

# SONNEMAN - A WAY OF LIGHT TEST REPORT

## SCOPE OF WORK

LED Performance Testing

## MODEL NUMBER

1XDXXHA05K

## PROJECT NUMBER

G106005580

## REPORT NUMBER

106005580CRT-006

## ISSUE DATE

6/4/2025

## REVISION DATE

6/12/2025

## TEST DATES

6/3/2025

## DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

106005580CRT-006

**MODEL NUMBER(s)**

1DXXHA05K

**REPORT RENDERED TO:**

SONNEMAN - A WAY OF LIGHT  
103 TOWER DRIVE  
MIDDLETOWN, NY 10941  
USA

**STATEMENT OF LIMITATION**

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**AUTHORIZATION**

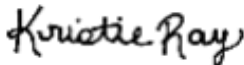
The testing performed was authorized by signed quote number Qu-01491297-0.

**TEST STANDARDS**

ANSI/IES LM-79-19: Optical and Electrical Measurements of Solid State Lighting Products

In Charge of Testing:

Reviewer:



Kristie Ray  
Team Lead, Engineering  
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Melanie Brittain  
Senior Associate Engineer  
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# SAMPLE INFORMATION

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## ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received Date	Sampling Date
1	CRT2505201423-007-004	1XDXXHA05K	Etched Through Cylinder Luminaire	Production	5/20/2025	N/A
2	CRT2505201423-007-005	LTF TA60WA24LED65B15	Driver	Production	5/20/2025	N/A
3	CRT2505201423-007-006	1XC01XX48K	48" Linear Power Bar	Production	5/20/2025	N/A

## TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	1XDXXHA05K	1,2,3

## SAMPLE PHOTOS



## SUMMARY

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### PRODUCT INFORMATION AND SUMMARY OF DATA

Test Configuration 1	
Product Model No.:	1XDXXHA05K
Product Description:	Etched Through Cylinder Luminaire
LED Model No.:	Proprietary
Driver Model No.:	LTF TA60WA24LED65B15

Criteria	Results
Light Output (lumens)	115.7
Input Power (W) @ 120 (Vac)	6.41
Luminous Efficacy (lm/W)	18.0
Input Power Factor (I) @ 120 (Vac)	0.945

## TEST METHODS

### SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with ANSI/IES LM-79-19

### DUT SAMPLING METHOD

For testing plans, program requirements, or shipments requiring sampling of DUTs or components, the selections for each test were random. All samples are marked with control numbers regardless of being tested.

### TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the DUT. Electrical measurements of the unit were measured using a power analyzer. Each DUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature and relative humidity was measured at  $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$  and 10-65% respectively at a position within 1.5m and at equal height of the DUT. Stabilization procedures to LM-79-19 were followed. The test distance was  $\geq 5x$  the longest luminous dimension of the DUT.

ANSI/IES Technical Memorandums (TM) reported are not NVLAP accredited

# TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	1XDXXHA05K	NA

## PHOTOMETRIC AND ELECTRICAL MEASUREMENTS

Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )
Up	120.09	56.6	6.41	0.945

Light Output (lm)	Efficacy (lm/W)
115.7	18.0

## LUMINOUS INTENSITY SUMMARY (candela)

Vertical	Horizontal					Polar Candela Plot
Angle (°)	0	22.5	45	67.5	90	
0	5	5	5	5	5	<p><b>Polar Candela Distribution</b></p> <p>180° 170° 160° 150° 140°</p> <p>130° 120° 110° 100° 90° 80° 70° 60° 50°</p> <p>VA: 0° 10° 20° 30° 40°</p> <p>■ - 0° H ■ - 22.5° H ■ - 45° H ■ - 67.5° H ■ - 90° H</p>
5	5	5	5	5	5	
10	6	6	6	6	6	
15	7	7	6	6	6	
20	8	8	8	8	8	
25	9	9	8	8	8	
30	9	9	9	9	9	
35	10	10	10	10	10	
40	11	11	10	10	10	
45	11	11	11	10	11	
50	11	11	11	10	10	
55	10	10	10	10	10	
60	10	10	10	10	10	
65	9	9	9	9	9	
70	9	9	9	9	9	
75	8	8	8	8	8	
80	8	8	8	8	8	
85	7	8	7	8	8	
90	7	7	7	7	7	
95	8	8	8	8	7	
100	8	8	8	8	7	
105	9	9	8	8	8	
110	9	9	9	9	8	
115	10	10	10	10	9	
120	11	11	11	11	10	
125	12	12	11	11	11	
130	12	12	12	12	12	
135	12	12	12	12	12	
140	12	12	12	12	11	
145	11	11	11	11	11	
150	10	11	10	11	10	
155	9	9	9	10	9	
160	9	8	8	8	8	
165	7	7	7	7	7	
170	6	6	6	6	6	
175	5	5	5	5	5	
180	5	5	5	5	5	

