

IES Report

ZipWave® | 707 | Clear with EdgeSoft™ | 90 CRI | SO

707-Z9-4-48-AW / EW-XX-X-0-Z-SO-359-C1-0-AL-0

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	122	126	129	134
Total Lumens, 4' rail length (1219mm)	3218	3319	3387	3421
Lumens per foot (305mm)	804	830	847	855
Input Power (W), 4' rail length (1219mm)	26.4	26.4	26.4	26.4
Watts per foot (305mm)	6.7	6.7	6.6	6.7
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: L121911561R01



Report No: L121911561R01

Issue Date: 1/29/2020

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

Model Number: 707-Z9-48-AW-Z-SO-359-C1-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: 1/10/20 - 1/22/20

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:	707-Z9-48-AW-Z-SO-359-C1-AL
Driver Model Number:	eldoLED ECOdrive 566/L

Test Summary

Total Lumens:	3387.09
Efficacy:	128.37
Color Redering Index:	93.9
Correlated Color Temperature:	3395
Input Voltage (VAC/60Hz):	120.02
Input Current (Amp):	0.2224
Input Power (W):	26.39
Input Power Factor:	0.9887
Current ATHD (%):	10.4%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:30

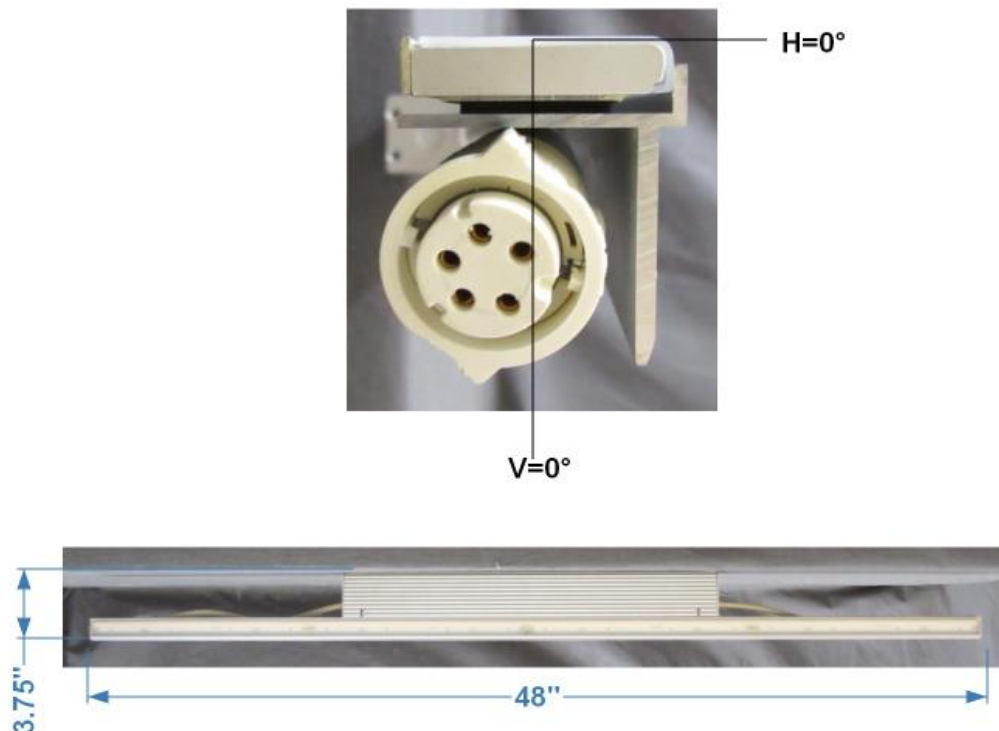
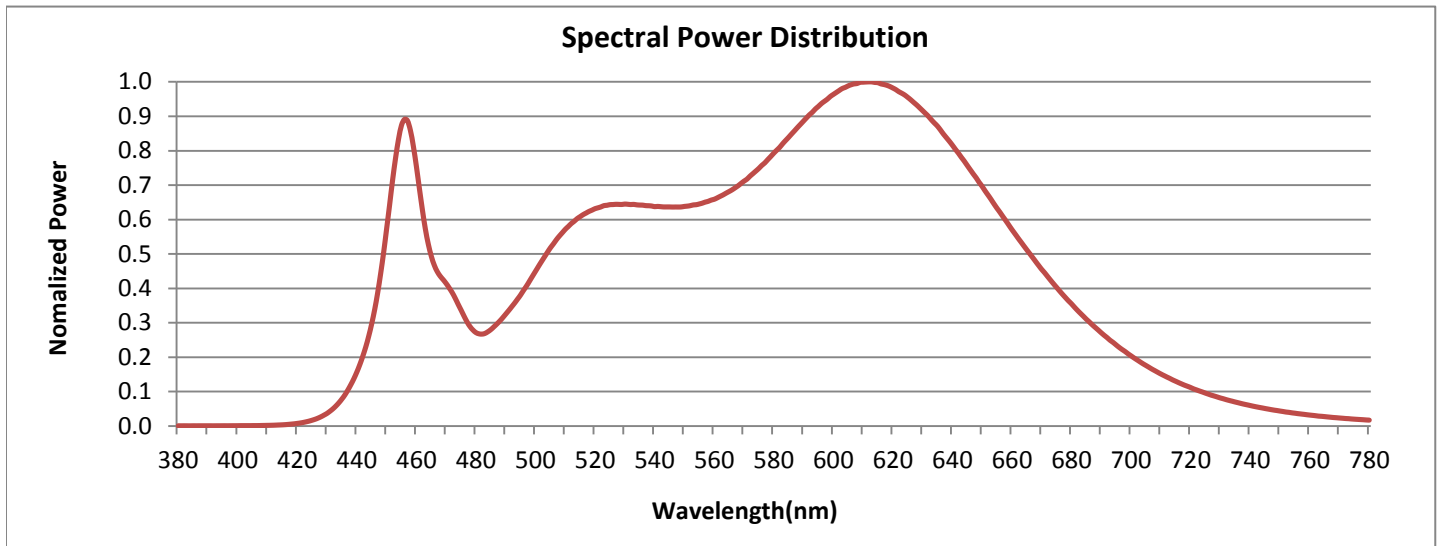


