



8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L022512702



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Report Prepared For: Teron Lighting LLC
33 Donald Drive, Fairfield OH 45014

Model Number: SHRS12-WLN-L13.5-ZE-UNV-30K

Test: Photometric/Colorimetric/Electrical Test

Issue Date: 3/5/2025
Reference: N/A
Amendment: N/A

Standards Used: Appropriate part or all test guidelines were used for test performed:

IES LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI/IES LM79: 2019 Approved Methods for Optical and Electrical Measurements of Solid-State Lighting Products

ANSI/NEMA C78.377: 2017 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77-10:2014: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Date of Tests: 3/4/25

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S3	6/21/26
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	6/25/26
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

General Information

Manufacturer:	Teron Lighting LLC
Model Number:	SHRS12-WLN-L13.5-ZE-UNV-30K
Driver Model Number:	KEYSTONE KTLD-20-UV-PS640-36-VDIM-AQ7

Test Summary

Total Lumens:	1579.00
Efficacy:	122.73
Color Redering Index:	82.5
Correlated Color Temperature:	2868
Input Voltage (VAC/60Hz):	120.02
Input Current (Amp):	0.1094
Input Power (W):	12.87
Input Power Factor:	0.9800
Current ATHD (%):	12.0%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:35
Total Operating Time (Hours):	1:25

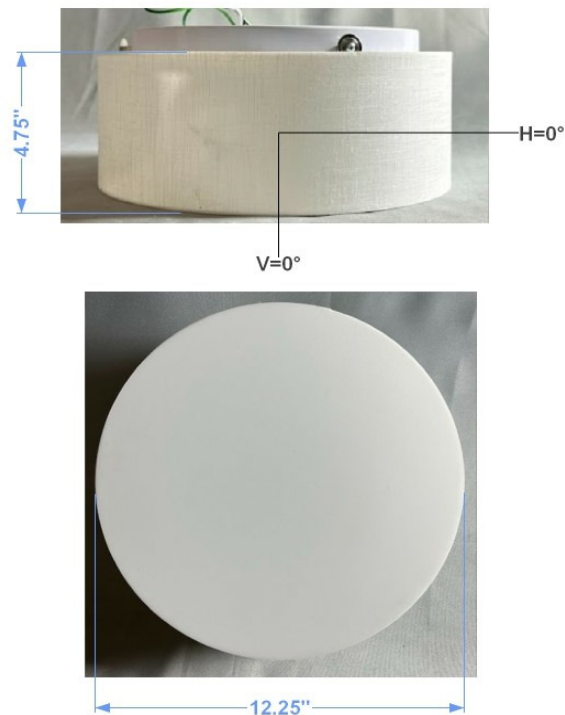
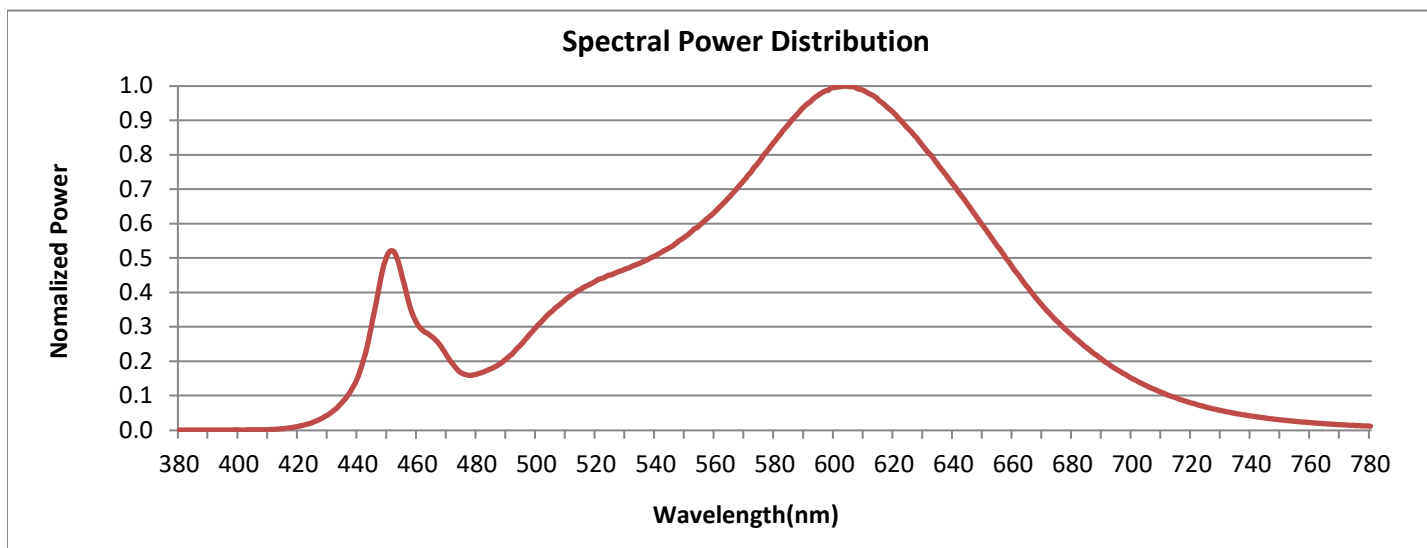


