



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

Report No: L062111004



Report No: L062111004

Issue Date: 6/23/2021

Report Prepared For: Light & Green
 2340 E. Olympic Blvd. Unit E Los Angeles, CA 90021

Model Number: 5001

Test: Photometric/Colorimetric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:
IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products
ANSI C82.77:2002: 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.

Sample Arrival Date: 6/17/21

Date of Tests: 6/18/21 - 6/22/21

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-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
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:	Light & Green
Model Number:	5001
Driver Model Number:	REVOLTLED GEO151UB-2405

Test Summary

Total Lumens:	642.22
Efficacy:	33.81
Input Voltage (VAC/60Hz):	119.98
Input Current (Amp):	0.2941
Input Power (W):	19.00
Input Power Factor:	0.5382
Current ATHD (%):	142.3%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	1:00

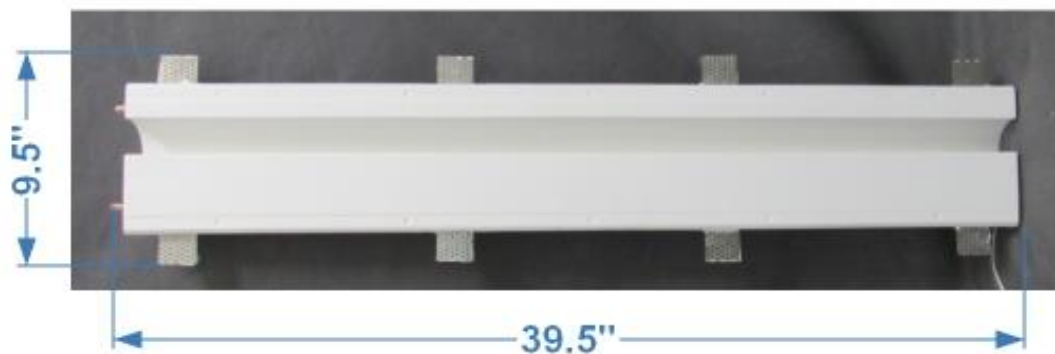
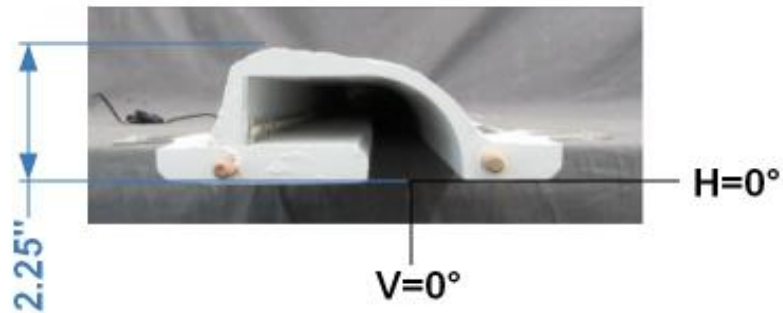


FIG. 1 LUMINAIRE

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:

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

Report Prepared by : Keyur Patel

Test Report Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 11*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L062111004.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L062111004
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUE DATE] 6/23/2021
[MANUFAC] Light & Green
[LUMCAT] 5001
[LUMINAIRE] Cove Lighting
[BALLASTCAT] REVOLTLTD GEO151UB-2405
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 119.98VAC, 19.0W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	642
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	34
Total Luminaire Watts	19
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.52
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.46
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.13 ft
Luminous Width (90-270)	3.29 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7208	6398	5324
55	6405	7164	5337
65	3693	5758	5312
75	2253	3220	5242
85	355	473	4408