FIG. 1 LUMINAIRE

Colorimetry Test Results

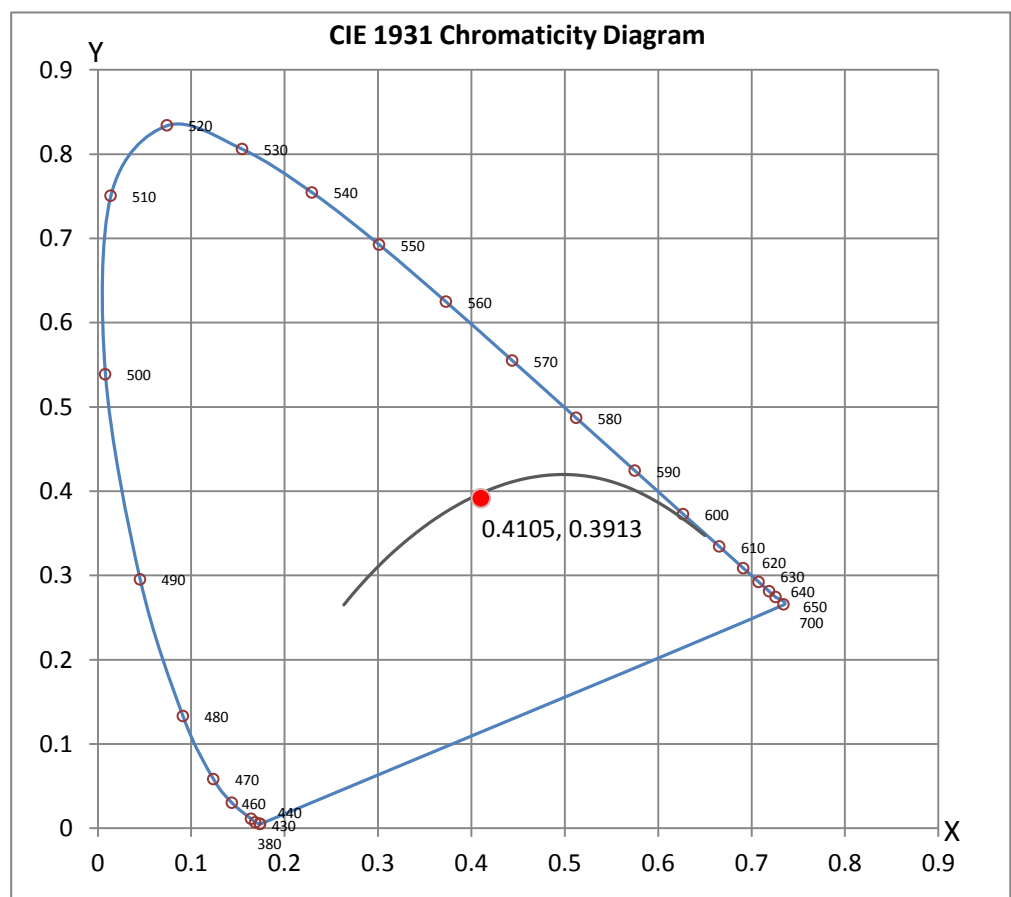


CRI & CCT

x	0.4105
y	0.3913
u'	0.2389
v'	0.5123
CRI	93.90
CCT	3395
Duv	-0.00085

R Values

R1	96.19
R2	99.26
R3	97.57
R4	96.01
R5	96.12
R6	95.48
R7	90.06
R8	80.74
R9	57.37
R10	98.05
R11	98.38
R12	76.90
R13	98.00
R14	99.53
R15	90.40





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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: 11*



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

Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L121911561R01.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121911561
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/29/2020
[MANUFAC] Vode Lighting
[LUMCAT] 707-Z9-48-AW-Z-SO-359-C1-AL
[LUMINAIRE] ZipWave LED, wall cove, 48", 3500K, 90 CRI, zipper board, clear lens w/edgesoft,
[MORE] standard output, clear anodized finish
[BALLASTCAT] eldoLED ECOdrive 566/L
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120.02VAC, 26.39W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3387
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	26.39
Ballast Factor	1.00
CIE Type	Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.06 ft
Luminous Width (90-270)	3.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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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	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	21	21	20	20	19	19	17	16	15	14
95	79	79	78	77	76	75	73	71	68	66
100	154	154	153	152	151	149	146	144	141	138
105	244	245	244	242	241	239	236	233	230	226
110	345	345	344	343	341	339	337	333	330	327
115	459	459	459	458	456	454	452	449	445	442
120	583	583	582	581	580	578	576	573	570	567
125	710	711	710	709	708	707	705	703	699	696
130	839	839	838	838	837	834	833	831	829	826
135	960	959	960	958	957	956	955	952	950	947
140	1068	1068	1069	1067	1067	1064	1061	1058	1057	1054
145	1157	1159	1158	1158	1155	1155	1153	1150	1146	1142
150	1234	1233	1233	1231	1231	1227	1226	1222	1219	1214
155	1293	1293	1292	1290	1289	1286	1283	1280	1276	1271
160	1330	1329	1328	1327	1325	1324	1321	1317	1313	1309
165	1354	1354	1353	1353	1350	1347	1346	1343	1340	1335
170	1357	1357	1357	1356	1357	1355	1354	1350	1349	1345
175	1348	1350	1348	1349	1348	1348	1347	1344	1344	1343
180	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328

Vert. Horizontal Angles
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	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0

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CANDELA TABULATION - (Cont.)

