

**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

<b>Manufacturer:</b>	Vode Lighting
<b>Model Number:</b>	107-WG-48-Z-SO-359-WB-AL
<b>Driver Model Number:</b>	MEAN WELL HLG-40H-36A

### Test Summary

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

### Test Condition

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

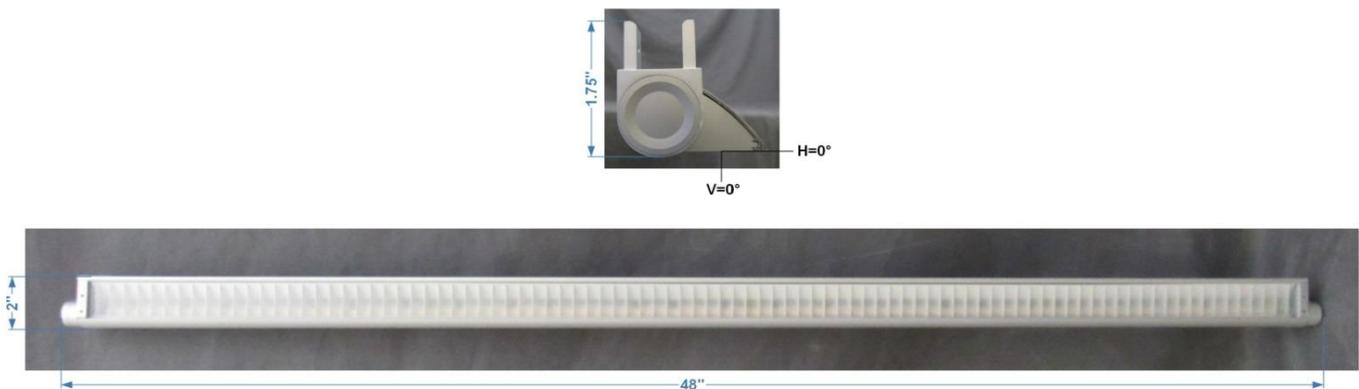
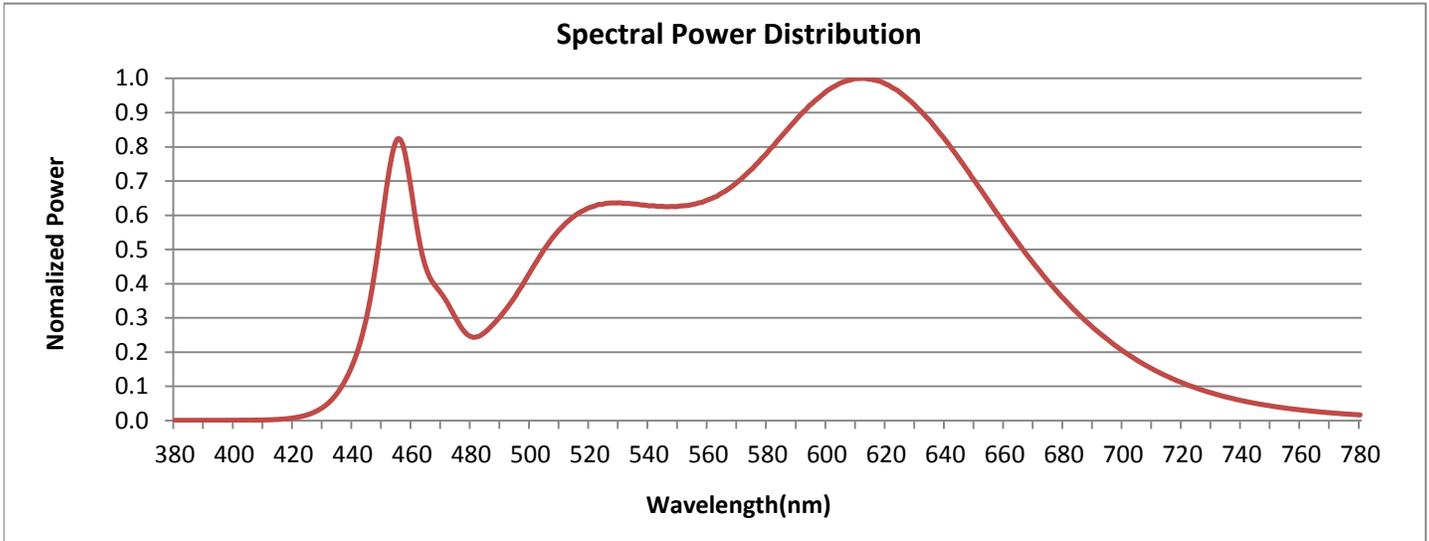


