

IES Report

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

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

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	112	116	118	123
Total Lumens, 4' rail length (1219mm)	5994	6183	6310	6373
Lumens per foot (305mm)	1499	1546	1577	1593
Input Power (W), 4' rail length (1219mm)	53.7	53.7	53.7	53.7
Watts per foot (305mm)	13.5	13.5	13.5	13.5
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: L121911563R01



Report No: L121911563R01

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-HO-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-HO-359-C1-AL
Driver Model Number:	SIGNIFY ADVANCE XI075C200V054BST1

Test Summary

Total Lumens:	6309.64
Efficacy:	117.43
Color Redering Index:	93.5
Correlated Color Temperature:	3408
Input Voltage (VAC/60Hz):	120.02
Input Current (Amp):	0.4494
Input Power (W):	53.73
Input Power Factor:	0.9962
Current ATHD (%):	8.4%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:35

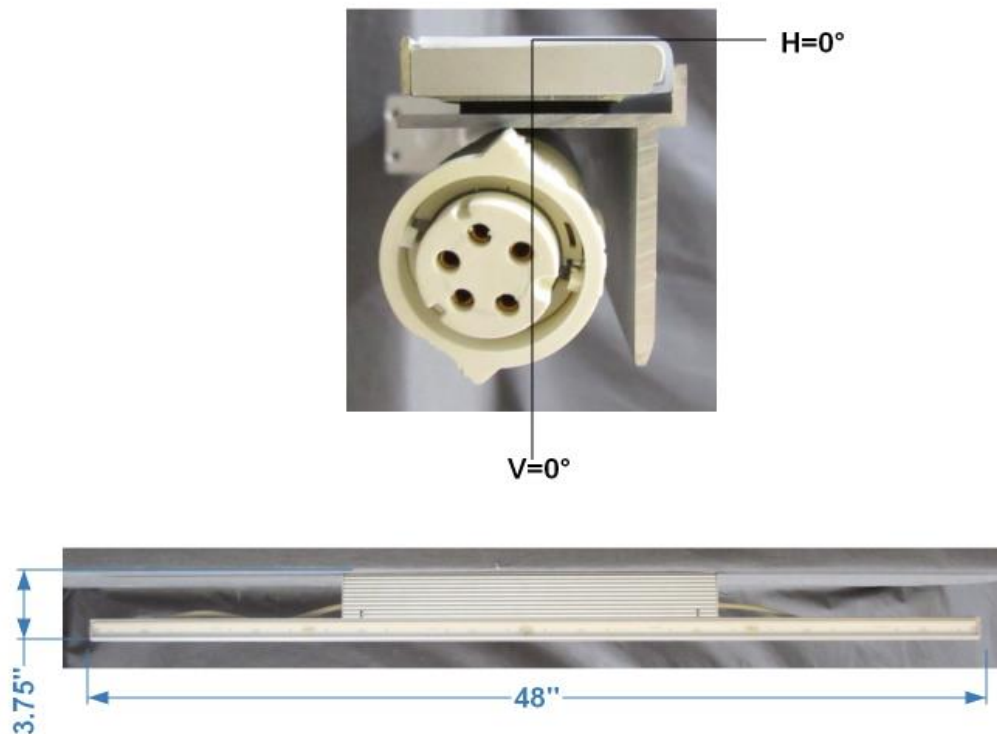
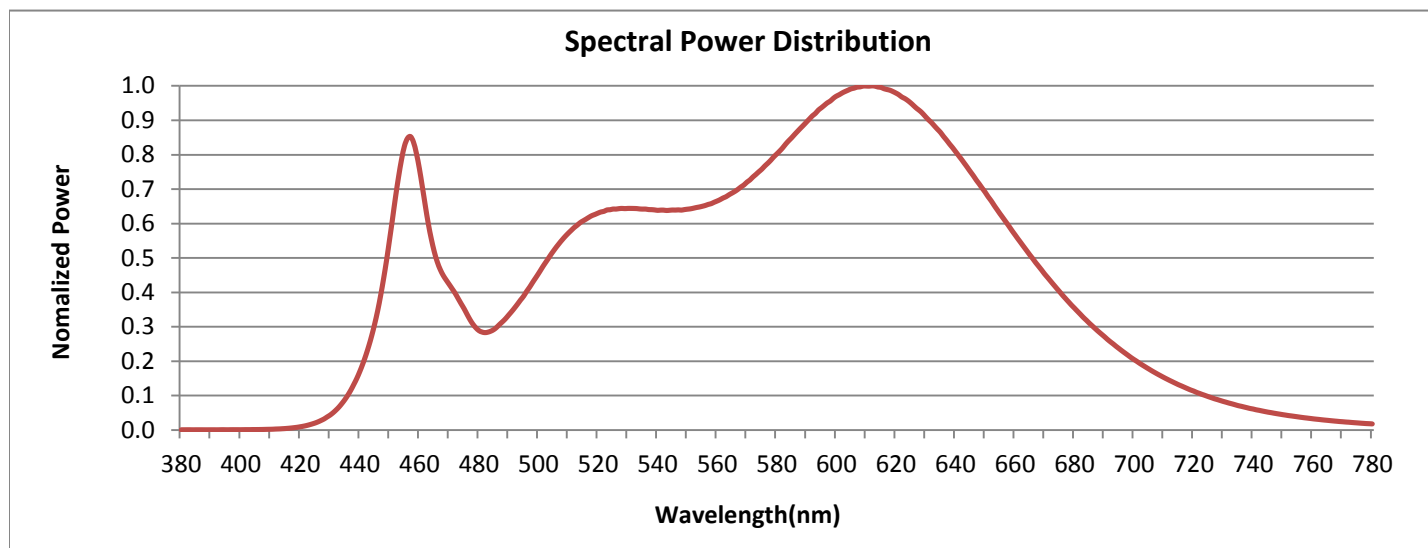


