

LM-79-08 Test Report

For

LIGHT EFFICIENT DESIGN, LLC
(Brand Name: LIGHT EFFICIENT DESIGN, LLC)

Suite 301, 188 S.Northwest Highway, Cary, IL60013, USA

LED Luminaires

Model name(s): LED-8132M40

Representative (Tested) Model: LED-8132M40

Model Different: N/A

Test & Report By:

Garman Mo

Engineer: Garman Mo

Date: Nov.01,2018

Review By:

John Li

Manager: John-Li

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 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: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

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1.1 Product Information:

Organization Name	LIGHT EFFICIENT DESIGN, LLC	
Brand Name	LIGHT EFFICIENT DESIGN, LLC	
Model Number	LED-8132M40	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Luminaires	
Rated Voltage / Frequency	120-277Vac, 50/60Hz	
Nominal Power	135W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K	
LED Manufacturer	Everlight	
LED Model	67-21S/KK7C-H407034Z15/DT(GC)	
Sample Number	JBE180907-C1	
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	Oct.30,2018
Date of Test	Oct.31,2018
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	2018-10-31	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED-8132M40		

Electrical Measurement:

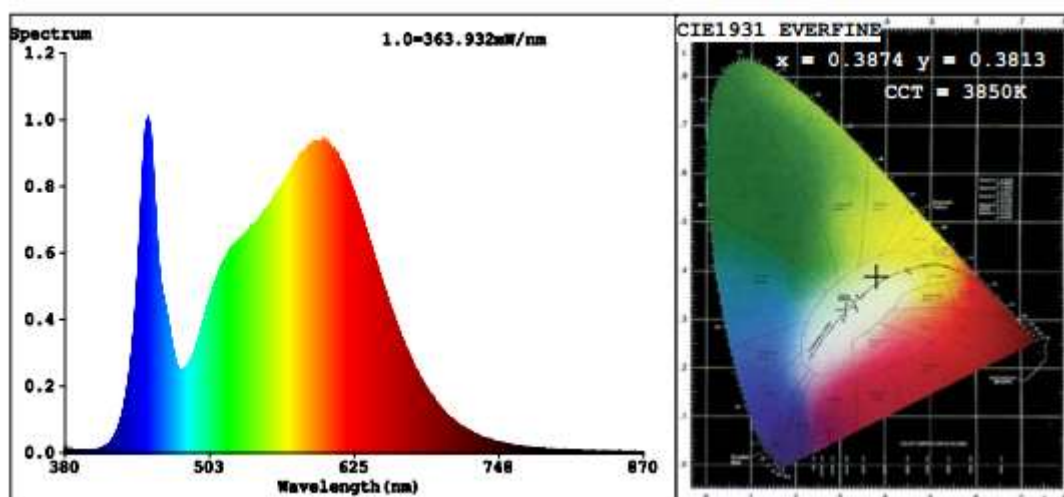
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JBE180907-	120.0	60	1.088	129.7	0.9931	9.38
C1	277.0	60	0.4888	127.3	0.9401	14.25

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	11
Frequency (Hz)	60	R2	89	R10	75
CCT (K)	3850	R3	95	R11	82
Duv	0.0001	R4	83	R12	64
Chromaticity (x, y)	x=0.3874 y=0.3813	R5	82	R13	84
Chromaticity (u', v')	u'=0.2279 v'=0.5046	R6	85	R14	97
Color Rendering Index (CRI)	83.4	R7	86	R15	76
R9	11	R8	65	--	--

