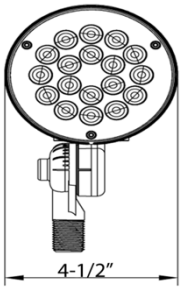
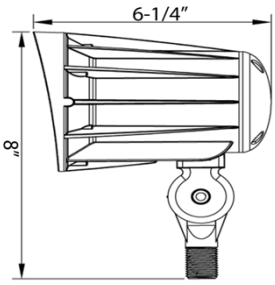
Catalog Number	71691
UPC Number	60198671691
Description	LED Spot Bullet Flood Light 42W 4204 Lumens Bronze

QPL ID #
PWG6GTSQ

Features

- Philips Lumiled LUXEON 3030 2D
- Voltage: 120-277VAC
- Isolated Driver Compartment for Optimal Thermal Management
- Corrosion Resistant Die Cast Aluminum Housing
- Superior Architectural Powder Coat Finish
- Fluted Reflector & Tempered Glass Lens
- Aluminum LED Board - High Conductive
- Waterproof, Aging Resistance, Salt Mist Resistance
- 1/2" NPT Knuckle Mount
- Power Factor: 0.9
- Luminous Efficiency: 106+ Lumens/watt
- Light Pattern: 65° Beam Spread Flood
- Operation Temperature: -40°F to 131°F
- 50,000+ Hour LED Life Expectancy
- IC Current Controlled LED Circuits
- Color Temperature: 3000K Cool White
- DLC (Design Light Consortium)
- cULus Listed
- 5 Year Warranty





General

Lumen Output:	4204
Color Temperature:	3000K Cool White
CRI:	80+
Light Pattern:	65° Beam Spread Flood
Operation Temperature:	-40°F to 131°F
Housing:	ADC12 Aluminum Heat Sink, SUS Back Plate
Housing Color:	Bronze

Dimension Information

Height: 8"
Depth: 6-1/4"
Diameter: 4-1/2"

Specifications

Voltage:	120/208/240/277
Input Current:	.60A
Power Consumption:	42 Watts

Packaging

Box Qty	1
Master Box Qty	6

Quality Assured

NVLAP LAD CODE 20096Q-0

LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Road

Queensbury, NY 12804

LED FLOOD LIGHT

Model: 71691

Laboratory: Leading Testing Laboratories

NVLAP CODE: 200960-0

No.180S, DongLiu road, BinJiang District, Hangzhou, China

Tel: +86-571-56680806 www.ledtestlab.com

Report No.: HZ160600301

The laboratory that conducted the testing detailed in this report has been accredited for SSL by NVLAP.

Reviewed by:

Engineer: April Zou

Jun. 30, 2016

Approved by:

Manager: Jim Zhang

Jun. 30, 2016

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Govemment.

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Test Summary

Sample Tested: 71691

Luminous Efficacy (Lumens /Watt)	Total Luminous Flux (Lumens)	Power (Watts)	Power Factor
106.9	4204.1	39.32	0.9852
CCT (K)	CRI	Stabilization Time (Light & Power)	BUG (Back, Up, Glare) Rating
3077	83.4	60	B2-U1-G0

Table 1: Executive Data Summary

Test specifications:

Date of Receipt	: Jun. 20, 2016
Date of Test	: Jun. 29, 2016
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	: IESNA LM-79-2008 Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

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Sample Photos

Figure 1- Overview of the sample

Equipment Under Test (EUT)	
Name	: LED FLOOD LIGHT
Model	: 71691
Electrical Ratings	: 120~277VAC, 50/60Hz
Product Description	: 3000K, Plastic Light Cover Manufacturer of light source: Philips Lumileds Model of light source: LUXEON 3030 2D
Manufacturer	: Morris Products Inc.
Address	: 53 Carey Road Queensbury, NY 12804

TEST RESULTS

Test ambient temperature was 24.9℃.

Base orientation was Light down. Test was conducted without a dimmer in the circuit.

The stabilization time of the sample was 60 minutes, and the total operating time including stabilization was 85 minutes.

The photometric distance is 2.47m.

Luminous data was taken at 0.5°vertical intervals and 10°horizontal intervals.

