



Report No.: GZE160347-N

NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

LIGHT EFFICIENT DESIGN

(Brand Name:N/A)

188 S. Northwest Highway Cary, IL 60013

LED Lamp

Model name(s): LED-8087E40C-A
LED-8087M40C-A

Remark : The suffix of the model name“E” stand for E26;
“M” stand for E39.

Representative (Tested) Model: LED-8087E40C-A

Model Different :N/A

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date: Apr.28,2016

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

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

Tel: 8620-3229 0320 Fax: 8620-32290422 <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	Apr.28,2016
Test Report No.	GZE160347-N
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	LIGHT EFFICIENT DESIGN		
Brand Name	N/A		
Model Number	LED-8087E40C-A		
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	

Integrating Sphere
Goniophotometer
Electrical Measurements:

	Output	Output	
Input Wattage	--	31.23	W
Input Current	--	0.1466	A
Input Voltage (ac)	--	220.0	V
Power Factor	--	0.9681	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	3992.3	lm
Initial Lumen Efficacy	--	127.84	lm/w
Correlated color temperature / CCT	4046	--	K
Color rendering index / CRI	83.8	--	
R9 Value	12	--	
Duv	0.0004	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)		1472	cd
Beam angle (if applicable)		109.7	°
Zonal lumens in the 0°-60° zone		81.2	%
Zonal lumens in the 60°-90° zone	-----	18.2	%
Zonal lumens in the 90°-120° zone		0.5	%
Zonal lumens in the 120°-180° zone		0.1	%

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Test Specifications:	
Date of Receipt	: Apr.01,2016
Date of Test	: Apr.24,2016
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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 220 Volts, 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 220 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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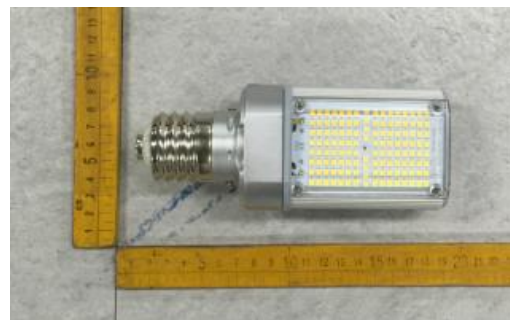
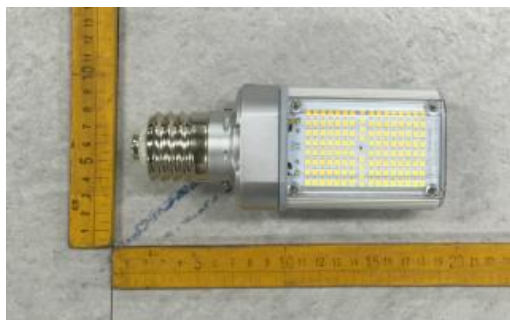
1. Product Information:

Brand Name	N/A
Model Number	LED-8087E40C-A, LED-8087M40C-A
Luminaire Type	LED Lamp
Rated Voltage / Frequency	220~347 Vac, 50/60Hz
Nominal Power	30W
Rated Initial Lamp Lumen	--
Declared CCT	4000K
LED Manufacturer	N/A
LED Model	N/A
Sample Receipt Date	Apr.01,2016
Sample Number	GZE160347-N1(4000K)

Photo



LED-8087E40C-A



LED-8087M40C-A

2.1 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-04-24	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED-8087E40C-A		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160347	220.0	60	0.1466	31.23	0.9681	15.52
-N1	347.0	60	0.0971	31.38	0.9318	18.33

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	220.0
Frequency (Hz)	60
Color Rendering Index (CRI)	83.8
R9	12
CCT (K)	4046
Chromaticity (x, y)	x=0.3787 y=0.3766
Chromaticity (u', v')	u'=0.2240 v'=0.5012
Duv	0.0004

Special Color Rendering Indices			
R1	82	R9	12
R2	90	R10	76
R3	95	R11	81
R4	82	R12	62
R5	82	R13	84
R6	86	R14	98
R7	86	R15	76
R8	66	--	--