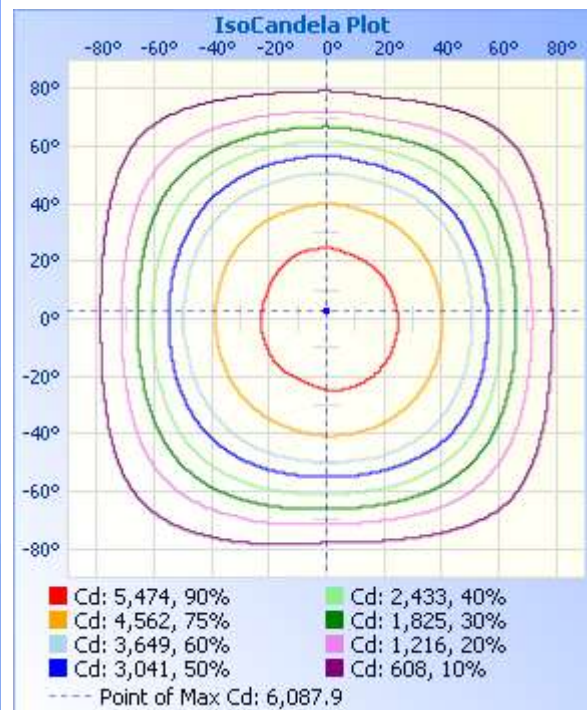
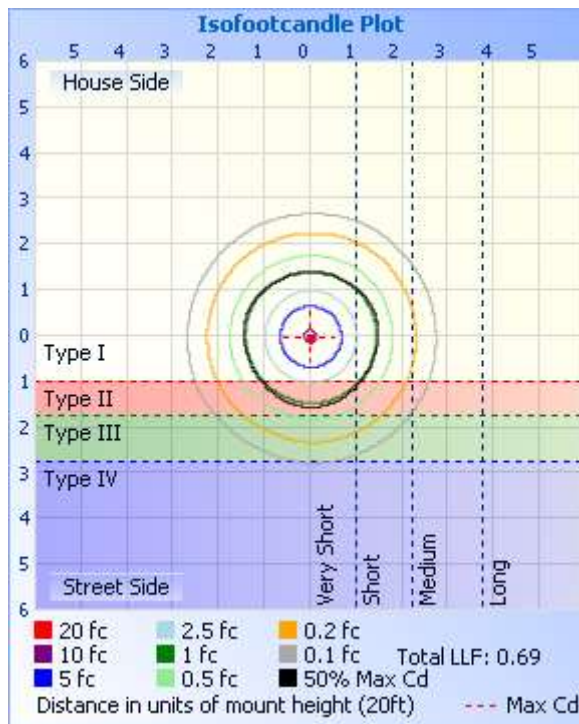
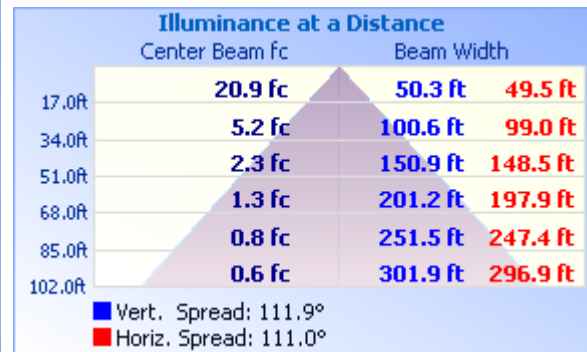
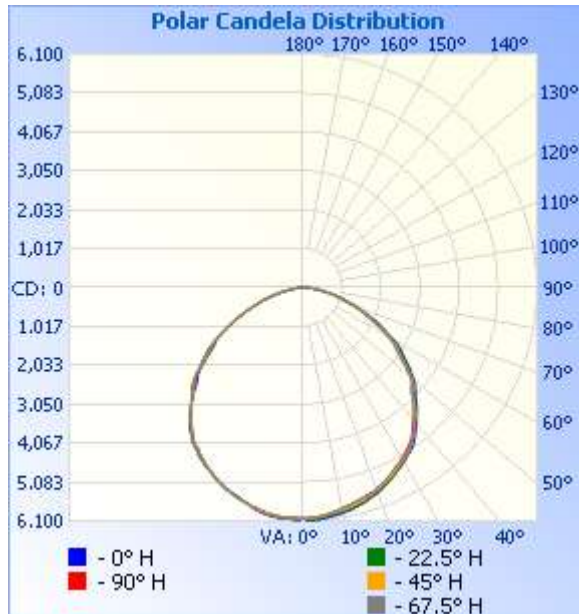
Photometric Measurement – Goniophotometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	17055	16706
Luminous Efficacy (lm/W)	131.50	131.23
Beam Angle (°)	111.7	--
Center Beam Candle Power (cd)	6026	--