Parameter	Result	
Test Voltage (V)	120.0	277.0
Voltage frequency (Hz)	60	60
Test Current (A)	0.333	0.164
Power Factor	0.9852	0.8914
Test Power (W)	39.32	40.56
THD A%	14.75	19.19
Luminous Efficacy (lm/W)	106.9	104.8
Total Luminous Flux (lm)	4204.1	4252.3
Color Rendering Index (CRI)	83.4	
R9	12	
Correlated Color Temperature (CCT) (K)	3077	
Chromaticity (Chroma x, Chroma y)	(0.4332, 0.4057)	
Chromaticity (Chroma u, Chroma v)	(0.2475, 0.3477)	
Chromaticity (Chroma u , Chroma v)	(0.2475, 0.5215)	
Duv	0.0012	
Average Beam Angle (°)	66.6	
Center Beam Candle Power (cd)	2979	
Spacing Criteria	0.91 (0°-180°)/ 0.90 (90°-270°)	
Zonal Lumens in the 0°-60°Zone	92.34%	
Zonal Lumens in the 60°-90°Zone	7.59%	
Zonal Lumens in the 90°-120°Zone	0.02%	
Zonal Lumens in the 120°-180°Zone	0.06%	

Special Color Rendering Indices	
R1	82
R2	92
R3	96
R4	80
R5	82
R6	91
R7	83
R8	61
R9	12
R10	82
R11	79
R12	71
R13	85
R14	98

Table 2: Test data per Goniophotometer Method

Note: According to CIE 1976 (u ,v) diagram, u = u = 4x/(-2x+12y+3), v = 3v/2 = 9y/(-2x+12y+3).

Spectral Power Distribution

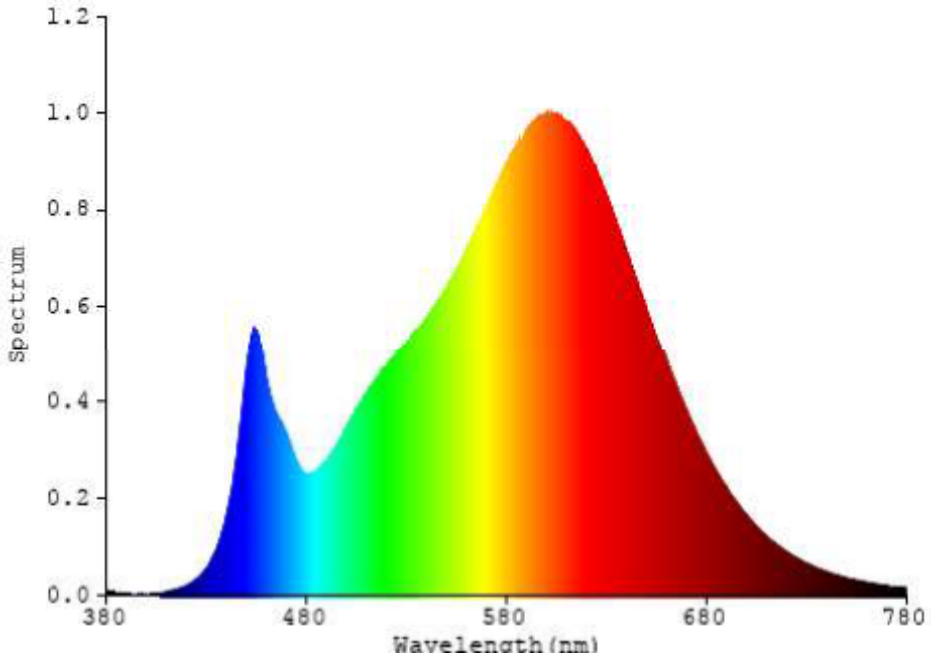

Chart 1: Spectral Power Distribution

Zonal Lumen Tabulation

γ(°)	Lumens	% Total
0- 10	272.291	6.48%
10- 20	696.839	16.58%
20- 30	891.232	21.20%
30- 40	872.105	20.74%
40- 50	700.993	16.67%
50- 60	448.454	10.67%
60- 70	223.036	5.31%
70- 80	81.29	1.93%
80- 90	14.63	0.35%
90-100	0.388	0.01%
100-110	0.184	0.00%
110-120	0.236	0.01%
120-130	0.348	0.01%
130-140	0.512	0.01%
140-150	0.588	0.01%
150-160	0.501	0.01%
160-170	0.332	0.01%
170-180	0.115	0.00%
Total	4204.1	100%

γ(°)	Lumens	% Total
0- 60	3881.914	92.34%
60- 90	318.956	7.59%
0-90	4200.87	99.92%
90- 180	3.204	0.08%
0- 180	4204.1	100%

