



# GONIOPHOTOMETER TEST REPORT

## IES LM79-08 Section 9.3

TÜV SÜD America

### Photometric Testing and Evaluation in Accordance with LM79-2008

Report Prepared for:

**Michael Prainito**  
Marketing Manager

**Global Tech LED LLC**  
8901 Quality Road  
Bonita Springs, FL 34135  
United States

Telephone: (877) 748-5533

**Sample Tested:** GTSOL5498-HI-GR-25D  
**Sample Description:** LED Luminaire  
**Manufacturer:** Global Tech LED LLC

**Technical Report Number:** 72106215-18-GONI  
**Report Issue Date:** July 21<sup>st</sup>, 2015  
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Report Prepared by:

**Laymond Drummond**  
TÜV SÜD Project Handler

Report Reviewed by:

**Bryan Cubitt**  
TÜV SÜD Program Manager



# GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

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July 21, 2015

## Summary of Key Test Results

Model# **GTSOL5498-HI-GR-25D**

Manufacturer **Global Tech LED LLC**

TÜV Sample# **1923-5**

Date of Test **July 21, 2015**

Notes: Tested in intended orientation

(Horizontal, FBU – Fixture Base Up)

25 DEGREE OPTICS



<b>Parameter</b>	<b>Measured Result</b>
Luminous Flux	<b>9,867 Lumens</b>
Input Power	<b>99.44 Watts</b>
Efficacy	<b>99.22 Lumens/Watt</b>
Beam Angle	<b>23.7° (V) / 23.7° (H)</b>
Stabilization Time	<b>30 minutes</b>

The above results are recorded / derived from measurements in accordance with LM79-08.



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### Test Results –

The following results were obtained after stabilization of the sample in accordance with the requirements set forth in section 5.0 of IES LM79-2008. Stability is achieved when the variation of 3 readings of light output and electrical power over a period of 30 minutes, taken 15 minutes apart, is less than 0.5%.

Photometric Results	Global Tech LED LLC: GTSOL5498-HI-GR-25D
	Goniophotometer (120V)
Total Luminous Flux (Lumens)	9,867
Luminous Efficacy (Lumens/Watt)	99.22

Electrical Results	Global Tech LED LLC: GTSOL5498-HI-GR-25D
	Goniophotometer (120V)
Input Power (Watts)	99.44
Input Voltage (Volts AC)	119.98
Input Current (Amps)	0.83
Power Factor	0.997
Input Frequency (Hertz)	60
A-THD (Current %)	6.63

Additional Parameters	Global Tech LED LLC: GTSOL5498-HI-GR-25D
	Goniophotometer (120V)
Stabilization Time (Light and Power)	30 minutes
Test Geometry Configuration	Type C
Ambient Temperature	24.8°C

### Zonal Lumen Summary

Zone	Lumens	% Lamp / Luminaire
0-30	8,412.70	85.30%
0-40	8,973.70	90.90%
0-60	9,493.20	96.20%
60-90	263.8	2.70%
70-100	168	1.70%
90-120	62.7	0.60%
0-90	9,757.00	98.90%
90-180	110.3	1.10%
0-180	9,867.30	100%

**TÜV SÜD America, Inc.**  
5945 Cabot Parkway, Suite 100,  
Alpharetta GA 30005

Telephone: 678-341-5900 www.tuvamerica.com

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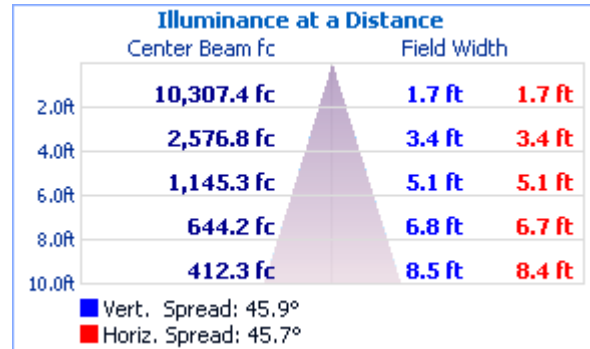
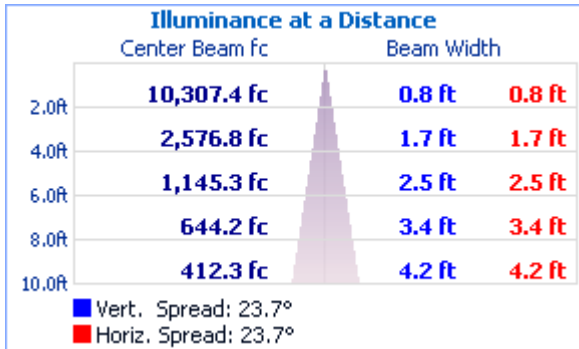
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## Test Results – Illuminance Plots

The following images depict the illuminance characteristics of the luminaire.