Spectral Power Distribution & Chromaticity Diagram

Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	4,710.3	27.6%
0-40	7,784.4	45.6%
0-60	13,727.3	80.5%
60-90	3,170.1	18.6%
70-100	1,296.6	7.6%
90-120	116.1	0.7%
0-90	16,897.4	99.1%
90-180	156.8	0.9%
0-180	17,054.2	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	570.2	3.3%	90-100	62.6	0.4%
10-20	1,635.2	9.6%	100-110	39.4	0.2%
20-30	2,504.9	14.7%	110-120	14.1	0.1%
30-40	3,074.1	18.0%	120-130	11.5	0.1%
40-50	3,162.5	18.5%	130-140	9.7	0.1%
50-60	2,780.5	16.3%	140-150	8.4	0%
60-70	1,936.1	11.4%	150-160	6.3	0%
70-80	963.9	5.7%	160-170	3.6	0%
80-90	270.1	1.6%	170-180	1.2	0%

Photometric Data


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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	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026	6026
1	6077	6066	6043	6021	6021	5987	5987	5987	6077	6054	6043	6021	6021	5999	6010	5987	6077
2	6088	6066	6032	6021	6010	5987	5987	5987	6066	6054	6021	6021	6010	5999	5999	5987	6088
3	6077	6066	6021	6010	5999	5987	5987	5965	6054	6054	6021	6032	6010	6010	6010	5987	6077
4	6077	6054	6010	5987	5999	5976	5965	5965	6054	6054	6021	6032	6021	6021	6010	5976	6077
5	6054	6021	5999	5976	5976	5965	5965	5965	6043	6043	6021	6021	6010	5999	5999	5976	6054
6	6043	6021	5976	5965	5954	5943	5943	5976	6043	6043	6010	6010	6010	5976	5987	5976	6043
7	6021	5987	5954	5932	5932	5932	5943	5932	6043	6032	6010	5999	5999	5954	5965	5954	6021
8	6010	5976	5920	5909	5909	5909	5920	5932	6032	6010	5999	5987	5976	5943	5932	5932	6010
9	5999	5965	5909	5887	5887	5887	5898	5920	6010	6010	5976	5999	5965	5920	5909	5909	5999
10	5976	5954	5887	5865	5853	5865	5876	5909	5987	5987	5965	5965	5932	5898	5887	5887	5976
11	5954	5932	5876	5842	5820	5831	5853	5876	5965	5943	5932	5943	5920	5853	5853	5876	5954
12	5943	5909	5853	5820	5809	5797	5842	5865	5932	5909	5920	5909	5876	5831	5820	5842	5943
13	5909	5887	5831	5786	5786	5786	5820	5842	5898	5887	5876	5887	5876	5820	5809	5820	5909
14	5887	5865	5809	5764	5753	5775	5786	5797	5842	5842	5842	5842	5831	5797	5775	5797	5887
15	5853	5842	5786	5742	5730	5742	5764	5764	5809	5809	5820	5820	5820	5764	5764	5764	5853
16	5831	5831	5764	5719	5708	5719	5742	5719	5775	5786	5797	5797	5786	5742	5708	5730	5831
17	5797	5786	5730	5708	5675	5686	5708	5686	5742	5742	5764	5775	5753	5730	5708	5708	5797
18	5764	5753	5697	5675	5652	5652	5663	5641	5708	5697	5730	5742	5730	5697	5675	5697	5764
19	5730	5719	5663	5652	5641	5630	5641	5619	5675	5686	5686	5697	5697	5675	5630	5663	5730
20	5708	5675	5630	5608	5596	5585	5596	5563	5641	5652	5663	5663	5663	5630	5608	5619	5708
21	5652	5663	5596	5552	5563	5552	5563	5541	5619	5630	5630	5652	5641	5608	5585	5596	5652
22	5596	5619	5541	5507	5518	5518	5529	5496	5574	5585	5574	5596	5585	5574	5541	5552	5596
23	5563	5585	5518	5474	5485	5496	5485	5451	5541	5552	5563	5552	5541	5529	5507	5507	5563
24	5507	5529	5485	5429	5440	5429	5429	5407	5507	5507	5507	5507	5496	5485	5474	5474	5507
25	5485	5474	5429	5384	5384	5384	5384	5362	5451	5474	5474	5462	5462	5429	5440	5429	5485
26	5440	5440	5395	5339	5339	5339	5351	5317	5407	5429	5407	5407	5418	5384	5384	5384	5440
27	5384	5395	5351	5295	5284	5306	5295	5261	5362	5373	5351	5351	5351	5351	5328	5328	5384
28	5351	5328	5295	5250	5239	5250	5239	5228	5328	5328	5306	5306	5317	5295	5272	5272	5351

