

## IES Report

# ZipTwo® | 707 | Round, Diffuse | 90 CRI | HO

707-Z2-4-48-XX-XX-X-0-Z-HO-359-S4-X-WH-0

|  | 2700K | 3000K | 3500K | 4000K |
|--|-------|-------|-------|-------|
| Efficacy - Lumens per Watt               | 106   | 109   | 111   | 113   |
| Total Lumens, 4' rail length (1219mm)    | 4169  | 4300  | 4388  | 4432  |
| Lumens per foot (305mm)                  | 1042  | 1075  | 1097  | 1108  |
| Input Power (W), 4' rail length (1219mm) | 39.6  | 39.6  | 39.6  | 39.6  |
| Watts per foot (305mm)                   | 9.9   | 9.9   | 9.9   | 9.9   |
| 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](#).



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : VODE\_707\_Z2\_HO\_359\_S4.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] L121911531 (SOURCE REPORT FOR REFERENCE)

[TESTLAB] REPORT BASED ON DATA FROM NVLAP ACCREDITED LAB

[ISSUE DATE] 12/23/2019

[MANUFAC] Vode Lighting

[LUMCAT] 707-Z2-48-Z-HO-359-S4-AL

[LUMINAIRE] ZipTwo LED, 48", 3500K, 90 CRI, zipper board, round diffuse lens,

[MORE] high output, clear anodized finish

[TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 4388            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 111             |
| Total Luminaire Watts           | 39.55           |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.30            |
| Spacing Criterion (90-270)      | 1.28            |
| Spacing Criterion (Diagonal)    | 1.40            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 0.11 ft         |
| Luminous Width (90-270)         | 4.00 ft         |
| Luminous Height                 | 0.00 ft         |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 32386            | 31569             | 30865             |
| 55                  | 32822            | 31212             | 29912             |
| 65                  | 34569            | 31235             | 28272             |
| 75                  | 40881            | 33720             | 25113             |
| 85                  | 81557            | 57930             | 20872             |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VODE\_707\_Z2\_HO\_359\_S4.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>   | 1319.355 | 1319.355 | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  |
| <b>5</b>   | 1315.710 | 1315.770 | 1315.635  | 1315.635  | 1315.575  | 1315.575  | 1315.515  | 1315.455  | 1315.455  | 1315.710  |
| <b>10</b>  | 1301.490 | 1301.490 | 1301.565  | 1301.370  | 1301.370  | 1301.175  | 1300.935  | 1300.740  | 1300.545  | 1300.305  |
| <b>15</b>  | 1277.730 | 1277.730 | 1277.535  | 1277.355  | 1277.100  | 1276.665  | 1276.155  | 1275.915  | 1275.405  | 1274.970  |
| <b>20</b>  | 1243.275 | 1243.410 | 1243.095  | 1242.900  | 1242.210  | 1241.580  | 1240.830  | 1240.005  | 1239.135  | 1238.190  |
| <b>25</b>  | 1199.400 | 1199.265 | 1198.890  | 1198.395  | 1197.255  | 1196.445  | 1195.305  | 1193.985  | 1192.665  | 1191.345  |
| <b>30</b>  | 1145.835 | 1145.715 | 1145.205  | 1144.455  | 1143.255  | 1141.875  | 1140.240  | 1138.410  | 1136.460  | 1134.705  |
| <b>35</b>  | 1083.600 | 1083.600 | 1082.715  | 1081.710  | 1080.135  | 1078.320  | 1076.115  | 1073.910  | 1071.465  | 1069.005  |
| <b>40</b>  | 1013.940 | 1013.565 | 1012.680  | 1011.360  | 1009.350  | 1007.085  | 1004.325  | 1001.490  | 998.280   | 995.145   |
| <b>45</b>  | 936.990  | 936.615  | 935.475   | 933.660   | 931.140   | 928.065   | 924.720   | 921.015   | 917.055   | 913.350   |
