



Report No.: GZE161256-B

NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

AOK Industrial Company limited

(Brand Name: AOK)

Add: 1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Province, China

LED Luminaires

Model name(s): AOK-50WiM

Representative (Tested) Model: AOK-50WiM

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Charman Chen

Engineer: Charman Chen

Date: Dec.22,2016

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

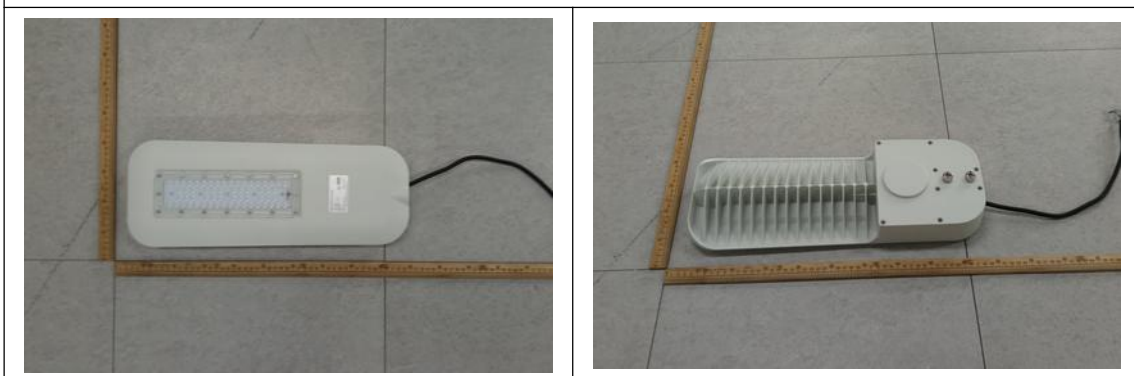
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Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

1.1 Product Information:

Organization Name	AOK Industrial Company limited	
Brand Name	AOK	
Model Number	AOK-50WiM	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Luminaires	
Rated Voltage / Frequency	90~277Vac, 50/60 Hz	
Nominal Power	50W	
Rated Initial Lamp Lumen	--	
Declared CCT	5700K	
LED Manufacturer	Philips Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	GZE161256-B1(5700K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Photo



1.2 Test Specifications:

Date of Receipt	Dec.18,2016
Date of Test	Dec.19,2016
Test item	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 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

1.3 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) 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 Electrical, Photometric and Chromaticity Measurements
(Refer to Work Instruction QD25)

Test date	2016-12-19	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	AOK-50WiM		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD%
GZE161256-	120.0	60	0.4104	49.06	0.9962	7.53
B1	277.0	60	0.1935	49.11	0.9162	10.81

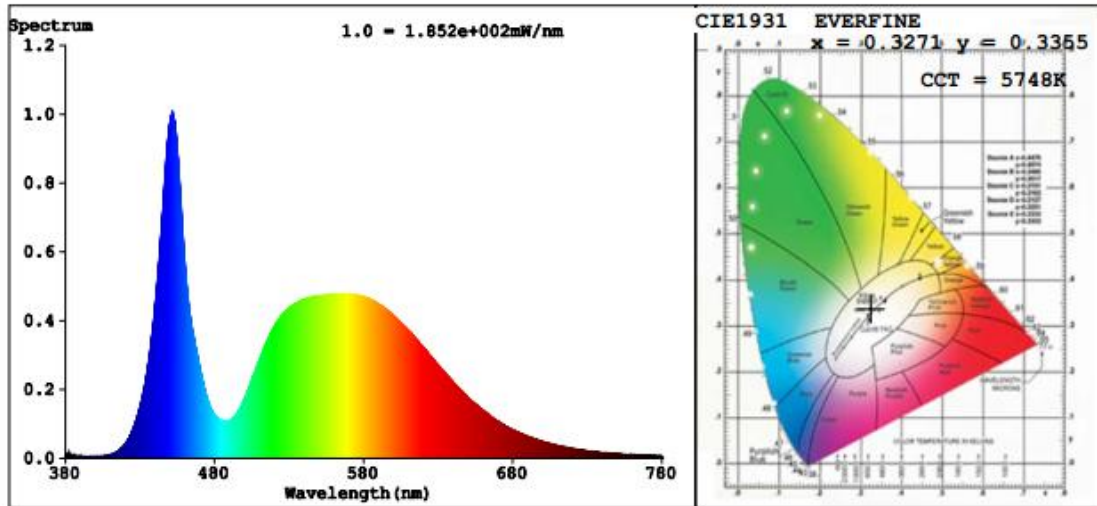
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	75	R9	0
Frequency (Hz)	60	R2	80	R10	50
CCT (K)	5748	R3	81	R11	73
Duv	-0.0004	R4	77	R12	44
Chromaticity (x, y)	x=0.3271 y=0.3355	R5	75	R13	76
Chromaticity (u', v')	u'=0.2053 v'=0.4739	R6	71	R14	89
Color Rendering Index (CRI)	75.9	R7	84	R15	72
R9	0	R8	64	--	--