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29	5306	5284	5261	5228	5205	5205	5183	5172	5272	5295	5261	5250	5272	5261	5228	5239	5306
30	5261	5239	5217	5183	5150	5138	5127	5127	5194	5228	5194	5217	5239	5228	5183	5183	5261
31	5205	5183	5172	5150	5105	5094	5071	5071	5150	5194	5161	5161	5194	5172	5150	5116	5205
32	5161	5138	5138	5116	5060	5049	5027	5027	5094	5127	5094	5127	5150	5127	5116	5071	5161
33	5116	5071	5071	5060	5004	4993	4982	4982	5027	5071	5060	5083	5083	5083	5060	5027	5116
34	5060	4993	5004	4993	4949	4926	4926	4926	4993	5038	5027	5038	5027	5027	5004	4960	5060
35	5004	4937	4949	4937	4893	4870	4870	4882	4960	4993	4949	4971	4949	4982	4971	4904	5004
36	4937	4859	4870	4859	4826	4792	4814	4826	4904	4937	4904	4904	4870	4882	4882	4826	4937
37	4848	4792	4781	4770	4725	4703	4736	4759	4826	4848	4826	4814	4792	4814	4803	4747	4848
38	4759	4714	4714	4703	4647	4636	4669	4680	4759	4759	4725	4736	4703	4725	4703	4680	4759
39	4680	4625	4636	4591	4569	4569	4569	4602	4680	4658	4625	4647	4625	4625	4647	4602	4680
40	4602	4546	4535	4502	4479	4468	4479	4513	4591	4580	4569	4569	4569	4546	4535	4535	4602
41	4513	4479	4479	4412	4401	4390	4412	4435	4491	4491	4468	4468	4491	4446	4435	4446	4513
42	4435	4390	4390	4312	4312	4312	4323	4368	4390	4390	4379	4379	4401	4356	4345	4356	4435
43	4356	4301	4278	4211	4245	4222	4234	4278	4267	4289	4278	4289	4289	4267	4267	4256	4356
44	4267	4222	4178	4122	4167	4155	4167	4200	4189	4189	4178	4211	4189	4167	4167	4167	4267
45	4178	4111	4066	4021	4066	4055	4066	4100	4077	4100	4088	4133	4111	4100	4077	4088	4178
46	4066	3999	3966	3921	3977	3943	3966	3988	3977	3999	3988	4021	4021	3999	3977	3988	4066
47	4010	3943	3921	3854	3898	3876	3887	3910	3854	3887	3898	3932	3943	3921	3910	3910	4010
48	3932	3887	3876	3809	3820	3787	3787	3798	3742	3787	3820	3854	3910	3865	3820	3865	3932
49	3865	3820	3798	3764	3764	3697	3720	3697	3664	3742	3764	3764	3809	3798	3764	3798	3865
50	3787	3720	3720	3686	3686	3630	3608	3619	3597	3675	3686	3686	3720	3720	3709	3686	3787
51	3675	3619	3597	3575	3541	3519	3496	3519	3508	3563	3563	3586	3563	3597	3586	3552	3675
52	3563	3519	3452	3452	3418	3385	3407	3385	3385	3407	3418	3452	3441	3452	3429	3429	3563
53	3463	3441	3340	3351	3273	3273	3273	3262	3228	3239	3284	3340	3329	3295	3284	3306	3463
54	3340	3318	3195	3206	3161	3161	3150	3128	3128	3128	3150	3228	3239	3150	3139	3228	3340
55	3239	3206	3105	3083	3072	3061	3038	3027	2994	3016	3083	3139	3117	3038	3038	3083	3239
56	3139	3094	3016	2960	2971	2949	2915	2904	2882	2904	2971	3038	2994	2938	2938	2971	3139
57	3050	3016	2949	2871	2904	2871	2837	2804	2770	2826	2893	2960	2938	2871	2893	2904	3050
58	2994	2927	2871	2804	2826	2804	2770	2714	2714	2759	2804	2804	2815	2815	2826	2826	2994
59	2871	2804	2748	2714	2703	2703	2703	2681	2636	2670	2636	2659	2670	2681	2670	2670	2871
60	2726	2692	2625	2625	2580	2580	2614	2592	2491	2513	2502	2502	2525	2547	2536	2536	2726

