NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

L-TECH CORPORTION

(Brand Name: L-TECH CORP)

Shaogangtou District, Qiaotou Town
Dongguan City, Guangdong, China

LED Lamp

Model name(s): CLED8A/P/R-40 WITH TCLD840HZ-5080

(CLKT840)

Model differences: N/A

Test & Report By:

Johnson Sun

Engineer: Johnson Sun
Date:Dec.11, 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.

NVLAP LAB CODE 201011-0

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	Dec.11, 2015
Test Report No.	GZE151229-H
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	L-TECH CORPORTION	
Brand Name	L-TECH CORP	
Model Number	CLED8A/P/R-40 WITH TCLD840HZ-5080 (CLKT840)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Lamp	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Electrical Measurements:	**Integrating Sphere Output**	**Goniophotometer Output**	
Input Wattage	--	41.88	W
Input Current	--	0.3528	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9893	
Off-State Power	--	0	W
Photometric Characteristics			
Total Initial Lumen Output	--	3496.2	lm
Initial Lumen Efficacy	--	83.48	lm/w
Correlated color temperature / CCT	5128	--	K
Color rendering index / CRI	84.1	--	
R9 Value	18	--	
Duv	0.0013	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)	--	2108	cd
Beam angle (if applicable)	--	117.1	°
Zonal lumens in the 0 °-60 °zone	--	92.1	%
Zonal lumens in the 60 °-90 °zone	--	7.9	%
Zonal lumens in the 90 °-120 °zone	--	0	%
Zonal lumens in the 120 °-180 °zone	--	0	%

Test Specifications:	
Date of Receipt	: Dec.08,2015
Date of Test	: Dec.10,2015
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 °C ±1 °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 ºC ±1 ºC. 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.

1. Product Information:

Brand Name	L-TECH CORP
Model Number	CLED8A/P/R-40 WITH TCLD840HZ-5080 (CLKT840)
Luminaire Type	LED Lamp
Rated Voltage / Frequency	120/277Vac, 60Hz
Nominal Power	40W
Rated Initial Lamp Lumen	N/A
Declared CCT	5000K
LED Manufacturer	Seoul Semiconductor Co.,Ltd
LED Model	STWxC2SB
Sample Receipt Date	Dec.08,2015
Sample Number	GZE151229-H1
Photo	

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

Test date	2015-12-10	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	CLED8A/P/R-40 WITH TCLD840HZ-5080 (CLKT840)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
GZE151229 -H1	120.0	60	0.3528	41.88	0.9893

Sphere-Spectroradiometer Method:

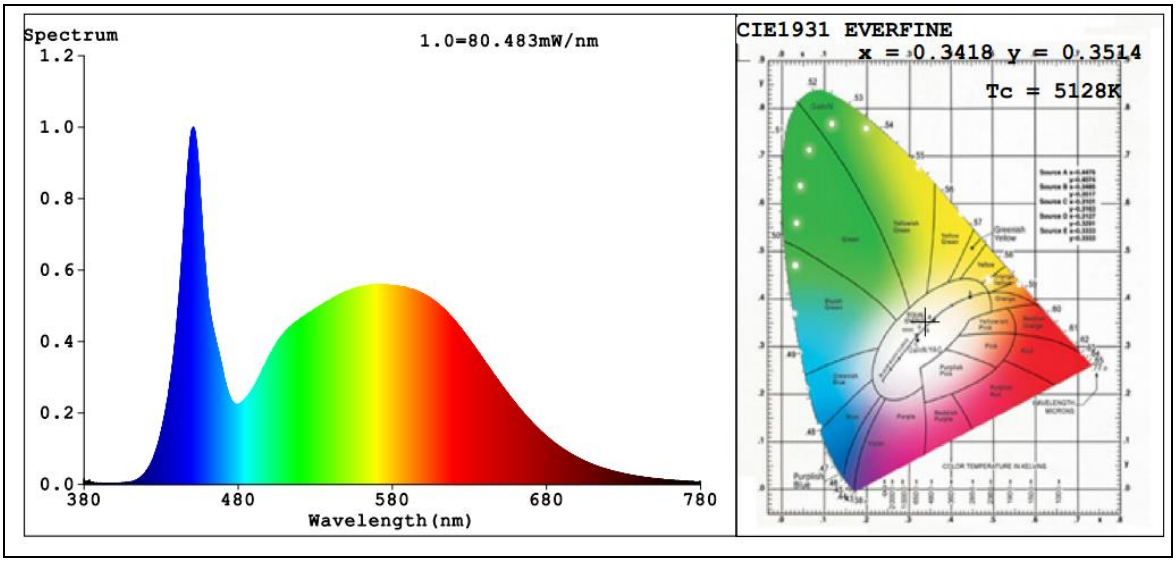
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	84.1
R9	18
CCT (K)	5128
Chromaticity (x, y)	x=0.3418 y=0.3514
Chromaticity (u', v')	u'=0.2092 v'=0.4841
Duv	0.0013