Table 3: Zonal Lumen Data

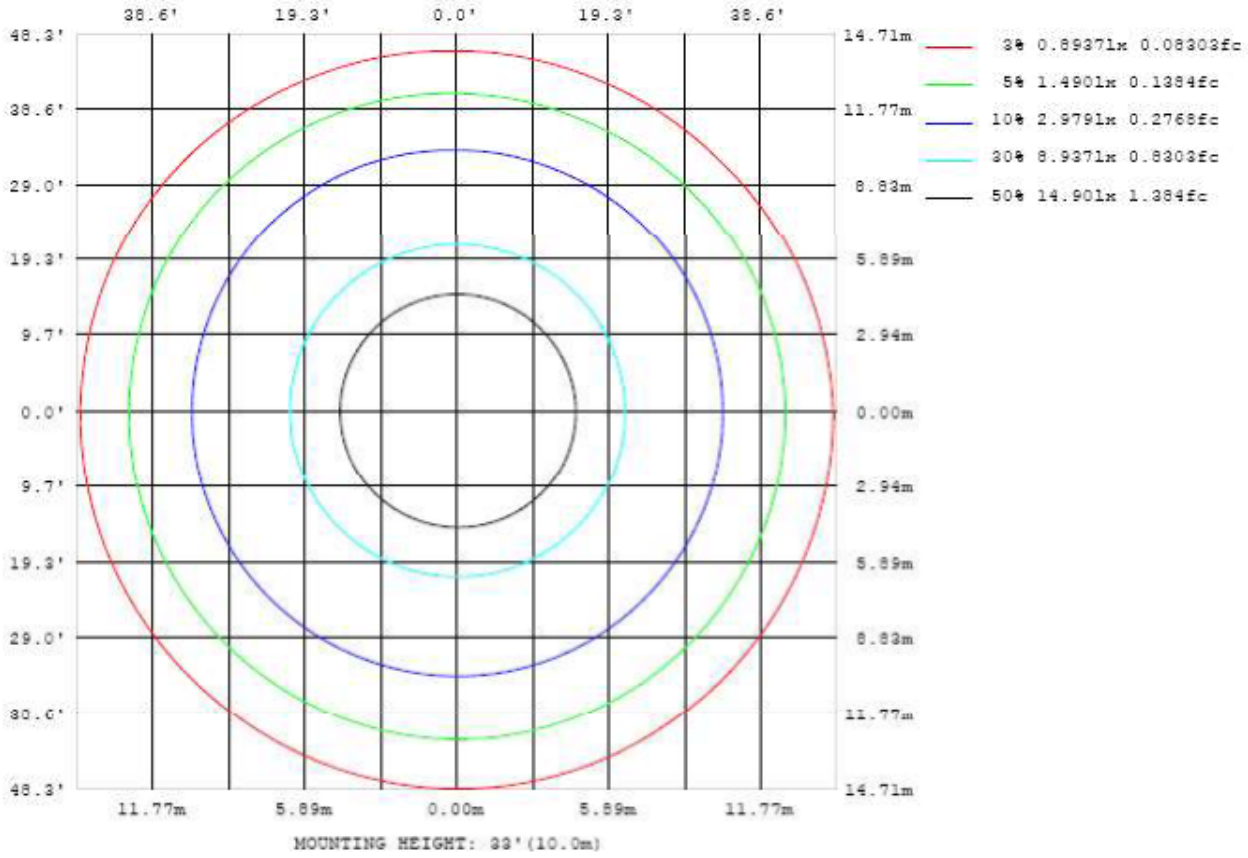

Chart 2: Illuminance Plot (Footcandles)

