



**Catalog Number** 71376  
**UPC Number** 601986713764  
**Description** LED Bullet Flood Light  
30W 2500 Lumens



#### Features

- Cree CXA LED's, CRI: 74
- Voltage: 120-277VAC
- Isolated Driver Compartment for Optimal Thermal Management
- Corrosion Resistant Die Cast Aluminum Housing
- Superior Architectural Black Powder Coat Finish
- Fluted Reflector & Tempered Glass Lens
- Waterproof & Durable Silicone Rubber Gaskets
- 1/2" NPT Knuckle Mount
- Power Factor: 95%
- Luminous Efficiency: 86 Lumens/watt
- Light Pattern: 75° Beam Spread Flood
- Operation Temperature: -40F to 131F
- 50,000+ Hour LED Life Expectancy
- IC Current Controlled LED Circuits
- Color Temperature: 5000K Cool White
- DLC (Design Light Consortium)
- cULus Listed
- 5 Year Warranty

#### General

Lumen Output: 2500  
Color Temperature: 5000K Cool White  
CRI: 74  
Light Pattern: 75° Beam Spread Flood  
Operation Temperature: -40F to 131F  
Housing: Corrosion Resistant Die Cast Aluminum Housing  
Housing Color: Black

#### Dimension Information

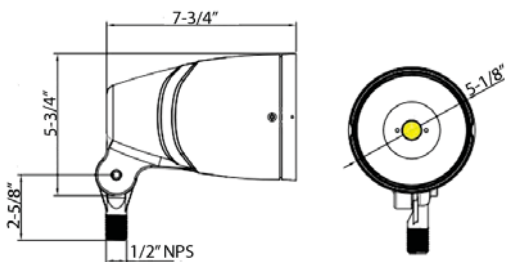
Height: 8-1/8"  
Depth: 7-3/4"  
Diameter: 5-1/8"  
Weight: 4 lbs

#### Specifications

Voltage: 120/208/240/277  
Input Current: .50A @ 120V  
Power Consumption: 30 Watts

#### Packaging

Box Qty 1  
Master Box Qty 6





NVLAP LAB CODE 201011-0

Report No.: GZE140307-F

## LM-79-08 Test Report

For

### Morris Products Inc.

53 Carey Rd  
Queensbury, NY 12804

**(Brand Name: Morris)**

## Architectural Flood and Spot Luminaires

Model name(s): 71376

Test & Report By:

*Sean Zhuo*

Engineer: Sean Zhuo

Date: Apr.04,2014

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>

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.04,2014
Test Report No.	GZE140307-F
Laboratory Contact Name	Tommy Liang

**Product Information:**

Organization Name	Morris Products Inc.	
Brand Name	Morris	
Model Number	71366	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Architectural Flood and Spot Luminaires	
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**

	Integrating Sphere Output	Goniophotometer Output	
Input Wattage	--	28.9	W
Input Current	--	0.2481	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9708	
Off-State Power	--	0	W

**Photometric Characteristics**

	Integrating Sphere	Goniophotometer	
Total Initial Lumen Output	--	2501.3	lm
Initial Lumen Efficacy	--	86.54	lm/w
Correlated color temperature / CCT	5064	--	K
Color rendering index / CRI	74.2	--	
R9 Value	0	--	
Duv	-0.0010	--	

**Luminous Intensity Distribution**

	Integrating Sphere	Goniophotometer	
Center beam candlepower (if applicable)		2298	cd
Beam angle (if applicable)		66.2	°
Zonal lumens in the 0°-60° zone	-----	99.5	%
Zonal lumens in the 60°-90° zone		0.5	%
Zonal lumens in the 90°-120° zone		0.0	%
Zonal lumens in the 120°-180° zone		0.0	%

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Test Specifications:	
Date of Receipt	: Mar.28,2014
Date of Test	:Apr.04,2014
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 120 Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  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 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	Morris
Model Number	71376
Luminaire Type	Architectural Flood and Spot Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60 Hz
Nominal Power	30W
Rated Initial Lamp Lumen	--
Declared CCT	5000K
LED Manufacturer	CREE
LED Model	CXA2520
Sample Receipt Date	Mar.28,2014
Sample Number	140307-6

**Photo**


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<b>2.1 Electrical, Photometric and Chromaticity Measurements</b> (Refer to Work Instruction QD25)	<b>IES LM-79 2008</b>
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<b>Test date</b>	2014-04-04	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	71376		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
140307-6	120.0	60	0.2481	28.90	0.9708	16.50
	277.0	60	0.1185	29.86	0.9098	19.23

