



**Catalog Number** 71660  
**UPC Number** 60198671660  
**Description** LED Spot Bullet Flood Light  
 15W 1620 Lumens  
 Bronze



#### 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: 35° Beam Spread Flood
- Operation Temperature: -40°F to 131°F
- 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: 1620  
 Color Temperature: 5000K Cool White  
 CRI: 80+  
 Light Pattern: 35° Beam Spread Flood  
 Operation Temperature: -40°F to 131°F  
 Housing: ADC12 Aluminum Heat Sink, SUS Back Plate  
 Housing Color: Bronze

#### Dimension Information

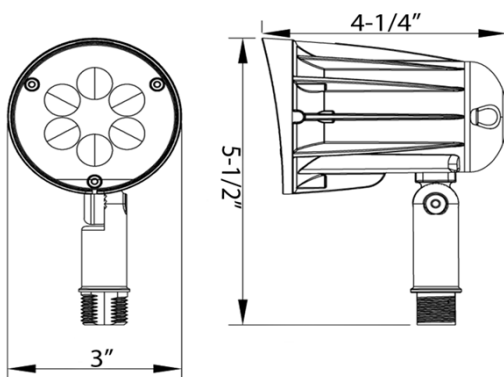
Height: 5-1/2"  
 Depth: 4-1/4"  
 Diameter: 3"

#### Specifications

Voltage: 120/208/240/277  
 Input Current: .18A  
 Power Consumption: 15 Watts

#### Packaging

Box Qty 1  
 Master Box Qty 12





## LM-79-08 Test Report

for

**Morris Products Inc.**

53 Carey Road  
Queensbury, NY 12804

**LED FLOOD LIGHT**

**Model: 71660**

**Laboratory: Leading Testing Laboratories**

NVLAP CODE: 200960-0  
No.180S, DongLiu road, BinJiang District, Hangzhou, China  
Tel: +86-571-56680806 [www.ledtestlab.com](http://www.ledtestlab.com)

Report No.: HZ16060030b

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

Reviewed by:

Engineer: April Zou  
Jun. 27, 2016



Manager: Jim Zhang  
Jun. 27, 2016

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

## Test Summary

Sample Tested: 71660

Luminous Efficacy (Lumens /Watt)	Total Luminous Flux (Lumens)	Power (Watts)	Power Factor
111.5	1620.2	14.53	0.9771
CCT (K)	CRI	Stabilization Time (Light & Power)	BUG (Back, Up, Glare) Rating
5013	82.8	60	B2-U1-G0

Table 1: Executive Data Summary

### Test specifications:

Date of Receipt : Jun. 20, 2016

Date of Test : Jun. 25, 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

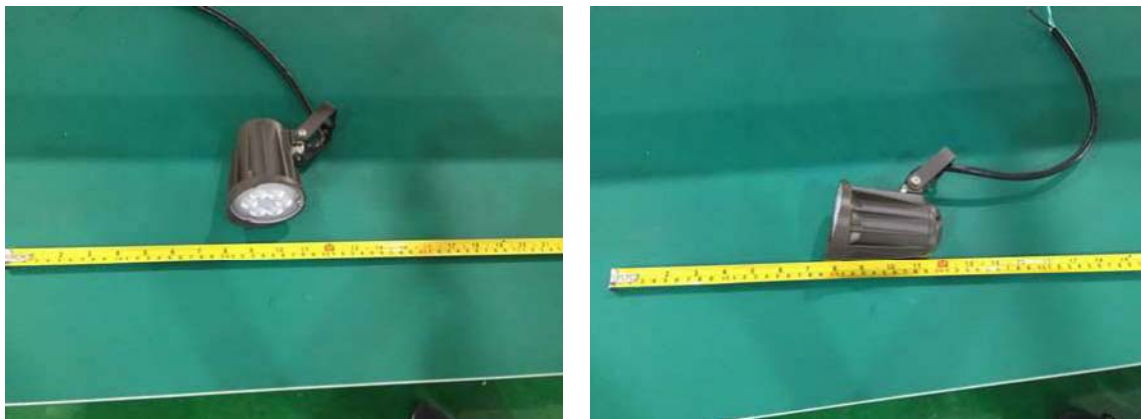


Figure 1- Overview of the sample

### Equipment Under Test (EUT)

Name	: LED FLOOD LIGHT
Model	: 71660
Electrical Ratings	: 120~277VAC, 50/60Hz
Product Description	: 5000K, 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 24.4°C.

Test 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 65 minutes.