FIG. 1 LUMINAIRE

Colorimetry Test Results

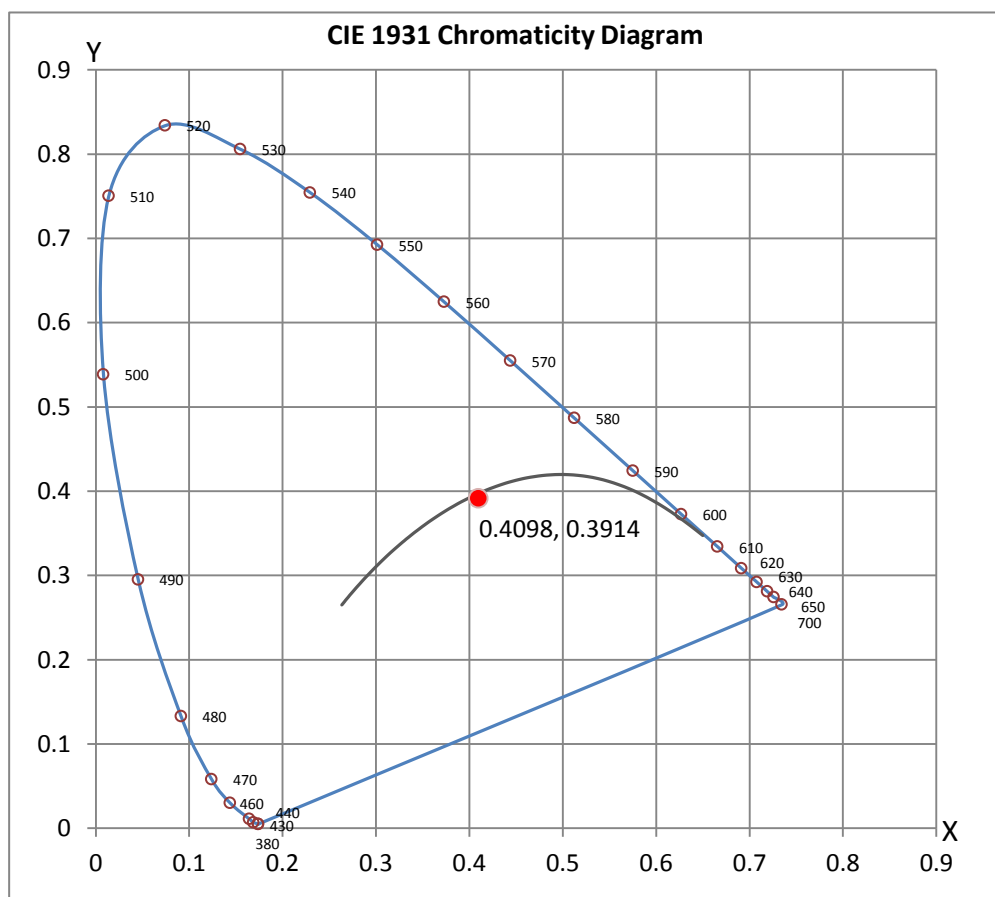


CRI & CCT

x	0.4098
y	0.3914
u'	0.2384
v'	0.5122
CRI	93.50
CCT	3408
Duv	-0.00066

R Values

R1	95.65
R2	99.20
R3	97.14
R4	95.20
R5	95.64
R6	95.58
R7	89.59
R8	79.79
R9	55.35
R10	97.91
R11	98.52
R12	77.31
R13	97.54
R14	99.32
R15	89.72





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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 : L121911563R01.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121911563R01
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/29/2020
[MANUFAC] Vode Lighting
[LUMCAT] 707-Z9-48-AW-Z-HO-359-C1-AL
[LUMINAIRE] ZipWave LED, wall cove, 48", 3500K, 90 CRI, zipper board, clear lens w/edgesoft,
[MORE] high output, clear anodized finish
[BALLASTCAT] SIGNIFY ADVANCE XI075C200V054BST1
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120.02VAC, 53.73W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6310
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	53.73
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	60	59	59	57	55	53	50	47	44	40
95	173	172	171	169	166	162	158	153	148	142
100	316	316	315	312	309	304	299	293	287	279
105	485	484	482	480	476	472	466	460	453	445
110	680	679	677	675	671	666	660	654	646	638
115	895	894	892	890	886	881	876	869	862	854
120	1126	1126	1124	1122	1118	1114	1109	1103	1094	1085
125	1365	1365	1363	1361	1357	1353	1347	1341	1333	1325
130	1599	1600	1598	1596	1593	1588	1583	1578	1571	1564
135	1822	1822	1821	1819	1816	1812	1808	1802	1795	1787
140	2023	2022	2021	2019	2016	2012	2008	2002	1995	1987
145	2193	2193	2192	2189	2187	2183	2178	2171	2164	2155
150	2330	2329	2328	2326	2323	2319	2314	2306	2298	2289
155	2433	2433	2432	2429	2427	2421	2416	2409	2401	2392
160	2506	2505	2503	2500	2497	2493	2488	2481	2473	2464
165	2544	2543	2543	2541	2537	2535	2529	2523	2516	2509
170	2553	2553	2551	2550	2546	2546	2541	2536	2532	2525
175	2530	2531	2530	2530	2528	2527	2525	2522	2520	2517
180	2486	2486	2486	2486	2486	2486	2486	2486	2486	2486