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61	2580	2536	2502	2458	2424	2424	2446	2424	2368	2346	2368	2390	2424	2379	2413	2424	2580
62	2458	2413	2368	2323	2312	2323	2323	2290	2256	2223	2245	2301	2290	2223	2268	2279	2458
63	2335	2323	2223	2201	2156	2178	2189	2178	2134	2134	2145	2212	2134	2100	2111	2156	2335
64	2223	2201	2089	2067	2067	2055	2078	2078	2055	2011	2033	2067	2033	2000	2011	2078	2223
65	2122	2111	1977	1977	1977	1966	2000	2000	1921	1899	1899	1888	1888	1910	1899	1932	2122
66	1966	1932	1854	1899	1832	1843	1854	1865	1765	1776	1765	1754	1787	1787	1798	1776	1966
67	1832	1810	1787	1765	1731	1731	1743	1720	1653	1653	1664	1676	1687	1720	1709	1642	1832
68	1731	1698	1698	1664	1631	1586	1575	1575	1519	1553	1586	1553	1586	1586	1586	1553	1731
69	1631	1597	1597	1564	1519	1486	1463	1508	1419	1430	1441	1430	1441	1486	1475	1463	1631
70	1519	1497	1486	1452	1407	1396	1374	1396	1318	1329	1307	1329	1352	1374	1363	1352	1519
71	1396	1374	1352	1340	1285	1318	1273	1307	1206	1218	1206	1195	1240	1251	1229	1218	1396
72	1296	1273	1229	1229	1195	1206	1206	1240	1117	1128	1128	1128	1151	1173	1139	1128	1296
73	1173	1151	1106	1117	1106	1084	1095	1106	1005	1005	1005	1039	1050	1050	1039	1050	1173
74	1106	1072	1028	1039	1017	1005	1017	1005	905	916	927	938	961	949	938	961	1106
75	994	972	938	938	916	916	927	938	793	827	860	849	860	871	849	860	994
76	905	905	871	860	871	871	849	838	726	748	771	771	804	782	793	782	905
77	827	804	771	782	771	760	760	760	637	659	670	715	704	693	693	693	827
78	737	715	704	715	704	704	693	681	559	570	592	614	626	614	614	592	737
79	670	637	637	648	614	592	603	603	492	492	536	547	525	536	525	547	670
80	581	559	559	547	525	514	547	547	413	447	469	480	480	469	469	480	581
81	536	503	503	469	447	447	447	458	357	380	402	413	402	391	391	402	536
82	458	447	413	391	380	391	402	413	302	324	335	335	335	357	335	324	458
83	391	380	369	357	357	346	346	346	257	268	302	302	290	290	290	268	391
84	335	313	302	302	290	290	290	290	223	235	257	279	268	257	246	246	335
85	279	268	268	257	246	246	235	235	179	190	190	223	235	235	212	212	279
86	235	223	212	212	201	212	201	201	156	145	156	156	179	168	168	156	235
87	201	201	190	190	179	179	179	179	101	89	123	123	123	134	123	112	201
88	168	145	134	134	112	123	134	156	112	101	89	112	112	101	89	89	168
89	101	101	89	89	89	78	78	89	101	101	89	101	112	101	89	89	101
90	89	78	78	78	78	89	78	78	78	78	89	89	89	78	67	78	89
91	67	67	78	78	78	89	101	101	67	78	67	67	67	56	56	67	67
92	67	67	67	67	67	67	67	67	56	56	67	67	67	56	56	56	67

