

IES Report

WingRail® | 107 | White Baffle with EdgeSoft™ | 90 CRI | SO

107-WG-XX-4-48-XX-XX-XX-XX-X-X-Z-SO-359-WB-X-XX-X

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	91	94	96	97
Total Lumens, 4' rail length (1219mm)	2170	2238	2284	2307
Lumens per foot (305mm)	542	560	571	577
Input Power (W), 4' rail length (1219mm)	24.0	24.0	24.0	24.0
Watts per foot (305mm)	6.0	6.0	6.0	6.0
CRI	94	94	94	94

Due to the large number of options in Vode's product offering, most Vode IES reports are factored reports prepared from source reports. Source reports are the IES test reports prepared for Vode by an NVLAP accredited photometric test laboratory. Factored reports are based on data from the Vode source reports.

If the data above is in black, it is directly from a Vode source report. If it is in grey, it is factored from Vode source reports. Reference details on Vode source reports can be found on the [IES File Finder](#) page on [vode.com](#).



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

Report No: L121911519



Report No: L121911519

Issue Date: 1/8/2020

Report Prepared For: Vode Lighting
21684 8th Street East, Suite 700, Sonoma, CA 95476

Model Number: 107-WG-48-Z-SO-359-WB-AL

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: 12/16/19

Date of Tests: 1/2/20 - 1/8/20

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	1/9/21
BK PRECISION	1747	PS-DC04	1/10/21
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/21
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:	Vode Lighting
Model Number:	107-WG-48-Z-SO-359-WB-AL
Driver Model Number:	MEAN WELL HLG-40H-36A

Test Summary

Total Lumens:	2283.82
Efficacy:	95.23
Color Redering Index:	94.1
Correlated Color Temperature:	3323
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.2012
Input Power (W):	23.98
Input Power Factor:	0.9933
Current ATHD (%):	8.6%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:25