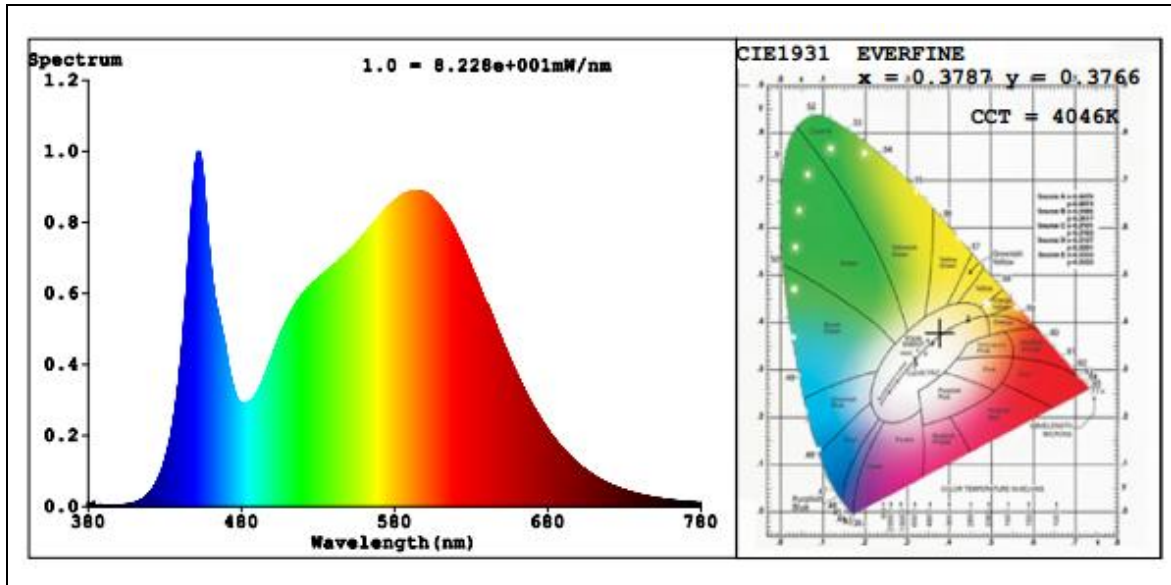
Goniophotometer Method :

Parameter	Result
Test Voltage (V)	220.0
Frequency (Hz)	60
Total Luminous (lm)	3992.3
Luminous Efficacy (lm/W)	127.84
Beam Angle°	109.7
Center Beam Candle Power (cd)	1472

Goniophotometer Methodn :

Parameter	Result
Test Voltage (V)	347.0
Frequency (Hz)	60
Total Luminous (lm)	3993.7
Luminous Efficacy (lm/W)	127.27

Spectral Power Distribution & Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,090.2	27.3%
0-40	1,818.3	45.6%
0-60	3,242.1	81.2%
60-90	726.0	18.2%
70-100	268.0	6.7%
90-120	19.9	0.5%
0-90	3,968.1	99.4%
90-180	23.7	0.6%
0-180	3,991.8	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	137.5	3.4%	90-100	5.0	0.1%
10-20	378.4	9.5%	100-110	10.8	0.3%
20-30	574.2	14.4%	110-120	4.0	0.1%
30-40	728.1	18.2%	120-130	1.2	0%
40-50	765.0	19.2%	130-140	0.8	0%
50-60	658.8	16.5%	140-150	0.7	0%
60-70	463.0	11.6%	150-160	0.6	0%
70-80	209.3	5.2%	160-170	0.4	0%
80-90	53.7	1.3%	170-180	0.2	0%