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88
5.0	210.64	210.77	211.18	211.46	211.80	211.52	211.39	211.93	212.34	212.48
10.0	210.36	210.36	210.64	210.77	211.11	210.71	210.50	210.71	211.18	211.18
15.0	209.55	209.48	209.75	209.95	209.89	209.41	208.66	208.93	209.00	208.52
20.0	208.59	208.52	208.73	208.86	208.45	207.84	206.82	206.41	206.00	205.38
25.0	207.91	207.84	207.70	207.16	206.75	205.59	204.22	203.20	202.25	201.09
30.0	207.09	207.16	206.68	206.20	205.18	203.82	201.50	199.72	198.29	196.52
35.0	206.95	206.54	206.00	204.98	203.68	201.56	199.11	196.38	193.99	191.40
37.5	207.09	206.68	205.86	204.43	202.93	200.75	197.61	194.33	191.61	188.60
40.0	206.68	206.20	205.32	204.02	202.25	199.65	196.38	192.49	189.15	185.74
42.5	205.59	205.59	204.63	203.13	201.16	198.77	195.22	190.92	187.10	182.87
45.0	202.72	202.52	201.77	200.81	199.25	196.65	193.31	188.67	184.44	179.94
47.5	195.90	195.97	195.90	195.70	194.61	193.31	190.79	186.63	181.58	176.87
50.0	185.40	185.47	185.74	186.35	186.56	186.29	185.47	182.53	178.30	173.33
52.5	169.71	169.71	170.87	172.30	174.08	175.78	176.60	175.71	173.46	169.44
55.0	146.11	147.20	149.18	152.32	156.14	159.89	163.09	165.00	165.21	163.43
57.5	118.55	118.76	121.28	125.24	130.63	137.38	144.13	149.45	153.07	154.29
60.0	90.31	91.27	93.38	96.52	103.00	109.96	118.48	128.17	136.15	141.13
62.5	71.21	71.83	72.30	74.08	77.28	82.33	89.97	100.34	112.48	123.05
65.0	62.07	62.82	63.23	63.85	64.73	65.62	68.14	74.76	84.45	96.79
67.5	51.70	52.59	53.21	53.89	54.71	56.21	57.71	59.28	61.94	70.80
70.0	41.06	41.54	42.36	43.11	44.06	45.57	47.48	49.32	51.36	53.27
72.5	31.24	31.31	31.99	32.61	33.36	34.86	36.77	39.02	41.20	43.66
75.0	23.19	23.47	23.87	24.15	24.83	25.58	26.94	28.31	30.49	33.15
77.5	15.01	15.28	15.69	16.30	17.12	17.87	19.03	19.99	21.35	22.99
80.0	7.23	7.16	7.64	8.19	8.80	9.48	10.64	11.94	13.44	15.28
85.0	1.23	1.16	1.23	1.23	1.16	1.16	1.36	1.43	1.50	1.64
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0.0	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88
5.0	212.41	211.93	211.25	211.05	210.64	210.43	210.16	209.55	209.48	209.61
10.0	210.77	210.09	209.48	209.07	208.66	208.39	208.11	207.36	207.02	206.95
15.0	208.18	207.43	206.41	205.93	205.32	204.91	204.63	203.82	203.34	202.86
20.0	204.63	203.20	201.97	201.16	200.47	199.79	199.38	198.50	197.88	197.20
25.0	200.13	198.50	196.72	195.29	194.13	193.38	192.70	191.61	190.92	190.17
30.0	194.88	192.83	190.24	188.20	186.69	185.40	184.44	183.35	182.81	181.78
35.0	188.54	185.67	182.40	179.87	178.10	176.19	174.83	173.73	172.92	171.76
37.5	185.47	182.40	178.78	175.24	172.92	170.87	169.51	168.48	167.87	166.23
40.0	182.19	178.65	174.35	170.80	167.80	165.48	163.98	163.03	162.07	160.30
42.5	178.17	174.35	169.91	165.89	162.82	159.89	157.84	156.82	155.93	154.09
45.0	175.03	170.73	166.03	161.12	156.89	153.95	151.98	150.68	149.72	147.88
47.5	171.69	166.16	160.43	155.39	151.09	147.68	145.15	144.13	143.11	140.92
50.0	167.66	162.34	156.00	150.27	145.02	141.27	138.81	137.31	136.42	134.10
52.5	163.91	157.30	151.36	144.74	139.42	134.85	131.85	130.22	129.33	127.01
55.0	159.34	152.79	146.25	139.42	133.63	128.17	124.83	122.99	121.76	119.30
57.5	152.79	148.09	141.13	133.97	127.21	121.28	117.46	115.28	114.25	111.59
60.0	143.11	141.06	135.74	128.10	120.46	114.32	110.09	107.57	106.27	103.68
62.5	129.53	131.92	129.40	122.85	114.19	106.96	102.04	99.25	97.88	95.09
65.0	109.75	118.28	120.39	116.51	108.46	100.61	94.34	91.06	89.29	86.49
67.5	84.04	98.16	107.30	107.98	101.02	92.77	86.36	82.60	80.90	78.10
70.0	59.48	73.60	88.81	95.91	94.20	86.01	78.51	74.15	71.96	69.30

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CANDELA TABULATION - (Cont.)