FIG. 1 LUMINAIRE

Colorimetry Test Results

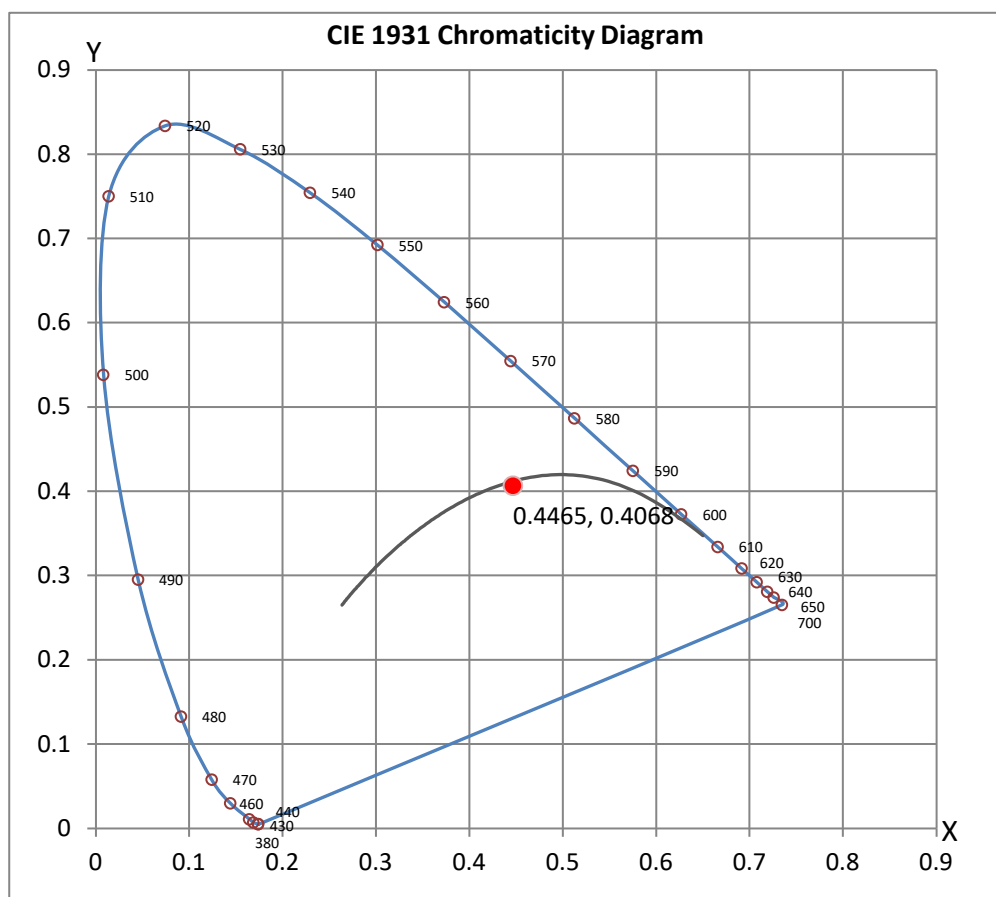


CRI & CCT

x	0.4465
y	0.4068
u'	0.2556
v'	0.5239
CRI	82.50
CCT	2868
Duv	-0.00013

R Values

R1	80.91
R2	91.38
R3	95.75
R4	80.91
R5	81.80
R6	90.74
R7	81.46
R8	57.16
R9	5.96
R10	81.13
R11	81.03
R12	72.88
R13	83.40
R14	98.36
R15	72.78



Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

The results related only to the samples as received and tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