Special Color Rendering Indices			
R1	83	R9	18
R2	88	R10	72
R3	91	R11	84
R4	84	R12	63
R5	84	R13	84
R6	83	R14	95
R7	88	R15	79
R8	71	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	3496.2
Luminous Efficacy (lm/W)	83.48
Beam Angle °	117.1
Center Beam Candle Power (cd)	2108

Spectral Power Distribution & Chromaticity Diagram



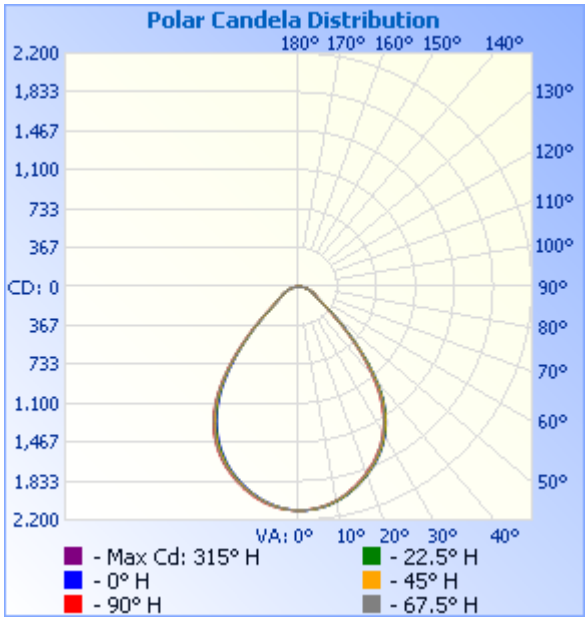
NVLAP LAB CODE 201011-0

Zonal Lumen Tabulation:

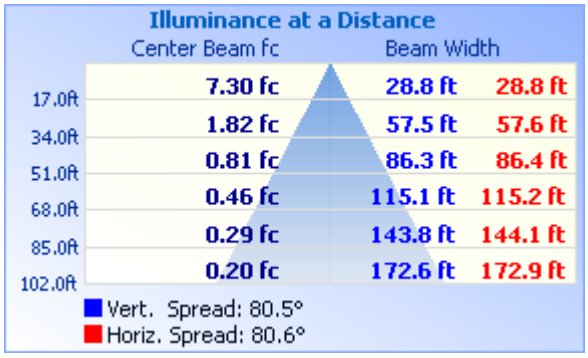
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,553.8	44.5%
0-40	2,399.1	68.6%
0-60	3,218.9	92.1%
60-90	276.3	7.9%
70-100	119.2	3.4%
90-120	0.1	0%
0-90	3,495.3	100%
90-180	0.4	0%
0-180	3,495.6	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	198.2	5.7%	90-100	0.0	0%
10-20	554.2	15.9%	100-110	0.0	0%
20-30	801.4	22.9%	110-120	0.0	0%
30-40	845.3	24.2%	120-130	0.0	0%
40-50	565.1	16.2%	130-140	0.1	0%
50-60	254.7	7.3%	140-150	0.1	0%
60-70	157.1	4.5%	150-160	0.0	0%
70-80	93.7	2.7%	160-170	0.0	0%
80-90	25.5	0.7%	170-180	0.0	0%