72.5	46.04	50.14	64.80	78.65	83.90	78.65	70.26	65.14	63.03	60.44
75.0	35.95	38.61	41.27	55.87	69.17	69.51	61.94	56.14	53.96	51.43
77.5	25.44	28.51	31.58	34.31	45.77	57.71	54.64	46.86	44.41	42.16
80.0	16.64	18.49	21.21	24.69	27.63	39.15	44.68	38.06	34.99	33.22
85.0	1.98	2.80	4.57	6.62	8.73	10.85	13.44	18.49	15.28	15.42
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Horizontal Angles
Angles

	100	105	110	115	120	125	130	135	140	145
0.0	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88	210.88
5.0	209.41	209.48	208.73	208.25	208.73	208.93	208.32	207.84	207.50	207.23
10.0	206.48	206.34	205.11	204.63	204.98	204.84	203.82	203.20	202.79	202.18
15.0	202.11	201.56	200.27	199.25	199.38	198.90	197.95	196.86	196.24	195.77
20.0	196.18	195.36	193.72	192.49	192.49	191.61	190.31	189.42	188.60	188.13
25.0	188.88	187.58	185.74	184.51	183.90	182.94	181.51	180.56	179.53	179.05
30.0	180.21	178.24	176.12	174.96	174.42	172.98	171.55	170.26	169.23	168.69
35.0	169.71	167.73	165.55	164.25	163.16	161.52	160.09	158.86	157.57	157.23
37.5	164.12	161.87	159.61	158.32	157.16	155.45	154.02	152.73	151.77	151.16
40.0	158.39	155.73	153.61	152.38	150.95	149.11	147.54	146.38	145.50	144.81
42.5	152.25	149.38	147.20	145.77	144.40	142.36	141.13	139.90	139.08	138.40
45.0	145.70	142.49	140.45	139.08	137.51	135.95	134.51	133.22	132.53	131.65
47.5	138.74	135.95	133.90	132.19	130.35	128.92	127.42	126.26	125.37	124.69
50.0	131.78	128.85	126.67	124.96	123.26	121.48	120.26	119.17	118.21	117.26
52.5	124.55	121.48	119.44	117.53	115.62	114.12	112.82	111.87	110.71	109.75
55.0	116.51	113.71	111.73	109.82	108.12	106.61	105.32	104.16	103.20	102.11
57.5	108.73	105.93	104.09	102.04	100.61	98.91	97.47	96.38	95.43	94.27
60.0	100.54	98.16	96.04	94.27	92.63	91.20	89.90	88.61	87.52	86.49
62.5	92.22	89.90	87.92	86.08	84.65	83.35	81.92	80.63	79.47	78.51
65.0	83.70	81.58	79.74	77.90	76.53	75.17	73.87	72.58	71.42	70.60
67.5	75.24	73.26	71.14	69.64	68.35	66.98	65.69	64.32	63.44	62.41
70.0	66.64	64.53	62.82	61.25	60.09	58.80	57.43	56.21	55.18	54.30
72.5	58.05	55.93	54.36	52.86	51.64	50.34	49.18	48.16	47.00	46.11
75.0	48.91	47.27	45.77	44.61	43.31	42.09	40.86	39.77	38.88	38.06
77.5	40.25	38.74	37.52	36.43	34.72	33.70	32.61	31.72	30.63	29.81
80.0	31.51	30.01	28.99	27.83	26.67	25.65	24.35	23.40	22.44	21.69
85.0	14.46	13.57	12.48	11.60	11.05	10.71	10.51	10.51	10.37	10.10
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Horizontal Angles
Angles