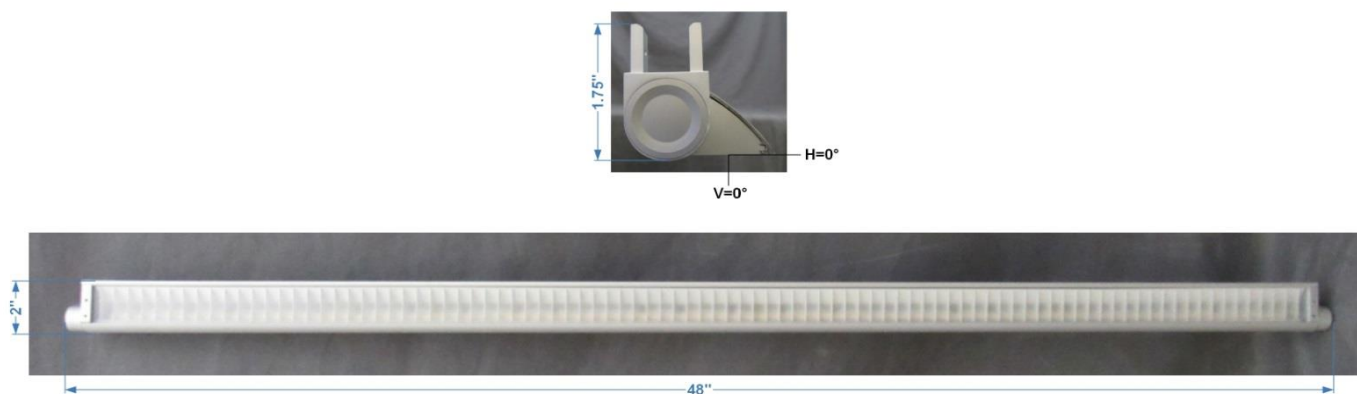
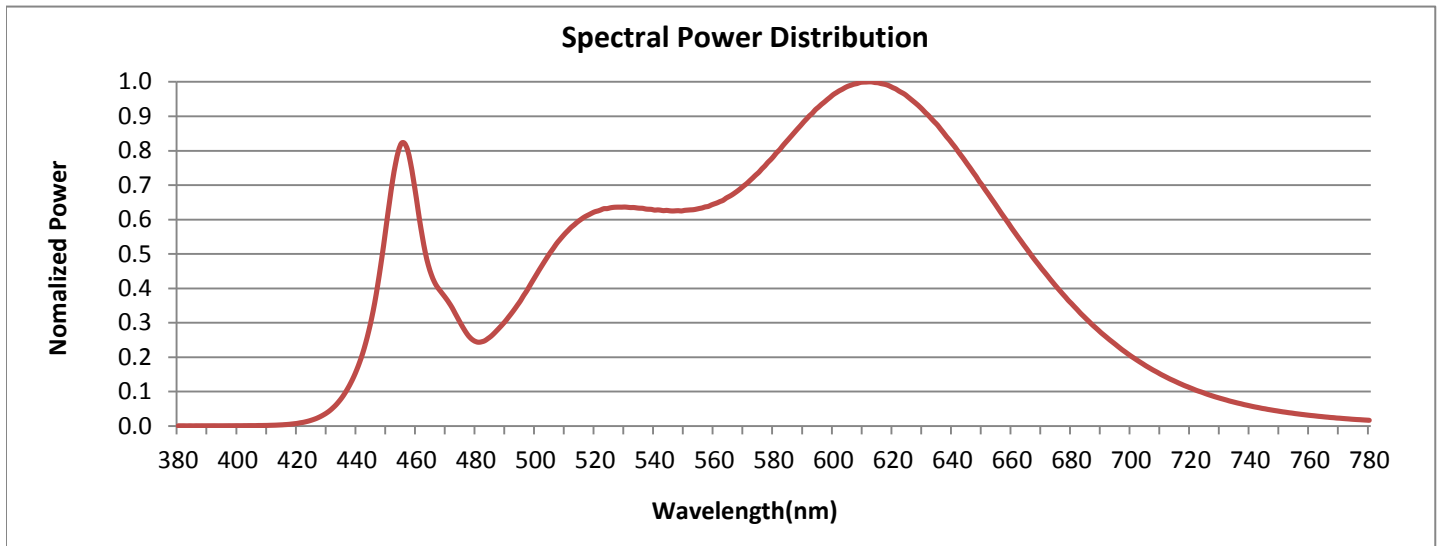