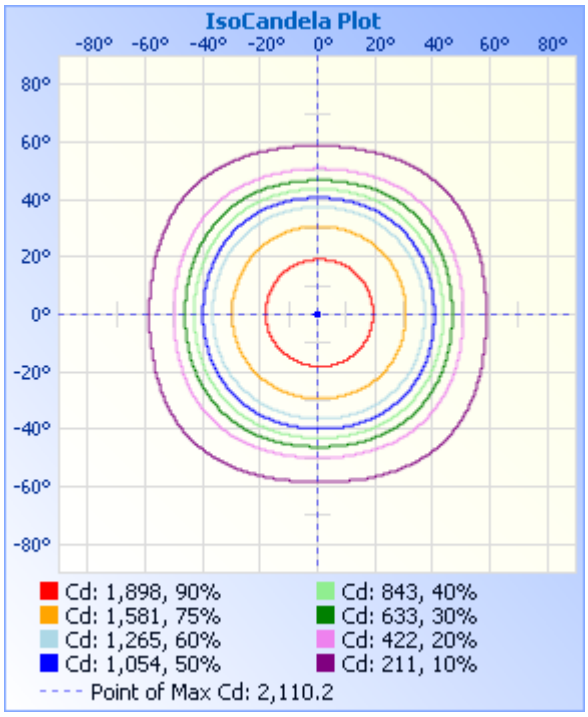
Photometric Data



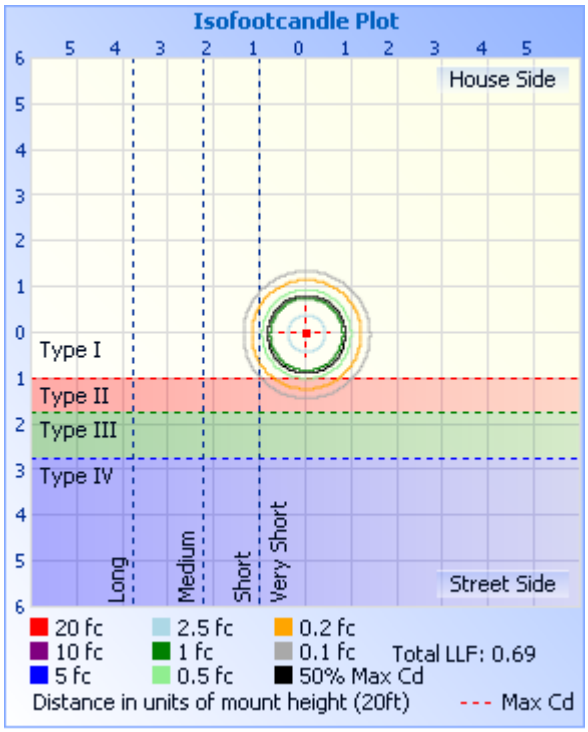
Illuminance Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108
1	2108	2110	2108	2107	2109	2106	2109	2106	2106	2106	2105	2108	2109	2109	2110	2109	2108
2	2108	2108	2105	2104	2106	2106	2106	2104	2103	2105	2105	2106	2106	2110	2109	2107	2108
3	2107	2104	2104	2103	2102	2102	2101	2099	2099	2101	2100	2102	2104	2108	2108	2107	2107
4	2102	2104	2100	2098	2097	2096	2095	2094	2092	2097	2097	2097	2101	2104	2104	2102	2102
5	2098	2096	2095	2092	2091	2091	2087	2086	2087	2088	2089	2092	2095	2097	2099	2099	2098
6	2091	2090	2089	2085	2085	2083	2080	2077	2078	2079	2083	2086	2087	2091	2092	2092	2091
7	2085	2084	2080	2078	2077	2073	2071	2069	2068	2072	2074	2078	2082	2083	2084	2086	2085
8	2076	2076	2070	2067	2067	2063	2059	2058	2057	2062	2064	2066	2071	2074	2076	2076	2076
9	2068	2066	2061	2057	2056	2052	2048	2044	2046	2049	2051	2057	2062	2067	2067	2067	2068
10	2055	2054	2049	2046	2046	2039	2035	2030	2033	2037	2041	2045	2048	2053	2056	2056	2055
11	2042	2042	2037	2030	2031	2025	2019	2018	2017	2022	2028	2030	2036	2040	2044	2045	2042
12	2030	2030	2023	2018	2016	2010	2005	2002	2004	2007	2011	2017	2023	2028	2031	2031	2030
13	2016	2014	2008	2002	2000	1994	1987	1985	1986	1992	1995	2001	2007	2012	2017	2017	2016
14	2000	1997	1992	1985	1983	1977	1970	1967	1969	1975	1980	1987	1991	1998	2001	2002	2000
15	1983	1982	1975	1969	1966	1959	1952	1950	1951	1957	1962	1968	1975	1981	1985	1984	1983
16	1967	1964	1957	1951	1948	1939	1933	1931	1932	1937	1944	1951	1956	1963	1967	1967	1967
17	1949	1946	1941	1932	1928	1920	1912	1909	1911	1917	1924	1932	1937	1943	1948	1950	1949
18	1929	1926	1920	1910	1908	1900	1892	1889	1890	1898	1903	1911	1918	1923	1929	1928	1929
19	1908	1907	1899	1891	1887	1878	1870	1868	1870	1875	1882	1891	1897	1903	1907	1911	1908
20	1888	1886	1880	1870	1865	1856	1848	1844	1848	1853	1861	1870	1875	1882	1888	1889	1888
21	1867	1864	1859	1848	1843	1833	1825	1821	1822	1830	1839	1847	1853	1860	1865	1868	1867
22	1844	1842	1834	1826	1821	1810	1802	1797	1799	1806	1815	1826	1831	1837	1842	1845	1844
23	1821	1820	1813	1803	1798	1786	1776	1770	1770	1777	1789	1801	1808	1815	1821	1822	1821
24	1799	1796	1789	1779	1773	1759	1748	1741	1741	1749	1761	1774	1782	1791	1797	1800	1799
25	1772	1770	1762	1751	1746	1732	1719	1712	1712	1721	1734	1746	1754	1764	1770	1773	1772
26	1747	1744	1734	1723	1718	1705	1691	1682	1683	1693	1706	1719	1725	1736	1743	1746	1747
27	1717	1714	1705	1693	1691	1674	1659	1649	1650	1660	1675	1691	1695	1707	1714	1717	1717
28	1688	1683	1676	1662	1659	1642	1625	1615	1616	1627	1641	1657	1662	1675	1683	1688	1688