Full luminous intensity matrix found in .IES file

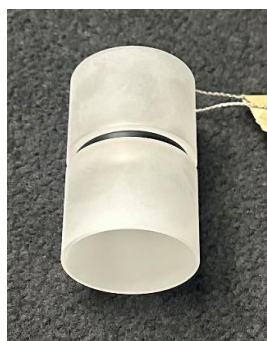
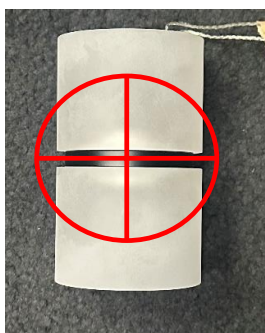
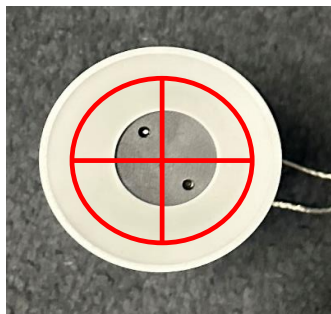
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**ORIENTATION AND ALIGNMENT OF DUT**

Luminous Opening		
Length (ft)	Width (ft)	Height (ft)
0.18	0.18	0.31
0°-180° H	90°-270° H	0°-180° V

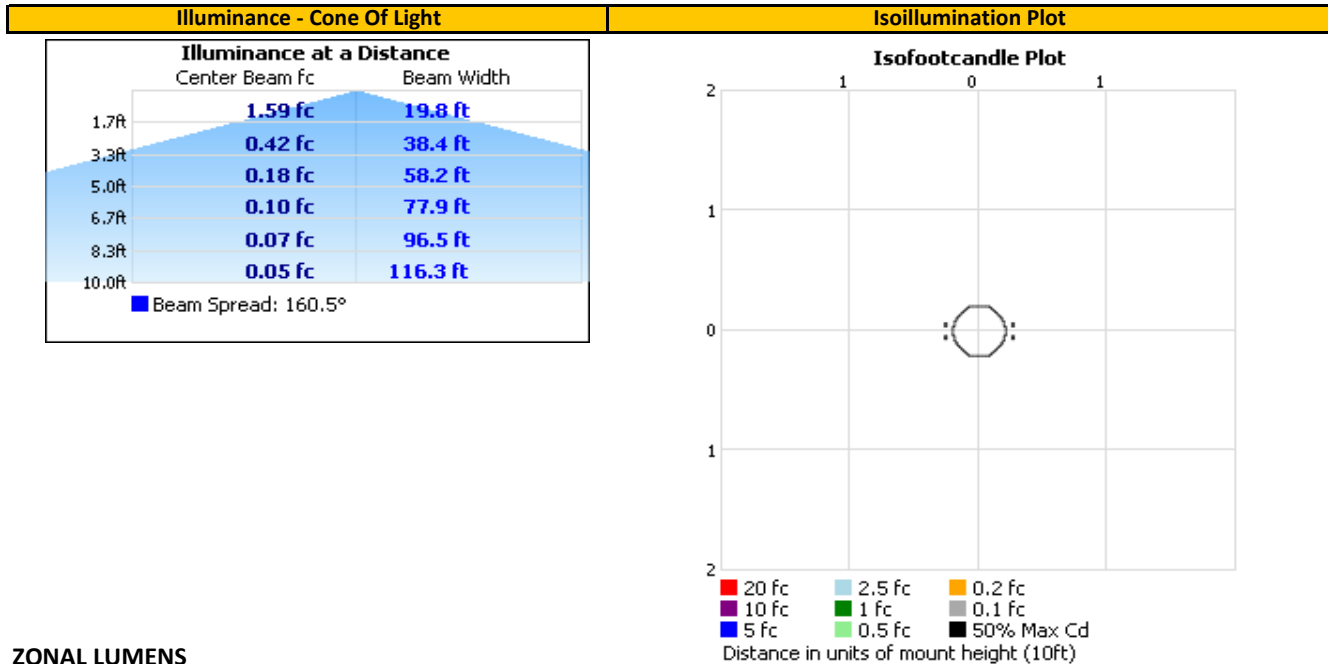
Test Distance (ft)
29.2

**PHOTOMETRIC CENTER OF DUT**



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## ILLUMINANCE SUMMARY



## ZONAL LUMENS

Zonal Lumen Summary					
Zone (°)	Lumens	Luminaire	Zone (°)	Lumens	Total
0-30	6.3	5.4%	90-100	8.1	7.0%
0-40	12.5	10.8%	100-110	8.8	7.6%
0-60	29.8	25.8%	110-120	9.7	8.4%
60-90	25.8	22.3%	120-130	10.2	8.8%
70-100	24.9	21.5%	130-140	9.3	8.1%
90-120	26.5	22.9%	140-150	7.1	6.1%
0-90	55.6	48.1%	150-160	4.4	3.8%
90-180	60.1	51.9%	160-170	2.1	1.8%
0-180	115.7	100.0%	170-180	0.5	0.5%

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**UNIFIED GLARE RATING (UGR) SUMMARY**

Reflectances					
Ceiling Cavity	70	70	50	50	30
Walls	50	30	50	30	30
Floor Cavity	20	20	20	20	20

Room Size	
X=2H	Y=2H
	3H
	4H
	6H
	8H
	12H

UGR Viewed Crosswise				
9.5	10.5	10.5	11.5	12.8
11.9	12.7	12.8	13.7	15.0
13.0	13.8	13.9	14.8	16.1
14.1	14.8	15.0	15.8	17.2
14.6	15.3	15.6	16.4	17.7
15.1	15.8	16.1	16.8	18.2

4H	2H
	3H
	4H
	6H
	8H
	12H

10.1	10.9	11.1	11.9	13.3
12.7	13.4	13.6	14.4	15.7
13.9	14.6	14.9	15.6	17.0
15.2	15.8	16.2	16.8	18.2
15.8	16.4	16.8	17.4	18.8
16.5	17.0	17.5	18.0	19.4

8H	4H
	6H
	8H
	12H

14.3	14.9	15.3	15.9	17.3