Photometric Measurement – Goniophotometer Method :

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	5780.7	5764.5
Luminous Efficacy (lm/W)	117.83	117.38
Beam Angle (°)	93.8	--
Center Beam Candle Power (cd)	1489	--

Spectral Power Distribution & Chromaticity Diagram

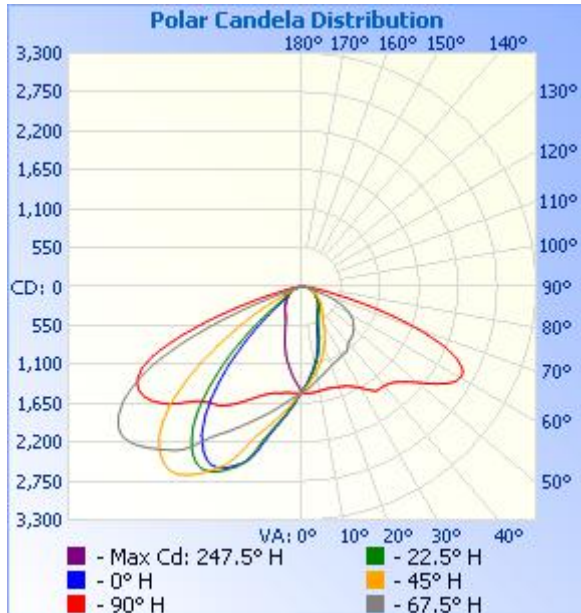


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,378.1	23.8%
0-40	2,460.7	42.6%
0-60	4,720.5	81.7%
60-90	1,053.7	18.2%
70-100	290.7	5%
90-120	2.7	0%
0-90	5,774.3	99.9%
90-180	5.9	0.1%
0-180	5,780.2	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	144.3	2.5%	90-100	1.3	0%
10-20	448.3	7.8%	100-110	0.6	0%
20-30	785.5	13.6%	110-120	0.7	0%
30-40	1,082.7	18.7%	120-130	0.8	0%
40-50	1,185.4	20.5%	130-140	0.7	0%
50-60	1,074.4	18.6%	140-150	0.7	0%
60-70	764.4	13.2%	150-160	0.6	0%
70-80	232.0	4.0%	160-170	0.4	0%
80-90	57.3	1.0%	170-180	0.1	0%