Report Prepared by : JG

Test Report Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports.*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L022512702.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L022512702
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUE DATE] 3/4/2025
[MANUFAC] Teron Lighting LLC
[LUMCAT] SHRS12-WLN-L13.5-ZE-UNV-30K
[LUMINAIRE] Architectural Indoor LED Ceiling Luminaire
[BALLASTCAT] KEYSTONE KTLD-20-UV-PS640-36-VDIM-AQ7
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120AC
[TEST PROCEDURE] IESNA:LM-79-19

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1579
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	12.87
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.42
Spacing Criterion (90-270)	1.42
Spacing Criterion (Diagonal)	1.54
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	1.02 ft (Diameter)
Luminous Width (90-270)	1.02 ft (Diameter)
Luminous Height	0.40 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2731	2731	2719
55	2558	2558	2545
65	2376	2376	2376
75	2184	2184	2202
85	2004	2004	2026

IES INDOOR REPORT
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CANDELA TABULATION

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
0	264	264	264	264	264	264	264	264	264	264
5	267	266	266	266	266	266	265	266	265	266
10	266	267	267	267	267	266	267	266	266	266
15	266	266	265	266	265	265	265	265	265	265
20	263	263	263	262	263	262	262	262	262	262
25	258	258	257	257	258	258	257	257	257	257
30	251	251	251	251	251	251	251	250	250	250
35	242	242	243	242	242	242	241	242	241	241
40	232	232	232	232	232	232	231	231	231	231
45	220	220	220	220	220	220	219	219	219	219
50	206	206	206	206	206	206	206	206	205	205
55	191	191	191	191	191	191	191	191	191	190
60	176	175	175	175	175	175	175	175	175	175
65	158	158	158	158	158	158	159	158	158	158
70	140	140	141	140	141	141	141	141	141	141
75	123	123	123	123	123	123	124	124	124	124
80	106	105	105	105	106	106	106	107	107	107
85	89	89	89	89	89	89	90	90	90	90
90	77	77	77	77	77	77	77	77	77	78
95	79	79	79	79	79	79	79	79	79	79
100	80	80	80	80	80	80	80	80	80	80
105	80	80	80	81	81	81	81	81	81	81
110	81	81	81	81	81	81	81	81	82	81
115	81	81	81	81	81	81	81	81	81	81
120	80	80	80	80	80	80	80	80	80	81
125	79	79	79	79	80	80	79	80	80	80
130	79	79	79	79	79	79	79	79	79	79
135	79	79	78	78	78	78	78	78	78	78
140	78	78	77	77	77	77	78	78	72	78
145	76	76	76	76	76	76	76	76	67	74
150	75	75	75	75	74	74	74	74	66	69
155	73	72	72	72	72	72	72	66	64	68
160	70	70	70	70	69	69	67	60	63	65
165	64	64	64	64	64	61	57	57	58	58
170	54	55	56	55	53	50	50	51	51	52
175	44	44	43	41	40	41	42	42	43	43
180	40	40	40	40	40	40	40	40	40	40

Vert. Angles	Horizontal Angles									
	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	
0	264	264	264	264	264	264	264	264	264	
5	265	265	265	265	265	265	265	265	265	
10	266	266	266	265	265	266	266	266	265	
15	265	265	265	264	264	264	264	264	264	
20	262	261	261	262	261	261	261	261	261	
25	256	256	256	256	256	256	256	256	256	
30	249	249	250	250	249	249	249	249	249	
35	241	241	240	240	240	240	241	240	240	
40	231	230	230	230	230	230	230	230	230	
45	218	218	218	218	218	218	217	218	218	
50	205	205	205	204	204	204	204	204	204	
55	190	190	190	190	190	189	190	189	190	
60	175	174	174	174	174	174	174	174	174	

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L022512702.IES

CANDELA TABULATION - (Cont.)

65	158	158	158	158	158	157	157	157	157
70	141	141	141	141	140	140	140	140	140
75	124	124	124	124	123	123	123	123	123
80	107	107	107	106	106	106	106	106	106
85	90	90	90	90	90	90	89	90	90
90	78	78	78	78	78	78	78	78	78
95	79	79	80	79	80	79	80	80	80
100	80	80	80	80	80	81	81	81	80
105	81	81	81	81	81	81	81	81	81
110	81	81	81	81	81	81	82	82	82
115	81	81	81	81	81	81	82	81	81
120	80	80	80	80	80	80	80	81	81
125	80	79	79	79	80	80	80	80	80
130	79	79	79	79	79	79	79	79	79
135	77	78	78	78	78	78	78	78	78
140	77	77	77	77	77	77	77	77	77
145	73	68	76	76	76	76	75	75	76
150	69	68	74	74	74	74	73	74	73
155	67	68	63	73	72	72	71	72	72
160	65	65	64	60	67	69	68	68	68
165	60	60	60	59	56	56	59	59	58
170	51	50	51	50	50	50	48	49	50
175	42	41	41	40	40	41	42	42	43
180	40	40	40	40	40	40	40	40	40