FIG. 1 LUMINAIRE

Colorimetry Test Results

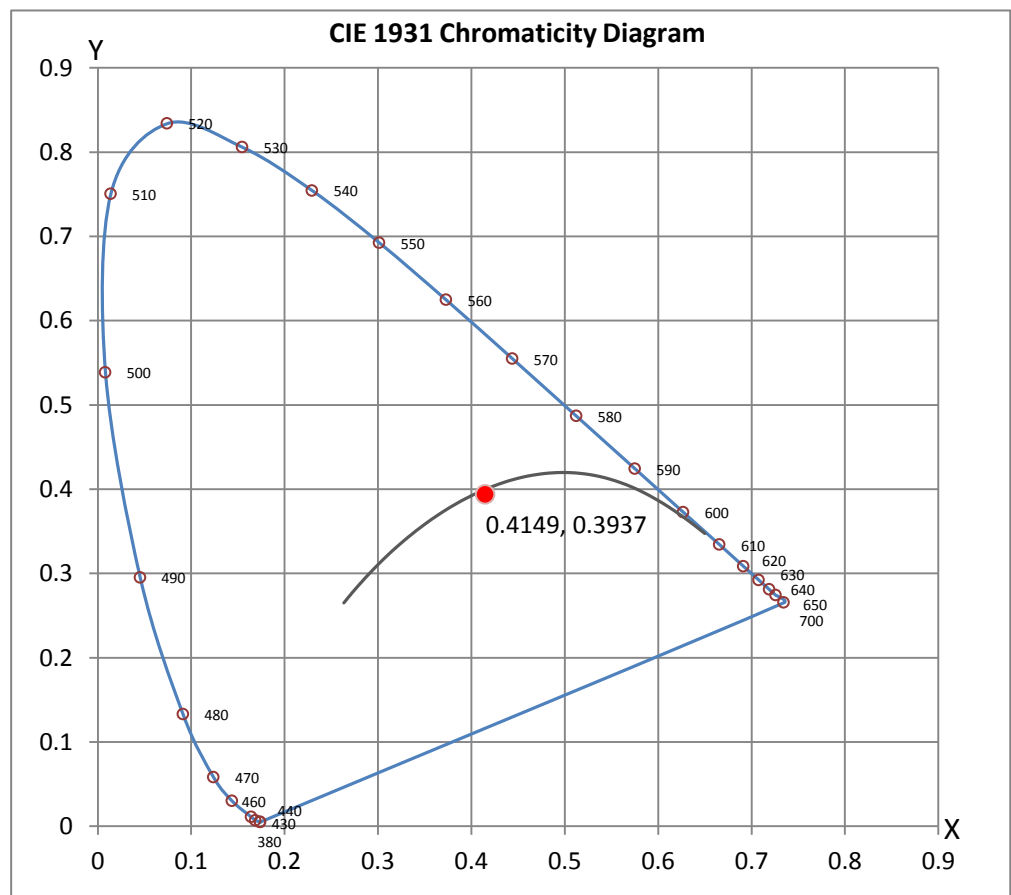


CRI & CCT

x	0.4149
y	0.3937
u'	0.2407
v'	0.5139
CRI	94.10
CCT	3323
Duv	-0.00069

R Values

R1	96.08
R2	98.85
R3	98.12
R4	96.69
R5	96.34
R6	95.84
R7	90.40
R8	80.52
R9	56.29
R10	97.10
R11	97.60
R12	78.12
R13	97.69
R14	99.58
R15	89.99





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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: 10*



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www.lightlaboratory.com

Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L121911519.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121911519
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/8/2020
[MANUFAC] Vode Lighting
[LUMCAT] 107-WG-48-Z-SO-359-WB-AL
[LUMINAIRE] WingRail LED, 48", 3500K, 90 CRI, zipper board, white baffle,
[MORE] standard output, clear anodized finish
[BALLASTCAT] MEAN WELL HLG-40H-36A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120.0VAC, 23.98W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2284
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	23.98
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.62
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.11 ft
Luminous Width (90-270)	3.84 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	35428	26499	18470
55	33955	22815	14825
65	29819	18916	11506
75	24296	15443	8558
85	18695	13145	4382

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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	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018
5	1069	1068	1068	1067	1065	1063	1061	1058	1056	1052
10	1115	1114	1112	1110	1107	1102	1098	1092	1085	1078
15	1146	1145	1142	1138	1133	1126	1118	1109	1099	1088
20	1162	1161	1157	1151	1143	1133	1122	1109	1094	1079
25	1162	1160	1155	1147	1136	1123	1107	1089	1070	1050
30	1147	1144	1137	1126	1111	1093	1073	1049	1024	999
35	1114	1110	1101	1087	1067	1044	1018	989	959	927
40	1060	1056	1044	1026	1002	974	941	907	873	839
45	984	979	965	944	917	882	846	808	771	736
50	885	879	864	841	811	774	736	697	661	626
55	765	760	744	720	690	654	618	581	547	514
60	632	627	613	591	562	532	499	467	436	408
65	495	490	479	461	438	412	385	359	332	314
70	363	360	351	338	323	304	284	264	245	229
75	247	245	239	231	220	207	194	181	168	157
80	146	145	142	137	132	125	117	110	102	95
85	64	63	63	61	60	58	55	52	48	45
90	0	0	0	0	0	0	0	0	0	0