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93	45	56	45	45	45	56	56	56	56	78	67	67	67	56	56	56	45
94	45	45	45	45	56	56	45	45	56	67	67	67	78	56	56	56	45
95	45	45	45	56	56	45	56	34	56	56	67	67	67	67	56	56	45
96	34	34	45	45	56	56	56	45	56	56	67	67	67	56	56	56	34
97	45	45	45	56	56	56	45	45	56	56	56	56	67	67	56	56	45
98	34	45	45	56	45	45	45	34	45	56	56	67	67	56	56	56	34
99	34	45	45	45	45	45	45	34	45	56	56	56	56	67	56	56	34
100	45	45	45	45	34	34	45	34	45	56	56	56	56	56	56	45	45
101	34	45	34	34	34	34	45	34	45	45	56	56	67	56	56	56	34
102	34	45	45	34	45	45	34	34	56	56	56	56	56	56	56	45	34
103	34	45	45	45	34	45	34	34	45	45	45	56	56	56	45	56	34
104	45	45	45	45	34	34	34	34	45	45	56	56	56	45	45	45	45
105	34	45	45	45	34	34	34	34	34	45	45	45	45	45	34	45	34
106	34	34	45	34	34	34	22	34	22	34	34	34	34	45	45	34	34
107	22	34	34	34	34	34	34	22	22	34	34	34	34	34	34	34	22
108	22	34	22	34	22	22	34	22	22	22	34	34	34	22	22	22	22
109	22	22	22	22	22	22	22	22	22	22	22	34	22	34	22	34	22
110	22	22	22	22	22	11	11	11	22	22	22	22	22	22	22	34	22
111	11	11	11	11	11	22	11	0	22	22	22	22	22	22	22	22	11
112	11	22	11	11	11	11	11	11	22	22	22	22	22	22	22	22	11
113	11	11	11	0	0	11	11	0	11	22	22	22	11	22	11	22	11
114	11	11	11	11	0	11	11	11	22	22	22	22	22	22	22	22	11
115	11	11	11	11	11	11	0	0	22	22	22	22	22	22	22	22	11
116	0	11	11	11	0	11	0	0	11	22	22	22	11	22	22	22	0
117	11	11	0	11	11	11	0	0	11	22	22	22	22	22	11	22	11
118	0	11	11	11	11	0	0	0	22	22	22	11	11	11	22	22	0
119	0	0	11	11	0	0	0	0	11	22	22	22	11	22	11	11	0
120	0	0	0	0	11	0	0	11	22	22	22	22	11	11	22	22	0
121	0	11	0	0	11	0	0	0	22	22	22	22	22	11	22	22	0
122	11	11	11	11	11	0	0	0	22	11	22	22	11	11	22	22	11
123	11	11	11	11	11	11	0	0	22	22	22	11	11	11	11	11	11
124	0	22	11	0	11	11	0	11	11	22	22	22	22	22	22	22	0

