	0	1	4	4	3	2	1	2	3	3	3	2	0	0	0
122	0	0	0	1	4	4	3	2	2	2	3	3	3	2	0	0	0
123	0	0	0	1	4	4	3	2	2	2	3	3	3	2	0	0	0
124	0	0	0	1	4	4	3	2	2	2	3	3	3	2	0	0	0
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126	0	0	0	1	3	4	3	2	2	3	3	3	3	2	1	0	0
127	0	0	0	2	3	4	3	3	2	3	3	3	3	2	1	0	0
128	0	0	0	2	3	4	3	3	2	3	3	3	3	2	1	0	0
129	0	0	0	2	3	4	3	3	2	3	3	3	3	2	1	0	0
130	0	0	0	2	3	4	3	3	3	3	3	3	3	2	1	0	0
131	0	0	0	2	3	4	3	3	3	3	3	3	3	2	1	0	0
132	0	0	0	2	3	4	3	3	3	3	3	3	3	2	1	0	0
133	0	0	1	2	3	4	3	3	3	3	3	3	3	2	1	0	0
134	1	0	1	2	3	4	3	3	3	3	3	3	3	2	1	0	1
135	1	0	1	2	3	4	3	3	3	3	3	3	3	2	1	1	1
136	1	0	1	2	3	4	3	3	3	3	3	3	3	2	1	0	1
137	1	2	1	2	3	4	3	3	3	3	3	3	3	2	1	1	1
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139	1	1	1	2	3	4	3	3	3	3	3	3	3	2	1	1	1
140	1	1	1	2	3	4	3	3	3	3	3	3	3	2	1	1	1
141	1	1	1	2	3	4	3	3	3	3	3	3	3	2	1	1	1
142	1	1	1	2	3	3	3	3	3	4	3	3	3	2	1	1	1
143	1	1	1	2	3	3	3	3	3	4	3	3	3	2	1	1	1
144	1	1	1	2	3	3	3	3	3	4	3	3	3	2	1	1	1
145	1	1	1	2	3	3	3	3	3	4	3	3	3	2	1	1	1
146	1	1	1	2	3	3	3	3	4	4	3	3	3	2	1	1	1
147	2	1	1	2	3	3	3	3	4	4	3	3	3	2	1	1	2
148	2	1	1	2	3	3	3	3	4	4	3	3	3	2	1	1	2
149	2	1	1	2	3	3	3	3	4	4	3	3	3	2	1	2	2
150	2	1	1	2	3	3	3	3	4	4	4	3	3	2	2	2	2
151	2	1	1	2	3	3	3	3	4	4	4	3	3	2	2	2	2
152	2	1	1	2	3	3	3	3	4	4	4	3	2	2	2	2	2
153	2	1	1	2	3	3	3	3	4	4	4	3	2	2	2	2	2
154	2	1	1	2	3	3	3	3	4	4	4	3	2	2	2	2	2
155	2	2	1	2	3	3	3	3	4	4	4	3	2	2	2	2	2
156	2	2	1	2	3	3	3	3	4	4	4	3	2	2	2	2	2
157	2	2	2	2	3	3	3	3	4	4	4	3	2	2	2	2	2

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158	2	2	2	2	3	3	3	3	4	4	4	3	2	2	2	2	2
159	2	2	2	2	3	3	3	3	4	4	4	3	2	2	2	2	2
160	3	2	2	2	3	3	3	3	4	4	4	3	2	2	2	2	3
161	3	2	2	2	3	3	3	3	4	4	4	3	2	2	2	3	3
162	3	2	2	2	3	3	3	3	4	4	4	3	2	2	2	3	3
163	3	2	2	2	3	3	3	3	4	4	4	3	2	2	2	3	3
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172	3	3	2	2	3	3	3	3	3	3	3	3	3	2	2	3	3
173	3	3	2	2	3	3	3	3	3	3	3	3	3	3	2	3	3
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177	3	3	3	2	3	6	3	3	3	3	3	3	3	3	3	3	3
178	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3
179	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3
180	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

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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-80WiL(5700K)		

Electrical Measurement for Bare Lamp:

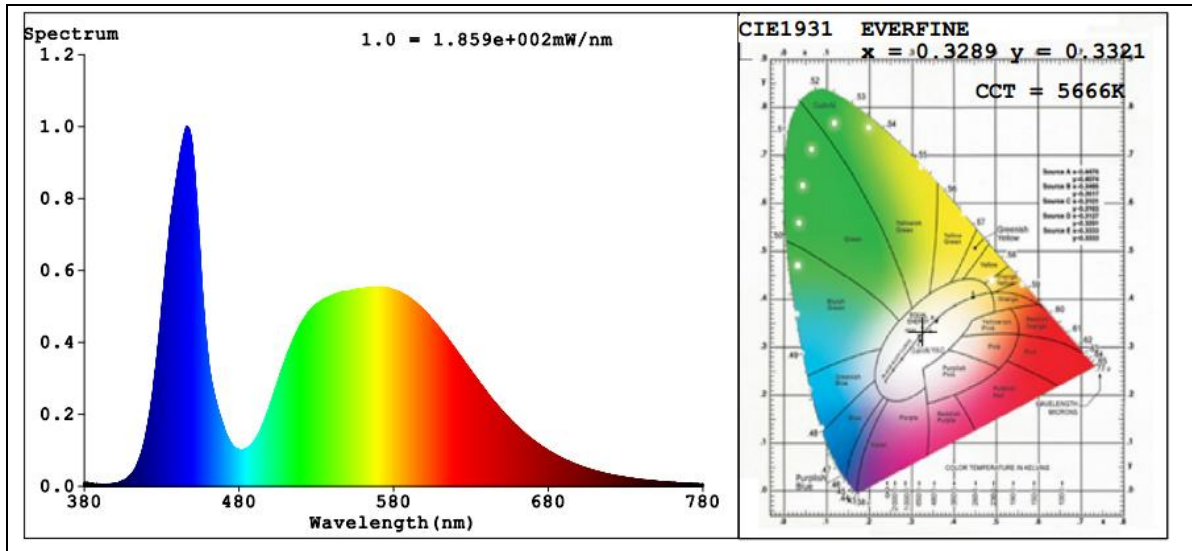
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
150120-4	120.0	60	0.6745	80.26	0.9916	7.82
	305.0	60	0.2788	79.45	0.9342	13.01

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	74.1
R9	0
CCT (K)	5666
Chromaticity (x, y)	x=0.3289 y=0.3321
Chromaticity (u', v')	u'=0.2079 v'=0.4723
Duv	-0.0031
Total Initial Lumen Output(lm)	8679
Initial Lumen Efficacy(lm/w)	108.14

Special Color Rendering Indices			
R1	75	R9	0
R2	77	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 *******