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	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018
5	1049	1045	1041	1037	1033	1028	1023	1019	1014	1009
10	1071	1063	1054	1045	1036	1026	1016	1006	996	986
15	1076	1064	1050	1037	1023	1009	995	980	965	951
20	1063	1046	1028	1010	992	973	955	937	918	900
25	1029	1006	984	962	940	918	897	876	855	834
30	973	946	920	894	870	846	823	801	779	756
35	898	867	839	812	787	763	740	718	695	672
40	806	774	745	718	694	671	648	627	605	583
45	702	672	643	617	594	572	551	532	513	492
50	592	563	536	512	491	472	454	437	420	401
55	484	457	433	412	394	377	361	347	334	319
60	382	359	338	321	306	292	279	268	256	245
65	292	274	258	243	230	219	209	200	191	181
70	214	200	187	176	166	157	149	141	134	127
75	146	137	128	120	112	104	98	92	87	81
80	88	82	77	71	66	61	55	50	46	42
85	41	38	35	32	29	26	22	18	15	14
90	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018
5	1004	999	995	990	986	982	978	974	971	968
10	976	966	956	946	935	926	917	908	900	893
15	936	920	904	889	873	858	843	828	814	801
20	881	861	841	820	798	776	755	732	711	691
25	812	789	764	738	710	683	655	626	598	573
30	732	706	677	648	615	582	550	518	488	462
35	647	619	588	555	519	485	452	421	393	369

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

40	558	529	499	465	430	397	368	341	318	298
45	468	441	413	382	351	323	298	275	257	241
50	381	358	333	308	282	259	239	221	207	195
55	302	282	263	242	222	204	188	175	165	155
60	231	216	201	185	170	157	145	135	127	120
65	171	160	149	137	126	116	107	100	94	89
70	120	111	103	95	87	81	74	69	65	61
75	76	71	65	60	54	50	45	42	39	37
80	40	37	34	30	27	24	22	20	19	17
85	13	12	10	9	7	6	5	5	4	4
90	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles						
	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0	1018	1018	1018	1018	1018	1018	1018
5	965	963	960	959	958	957	957
10	886	880	875	871	868	866	866
15	789	778	769	761	756	753	752
20	673	657	643	632	624	619	617
25	550	530	513	501	491	485	483
30	439	419	403	391	382	377	375
35	349	333	319	310	303	298	297
40	282	269	259	251	246	242	241
45	229	219	211	205	201	199	198
50	185	178	172	168	165	163	162
55	148	142	138	135	132	131	130
60	115	110	107	104	103	102	101
65	85	82	80	78	77	76	76
70	59	56	55	53	53	52	52
75	35	34	33	32	32	31	31
80	17	16	15	15	15	14	14
85	3	3	3	3	3	2	2
90	0	0	0	0	0	0	0

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	365.26	N.A.	16.00
0-30	750.89	N.A.	32.90
0-40	1181.11	N.A.	51.70
0-60	1918.35	N.A.	84.00
0-80	2253.69	N.A.	98.70
0-90	2283.82	N.A.	100.00
10-90	2187.76	N.A.	95.80
20-40	815.85	N.A.	35.70
20-50	1223.86	N.A.	53.60
40-70	958.43	N.A.	42.00
60-80	335.34	N.A.	14.70
70-80	114.15	N.A.	5.00
80-90	30.13	N.A.	1.30
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	2283.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	96.06
10-20	269.20
20-30	385.63
30-40	430.22
40-50	408.01
50-60	329.23
60-70	221.19
70-80	114.15
80-90	30.13
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