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

IES INDOOR REPORT
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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	37	32	28	24	19	15	11	8	5	3
95	135	128	120	112	105	98	90	80	72	67
100	271	263	254	245	235	223	207	193	182	171
105	437	427	417	406	391	373	355	338	321	305
110	630	620	608	591	574	554	533	511	488	466
115	845	832	818	802	784	761	737	710	681	653
120	1075	1063	1050	1034	1014	990	962	931	898	863
125	1316	1305	1291	1274	1255	1229	1199	1165	1127	1088
130	1554	1543	1529	1512	1491	1465	1433	1398	1360	1318
135	1778	1766	1752	1734	1712	1685	1654	1618	1581	1540
140	1976	1963	1948	1930	1907	1880	1851	1818	1781	1744
145	2144	2129	2115	2096	2072	2048	2020	1988	1956	1920
150	2277	2265	2248	2230	2209	2187	2161	2134	2106	2074
155	2381	2367	2353	2336	2317	2296	2274	2252	2228	2204
160	2455	2442	2429	2414	2399	2381	2365	2346	2327	2306
165	2501	2490	2480	2468	2455	2442	2428	2414	2401	2385
170	2520	2513	2506	2498	2489	2481	2471	2462	2453	2441
175	2513	2510	2506	2503	2499	2494	2490	2485	2481	2476
180	2486	2486	2486	2486	2486	2486	2486	2486	2486	2486

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	3	2	2	2	2	2	2	2	2	2
95	49	40	36	33	31	29	27	25	23	22
100	162	141	108	96	88	81	76	71	66	62
105	291	276	255	210	173	158	145	134	125	118
110	446	426	406	384	335	284	245	223	207	193
115	627	601	576	551	522	485	426	370	326	297
120	832	801	771	742	709	677	643	597	540	487
125	1053	1020	986	953	920	886	850	812	777	738
130	1282	1246	1212	1179	1146	1111	1075	1038	1003	968
135	1504	1469	1436	1405	1373	1341	1309	1275	1242	1210

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CANDELA TABULATION - (Cont.)

140	1709	1676	1646	1617	1589	1562	1535	1506	1479	1452
145	1890	1860	1833	1809	1785	1762	1741	1720	1699	1678
150	2047	2021	1998	1975	1955	1936	1919	1903	1888	1873
155	2179	2157	2137	2118	2099	2085	2070	2058	2046	2036
160	2287	2269	2252	2237	2221	2208	2197	2186	2176	2168
165	2371	2357	2344	2332	2321	2309	2300	2291	2283	2276
170	2432	2422	2415	2406	2398	2390	2383	2376	2371	2366
175	2470	2465	2462	2456	2453	2449	2447	2443	2440	2438
180	2486	2486	2486	2486	2486	2486	2486	2486	2486	2486

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	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	2	2	2	2	2	2	2
95	20	19	18	18	17	17	17
100	59	56	54	53	51	51	50
105	111	106	102	99	97	95	95
110	182	173	166	160	157	154	153
115	279	264	253	245	238	235	233
120	443	407	380	361	350	344	342
125	690	646	610	581	562	550	547
130	936	908	883	860	842	830	826
135	1180	1153	1130	1111	1097	1089	1086
140	1427	1404	1384	1368	1356	1348	1346
145	1658	1641	1625	1613	1603	1598	1596
150	1860	1848	1837	1828	1822	1818	1816
155	2026	2018	2011	2005	2001	1999	1998
160	2161	2156	2150	2146	2143	2141	2141
165	2271	2266	2262	2258	2256	2255	2254
170	2362	2359	2355	2353	2351	2350	2349
175	2436	2433	2432	2430	2430	2429	2428
180	2486	2486	2486	2486	2486	2486	2486

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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	5.40	N.A.	0.10
10-90	5.40	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	5.40	N.A.	0.10
90-110	421.65	N.A.	6.70
90-120	1044.01	N.A.	16.50
90-130	1989.46	N.A.	31.50
90-150	4368.24	N.A.	69.20
90-180	6304.24	N.A.	99.90
110-180	5882.58	N.A.	93.20
0-180	6309.64	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	5.40
90-100	98.79
100-110	322.86
110-120	622.36
120-130	945.44
130-140	1173.98
140-150	1204.8
150-160	1023.08
160-170	677.13
170-180	235.78