**Sphere-Spectroradiometer Method:**

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	74.1
R9	0
CCT (K)	5064
Chromaticity (x, y)	x=0.3431 y=0.3481
Chromaticity (u', v')	u'=0.2115 v'=0.4826
Duv	-0.0010

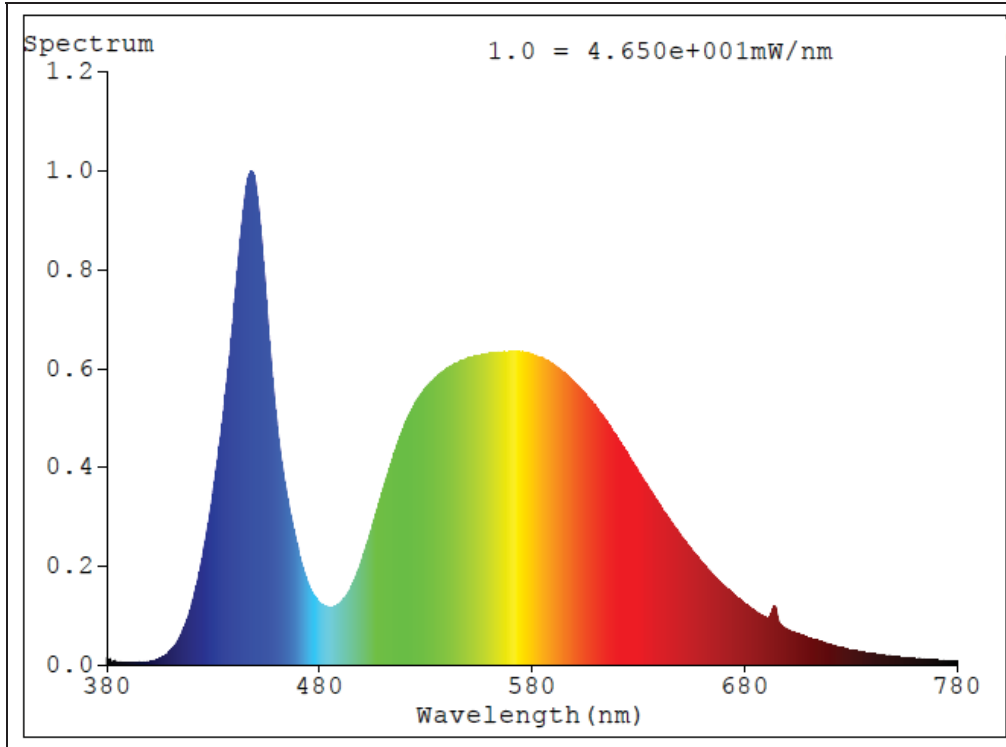
Special Color Rendering Indices			
R1	73	R9	0
R2	78	R10	46
R3	79	R11	73
R4	76	R12	48
R5	74	R13	73
R6	70	R14	88
R7	81	R15	69
R8	62	--	--

**Goniophotometer Method:**

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Test Current (A)	0.2481
Power Factor	0.9708
Test Power (W)	28.90
Total Luminous (lm)	2501.3
Luminous Efficacy (lm/W)	86.54
Beam Angle°	66.2
Center Beam Candle Power (cd)	2298
S/MH(C0/180)	0.98
S/MH(C90/270)	0.99

**Spectral Power Distribution**

Spectral Power Distribution:



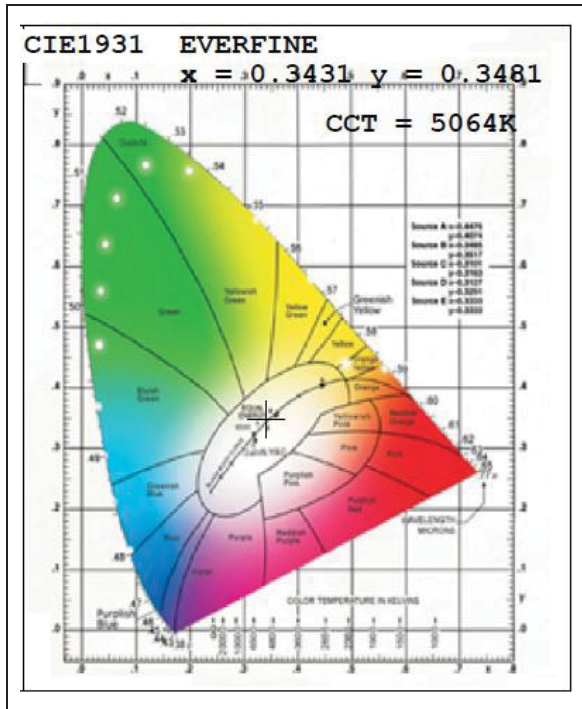
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**Chromaticity Diagram**