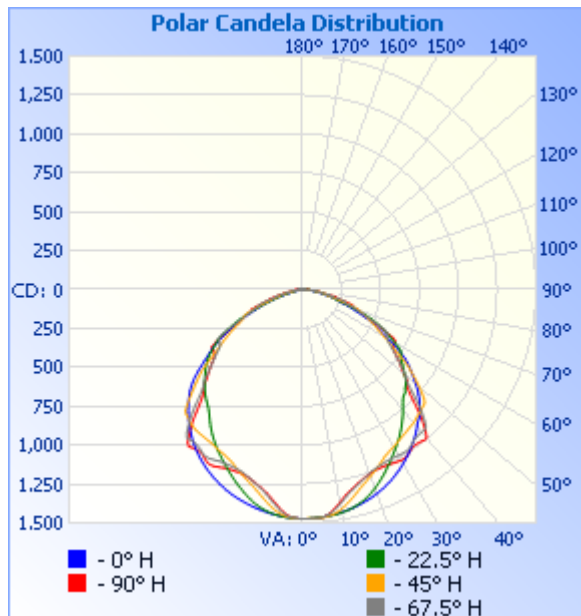
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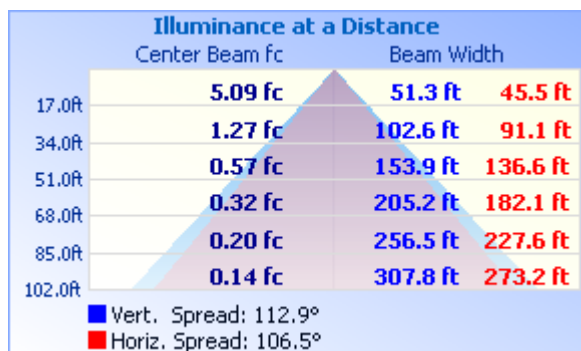
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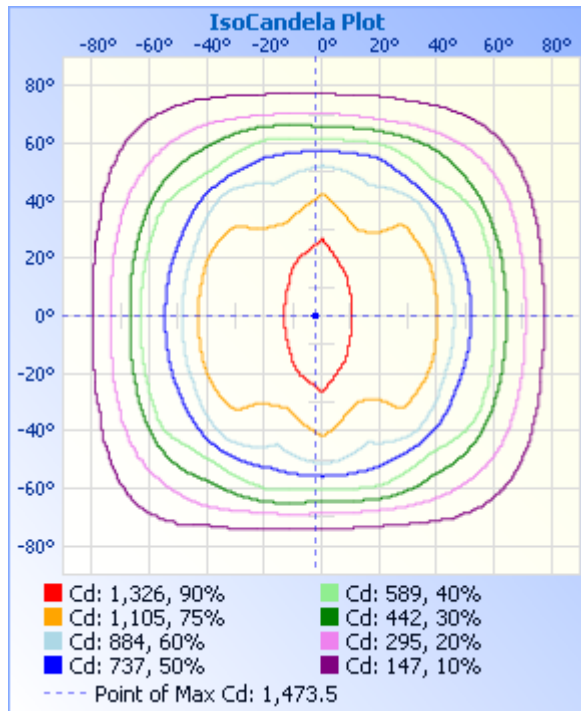
Photometric Data