29	1657	1652	1643	1628	1625	1605	1588	1578	1580	1590	1607	1622	1629	1643	1651	1655	1657
30	1623	1619	1609	1593	1590	1569	1550	1541	1541	1554	1570	1587	1594	1607	1618	1622	1623
31	1587	1585	1573	1558	1551	1530	1511	1499	1501	1513	1531	1549	1556	1571	1581	1586	1587
32	1549	1546	1536	1518	1511	1489	1468	1457	1459	1471	1489	1508	1514	1530	1542	1548	1549
33	1509	1506	1494	1476	1468	1444	1422	1413	1414	1427	1445	1465	1472	1488	1500	1507	1509
34	1465	1463	1450	1431	1422	1397	1376	1365	1366	1381	1399	1419	1426	1442	1456	1463	1465
35	1420	1416	1402	1382	1373	1348	1326	1314	1315	1331	1350	1368	1375	1393	1407	1415	1420
36	1368	1364	1351	1329	1320	1292	1272	1260	1261	1277	1296	1316	1321	1340	1355	1364	1368
37	1314	1310	1297	1273	1264	1237	1214	1204	1206	1221	1239	1260	1264	1282	1298	1309	1314
38	1255	1252	1238	1214	1204	1175	1154	1142	1146	1160	1179	1199	1204	1222	1239	1251	1255
39	1192	1189	1174	1150	1140	1113	1091	1080	1083	1098	1116	1135	1139	1159	1174	1188	1192
40	1127	1123	1107	1083	1075	1048	1027	1015	1018	1032	1050	1069	1072	1092	1107	1120	1127
41	1058	1054	1040	1016	1006	981	961	950	952	964	981	1001	1004	1024	1039	1051	1058
42	988	985	970	945	938	913	893	881	883	895	912	931	935	954	970	983	988
43	917	913	898	874	869	845	826	815	815	826	840	861	866	884	900	912	917
44	846	842	841	807	800	778	760	748	748	757	771	791	799	818	828	838	846
45	780	775	766	740	733	711	694	683	681	689	704	723	732	751	764	773	780
46	713	707	690	672	668	648	632	620	617	624	637	658	665	685	699	708	713
47	647	640	626	609	606	588	572	560	557	563	576	595	602	621	635	645	647
48	585	578	565	549	547	530	515	503	500	506	518	535	543	562	576	584	585
49	528	521	509	494	492	476	462	451	447	453	464	480	488	506	519	528	528
50	477	470	458	445	442	427	413	404	401	407	417	431	437	455	468	476	477
51	429	423	412	400	397	384	371	362	360	365	374	386	392	408	420	428	429
52	387	382	372	361	357	345	334	326	325	331	338	348	353	367	378	386	387
53	350	347	338	327	323	312	303	297	296	301	308	315	319	331	342	348	350
54	318	316	309	299	294	285	277	273	272	277	282	288	290	300	309	316	318
55	291	290	284	274	270	262	256	252	252	256	260	265	265	274	282	288	291
56	266	266	262	254	250	244	239	235	236	239	243	246	245	252	258	264	266
57	246	246	243	237	233	229	225	221	222	225	228	229	229	233	238	243	246
58	227	229	226	221	220	217	214	211	210	212	215	216	215	217	221	225	227
59	212	213	212	209	210	208	206	203	202	204	206	207	205	204	206	209	212