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**Zonal Lumen Tabulation**

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	1,618.6	64.7%	64.7%
0-40	2,239.5	89.5%	89.6%
0-60	2,487.3	99.4%	99.5%
60-90	13.2	0.5%	0.5%
70-100	4.4	0.2%	0.2%
90-120	0.0	0%	0%
0-90	2,500.6	100%	100%
90-180	0.2	0%	0%
0-180	2,500.8	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	208.4	8.3%	90-100	0.0	0%
10-20	621.1	24.8%	100-110	0.0	0%
20-30	789.1	31.6%	110-120	0.0	0%
30-40	620.9	24.8%	120-130	0.0	0%
40-50	229.8	9.2%	130-140	0.0	0%
50-60	18.0	0.7%	140-150	0.0	0%
60-70	8.8	0.4%	150-160	0.0	0%
70-80	3.7	0.1%	160-170	0.0	0%
80-90	0.7	0.0%	170-180	0.0	0%

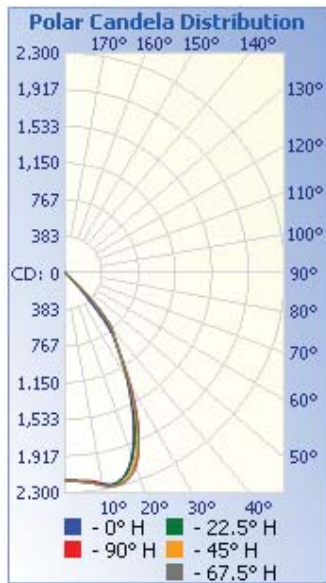
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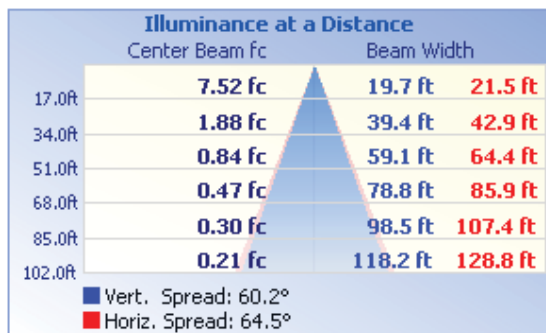
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### Photometric Data



### Illuminance Plots



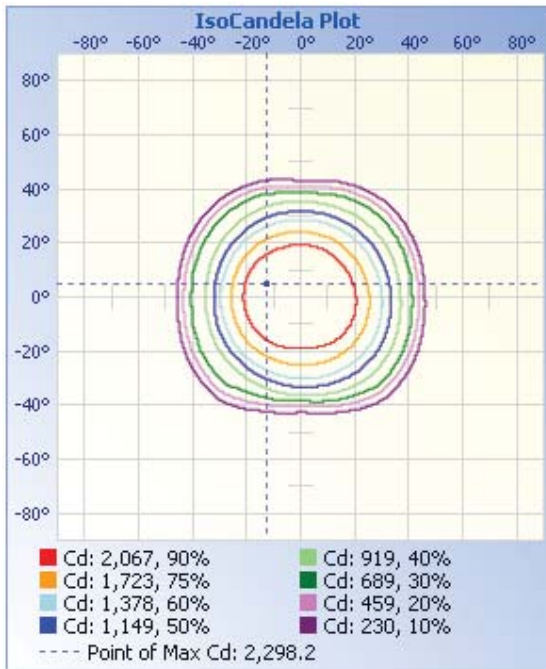
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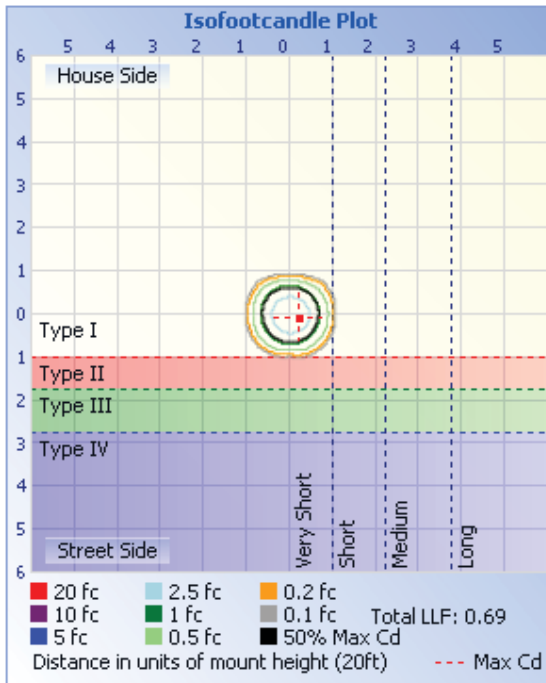
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### ISOCANDELA DIAGRAM