15.8	16.3	16.9	17.4	18.7
16.6	17.0	17.6	18.1	19.5
17.4	17.8	18.4	18.8	20.3

12H	4H
	6H
	8H

14.4	14.9	15.4	16.0	17.3
16.0	16.4	17.0	17.5	18.9
16.8	17.2	17.9	18.3	19.7

Room Size	
X=2H	Y=2H
	3H
	4H
	6H
	8H
	12H

UGR Viewed Endwise				
9.4	10.4	10.3	11.3	12.6
11.8	12.7	12.8	13.7	15.0
12.9	13.8	13.9	14.8	16.1
14.1	14.8	15.0	15.8	17.2
14.6	15.4	15.6	16.4	17.7
15.2	15.9	16.2	16.9	18.2

4H	2H
	3H
	4H
	6H
	8H
	12H

10.0	10.8	11.0	11.8	13.2
12.6	13.3	13.6	14.3	15.7
13.9	14.6	14.9	15.6	16.9
15.2	15.8	16.2	16.8	18.2
15.9	16.4	16.9	17.4	18.8
16.5	17.0	17.5	18.1	19.4

8H	4H
	6H
	8H
	12H

14.3	14.9	15.3	15.9	17.3
15.8	16.3	16.9	17.4	18.7
16.6	17.0	17.7	18.1	19.5
17.4	17.8	18.5	18.9	20.3

12H	4H
	6H
	8H

14.4	14.9	15.4	15.9	17.3
16.0	16.4	17.0	17.5	18.9
16.8	17.2	17.9	18.3	19.7

Maximum UGR	
20.3	



**EQUIPMENT LIST**

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI Type C Goniophotometer System	6440	---	4/21/2025	7/20/2025
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Yokogawa Power Analyzer	WT210	E464	6/12/2024	6/12/2025
4	Testo Hygrothermometer	608-H1	L285	5/8/2025	5/8/2026
5	Omega Thermometer	DPI8-C24	M263	3/13/2025	3/13/2026
6	Tape Measure	Crescent	L288	12/9/2024	12/9/2027
The AC power supplies used for testing have a crest factor capable of 0-3.5					

**REVISION HISTORY**

#	Revision Date	Updated By	Reviewed By	Description of Change
1	6/12/2025	Kristie Ray <i>Kristie Ray</i>	Melanie Brittain <i>NB</i>	Revised electricals to 120.09 VAC, 56.6mA, 6.41W, 0.945pF from 120.04VAC, 81.4mA, 9.36W, 0.985pF.
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