| <b>50</b>  | 855.135  | 854.625  | 853.185   | 850.860   | 847.710   | 843.750   | 839.355   | 834.765   | 829.605   | 825.075   |
| <b>55</b>  | 770.265  | 769.755  | 767.865   | 765.105   | 761.205   | 756.300   | 750.765   | 744.990   | 738.765   | 732.480   |
| <b>60</b>  | 684.000  | 683.370  | 681.045   | 677.400   | 672.750   | 666.525   | 659.805   | 652.380   | 644.520   | 636.600   |
| <b>65</b>  | 597.750  | 596.745  | 594.285   | 589.950   | 584.235   | 577.065   | 568.770   | 559.710   | 549.915   | 540.105   |
| <b>70</b>  | 513.510  | 512.505  | 509.355   | 504.900   | 498.480   | 490.185   | 480.630   | 469.935   | 458.250   | 446.115   |
| <b>75</b>  | 432.915  | 431.910  | 428.565   | 423.420   | 416.130   | 407.130   | 396.570   | 384.495   | 371.235   | 357.090   |
| <b>80</b>  | 357.345  | 356.340  | 352.755   | 347.280   | 339.615   | 329.865   | 318.555   | 305.730   | 291.150   | 275.670   |
| <b>85</b>  | 290.835  | 289.695  | 285.990   | 280.515   | 272.595   | 262.725   | 250.965   | 237.645   | 222.615   | 206.580   |
| <b>90</b>  | 229.350  | 228.345  | 224.820   | 219.345   | 211.680   | 201.810   | 190.560   | 177.480   | 162.885   | 147.300   |
| <b>95</b>  | 176.280  | 175.275  | 172.140   | 166.980   | 159.930   | 150.690   | 140.190   | 128.130   | 114.930   | 100.785   |
| <b>100</b> | 131.895  | 131.025  | 128.250   | 123.540   | 117.180   | 109.260   | 100.080   | 89.595    | 78.210    | 66.390    |
| <b>105</b> | 95.940   | 95.190   | 92.670    | 88.770    | 83.430    | 76.890    | 69.225    | 60.675    | 51.555    | 42.375    |
| <b>110</b> | 67.770   | 67.140   | 65.130    | 62.055    | 57.720    | 52.500    | 46.710    | 39.990    | 33.255    | 26.535    |
| <b>115</b> | 46.395   | 45.900   | 44.385    | 42.000    | 38.790    | 34.950    | 30.675    | 25.965    | 21.315    | 16.725    |
| <b>120</b> | 30.930   | 30.615   | 29.490    | 27.915    | 25.650    | 22.890    | 19.995    | 16.905    | 13.950    | 11.130    |
| <b>125</b> | 20.490   | 20.310   | 19.560    | 18.540    | 17.100    | 15.345    | 13.515    | 11.625    | 9.930     | 8.430     |
| <b>130</b> | 14.085   | 13.950   | 13.455    | 12.765    | 12.015    | 10.875    | 9.990     | 8.925     | 7.980     | 7.230     |
| <b>135</b> | 10.440   | 10.305   | 10.185    | 9.750     | 9.375     | 8.865     | 8.355     | 7.800     | 7.350     | 6.855     |
| <b>140</b> | 8.925    | 8.805    | 8.670     | 8.550     | 8.295     | 8.055     | 7.605     | 7.290     | 6.975     | 6.600     |
| <b>145</b> | 8.175    | 8.175    | 8.175     | 8.055     | 7.860     | 7.605     | 7.230     | 6.975     | 6.735     | 6.540     |
| <b>150</b> | 7.800    | 7.740    | 7.665     | 7.665     | 7.350     | 7.230     | 6.975     | 6.795     | 6.735     | 6.600     |
| <b>155</b> | 7.425    | 7.425    | 7.425     | 7.230     | 7.035     | 6.975     | 6.855     | 6.855     | 6.735     | 0.000     |
| <b>160</b> | 7.290    | 7.170    | 7.110     | 6.975     | 6.915     | 6.855     | 6.855     | 6.795     | 6.600     | 0.000     |
| <b>165</b> | 6.915    | 6.975    | 6.855     | 6.795     | 6.795     | 6.795     | 6.795     | 6.735     | 0.000     | 0.000     |
| <b>170</b> | 6.795    | 6.795    | 6.795     | 6.795     | 6.795     | 6.795     | 6.735     | 0.000     | 0.000     | 0.000     |
| <b>175</b> | 0.000    | 0.000    | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     |
| <b>180</b> | 0.000    | 0.000    | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     |