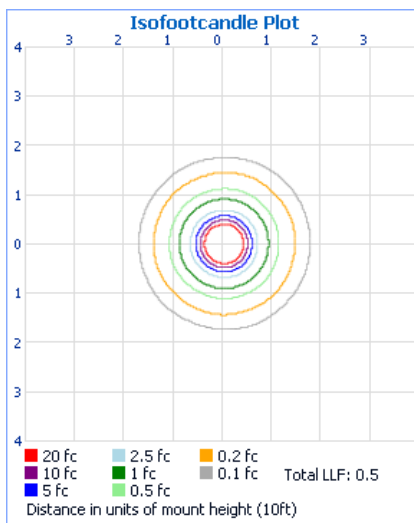


Beam Angle = 23.7° (V) / 23.7° (H)

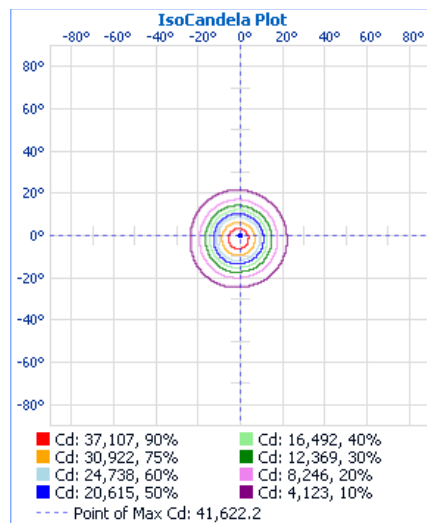
Field Angle = 45.9° (V) / 45.7° (H)

## Test Results – Candela Plots

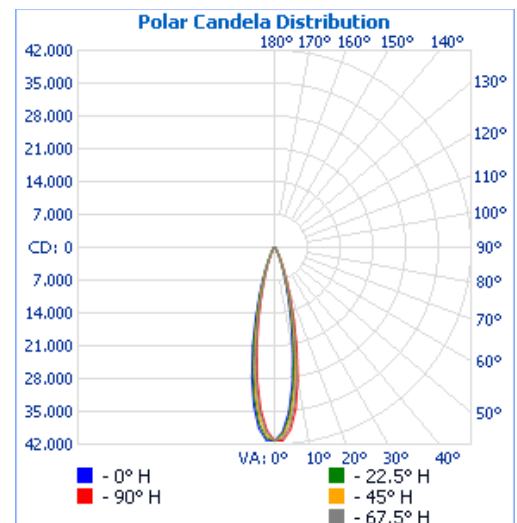
The following images depict the luminous intensity distribution characteristics of the luminaire:



Isofootcandle Plot



Isocandela Plot



Polar Candela

Maximum Candela = 41,622.2 at Horizontal: 135.0°, Vertical: 2.5°

TÜV SÜD America, Inc.  
5945 Cabot Parkway, Suite 100,  
Alpharetta GA 30005

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## TÜV SÜD Photometric Testing Information

Testing is performed in accordance with the procedures outlined in IESNA LM79-2008. The sample is evaluated for photometric and electrical characteristics using a goniophotometer, located in an accredited, temperature and humidity-controlled, draft free photometric laboratory.

### Sample Stabilization

The sample (UUT) is placed on a goniophotometer and powered by a regulated and conditioned alternating or direct current supply. The stabilization times shown on the results pages of this report denote the time of the 3<sup>rd</sup> measurement (of the 3 consecutive readings) since this is the minimum time that the sample is assumed to have taken to reach stabilization in accordance with section 5.0 of LM79-2008.

### Goniophotometer

The Goniophotometer is a Mirror based Type C optical measurement system in accordance with section 9.3.1 of IESNA LM79-2008.

### Goniophotometer Calibration

The Goniophotometer is calibrated using a frosted tungsten filament FDS/DZE lamp with the following specifications:

- Manufacturer: General Electric
- Part Number: CSB-110
- Lamp Number: 112-A
- Voltage: 16.52 Volts DC
- Wattage: 150.0 Watts
- Calibration Current: 4.816 Amperes
- Luminous Intensity: 151.5 Candelas
- Calibration Date: 02-13-2011 (NIST traceable)

## TÜV SÜD Test Equipment List:

TÜV SÜD Mirror Goniophotometer System – contains the following:			
Goniophotometer	M.E. GONC02	GON002	Weekly
Spectroradiometer	Gigahertz Optik P9801	GIG002	Weekly
Power Analyzer	Yokogawa WT210	ATLE0031	11/21/2015
Power Source	Chroma 61603	AC007	N/A

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