### 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	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173	2173
1	2179	2179	2178	2177	2176	2173	2171	2169	2166	2165	2165	2166	2170	2171	2174	2177	2179
2	2183	2183	2183	2180	2179	2173	2169	2164	2159	2157	2156	2161	2165	2171	2174	2180	2183
3	2187	2191	2188	2187	2182	2175	2166	2158	2150	2148	2151	2157	2162	2166	2173	2183	2187
4	2193	2197	2195	2192	2187	2175	2164	2149	2140	2140	2145	2156	2161	2165	2173	2185	2193
5	2199	2202	2200	2198	2190	2175	2158	2143	2132	2134	2143	2154	2160	2164	2173	2190	2199
6	2206	2211	2208	2206	2193	2175	2156	2137	2125	2130	2144	2157	2164	2168	2180	2198	2206
7	2218	2220	2220	2214	2200	2178	2154	2136	2121	2130	2147	2163	2170	2175	2190	2208	2218
8	2231	2234	2234	2227	2212	2187	2159	2137	2121	2132	2152	2172	2179	2185	2203	2222	2231
9	2243	2247	2251	2245	2227	2201	2166	2142	2124	2136	2163	2183	2190	2200	2213	2236	2243
10	2256	2262	2267	2264	2245	2218	2179	2147	2129	2139	2171	2193	2202	2215	2227	2246	2256
11	2266	2274	2283	2280	2263	2231	2190	2154	2135	2144	2177	2200	2211	2230	2240	2258	2266
12	2275	2280	2291	2293	2277	2244	2201	2158	2136	2147	2182	2207	2221	2240	2249	2267	2275
13	2274	2281	2292	2297	2287	2254	2204	2159	2138	2151	2187	2212	2230	2243	2252	2271	2274
14	2267	2274	2289	2298	2288	2257	2207	2160	2135	2153	2188	2217	2232	2240	2248	2267	2267
15	2249	2258	2277	2293	2283	2254	2204	2153	2129	2151	2189	2216	2229	2231	2236	2254	2249
16	2226	2236	2259	2285	2276	2246	2195	2145	2120	2142	2183	2211	2217	2210	2214	2232	2226
17	2194	2205	2233	2263	2258	2232	2180	2131	2104	2129	2170	2196	2196	2184	2182	2200	2194
18	2155	2166	2202	2237	2235	2208	2158	2111	2081	2107	2149	2172	2165	2149	2144	2159	2155
19	2106	2120	2165	2200	2202	2173	2127	2080	2052	2076	2119	2140	2127	2103	2096	2107	2106
20	2048	2066	2120	2159	2161	2127	2083	2037	2012	2037	2077	2095	2075	2047	2035	2045	2048
21	1984	2006	2066	2106	2108	2071	2025	1984	1962	1987	2026	2041	2015	1982	1966	1975	1984
22	1917	1942	2005	2046	2046	2009	1962	1922	1904	1931	1962	1976	1948	1911	1894	1904	1917
23	1846	1874	1936	1974	1974	1939	1894	1855	1843	1864	1895	1904	1875	1834	1820	1829	1846
24	1771	1801	1856	1895	1897	1864	1817	1785	1775	1796	1820	1827	1801	1758	1744	1757	1771
25	1694	1725	1774	1809	1817	1785	1741	1712	1704	1724	1745	1755	1727	1684	1668	1683	1694
26	1616	1647	1689	1722	1733	1706	1664	1639	1633	1651	1668	1681	1654	1612	1596	1607	1616
27	1538	1568	1598	1629	1645	1626	1588	1567	1564	1578	1595	1610	1579	1538	1523	1533	1538
28	1458	1486	1512	1540	1558	1541	1511	1496	1496	1508	1525	1537	1507	1468	1452	1457	1458
29	1380	1405	1425	1446	1467	1453	1427	1417	1426	1441	1459	1469	1433	1395	1382	1382	1380