FIG. 1 LUMINAIRE

**Colorimetry Test Results**

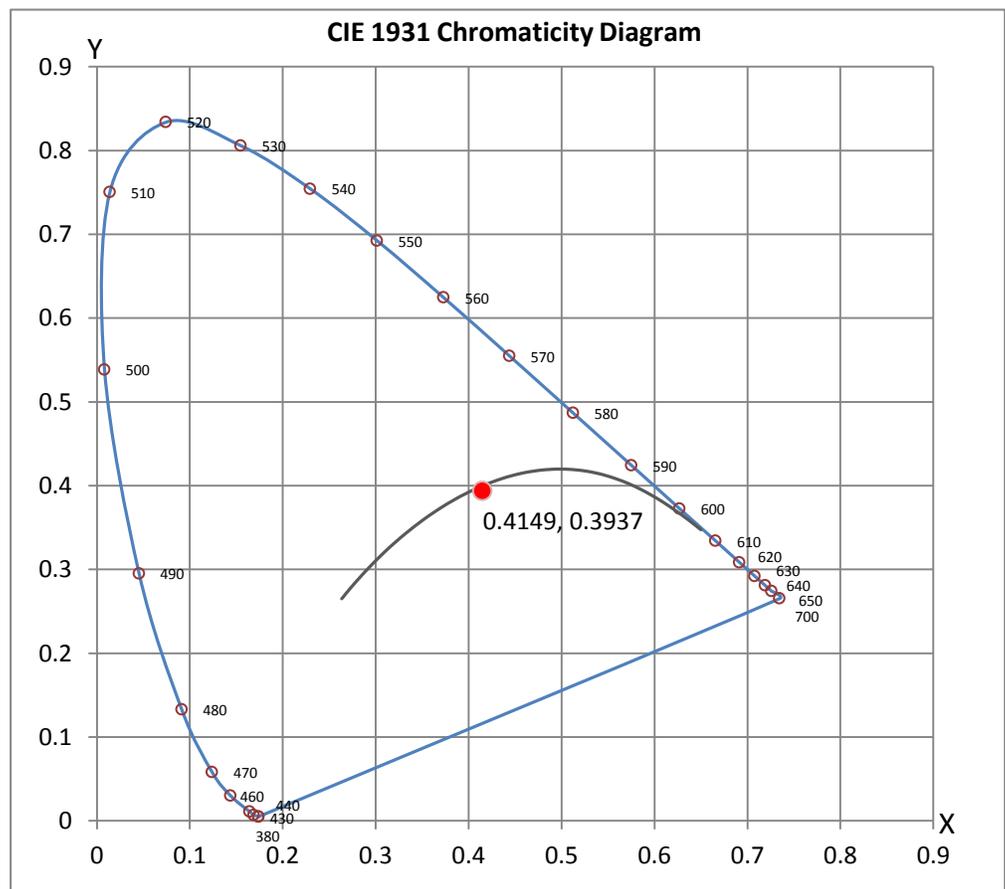


**CRI & CCT**

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



## 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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# 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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121911519.IES**

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

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

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

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**CANDELA TABULATION - (Cont.)**

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

**Vert. Horizontal Angles**

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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121911519.IES**