Luminous Intensity Distribution Plots

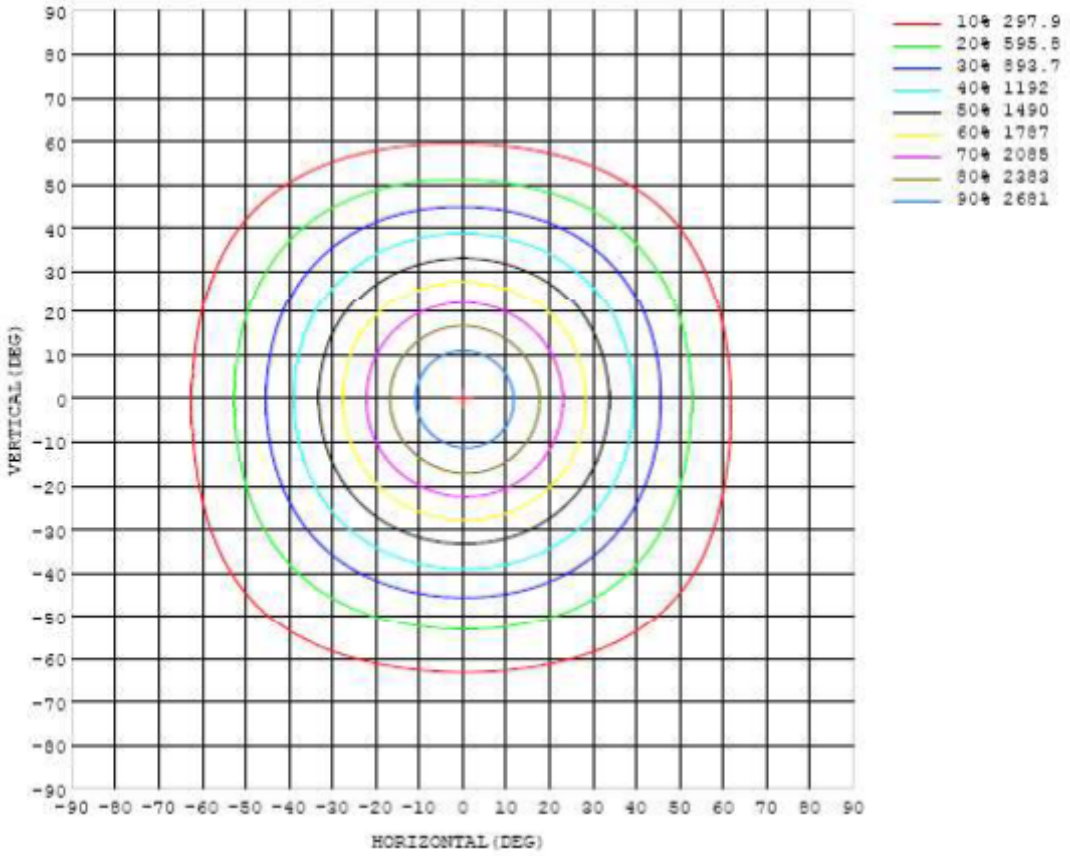

Chart 3: Isocandela PIot

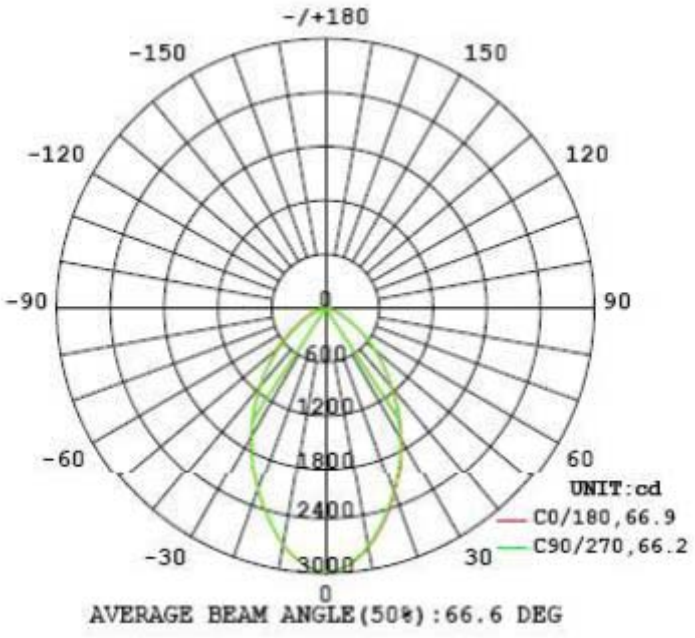

Chart 4: Polar Candela Distribution

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Luminous Intensity Data

Table--1 UNIT: cd

γ (DEG) \ C (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979	2979
5	2924	2926	2922	2918	2914	2905	2907	2906	2906	2905	2907	2910	2912	2913	2912	2919
10	2757	2761	2758	2751	2739	2724	2719	2721	2722	2721	2722	2724	2724	2726	2733	2747
15	2524	2529	2523	2511	2494	2478	2474	2478	2479	2477	2474	2473	2472	2475	2486	2507
20	2257	2260	2252	2238	2222	2209	2206	2209	2209	2206	2200	2198	2199	2203	2216	2238
25	1976	1977	1967	1955	1943	1934	1934	1936	1933	1936	1935	1935	1935	1934	1944	1968
30	1696	1696	1681	1675	1665	1660	1660	1659	1661	1662	1652	1648	1651	1655	1665	1682
35	1420	1421	1408	1403	1394	1390	1391	1388	1392	1396	1387	1385	1382	1384	1397	1404
40	1157	1157	1149	1150	1145	1140	1140	1137	1139	1140	1133	1134	1130	1129	1137	1146
45	921	923	920	923	922	916	913	912	909	905	903	900	887	886	901	913
50	707	709	712	718	718	710	706	702	698	693	685	669	648	643	667	693
55	514	517	524	531	530	524	519	518	513	504	484	455	440	439	451	485
60	349	365	372	375	376	372	368	367	361	346	317	298	285	280	290	317
65	219	245	254	256	257	255	252	250	242	221	199	181	167	166	178	193
70	130	150	167	169	170	168	166	165	152	130	112	93.3	84.1	81.4	90.4	110
75	68.2	85.1	101	107	108	106	104	99.1	85.6	71.2	55.4	41.4	31.7	30.4	38.6	53.0
80	28.7	42.0	53.1	63.2	64.2	63.1	60.7	52.6	40.9	29.4	16.9	5.07	0.07	0.21	3.98	16.7
85	4.90	12.5	19.3	27.2	29.9	28.9	27.2	18.7	11.3	3.86	0.00	0.13	0.26	0.27	0.12	0.10