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30	1306	1327	1338	1357	1375	1365	1343	1339	1357	1373	1392	1401	1362	1322	1310	1305	1306
31	1229	1248	1253	1267	1284	1277	1259	1261	1287	1306	1325	1333	1290	1250	1239	1232	1229
32	1156	1174	1171	1179	1191	1186	1172	1179	1213	1237	1259	1262	1216	1178	1167	1156	1156
33	1087	1103	1093	1098	1103	1097	1085	1097	1140	1167	1192	1191	1144	1109	1099	1085	1087
34	1020	1036	1025	1026	1026	1018	1007	1020	1067	1099	1129	1121	1075	1045	1034	1021	1020
35	961	976	963	960	957	949	937	948	996	1033	1067	1056	1009	986	974	959	961
36	905	921	910	903	897	888	877	886	911	970	1008	992	949	929	921	902	905
37	855	873	867	855	849	840	830	834	799	911	952	936	896	880	874	854	855
38	780	832	830	815	810	802	793	775	674	850	901	886	850	837	835	810	780
39	682	798	796	781	778	773	763	692	544	759	855	844	810	802	800	771	682
40	568	750	763	753	750	747	741	596	420	655	810	797	766	761	761	707	568
41	453	665	700	706	704	724	719	495	302	543	765	736	695	694	689	609	453
42	338	563	608	617	629	667	672	390	226	428	691	656	593	600	595	511	338
43	231	461	514	527	538	587	596	284	150	318	597	559	491	505	500	412	231
44	142	354	421	438	436	492	504	210	76	237	496	455	389	410	405	308	142
45	83	250	321	339	325	390	405	136	65	157	389	353	280	309	304	211	83
46	67	157	218	239	236	290	304	62	54	76	289	267	182	208	202	129	67
47	52	87	128	144	147	212	223	46	53	51	213	181	102	123	116	75	52
48	37	68	66	74	60	133	142	34	49	41	136	96	78	66	64	60	37
49	33	49	52	58	45	55	61	30	37	32	61	62	55	53	52	47	33
50	29	30	40	42	28	40	42	27	27	29	46	46	32	40	41	34	29
51	26	27	27	27	26	28	30	25	26	26	31	34	28	28	30	30	26
52	24	24	25	24	24	25	26	23	22	24	28	31	26	25	27	26	24
53	22	22	23	23	22	23	23	21	20	22	25	26	23	23	24	24	22
54	20	21	21	21	20	21	21	19	18	20	23	23	21	21	22	21	20
55	18	19	19	19	19	19	20	18	17	18	21	21	19	19	20	19	18
56	17	17	18	18	17	18	18	17	16	17	19	19	18	17	18	18	17
57	15	16	16	16	16	17	17	15	15	16	17	17	16	16	17	16	15
58	14	15	15	15	15	15	15	14	14	15	16	16	15	15	15	15	14
59	13	14	14	14	14	14	14	13	13	13	15	15	14	14	14	14	13
60	12	13	13	13	13	13	13	12	12	12	14	14	13	13	13	12	12
61	11	12	12	12	12	12	12	11	11	11	12	12	12	12	12	12	11

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62	11	11	11	11	11	11	11	10	10	11	12	12	11	11	11	11
63	10	10	10	10	10	10	10	10	9	10	11	11	10	10	10	10
64	9	9	10	10	9	10	10	9	9	9	10	10	9	9	9	9
65	9	9	9	9	9	9	9	8	8	9	9	9	9	9	9	9
66	8	8	8	8	8	8	8	8	8	8	9	9	8	8	8	8
67	8	8	8	8	8	8	8	7	7	7	8	8	7	7	7	8
68	7	7	7	7	7	7	7	7	6	7	7	7	7	7	7	7
69	6	6	7	7	6	7	6	6	6	6	7	7	6	6	6	6
70	6	6	6	6	6	6	6	5	5	6	6	6	6	6	6	6
71	5	5	5	5	5	5	5	5	5	5	6	6	5	5	5	5
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74	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
75	4	4	4	4	3	3	3	3	3	3	3	4	3	3	3	4
76	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
77	3	3	3	3	3	3	3	2	3	2	3	3	2	3	3	3
78	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3
79	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
80	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
81	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	2
82	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
83	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
84	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
85	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	1
86	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1
87	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

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Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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

**3. Test Equipment**

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2013-07-08	2014-07-07
ST-R-331	Spectral analysis system HAAS-2000	2013-06-21	2014-06-20
D204	Standard Lamp	2013-06-28	2014-06-27
PF2010	Power Meter for Integrating Sphere	2013-06-20	2014-06-19
EE-09	Goniophotometer system	2013-06-21	2014-06-20
D908S	Standard Lamp	2013-07-05	2014-07-04
PF210	Power Meter for Goniophotometer	2013-06-20	2014-06-19
ST-R-181A	Temperature Tester	2013-08-14	2014-08-13

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

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