



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-HO-GR-360D
Sample Description: LED Luminaire
Manufacturer: Global Tech LED LLC

Technical Report Number: 72106215-15-GONI
Report Issue Date: June 23th, 2015
Total Number of Pages: 6 (including this page)

Report Prepared by:

Laymond Drummond
TÜV SÜD Project Handler

Report Reviewed by:

Bryan Cubitt
TÜV SÜD Program Manager



GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-15-GONI

June 23, 2015

Summary of Key Test Results

Model# **GTSOL5498-HO-GR-360D**

Manufacturer **Global Tech LED LLC**

TÜV Sample# **1923-11**

Date of Test **June 11, 2015**

Notes: Tested in intended orientation

(Horizontal, FBU – Fixture Base Up)

SIDE EMITTER OPTICS



Parameter	Measured Result
Luminous Flux	13,210.17 Lumens
Input Power	132.87 Watts
Efficacy	99.42 Lumens/Watt
Beam Angle	38.8° (V) / 96.6° (H)
Stabilization Time	36 minutes

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



GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-15-GONI

June 23, 2015

TABLE OF CONTENTS

Test Results4

Zonal Lumen Summary4

Illuminance Plots.....5

Candela Plots5

Photometric Testing Information6

Equipment List:6





GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-15-GONI

June 23, 2015

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-H0-GR-360D	
	Goniophotometer (120V)	
Total Luminous Flux (Lumens)	13,210	
Luminous Efficacy (Lumens/Watt)	99.42	

Electrical Results	Global Tech LED LLC: GTSOL5498-H0-GR-360D	
	Goniophotometer (120V)	
Input Power (Watts)	132.87	
Input Voltage (Volts AC)	120.2	
Input Current (Amps)	1.11	
Power Factor	.996	
Input Frequency (Hertz)	60	
A-THD (Current %)	4.43	

Additional Parameters	Global Tech LED LLC: GTSOL5498-H0-GR-360D	
	Goniophotometer (120V)	
Stabilization Time (Light and Power)	36 minutes	
Test Geometry Configuration	Type C	
Ambient Temperature	24.2°C	

Zonal Lumen Summary

Zone	Lumens	% Lamp / Luminaire
0-30	1,489.90	11.30%
0-40	3,001.50	22.70%
0-60	9,609.00	72.70%
60-90	3,559.30	26.90%
70-100	655.3	5%
90-120	39.7	0.30%
0-90	13,168.30	99.70%
90-180	42.5	0.30%
0-180	13,210.90	100%

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

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

Page 4

NRG_F_10.04

Confidential Report



TÜV SÜD America is
accredited under the
ISO/IEC 17025:2005
program





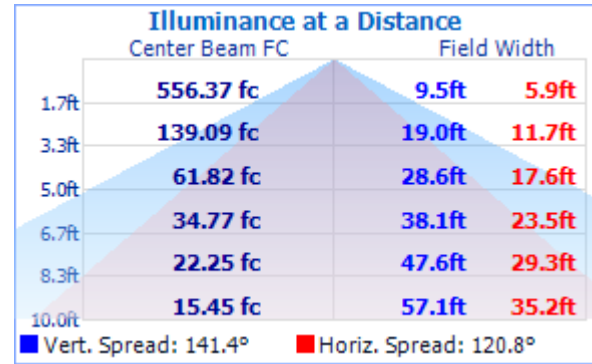
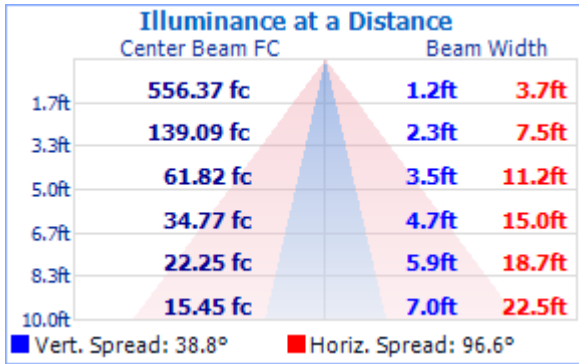
GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-15-GONI

June 23, 2015

Test Results – Illuminance Plots

The following images depict the illuminance characteristics of the luminaire.

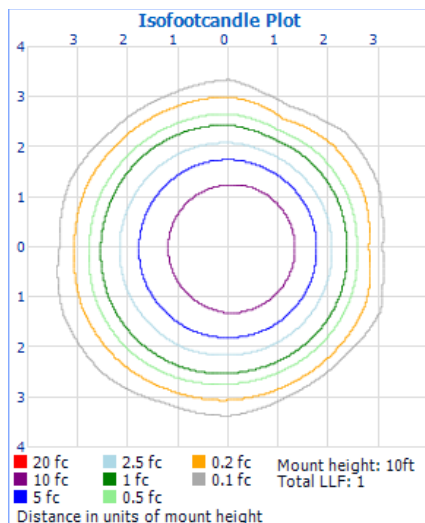


Beam Angle = 38.8° (V) / 96.6°(H)

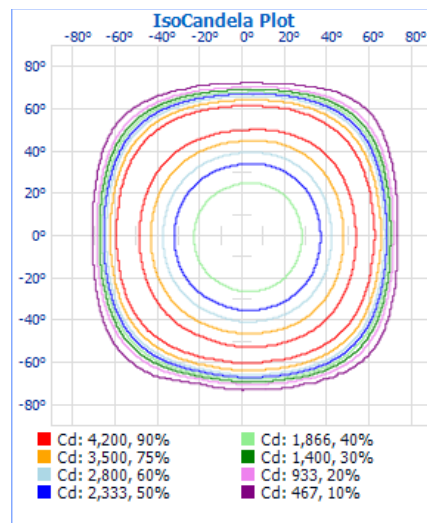
Field Angle = 141.4° (V) / 120.8° (H)

Test Results – Candela Plots

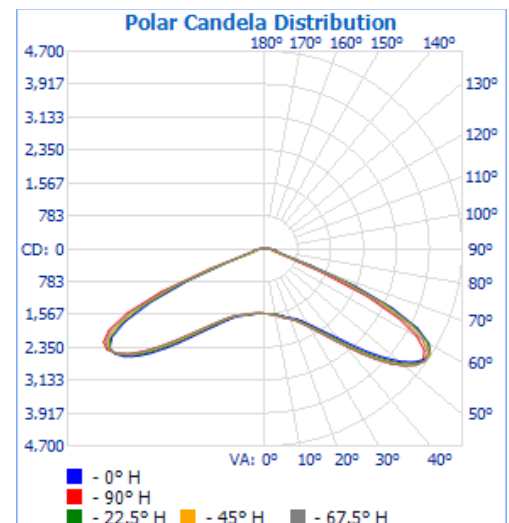
The following images depict the luminous intensity distribution characteristics of the luminaire:



Isofootcandle Plot



Isocandela Plot



Polar Candela

Maximum Candela = 4,669.3 at Horizontal: 45.0°, Vertical: 55.0°

TUV SUD America, Inc.
5945 Cabot Parkway, Suite 100,
Alpharetta GA 30005

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

Page 5

NRG_F_10.04

Confidential Report



TUV SUD America is
accredited under the
ISO/IEC 17025:2005
program





GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-15-GONI

June 23, 2015

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 3rd 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

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.

This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the Federal Government

TÜV SÜD America, Inc.
 5945 Cabot Parkway, Suite 100,
 Alpharetta GA 30005
 Telephone: 678-341-5900 www.tuvamerica.com

Page 6

NRG_F_10.04

Confidential Report



TÜV SÜD America is
 accredited under the
 ISO/IEC 17025:2005
 program