	150	155	160	165	170	175	180
0.0	210.88	210.88	210.88	210.88	210.88	210.88	210.88
5.0	207.64	207.84	207.57	207.16	206.95	206.34	205.59
10.0	202.52	202.52	202.04	201.70	201.36	200.88	200.00
15.0	195.83	195.77	195.36	194.61	194.54	193.99	193.45
20.0	187.85	187.79	187.31	186.42	186.35	185.74	185.40
25.0	178.65	178.30	177.76	177.01	176.74	176.12	176.12
30.0	168.35	167.66	166.91	166.23	166.09	165.14	165.75
35.0	156.75	155.79	155.25	154.70	154.43	153.75	154.29
37.5	150.54	149.72	149.11	148.50	148.29	147.61	148.16
40.0	144.20	143.38	142.63	141.95	141.74	141.13	141.61
42.5	137.65	136.83	136.08	135.47	135.33	134.44	135.33
45.0	130.63	129.74	129.12	128.65	128.58	127.76	128.24
47.5	123.39	122.64	121.89	121.42	121.42	120.60	120.87
50.0	116.37	115.35	114.66	114.19	114.12	113.37	113.50

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CANDELA TABULATION - (Cont.)

52.5	108.73	107.98	107.36	106.89	106.75	106.14	106.00
55.0	101.23	100.48	100.00	99.38	99.11	98.63	98.50
57.5	93.45	92.84	92.15	91.68	91.61	90.86	90.99
60.0	85.67	84.99	84.38	83.90	83.63	83.08	82.81
62.5	77.76	77.08	76.40	75.99	75.65	75.10	75.17
65.0	69.78	68.96	68.21	68.08	67.53	67.19	67.26
67.5	61.53	60.84	60.30	59.89	59.48	59.14	59.48
70.0	53.55	52.66	52.32	51.77	51.30	51.23	51.70
72.5	45.16	44.54	44.13	43.66	43.25	43.31	43.52
75.0	37.18	36.63	36.02	35.54	34.99	35.20	35.33
77.5	28.99	28.38	27.83	27.29	27.08	27.15	27.29
80.0	21.08	20.80	20.40	20.19	20.19	20.12	20.05
85.0	9.28	8.46	7.71	7.09	6.62	6.41	6.28
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	77.19	N.A.	12.00
0-30	165.39	N.A.	25.80
0-40	275.47	N.A.	42.90
0-60	508.84	N.A.	79.20
0-80	632.09	N.A.	98.40
0-90	642.22	N.A.	100.00
10-90	622.30	N.A.	96.90
20-40	198.29	N.A.	30.90
20-50	319.07	N.A.	49.70
40-70	313.87	N.A.	48.90
60-80	123.25	N.A.	19.20
70-80	42.75	N.A.	6.70
80-90	10.13	N.A.	1.60
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	642.22	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	19.92
10-20	57.26
20-30	88.21
30-40	110.08
40-50	120.78
50-60	112.58
60-70	80.50
70-80	42.75
80-90	10.13
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	67	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