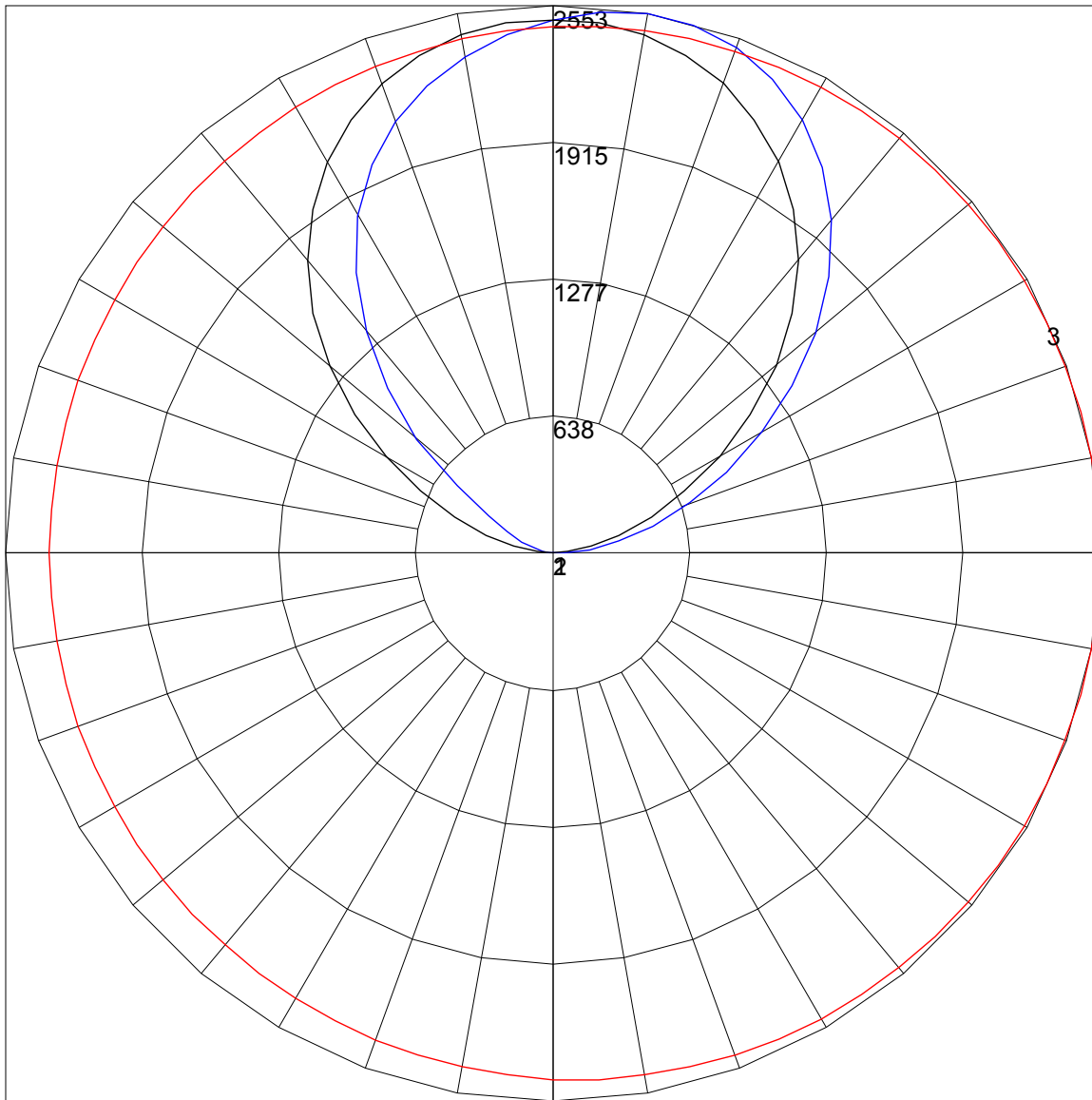
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121911563R01.IES

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 = 2553 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.)