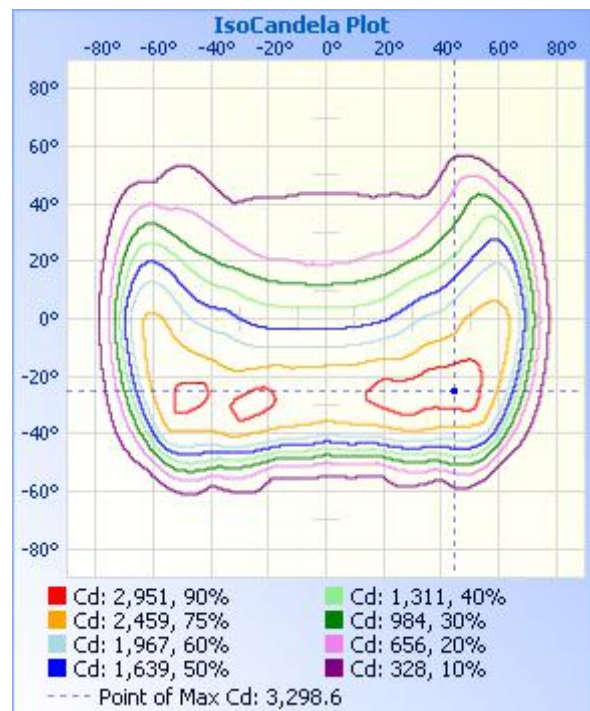
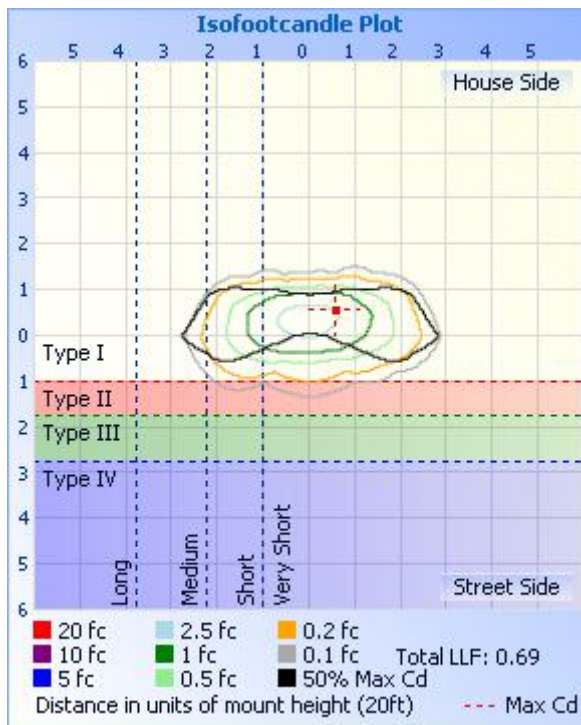
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	5.15 fc	19.8 ft	74.3 ft
34.0ft	1.29 fc	39.6 ft	148.6 ft
51.0ft	0.57 fc	59.4 ft	222.9 ft
68.0ft	0.32 fc	79.2 ft	297.2 ft
85.0ft	0.21 fc	99.1 ft	371.5 ft
102.0ft	0.14 fc	118.9 ft	445.8 ft