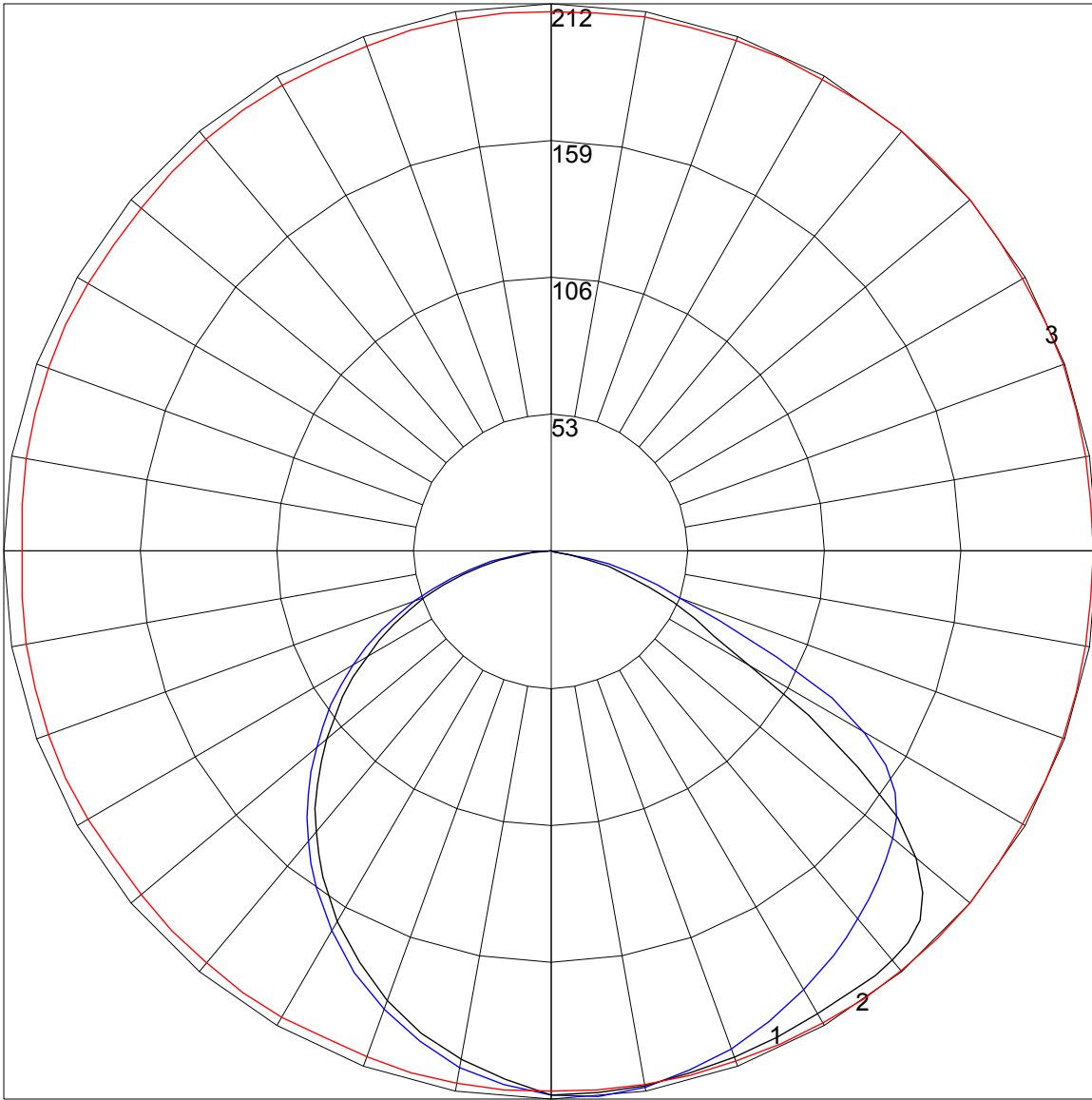
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UGR TABLE - CORRECTED

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	19.0	20.7	19.4	21.0	21.3	18.3	20.0	18.7	20.3	20.6
	3H	19.8	21.3	20.1	21.6	22.0	20.4	21.9	20.8	22.3	22.6
	4H	20.0	21.4	20.4	21.7	22.1	21.3	22.7	21.7	23.1	23.4
	6H	20.0	21.3	20.4	21.7	22.1	22.0	23.3	22.4	23.7	24.0
	8H	20.0	21.3	20.4	21.6	22.0	22.2	23.5	22.7	23.9	24.3
	12H	20.0	21.2	20.4	21.6	22.0	22.4	23.6	22.8	24.0	24.4
4H	2H	19.7	21.1	20.1	21.5	21.9	19.0	20.4	19.4	20.8	21.1
	3H	20.6	21.8	21.0	22.2	22.6	21.3	22.5	21.7	22.9	23.3
	4H	20.8	21.9	21.3	22.3	22.8	22.3	23.4	22.7	23.8	24.2
	6H	20.9	21.9	21.4	22.3	22.8	23.1	24.1	23.6	24.5	25.0
	8H	20.9	21.8	21.4	22.2	22.7	23.4	24.3	23.9	24.8	25.2
	12H	20.9	21.7	21.4	22.2	22.6	23.7	24.4	24.1	24.9	25.4
8H	4H	21.1	22.0	21.6	22.4	22.9	22.4	23.3	22.9	23.8	24.2
	6H	21.2	22.0	21.7	22.5	22.9	23.3	24.1	23.8	24.6	25.0
	8H	21.2	21.9	21.8	22.4	22.9	23.7	24.4	24.2	24.9	25.3
	12H	21.2	21.8	21.7	22.3	22.8	24.0	24.6	24.5	25.1	25.6
12H	4H	21.2	21.9	21.6	22.4	22.9	22.4	23.2	22.9	23.7	24.2
	6H	21.3	21.9	21.8	22.4	22.9	23.3	24.0	23.9	24.5	25.0
	8H	21.3	21.9	21.8	22.4	22.9	23.7	24.3	24.2	24.8	25.4

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 212.48 Located At Horizontal Angle = 45, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (0 - 180)
3 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)