90	0.02	0.25	1.59	3.91	4.34	3.99	2.54	0.99	0.28	0.05	0.08	0.14	0.30	0.31	0.11	0.06
95	0.06	0.04	0.14	0.52	0.74	0.68	0.47	0.12	0.08	0.09	0.11	0.16	0.47	0.66	0.12	0.07
100	0.08	0.07	0.09	0.14	0.13	0.11	0.16	0.15	0.13	0.13	0.15	0.19	0.52	0.74	0.13	0.09
105	0.10	0.10	0.11	0.14	0.12	0.11	0.15	0.17	0.18	0.19	0.19	0.20	0.25	0.29	0.17	0.11
110	0.14	0.13	0.13	0.12	0.12	0.11	0.15	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.22	0.15
115	0.19	0.18	0.17	0.16	0.16	0.15	0.20	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.28	0.19
120	0.24	0.23	0.22	0.21	0.21	0.20	0.25	0.37	0.37	0.37	0.38	0.38	0.38	0.38	0.34	0.24
125	0.30	0.29	0.28	0.28	0.27	0.26	0.33	0.47	0.47	0.48	0.48	0.49	0.49	0.49	0.44	0.31
130	0.40	0.38	0.37	0.36	0.36	0.35	0.43	0.63	0.63	0.64	0.65	0.65	0.65	0.66	0.58	0.40
135	0.52	0.51	0.50	0.49	0.48	0.47	0.57	0.83	0.82	0.84	0.85	0.85	0.85	0.86	0.75	0.52
140	0.62	0.62	0.61	0.60	0.60	0.58	0.71	1.03	1.02	1.03	1.03	1.03	1.03	1.04	0.91	0.63
145	0.71	0.71	0.71	0.71	0.71	0.69	0.83	1.21	1.19	1.20	1.20	1.19	1.19	1.20	1.04	0.71
150	0.75	0.76	0.76	0.76	0.76	0.73	0.89	1.34	1.31	1.31	1.31	1.30	1.30	1.32	1.12	0.75
155	0.80	0.80	0.80	0.80	0.80	0.77	0.93	1.42	1.39	1.38	1.38	1.37	1.36	1.38	1.17	0.80
160	0.86	0.86	0.86	0.86	0.86	0.83	0.96	1.46	1.43	1.43	1.43	1.42	1.42	1.44	1.21	0.86
165	0.94	0.92	0.92	0.92	0.91	0.89	0.99	1.46	1.44	1.44	1.44	1.44	1.43	1.46	1.24	0.96
170	1.02	1.02	1.03	1.03	1.03	1.01	1.05	1.43	1.43	1.42	1.41	1.41	1.41	1.44	1.20	1.01
175	1.15	1.12	1.09	1.07	1.07	1.06	1.07	1.31	1.39	1.36	1.36	1.35	1.35	1.36	1.19	1.17
180	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25