Laboratory: Standard-Tech Co., Ltd. Testing Center

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125	0	11	11	22	0	11	11	0	11	22	22	22	22	11	22	22	0
126	0	11	11	0	11	0	11	11	22	22	22	11	22	22	11	22	0
127	11	0	11	11	0	0	11	0	22	22	11	22	22	22	22	22	11
128	0	11	11	11	11	0	0	0	22	22	22	11	22	22	11	11	0
129	0	11	22	11	0	0	0	11	11	22	22	22	22	22	11	11	0
130	0	11	11	11	0	11	0	11	22	11	22	22	22	22	11	11	0
131	11	11	11	11	0	0	0	0	11	22	22	22	22	22	22	11	11
132	0	11	11	11	0	11	0	11	11	22	11	22	22	22	22	11	0
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136	0	11	11	22	11	11	11	0	22	22	22	22	22	22	11	22	0
137	11	22	11	11	0	0	11	11	11	22	22	22	22	22	22	11	11
138	0	11	0	11	11	0	0	0	11	22	11	22	22	22	22	11	0
139	0	11	11	11	0	11	0	0	11	22	22	22	22	22	11	11	0
140	0	11	0	11	11	0	11	11	11	11	22	22	11	22	22	22	0
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143	0	11	0	22	11	0	11	11	22	22	22	22	22	11	22	22	0
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145	0	11	22	0	22	0	11	0	11	22	11	11	22	11	22	11	0
146	11	11	11	11	11	11	0	11	22	22	22	22	11	22	22	11	11
147	0	11	11	11	11	0	11	11	22	22	22	22	11	22	11	22	0
148	0	11	11	11	11	11	11	11	22	22	22	22	22	22	11	22	0
149	0	11	11	11	11	0	11	0	22	11	22	22	22	22	11	11	0
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155	11	11	11	0	11	11	11	0	22	22	22	22	22	11	22	22	11
156	0	22	11	11	11	11	11	0	11	22	11	22	22	22	11	11	0

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157	11	11	11	11	11	0	11	11	11	22	22	11	11	11	11	11	11
158	11	22	11	11	11	0	0	0	22	22	22	11	11	11	22	11	11
159	0	11	11	11	11	11	0	0	22	22	22	22	22	11	11	22	0
160	0	11	11	0	22	0	11	22	11	22	22	11	22	11	22	11	0
161	11	11	11	11	11	11	11	11	11	22	11	11	22	11	22	11	11
162	11	11	11	11	11	11	11	11	22	11	22	11	11	11	11	11	11
163	0	11	11	0	11	11	11	11	22	22	22	11	11	22	22	22	0
164	0	11	11	11	11	11	0	0	22	22	22	22	22	22	0	22	0
165	0	11	11	11	11	11	11	11	11	11	22	11	11	22	11	22	0
166	11	22	11	11	11	11	11	0	22	11	22	11	11	11	11	11	11
167	0	22	11	11	0	11	11	0	11	11	22	11	22	11	11	11	0
168	0	22	11	11	11	11	0	11	11	11	22	11	11	11	22	22	0
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171	0	11	11	11	11	11	11	0	11	11	22	22	11	11	11	11	0
172	0	11	11	11	11	11	0	11	11	11	11	11	11	11	11	11	0
173	0	11	11	11	11	22	11	11	11	11	11	22	22	11	22	11	0
174	11	11	22	11	11	11	22	11	11	22	22	22	22	11	11	11	11
175	0	11	11	22	11	11	11	11	11	11	11	11	11	11	11	11	0
176	0	11	22	11	11	11	11	11	22	22	22	11	11	11	22	11	0
177	11	22	11	11	11	11	11	11	11	22	11	22	11	22	11	11	11
178	0	11	22	11	11	22	11	11	0	11	11	11	11	22	11	0	0
179	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
180	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-331	2 meter Integrating Sphere	2018-07-02	2019-07-01
ST-R-327	Spectral analysis system HAAS-2000	2018-07-02	2019-07-01
ST-R-332	Standard Lamp	2018-07-04	2019-07-03
ST-R-333	Power Meter for Integrating Sphere	2018-06-28	2019-06-27
ST-R-355	Goniophotometer system	2018-07-01	2019-06-30
ST-R-359	Standard Lamp	2018-07-04	2019-07-03
ST-R-358	Power Meter for Goniophotometer	2018-06-28	2019-06-27
Expand Uncertainty: Photometric Measurement (Sphere):2.04%, k=2 Chromaticity Measurement(Sphere):28.8K, k=2 Photometric Measurement(Goniophotometer):2.36%, k=2			

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