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	100.25	N.A.	6.30
0-30	218.76	N.A.	13.90
0-40	369.83	N.A.	23.40
0-60	709.09	N.A.	44.90
0-80	995.95	N.A.	63.10
0-90	1094.93	N.A.	69.30
10-90	1069.58	N.A.	67.70
20-40	269.58	N.A.	17.10
20-50	438.49	N.A.	27.80
40-70	495.66	N.A.	31.40
60-80	286.86	N.A.	18.20
70-80	130.46	N.A.	8.30
80-90	98.98	N.A.	6.30
90-110	171.69	N.A.	10.90
90-120	251.96	N.A.	16.00
90-130	323.36	N.A.	20.50
90-150	430.80	N.A.	27.30
90-180	484.52	N.A.	30.70
110-180	312.83	N.A.	19.80
0-180	1579.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	25.35
10-20	74.90
20-30	118.51
30-40	151.07
40-50	168.91
50-60	170.35
60-70	156.40
70-80	130.46
80-90	98.98
90-100	86.24
100-110	85.45
110-120	80.27
120-130	71.40
130-140	60.43
140-150	47.01
150-160	32.40
160-170	17.01
170-180	4.31

IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69
1	99	94	88	84	93	88	84	80	78	75	71	69	66	64	61	59	57	52
2	89	80	72	66	84	75	69	63	67	62	57	59	55	51	52	48	45	42
3	81	69	61	54	76	65	58	51	58	52	46	51	46	42	45	41	37	34
4	73	61	52	45	69	57	49	43	51	44	39	45	40	35	40	35	31	28
5	67	54	45	38	63	51	43	36	45	38	33	40	34	30	35	31	27	24
6	62	48	39	33	58	46	37	31	41	34	29	36	30	26	32	27	23	21
7	57	43	35	28	53	41	33	27	37	30	25	33	27	23	29	24	20	18
8	53	39	31	25	50	37	29	24	33	27	22	30	24	20	26	22	18	16
9	49	36	28	22	46	34	26	21	31	24	20	27	22	18	24	20	16	14
10	46	33	25	20	43	31	24	19	28	22	18	25	20	16	23	18	15	13