Parameter	Result	
Test Voltage (V)	120.0	277.0
Voltage frequency (Hz)	60	60
Test Current (A)	0.124	0.060
Power Factor	0.9771	0.8939
Test Power (W)	14.53	14.92
THD A%	17.83	16.24
Luminous Efficacy (lm/W)	111.5	
Total Luminous Flux (lm)	1620.2	
Color Rendering Index (CRI)	82.8	
R9	8	
Correlated Color Temperature (CCT)(K)	5013	
Chromaticity Chroma x	0.3451	
Chromaticity Chroma y	0.2096	
Chromaticity Chroma u	0.2096	
Chromaticity Chroma v	0.3246	
Duv	0.0023	
Chromaticity Chroma u	0.2096	
Chromaticity Chroma v	0.4869	

Special Color Rendering Indices	
R1	81
R2	88
R3	92
R4	82
R5	81
R6	83
R7	87
R8	67
R9	8
R10	71
R11	80
R12	60
R13	83
R14	96

Table 2: Test data per Goniophotometer Method

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

## Spectral Power Distribution

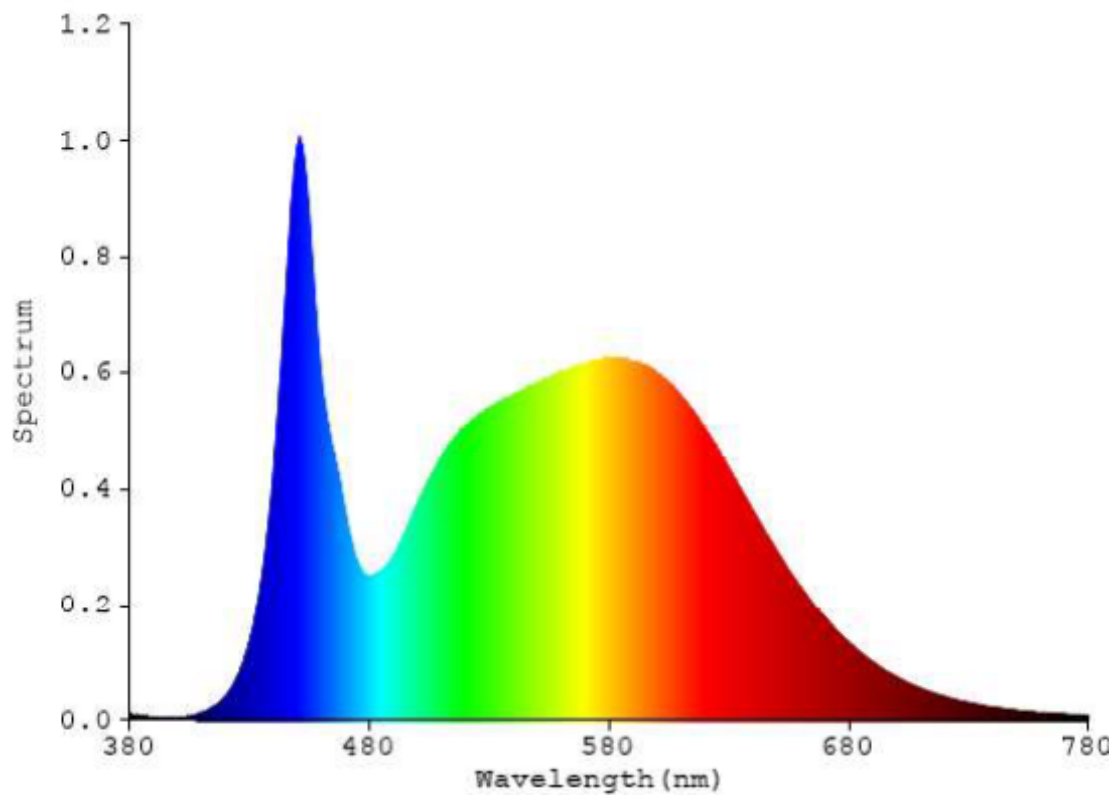


Chart 1: Spectral Power Distribution

## 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 6: 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.



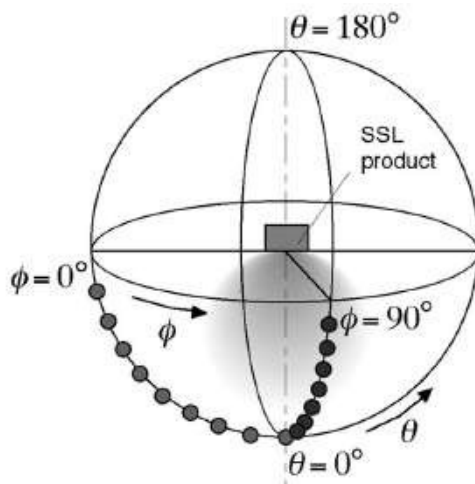
## Color Characteristics Measurements

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 ( $C=0^\circ/180^\circ$  and  $C=90^\circ/270^\circ$ ) and at  $10^\circ$  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 \*\*\*

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