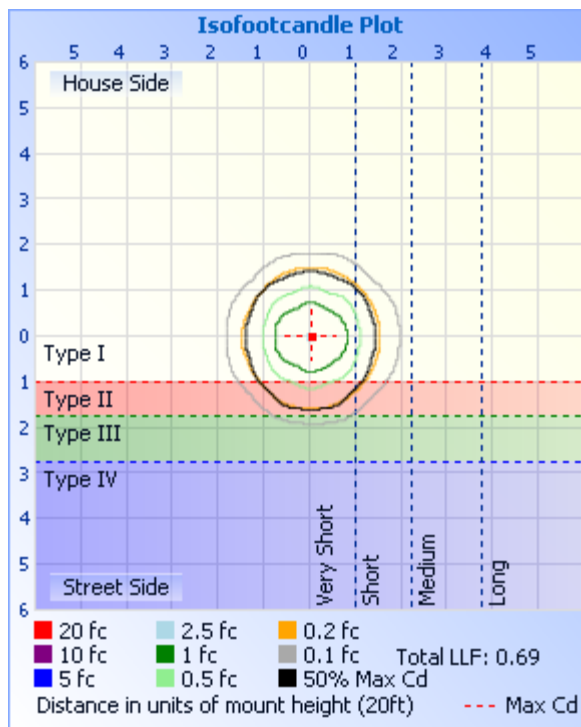
Illuminance Plots



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	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472	1472
1	1472	1472	1471	1472	1472	1472	1472	1472	1471	1472	1472	1471	1472	1472	1472	1472	1472
2	1472	1471	1472	1472	1473	1472	1472	1471	1470	1471	1470	1470	1468	1470	1471	1471	1472
3	1470	1470	1471	1472	1473	1473	1472	1470	1468	1469	1467	1465	1462	1465	1468	1470	1470
4	1469	1469	1471	1472	1473	1472	1472	1469	1466	1467	1462	1455	1451	1455	1463	1468	1469
5	1467	1467	1470	1469	1469	1469	1470	1468	1463	1464	1455	1440	1433	1441	1455	1466	1467
6	1464	1465	1468	1461	1460	1462	1468	1465	1460	1460	1444	1422	1411	1422	1444	1461	1464
7	1462	1463	1462	1450	1446	1450	1462	1463	1457	1456	1430	1399	1389	1401	1430	1457	1462
8	1460	1461	1456	1435	1428	1435	1454	1461	1453	1450	1414	1378	1367	1379	1413	1451	1460
9	1456	1458	1445	1416	1407	1415	1444	1457	1449	1443	1395	1357	1346	1358	1395	1445	1456
10	1452	1454	1433	1396	1386	1395	1430	1453	1445	1435	1376	1336	1328	1339	1377	1436	1452
11	1448	1450	1417	1376	1365	1375	1414	1448	1440	1426	1358	1319	1313	1322	1359	1427	1448
12	1444	1444	1401	1357	1347	1354	1396	1441	1435	1415	1340	1304	1300	1308	1341	1416	1444
13	1439	1438	1384	1340	1332	1337	1378	1434	1430	1402	1322	1291	1287	1295	1325	1404	1439
14	1434	1430	1367	1326	1318	1323	1360	1426	1425	1389	1306	1278	1275	1281	1309	1389	1434
15	1428	1421	1349	1313	1306	1309	1342	1416	1419	1374	1292	1266	1266	1271	1295	1375	1428
16	1422	1411	1332	1300	1294	1297	1324	1405	1413	1358	1278	1255	1258	1261	1282	1360	1422
17	1416	1400	1317	1288	1283	1284	1309	1392	1406	1343	1266	1247	1250	1253	1269	1345	1416
18	1409	1387	1303	1277	1274	1272	1294	1378	1400	1327	1252	1236	1246	1244	1256	1329	1409
19	1402	1373	1289	1267	1266	1262	1280	1364	1393	1311	1239	1231	1245	1238	1243	1313	1402
20	1395	1358	1276	1258	1258	1253	1267	1348	1385	1294	1226	1227	1245	1235	1231	1298	1395
21	1386	1342	1262	1248	1254	1243	1253	1332	1377	1278	1214	1225	1244	1233	1220	1283	1386
22	1378	1326	1249	1242	1252	1237	1239	1315	1368	1261	1203	1224	1246	1232	1207	1266	1378
23	1369	1309	1236	1238	1250	1233	1226	1297	1359	1245	1191	1222	1248	1231	1197	1251	1369
24	1360	1292	1224	1234	1250	1230	1213	1280	1349	1229	1183	1222	1253	1230	1189	1235	1360
25	1349	1275	1212	1230	1250	1228	1201	1263	1340	1213	1177	1223	1260	1231	1183	1220	1349
26	1339	1257	1198	1228	1251	1226	1189	1245	1329	1196	1172	1226	1266	1235	1178	1205	1339
27	1328	1240	1188	1227	1255	1225	1180	1227	1318	1181	1167	1231	1271	1240	1172	1191	1328
28	1316	1222	1180	1227	1260	1227	1172	1209	1308	1165	1162	1235	1272	1245	1167	1175	1316