■ Vert. Spread: 60.5°
■ Horiz. Spread: 130.8°



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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	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489
1	1437	1442	1455	1478	1505	1516	1527	1524	1517	1513	1510	1510	1505	1483	1463	1451	1437
2	1396	1404	1433	1463	1506	1531	1555	1574	1570	1561	1547	1524	1505	1465	1437	1412	1396
3	1363	1374	1405	1448	1507	1553	1593	1616	1615	1603	1587	1546	1506	1453	1407	1380	1363
4	1319	1333	1373	1436	1507	1569	1633	1669	1673	1657	1620	1568	1507	1435	1382	1337	1319
5	1280	1293	1346	1417	1506	1585	1665	1718	1728	1710	1663	1585	1508	1419	1349	1304	1280
6	1237	1262	1314	1397	1506	1605	1705	1758	1773	1753	1709	1610	1509	1403	1317	1266	1237
7	1203	1223	1290	1379	1504	1621	1737	1809	1829	1806	1743	1635	1510	1384	1293	1227	1203
8	1159	1182	1260	1359	1501	1642	1774	1861	1873	1862	1786	1657	1514	1374	1265	1194	1159
9	1122	1148	1229	1343	1497	1660	1813	1900	1932	1908	1822	1686	1517	1358	1235	1153	1122
10	1078	1107	1204	1324	1493	1675	1843	1953	1994	1965	1868	1710	1523	1346	1213	1113	1078
11	1041	1074	1172	1307	1490	1693	1878	1998	2047	2015	1916	1739	1530	1332	1183	1080	1041
12	994	1032	1141	1293	1486	1714	1917	2061	2121	2080	1953	1768	1536	1319	1158	1040	994
13	944	997	1117	1278	1484	1732	1947	2127	2204	2153	2003	1794	1543	1310	1130	1004	944
14	902	952	1086	1268	1484	1754	1989	2185	2281	2218	2055	1825	1550	1301	1108	959	902
15	850	906	1060	1255	1487	1772	2027	2272	2391	2318	2099	1857	1560	1294	1083	913	850
16	807	867	1028	1240	1491	1796	2073	2373	2473	2428	2157	1884	1572	1288	1055	875	807
17	749	816	994	1229	1495	1817	2121	2456	2554	2511	2206	1919	1584	1282	1034	830	749
18	689	765	966	1216	1498	1835	2163	2547	2605	2601	2280	1949	1600	1278	1007	794	689
19	649	725	932	1204	1503	1858	2224	2601	2649	2654	2376	1986	1616	1273	981	749	649
20	611	677	907	1191	1508	1874	2283	2656	2684	2709	2463	2017	1637	1273	960	703	611
21	585	645	879	1183	1515	1901	2378	2691	2722	2746	2569	2055	1657	1270	939	668	585
22	555	616	853	1174	1522	1916	2457	2734	2755	2780	2648	2088	1681	1273	909	638	555
23	535	582	819	1166	1529	1943	2551	2769	2789	2822	2729	2129	1703	1276	877	603	535
24	513	553	782	1161	1541	1969	2638	2807	2803	2854	2782	2172	1733	1279	851	572	513
25	498	532	752	1154	1553	1989	2693	2840	2824	2886	2830	2209	1764	1281	819	548	498
26	479	510	718	1149	1569	2017	2739	2867	2825	2910	2885	2256	1790	1285	796	524	479
27	465	494	689	1141	1585	2046	2789	2892	2824	2929	2926	2294	1824	1289	768	508	465
28	450	475	656	1134	1606	2084	2831	2903	2810	2933	2982	2339	1851	1292	745	492	450
29	440	461	631	1126	1626	2112	2879	2911	2785	2935	3022	2379	1886	1295	721	480	440

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30	428	445	603	1121	1653	2147	2919	2915	2745	2923	3069	2432	1914	1299	699	466	428
31	420	435	582	1117	1678	2174	2956	2909	2706	2904	3105	2480	1947	1305	674	456	420
32	413	424	557	1115	1711	2207	3002	2880	2644	2868	3137	2551	1974	1308	654	444	413
33	406	415	538	1113	1738	2232	3041	2855	2585	2829	3169	2619	2004	1310	629	434	406
34	399	409	518	1113	1772	2271	3084	2805	2538	2782	3187	2706	2027	1303	604	424	399
35	392	400	502	1106	1799	2300	3111	2758	2451	2712	3196	2771	2051	1294	584	414	392
36	387	394	484	1092	1812	2341	3136	2693	2352	2648	3196	2841	2063	1284	558	407	387
37	379	387	470	1068	1813	2392	3154	2626	2265	2574	3187	2892	2076	1273	538	397	379
38	373	380	455	1052	1811	2442	3163	2571	2144	2495	3167	2940	2086	1266	516	389	373
39	365	372	444	1037	1814	2513	3154	2478	2040	2383	3143	2973	2103	1259	498	379	365
40	358	365	431	1025	1821	2575	3144	2367	1902	2288	3104	3008	2125	1256	479	371	358
41	350	357	422	1019	1832	2656	3116	2271	1788	2156	3066	3051	2146	1253	465	361	350
42	344	351	411	1011	1842	2713	3095	2138	1643	2016	3014	3083	2178	1253	449	354	344
43	335	342	402	1008	1861	2787	3051	2027	1525	1897	2961	3124	2209	1253	437	344	335
44	328	336	391	1005	1879	2834	3012	1877	1375	1744	2901	3156	2260	1252	422	337	328
45	319	327	380	996	1907	2875	2951	1755	1225	1622	2809	3197	2306	1256	412	327	319
46	311	320	372	991	1934	2926	2887	1600	1105	1465	2729	3227	2368	1257	398	320	311
47	302	310	360	988	1973	2964	2816	1442	958	1339	2608	3258	2429	1260	387	309	302
48	295	301	351	967	2009	3010	2715	1313	847	1181	2529	3276	2476	1260	374	301	295
49	285	293	339	958	2058	3042	2615	1156	717	1022	2389	3290	2527	1261	364	291	285
50	276	283	330	945	2111	3080	2506	1030	623	899	2237	3299	2563	1264	350	282	276
51	269	275	318	935	2157	3111	2394	879	517	754	2104	3297	2604	1266	336	273	269
52	261	266	308	921	2221	3136	2243	765	430	648	1930	3276	2637	1273	325	264	261
53	255	258	295	909	2273	3146	2080	628	375	531	1785	3251	2671	1277	312	258	255
54	248	249	285	893	2339	3152	1937	528	322	450	1600	3206	2693	1283	301	250	248
55	243	242	272	880	2390	3144	1752	422	292	370	1455	3161	2714	1288	289	244	243
56	237	234	262	864	2451	3120	1599	348	266	323	1283	3090	2723	1294	280	236	237
57	233	228	250	850	2493	3084	1416	308	251	282	1125	3021	2729	1302	268	231	233
58	228	221	238	828	2536	3034	1283	275	238	255	1009	2941	2723	1310	259	224	228
59	224	215	229	802	2560	2964	1130	257	228	239	871	2820	2712	1318	249	218	224
60	220	210	219	780	2573	2894	990	239	221	224	763	2701	2684	1322	240	213	220
61	216	205	211	750	2579	2781	884	227	215	214	623	2568	2653	1321	230	208	216