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L022512702.IES

UGR TABLE - CORRECTED

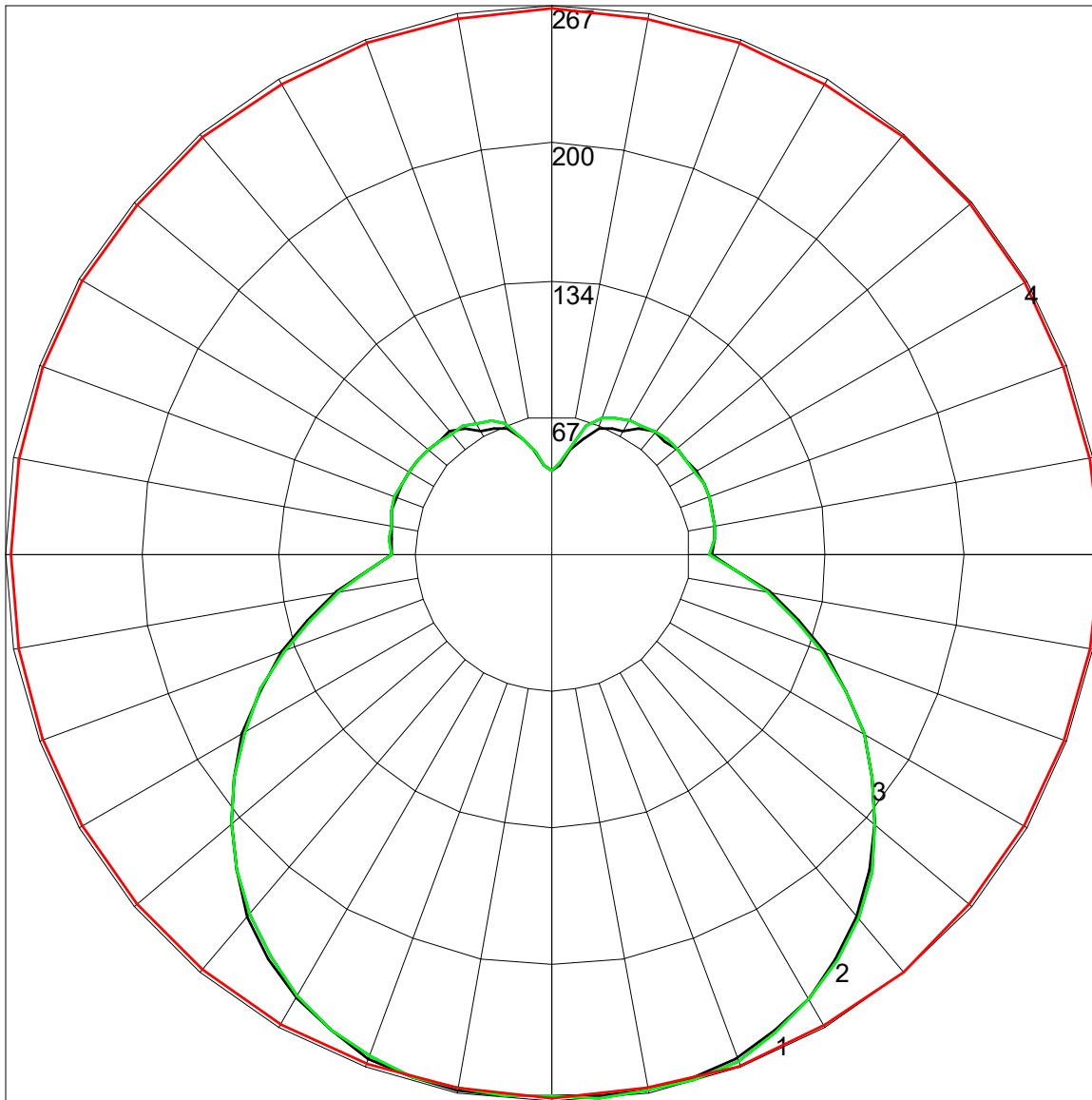
Reflectances

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

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	12.3	13.5	13.1	14.3	15.2	12.3	13.4	13.0	14.2	15.2
	3H	14.5	15.6	15.3	16.4	17.4	14.5	15.6	15.3	16.4	17.4
	4H	15.5	16.6	16.3	17.4	18.4	15.6	16.6	16.3	17.4	18.4
	6H	16.5	17.4	17.3	18.3	19.3	16.5	17.5	17.3	18.3	19.3
	8H	16.9	17.8	17.7	18.7	19.7	17.0	17.9	17.8	18.7	19.7
	12H	17.3	18.2	18.1	19.0	20.1	17.4	18.2	18.2	19.1	20.1
4H	2H	12.9	13.9	13.7	14.8	15.8	12.9	13.9	13.7	14.7	15.7
	3H	15.4	16.3	16.2	17.1	18.1	15.4	16.3	16.2	17.1	18.1
	4H	16.5	17.3	17.3	18.2	19.2	16.6	17.4	17.4	18.2	19.3
	6H	17.7	18.4	18.5	19.2	20.3	17.7	18.4	18.5	19.3	20.3
	8H	18.2	18.8	19.0	19.7	20.8	18.2	18.9	19.1	19.8	20.8
	12H	18.7	19.3	19.5	20.2	21.2	18.7	19.3	19.6	20.2	21.3
8H	4H	16.9	17.6	17.8	18.5	19.5	17.0	17.6	17.8	18.5	19.6
	6H	18.2	18.8	19.1	19.7	20.8	18.3	18.9	19.1	19.8	20.8
	8H	18.9	19.4	19.8	20.3	21.4	18.9	19.5	19.8	20.3	21.4
	12H	19.6	20.0	20.4	20.9	22.0	19.6	20.1	20.5	21.0	22.1
12H	4H	17.0	17.6	17.9	18.5	19.6	17.0	17.6	17.9	18.5	19.6
	6H	18.4	18.9	19.2	19.8	20.9	18.4	18.9	19.3	19.8	20.9
	8H	19.1	19.5	20.0	20.4	21.6	19.2	19.6	20.0	20.5	21.6

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 267 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (90 - 270)
3 - Vertical Plane Through Horizontal Angles (0 - 180)
4 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)