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29	1304	1204	1174	1229	1263	1228	1166	1191	1296	1148	1156	1239	1267	1248	1162	1160	1304
30	1291	1187	1167	1231	1266	1231	1160	1173	1284	1131	1151	1240	1256	1248	1156	1143	1291
31	1278	1171	1160	1232	1267	1235	1154	1156	1271	1113	1147	1237	1242	1243	1151	1126	1278
32	1265	1154	1154	1233	1263	1237	1147	1139	1259	1095	1144	1227	1236	1232	1148	1109	1265
33	1252	1136	1147	1232	1254	1237	1141	1121	1245	1077	1141	1215	1233	1221	1146	1092	1252
34	1238	1119	1141	1228	1242	1233	1135	1103	1230	1058	1139	1210	1234	1214	1144	1073	1238
35	1224	1101	1136	1219	1233	1226	1131	1084	1216	1038	1138	1204	1239	1209	1143	1053	1224
36	1209	1082	1130	1206	1233	1215	1127	1065	1200	1017	1137	1203	1246	1208	1141	1034	1209
37	1194	1063	1126	1199	1235	1209	1123	1045	1184	998	1135	1207	1228	1212	1138	1016	1194
38	1178	1044	1121	1195	1238	1207	1121	1025	1168	981	1130	1208	1185	1211	1131	1002	1178
39	1162	1025	1117	1193	1245	1206	1118	1004	1151	966	1125	1184	1143	1186	1127	990	1162
40	1145	1003	1112	1193	1240	1210	1114	983	1133	954	1121	1142	1096	1145	1123	979	1145
41	1128	982	1107	1196	1206	1212	1109	963	1115	943	1113	1101	1039	1105	1114	967	1128
42	1117	963	1099	1184	1161	1195	1103	945	1097	930	1102	1056	989	1059	1105	955	1117
43	1105	947	1094	1148	1114	1153	1100	930	1077	917	1096	1006	946	1009	1102	947	1105
44	1085	939	1089	1107	1057	1111	1095	916	1058	904	1085	956	917	960	1088	941	1085
45	1065	932	1082	1063	1002	1067	1089	902	1038	890	1051	912	907	916	1054	928	1065
46	1046	915	1076	1013	956	1013	1086	889	1018	876	1013	887	881	894	1018	915	1046
47	1025	904	1072	963	918	963	1074	873	996	861	975	869	846	873	983	902	1025
48	1001	891	1051	917	904	917	1039	858	974	846	939	834	820	838	952	886	1001
49	978	876	1018	884	892	888	997	843	951	831	905	801	796	808	918	870	978
50	952	858	984	869	857	877	957	827	922	815	871	772	774	780	884	853	952
51	926	840	943	839	828	845	917	810	890	801	840	746	749	754	854	839	926
52	900	822	908	805	803	810	882	792	853	785	791	721	727	729	808	828	900
53	874	804	871	780	782	782	846	770	817	768	745	697	707	707	763	820	874
54	849	787	840	754	758	755	818	749	781	752	706	675	700	684	725	812	849
55	824	772	799	729	733	730	770	729	749	731	671	653	693	662	690	797	824
56	794	761	748	704	711	706	723	712	719	706	638	639	693	649	656	777	794
57	760	753	710	681	694	682	686	700	688	681	606	632	694	642	624	754	760
58	723	743	673	659	687	660	652	679	656	660	578	629	686	638	596	730	723
59	683	720	637	639	684	639	617	654	619	641	551	629	648	638	572	705	683
60	644	689	606	626	682	629	586	630	579	618	522	626	590	632	549	673	644

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61	607	658	577	619	679	625	556	607	541	584	493	596	543	599	525	635	607
62	576	630	553	613	662	620	526	584	507	546	465	539	503	544	504	596	576
63	546	604	529	607	608	616	498	549	476	507	442	489	463	496	485	559	546
64	518	576	508	590	557	598	470	512	445	474	428	448	436	454	470	527	518
65	487	547	484	543	517	548	445	475	407	440	420	409	413	417	457	494	487
66	451	516	459	494	477	500	422	440	366	399	409	381	394	390	443	458	451
67	411	480	439	454	441	458	410	401	332	354	390	360	374	369	420	413	411
68	376	438	422	418	416	421	399	357	304	313	353	343	356	352	385	366	376
69	349	389	404	385	396	387	383	316	273	280	315	319	349	329	348	326	349
70	323	347	385	362	378	363	359	283	240	246	279	301	320	313	312	297	323
71	288	315	362	345	344	344	327	247	214	214	245	292	287	301	277	270	288
72	259	283	326	315	331	314	289	213	184	191	216	265	257	271	247	239	259
73	248	246	287	284	333	285	252	187	159	166	196	235	214	242	224	217	248
74	229	222	248	288	300	290	219	162	135	145	170	192	217	203	198	208	229
75	202	214	224	275	269	271	197	141	112	124	156	176	199	188	184	187	202
76	182	190	199	245	217	238	171	120	90	107	150	173	152	177	173	171	182
77	153	173	166	193	199	187	145	104	74	92	131	135	159	137	159	147	153
78	146	152	169	171	220	168	147	89	58	79	103	127	127	133	132	140	146
79	129	138	166	180	155	178	135	77	46	68	95	106	120	110	121	128	129
80	113	129	137	134	141	128	105	68	33	55	76	98	104	101	99	110	113
81	97	116	117	120	138	118	89	54	23	43	68	85	95	90	93	97	97
82	83	102	106	110	110	106	78	42	14	33	56	75	75	80	79	88	83
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84	60	76	85	90	97	82	56	28	3	20	39	42	43	47	61	62	60
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89	19	26	31	26	24	21	15	6	0	5	9	10	9	14	19	20	19
90	16	20	25	21	19	17	11	4	0	4	7	8	9	12	17	17	16
91	14	15	20	17	14	12	8	0	0	0	6	8	9	11	15	11	14
92	0	0	13	13	8	7	0	0	0	0	0	6	7	10	5	0	0