Table 4: Luminous Intensity Data

EQUIPMENT LIST

Test Equipment	Model	Equipment No.	Calibration Date	Calibration Due date
Goniophotometer system	GO-R5000	HZTE011-01	Jul. 17, 2015	Jul. 16, 2016
Digital Power Meter	PF2010A	HZTE028-01	Jul. 17, 2015	Jul. 16, 2016
AC Power Supply	PCR 500L	HZTE001-08	Jul. 17, 2015	Jul. 16, 2016
DC Power Supply	WY12010	HZTE004-03	Jul. 17, 2015	Jul. 16, 2016
Temperature Meter	TES1310	HZTE017-01	Jul. 17, 2015	Jul. 16, 2016
Standard Source	D908	HZTE012-01	Jul. 23, 2015	Jul. 22, 2016
Standard source	SCL-1400	HZTE012-02	Oct. 21, 2015	Oct. 20, 2016

Table 5: Test Equipment List

TEST METHODS

Seasoning of SSL Product

For the purpose of rating new SSL products, SSL products shall be tested with no seasoning.
Therefore, no seasoning was performed.

Goniophotometer Method

Photometric and Electrical Measurements

An EVERFINE Type C Model GO-R5000 Goniophotometer was used to measure the intensity at each angle of distribution for each sample. The photometric distance is 2.475m for near-field measurement or 30m for far-field measurement. Bandwidth of spectroradiometer is 380nm-780nm.
Ambient temperature was measured at the same height of the sample mounted on the Goniophotometer equipment. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation.
The stabilization time typically ranges from 30 min (small integrated LED lamps) to 2 or more hours for large SSL luminaires). It can be judged that stability is reached when the variation (maximum minimum) of at least 3 readings of the light output and electrical power over a period of 30 min, taken 15 minutes apart, is less than 0.5 %.
Electrical measurements including voltage, current, and power were measured using the Everfine Digital Power Meter.
Some graphics were created with Photometric Plus software.
The standard reference of the Goniophotometer system is halogen incandescent lamp, the intensity distribution type is omni-directional, and is traceable to the National Institute of Metrology P.R. China.
The uncertainty of goniophotometer system reported in this document is expended uncertainty is 1.94% with a coverage factor k=2.

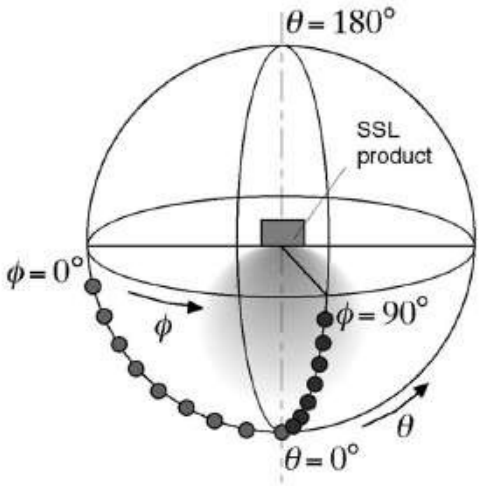
Color Characteristics Measurements

The color characteristics of SSL products include chromaticity coordinates, correlated color temperature, and color rendering index. These characteristics of SSL products may be spatially non-uniform, and thus, in order that they can be specified accurately, the color quantities shall be measured as values that are spatially average, weighted to intensity, over the angular range where light is intentionally emitted from the SSL product. The color characteristics measurements are using gonio-spectroradiometer.

Color Spatial Uniformity

The characteristics of SSL products may be spatially non-uniform, the chromaticity coordinate shall be measured at two vertical planes (C=0°/180° and C=90°/270°) and at 10° or less intervals for vertical angle until the light output dropped to below 10% of the peak intensity. The averaged weighted chromaticity coordinate was calculated from these points. The data was then analyzed to check for delta color differences of the u', v' chromaticity coordinates. The spatial non-uniformity of chromaticity, $\Delta u'v'$, is determined as the maximum deviation (distance on the CIE (u', v') diagram) among all measured points from the spatially averaged chromaticity coordinate.

The geometry for the chromaticity measurement using gonio-spectroradiometer is shown as following.



*** End of Report ***