65	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	12	11	10	8	7	6	4	3	3	2
95	63	60	57	54	50	47	43	40	37	35
100	134	130	126	122	117	111	106	100	95	90
105	222	218	213	208	202	194	186	179	170	162
110	323	318	313	306	299	291	280	269	258	247
115	438	433	428	420	412	402	390	377	363	348
120	563	558	552	545	536	524	511	495	478	460
125	693	688	682	674	666	654	639	622	603	583
130	822	817	811	804	793	781	765	746	727	706
135	942	938	931	923	912	899	882	865	846	825
140	1049	1043	1036	1026	1016	1003	987	971	952	933
145	1136	1130	1123	1113	1102	1090	1076	1061	1044	1026
150	1209	1202	1195	1185	1176	1163	1150	1137	1123	1108
155	1266	1260	1251	1243	1234	1223	1213	1201	1188	1175
160	1304	1298	1292	1284	1277	1268	1260	1250	1240	1230
165	1331	1327	1321	1315	1310	1304	1296	1289	1282	1273
170	1343	1339	1334	1330	1327	1322	1319	1313	1308	1302
175	1340	1339	1338	1336	1332	1331	1328	1326	1324	1323
180	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328

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	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	2	1	1	1	1	1	1	1	1	1
95	34	32	30	28	26	24	22	20	19	17
100	86	82	78	74	69	65	61	57	53	50
105	155	148	141	134	127	119	112	105	99	93
110	237	227	217	208	197	187	176	166	157	148
115	335	322	309	297	283	270	256	242	230	217
120	444	429	414	400	384	368	351	334	319	304
125	565	547	532	516	499	481	463	444	426	409
130	688	670	654	637	619	603	585	566	548	530
135	806	789	772	757	742	726	710	693	677	660

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CANDELA TABULATION - (Cont.)

140	914	898	882	868	854	842	829	816	802	789
145	1009	994	980	969	957	946	937	927	916	907
150	1094	1080	1067	1057	1045	1038	1030	1022	1015	1008
155	1163	1151	1141	1131	1122	1115	1109	1102	1097	1093
160	1220	1212	1203	1195	1188	1180	1175	1170	1166	1161
165	1266	1259	1252	1245	1240	1235	1230	1226	1221	1219
170	1297	1294	1289	1284	1280	1276	1273	1270	1268	1264
175	1319	1319	1317	1314	1312	1309	1308	1305	1303	1303
180	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328

Vert. Horizontal Angles

	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0
90	1	1	1	1	1	1	1
95	16	15	14	14	13	13	13
100	48	45	44	42	41	41	40
105	88	84	81	78	77	75	75
110	140	134	128	124	122	120	119
115	207	198	190	185	181	178	177
120	291	279	270	262	257	254	252
125	393	381	369	360	354	350	348
130	514	500	488	477	470	466	465
135	645	632	619	610	602	599	597
140	777	766	755	748	741	737	737
145	898	889	882	877	872	869	867
150	1002	996	992	987	985	983	983
155	1089	1085	1081	1079	1078	1075	1077
160	1158	1156	1152	1150	1150	1149	1150
165	1216	1214	1211	1210	1208	1208	1207
170	1262	1259	1258	1256	1256	1255	1253
175	1301	1302	1300	1300	1298	1297	1297
180	1328	1328	1328	1328	1328	1328	1328

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	0.00	N.A.	0.00
0-30	0.00	N.A.	0.00
0-40	0.00	N.A.	0.00
0-60	0.00	N.A.	0.00
0-80	0.00	N.A.	0.00
0-90	1.94	N.A.	0.10
10-90	1.94	N.A.	0.10
20-40	0.00	N.A.	0.00
20-50	0.00	N.A.	0.00
40-70	0.00	N.A.	0.00
60-80	0.00	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	1.94	N.A.	0.10
90-110	229.47	N.A.	6.80
90-120	570.75	N.A.	16.90
90-130	1080.42	N.A.	31.90
90-150	2352.22	N.A.	69.40
90-180	3385.15	N.A.	99.90
110-180	3155.68	N.A.	93.20
0-180	3387.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	0.00
10-20	0.00
20-30	0.00
30-40	0.00
40-50	0.00
50-60	0.00
60-70	0.00
70-80	0.00
80-90	1.94
90-100	51.51
100-110	177.96
110-120	341.28
120-130	509.67
130-140	628.27
140-150	643.53
150-160	545.86
160-170	361.23
170-180	125.84