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62	212	201	202	723	2568	2679	753	218	213	204	508	2428	2592	1301	220	203	212
63	207	196	195	688	2534	2551	641	208	220	197	378	2237	2540	1276	211	197	207
64	202	191	187	659	2474	2403	495	201	245	194	299	2021	2430	1225	201	192	202
65	195	186	180	618	2409	2194	389	196	274	196	236	1824	2328	1163	192	186	195
66	187	180	174	584	2305	1993	289	197	243	205	203	1548	2177	1052	182	180	187
67	175	175	168	540	2206	1712	238	201	206	216	185	1315	1996	946	173	174	175
68	164	168	163	494	2058	1474	202	208	184	224	167	1030	1831	791	165	168	164
69	158	163	156	423	1886	1185	178	214	161	212	154	814	1606	627	157	162	158
70	152	155	149	362	1737	915	163	212	143	188	145	577	1420	503	150	155	152
71	146	146	143	295	1535	723	148	198	128	166	138	386	1186	380	142	149	146
72	142	138	136	255	1364	517	136	181	117	153	133	271	1009	310	135	141	142
73	135	128	130	218	1148	385	130	159	106	137	129	181	811	242	127	131	135
74	129	120	123	190	980	268	122	144	98	124	124	143	640	207	119	123	129
75	122	111	117	170	785	205	117	125	93	112	120	118	519	175	112	113	122
76	116	104	109	147	648	154	110	109	87	98	114	105	393	154	104	106	116
77	107	98	101	132	507	127	103	102	82	89	108	98	315	134	97	97	107
78	98	91	94	118	418	114	97	89	75	78	100	91	248	118	88	89	98
79	90	84	84	108	330	103	90	79	69	71	95	86	211	109	79	81	90
80	80	77	77	103	277	96	85	68	64	63	92	84	181	100	73	73	80
81	72	70	68	96	228	89	80	58	58	56	82	81	155	94	66	66	72
82	63	62	61	90	188	84	73	51	52	51	69	75	139	86	59	58	63
83	54	53	54	81	163	78	65	45	46	45	58	67	124	77	51	50	54
84	46	46	47	73	137	70	56	39	41	41	48	60	108	71	45	43	46
85	36	38	42	64	121	63	49	34	37	34	41	51	96	61	37	35	36
86	29	32	35	54	101	55	41	28	31	28	35	42	80	52	30	29	29
87	21	24	29	45	85	46	33	24	24	23	27	35	69	44	24	21	21
88	7	14	22	37	68	40	27	19	18	17	21	29	59	36	17	13	7
89	1	2	7	27	53	32	21	14	12	12	16	24	25	8	3	1	1
90	0	0	0	1	13	24	16	10	8	8	7	4	3	2	1	1	0
91	0	0	0	1	2	2	2	2	1	1	2	2	2	2	1	0	0
92	0	0	0	1	2	2	1	1	1	1	1	2	2	1	1	0	0
93	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	0	0