60	198	200	200	200	201	200	197	195	194	196	198	199	196	196	195	196	198
61	189	191	192	192	193	192	189	187	186	188	190	191	188	187	187	187	189
62	181	183	184	184	185	184	181	179	178	180	182	183	180	179	179	179	181
63	173	175	176	176	177	176	173	171	170	172	174	175	172	172	171	172	173
64	166	168	169	168	169	168	165	163	162	164	166	167	164	164	164	164	166
65	158	160	161	161	162	160	158	156	155	156	158	159	157	156	156	157	158
66	151	153	154	153	154	153	150	148	148	149	151	152	149	149	149	150	151
67	144	146	147	146	147	145	143	141	140	142	144	144	142	142	142	143	144
68	137	139	140	139	140	138	136	134	133	134	136	137	135	135	135	136	137
69	130	132	133	132	133	131	129	127	126	127	129	130	128	128	128	129	130
70	124	125	126	125	125	124	122	120	119	120	122	123	121	121	121	122	124
71	117	118	119	118	118	117	115	113	112	113	115	116	114	114	114	115	117
72	110	111	112	111	112	110	108	106	105	106	108	109	107	107	108	109	110
73	104	105	105	104	105	103	101	99	98	99	101	102	100	100	101	102	104
74	97	98	99	98	98	96	94	93	92	93	94	95	94	94	95	96	97
75	91	92	92	91	91	89	87	86	85	86	87	88	87	87	88	89	91
76	84	85	85	85	84	82	81	79	78	79	81	81	80	81	82	83	84
77	78	79	79	78	78	76	74	73	72	73	74	75	74	75	76	77	78
78	72	73	72	72	71	69	67	66	65	66	67	68	67	68	69	71	72
79	66	66	66	65	64	62	61	59	59	59	60	61	61	62	63	64	66
80	59	60	59	58	58	56	54	52	52	52	53	54	54	55	57	58	59
81	53	53	52	51	51	48	47	45	45	45	46	47	47	49	50	51	53
82	46	46	45	44	43	41	39	38	37	38	39	40	40	42	43	44	46
83	39	39	38	37	36	34	32	31	30	31	32	33	33	35	36	38	39
84	31	32	31	30	29	27	26	24	24	24	25	26	26	27	29	30	31
85	25	25	24	23	23	21	20	18	18	18	19	20	20	21	22	24	25
86	18	18	18	17	17	15	14	12	12	12	13	14	14	15	16	18	18
87	13	13	12	11	11	9	8	7	7	7	8	9	9	10	11	12	13
88	8	8	8	7	6	5	4	3	3	3	4	4	5	7	7	8	8
89	4	4	4	4	2	1	1	0	0	0	0	1	1	3	4	4	4
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

153	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2015-07-01	2016-06-30
ST-R-331	Spectral analysis system HAAS-2000	2015-07-01	2016-06-30
D204	Standard Lamp	2015-07-01	2016-06-30
PF2010	Power Meter for Integrating Sphere	2015-07-01	2016-06-30
EE-09	Goniophotometer system	2015-07-01	2016-06-30
D908S	Standard Lamp	2015-07-01	2016-06-30
PF210	Power Meter for Goniophotometer	2015-07-01	2016-06-30
ST-R-181A	Temperature Tester	2015-07-01	2016-06-30
Uncertainty Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

****** END OF DATASHEET PACKAGE ******