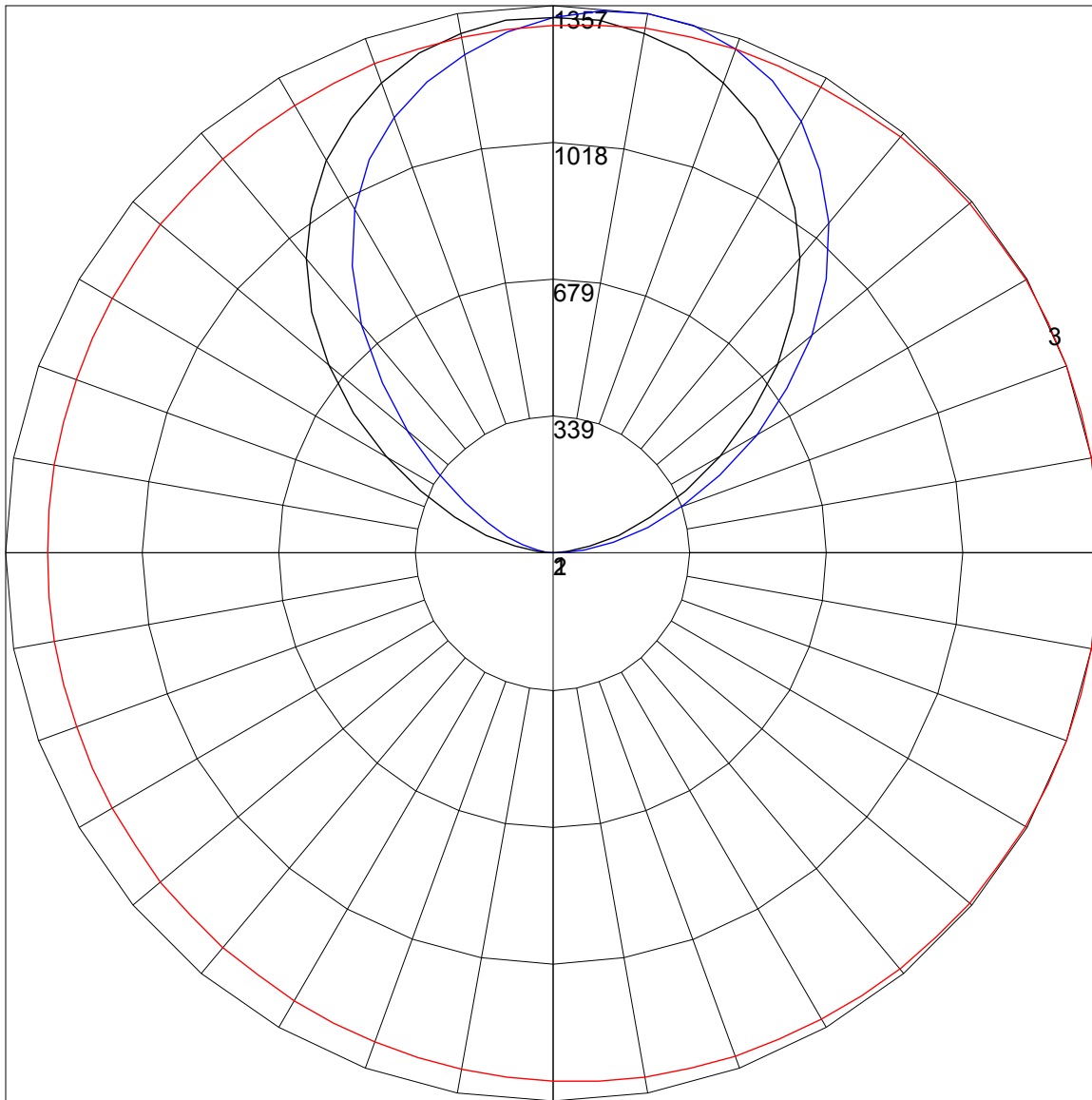
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

POLAR GRAPH



Maximum Candela = 1357 Located At Horizontal Angle = 0, Vertical Angle = 170
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 (170) (Through Max. Cd.)