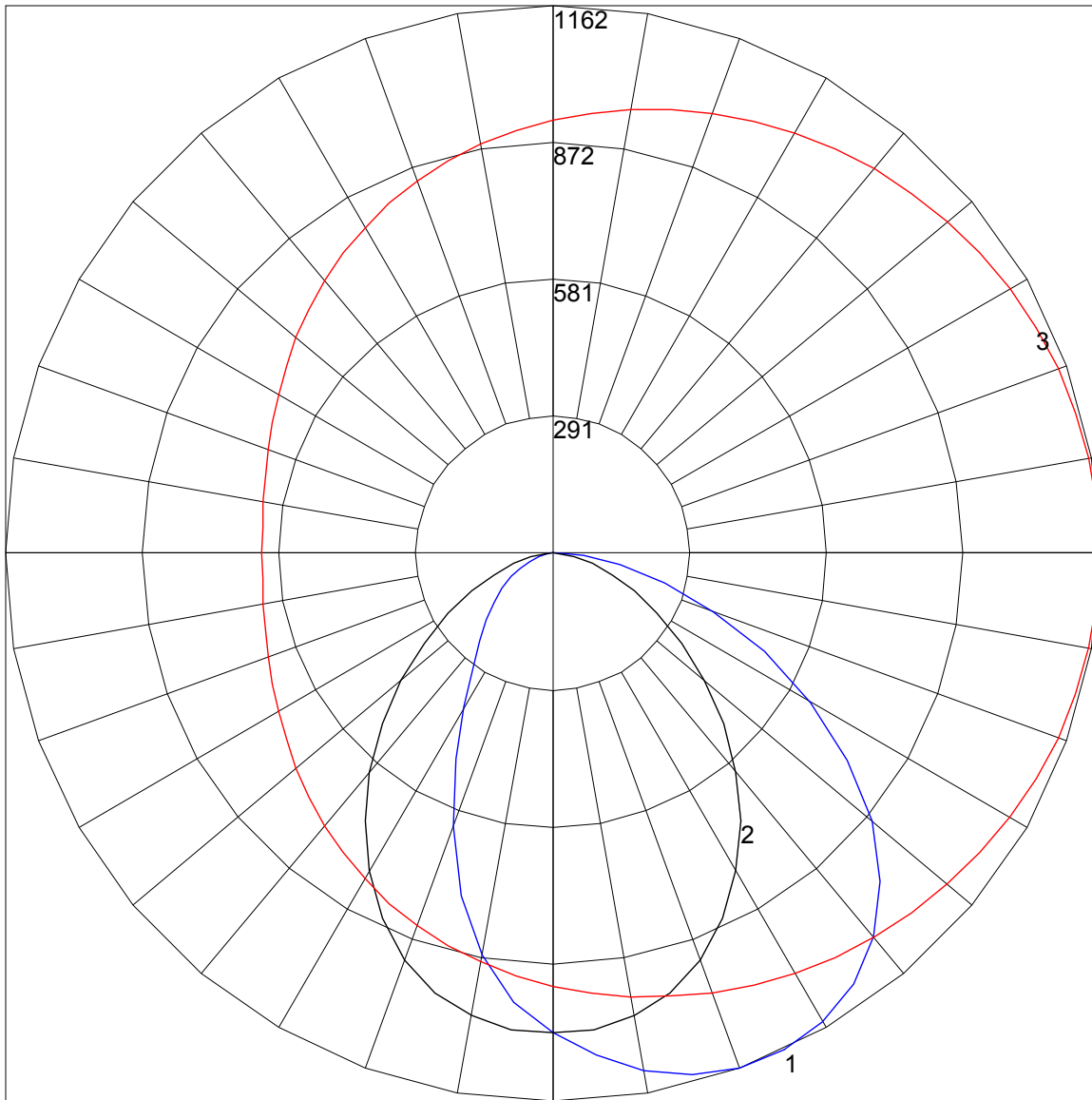
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38
8	63	50	42	36	62	49	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28

POLAR GRAPH



Maximum Candela = 1162 Located At Horizontal Angle = 0, Vertical Angle = 20

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)