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93	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
95	6	11	0	0	0	0	0	1	0	1	0	0	0	0	0	12	6
96	17	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	17
97	21	15	2	0	0	0	0	0	0	0	0	0	0	0	7	16	21
98	22	16	12	0	0	0	0	0	0	0	0	0	0	0	14	17	22
99	21	16	11	0	0	4	0	0	0	0	0	13	0	0	11	16	21
100	20	16	9	0	7	23	0	0	0	0	0	25	30	0	10	17	20
101	20	16	9	0	27	22	0	0	0	0	0	27	38	0	9	17	20
102	20	16	7	0	27	23	0	0	0	0	0	30	35	1	7	17	20
103	19	16	5	1	27	24	0	0	0	0	0	26	37	3	4	18	19
104	20	17	2	0	30	24	1	0	0	0	1	24	34	6	1	16	20
105	19	15	0	9	31	26	4	0	0	0	3	20	30	7	0	16	19
106	17	14	0	10	30	25	7	0	0	0	4	19	24	9	0	13	17
107	16	9	0	12	31	21	9	0	0	0	5	20	23	12	0	7	16
108	11	4	0	13	26	21	8	0	0	0	5	18	24	11	0	3	11
109	5	1	0	12	24	18	8	0	0	0	5	15	22	10	0	1	5
110	2	0	0	14	20	19	8	0	0	0	4	12	19	9	0	0	2
111	0	0	0	14	21	18	6	0	0	0	4	12	16	9	0	0	0
112	0	0	0	12	21	15	5	0	0	0	3	10	14	9	0	0	0
113	0	0	0	11	18	13	4	0	0	0	3	9	13	8	0	0	0
114	0	0	1	10	15	12	3	0	0	0	2	7	11	6	0	0	0
115	0	0	1	9	13	11	3	0	0	0	2	6	9	6	1	0	0
116	0	0	1	8	12	8	2	0	0	0	1	6	8	5	1	0	0
117	0	0	1	7	11	7	2	0	0	0	1	5	7	5	1	0	0
118	0	0	1	6	8	6	1	0	0	0	1	4	7	4	1	0	0
119	0	0	1	5	7	5	1	0	0	0	1	4	6	4	1	0	0
120	0	0	1	5	6	5	1	0	0	0	1	3	5	3	1	0	0
121	0	0	1	4	6	4	1	0	0	1	1	3	4	3	1	0	0
122	0	0	1	3	5	3	1	0	1	1	1	2	4	3	1	0	0
123	0	0	1	3	4	3	0	0	1	1	1	2	3	2	1	0	0
124	1	0	1	3	3	2	0	0	1	1	1	2	3	2	1	0	1

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125	1	1	1	3	3	2	0	1	1	1	1	1	3	2	1	1	1
126	1	1	1	2	2	2	0	1	1	1	1	1	3	2	1	1	1
127	1	1	1	2	2	1	0	1	1	1	1	1	2	2	1	1	1
128	1	1	1	2	2	1	0	1	1	1	1	1	2	2	1	1	1
129	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1
130	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
131	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
132	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
133	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
134	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
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137	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
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143	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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146	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
147	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
148	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
149	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
150	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
151	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
152	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
153	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
154	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
155	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
156	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2

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157	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
158	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
159	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
160	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
161	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2
162	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
163	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
164	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2
165	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2
166	2	1	1	1	1	1	1	2	1	2	2	2	1	1	1	1	2
167	2	2	1	1	2	1	1	2	2	2	2	2	1	1	1	1	2
168	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	1	2
169	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
170	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
171	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
172	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
173	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
174	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
175	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
176	2	2	2	1	2	1	0	2	2	2	2	2	2	1	2	2	2
177	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
178	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
179	2	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2
180	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

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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 *******

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