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94	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	0	0
95	0	0	0	5	2	1	1	1	1	1	1	1	2	1	0	0	0
96	0	0	0	1	11	4	1	1	1	1	1	1	2	1	0	0	0
97	0	0	0	1	3	1	1	1	1	1	1	1	1	1	0	0	0
98	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0
99	0	0	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0
100	0	0	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0
101	0	0	0	1	1	1	1	1	1	0	1	1	1	1	0	0	0
102	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0
103	0	0	0	1	1	1	1	1	1	0	1	1	1	1	0	0	0
104	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	0
105	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	0
106	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	0
107	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	0
108	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0
109	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0
110	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
111	1	0	1	1	1	1	0	0	0	0	0	1	1	1	1	0	1
112	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
113	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
114	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
115	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0
116	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
117	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
118	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
119	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0
120	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0
121	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0
122	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0
123	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0
124	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0
125	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1

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126	1	1	1	2	1	1	1	0	0	0	0	1	1	1	1	1	1
127	0	1	1	2	1	1	1	0	0	0	0	1	1	1	1	1	0
128	1	1	1	2	1	1	1	0	0	1	0	1	1	1	1	1	1
129	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1
130	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1
131	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1
132	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1
133	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1
134	1	1	1	2	1	1	1	0	0	0	0	1	1	1	1	1	1
135	1	1	1	2	1	1	1	0	0	0	1	1	1	1	1	1	1
136	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1
137	1	1	1	2	1	1	1	0	0	0	1	1	1	1	1	1	1
138	1	1	1	2	1	1	1	1	0	0	1	1	1	1	1	1	1
139	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
140	1	1	1	2	1	1	1	1	0	0	1	1	1	1	1	1	1
141	2	1	1	2	1	1	1	0	1	0	1	1	1	1	2	1	2
142	2	1	2	2	1	1	1	0	0	1	1	1	1	1	1	1	2
143	2	1	2	1	1	1	1	1	0	0	1	1	1	1	2	1	2
144	2	1	1	2	1	1	1	1	1	0	1	1	1	1	2	2	2
145	2	1	1	2	1	1	1	1	1	1	1	1	1	1	2	2	2
146	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2
147	2	2	1	2	1	1	1	1	1	1	1	1	1	1	2	2	2
148	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2
149	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2
150	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2
151	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2
152	2	2	2	1	1	1	1	1	1	0	1	1	1	1	2	2	2
153	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2
154	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2
155	2	2	2	1	1	1	1	1	1	0	1	1	1	1	2	2	2
156	2	2	1	2	1	1	1	1	1	1	1	1	1	1	2	2	2
157	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2

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158	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2
159	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2
160	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
161	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
162	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
163	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
164	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
165	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
166	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
167	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
168	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
169	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
170	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2
171	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2
172	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
173	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
174	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
175	2	2	2	2	1	1	1	1	1	2	1	1	1	1	1	2	2
176	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
177	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
178	2	2	1	2	1	1	1	1	1	1	1	1	2	1	1	1	2
179	1	1	1	2	2	1	1	1	1	1	1	2	2	1	1	1	1
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2016-07-01	2017-06-30
ST-R-331	Spectral analysis system HAAS-2000	2016-07-01	2017-06-30
D204	Standard Lamp	2016-07-01	2017-06-30
PF2010	Power Meter for Integrating Sphere	2016-07-01	2017-06-30
EE-09	Goniophotometer system	2016-07-01	2017-06-30
D908S	Standard Lamp	2016-07-01	2017-06-30
PF210	Power Meter for Goniophotometer	2016-07-01	2017-06-30
ST-R-181A	Temperature Tester	2016-07-01	2017-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

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