**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

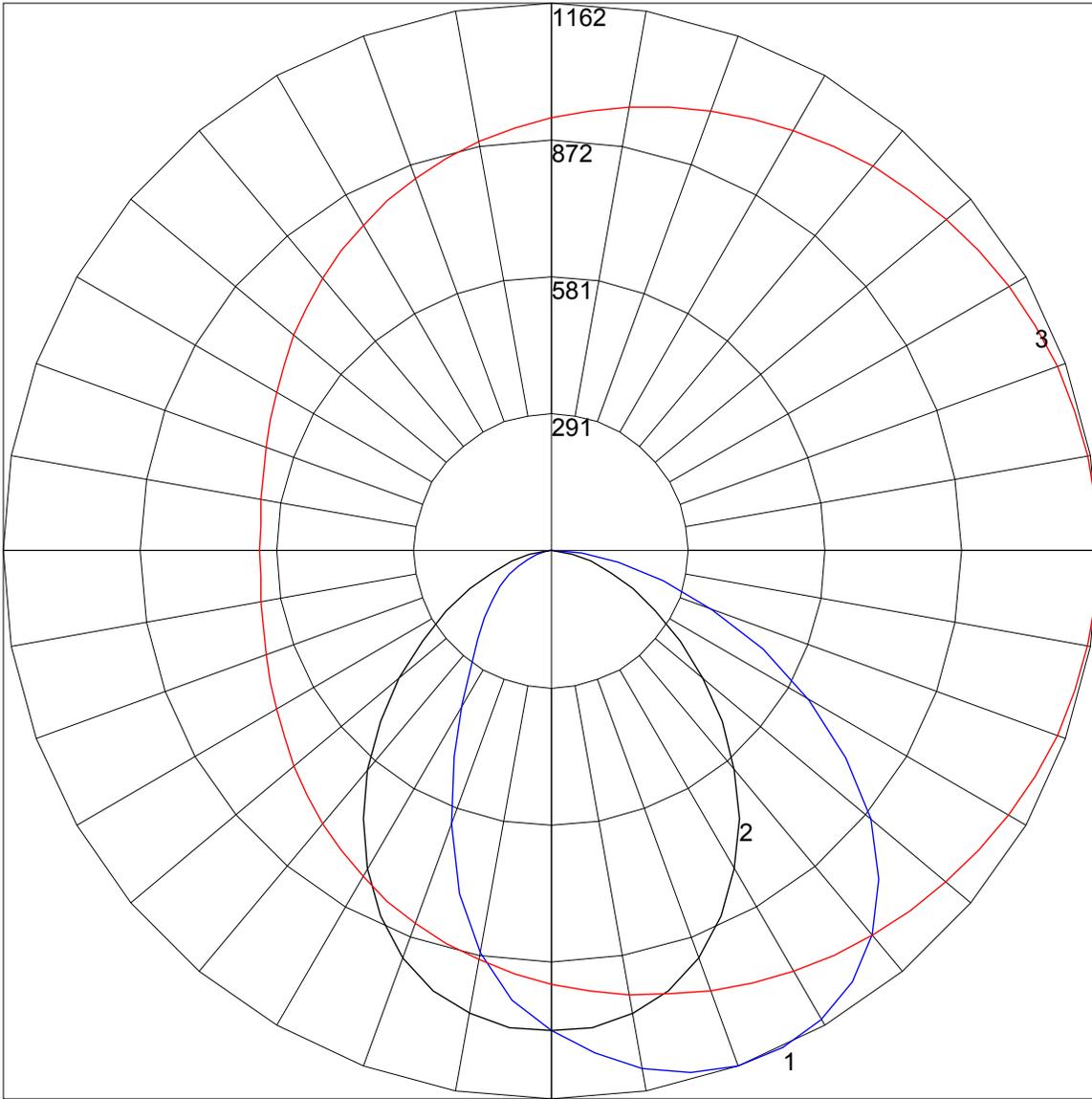
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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.)