**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> |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>0</b>  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  | 1319.355  |
| <b>5</b>  | 1315.515  | 1315.395  | 1315.260  | 1315.260  | 1315.260  | 1315.260  | 1315.200  | 1315.260  | 1315.455  |
| <b>10</b> | 1300.110  | 1299.855  | 1299.795  | 1299.675  | 1299.420  | 1299.360  | 1299.420  | 1298.985  | 1299.225  |
| <b>15</b> | 1274.400  | 1273.830  | 1273.395  | 1273.020  | 1272.645  | 1272.255  | 1272.135  | 1272.075  | 1272.075  |
| <b>20</b> | 1237.305  | 1236.420  | 1235.610  | 1234.980  | 1234.230  | 1233.465  | 1233.225  | 1233.225  | 1232.850  |
| <b>25</b> | 1189.965  | 1188.645  | 1187.265  | 1186.125  | 1185.120  | 1184.505  | 1183.740  | 1183.680  | 1183.560  |
| <b>30</b> | 1132.815  | 1130.865  | 1129.230  | 1127.730  | 1126.410  | 1125.465  | 1124.580  | 1124.085  | 1123.950  |
| <b>35</b> | 1066.305  | 1064.175  | 1061.910  | 1059.825  | 1058.265  | 1057.065  | 1056.060  | 1055.430  | 1055.310  |
| <b>40</b> | 991.935   | 989.100   | 986.400   | 983.880   | 981.930   | 980.370   | 979.110   | 978.225   | 978.225   |
| <b>45</b> | 909.450   | 905.745   | 902.595   | 899.775   | 897.315   | 895.500   | 894.045   | 893.160   | 892.980   |
| <b>50</b> | 820.245   | 815.895   | 811.935   | 808.485   | 805.650   | 803.205   | 801.690   | 800.880   | 800.565   |
| <b>55</b> | 726.570   | 720.975   | 716.130   | 711.855   | 708.405   | 705.630   | 703.680   | 702.420   | 701.985   |
| <b>60</b> | 628.875   | 621.825   | 615.360   | 609.945   | 605.550   | 602.025   | 599.385   | 598.065   | 597.630   |

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**CANDELA TABULATION - (Cont.)**

|            |         |         |         |         |         |         |         |         |         |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>65</b>  | 530.100 | 520.800 | 512.565 | 505.335 | 499.425 | 494.835 | 491.505 | 489.435 | 488.865 |
| <b>70</b>  | 433.980 | 421.785 | 410.535 | 400.155 | 391.920 | 385.515 | 380.850 | 378.030 | 377.085 |
| <b>75</b>  | 342.450 | 327.735 | 313.275 | 299.385 | 287.685 | 278.190 | 271.155 | 267.315 | 265.935 |
| <b>80</b>  | 259.335 | 242.865 | 225.825 | 208.590 | 193.200 | 179.550 | 169.500 | 163.710 | 161.700 |
| <b>85</b>  | 189.105 | 171.135 | 152.700 | 133.665 | 115.935 | 99.390  | 85.065  | 76.770  | 74.430  |
| <b>90</b>  | 130.320 | 112.905 | 95.115  | 76.635  | 59.670  | 43.320  | 28.485  | 16.290  | 9.060   |
| <b>95</b>  | 85.620  | 70.350  | 55.200  | 40.110  | 26.970  | 15.585  | 6.915   | 2.385   | 2.010   |
| <b>100</b> | 54.000  | 41.940  | 30.555  | 20.175  | 12.015  | 6.105   | 2.895   | 2.265   | 0.000   |
| <b>105</b> | 33.075  | 24.450  | 16.905  | 10.500  | 6.225   | 3.585   | 2.835   | 0.000   | 0.000   |
| <b>110</b> | 20.175  | 14.520  | 9.870   | 6.345   | 4.395   | 3.525   | 3.075   | 0.000   | 0.000   |
| <b>115</b> | 12.630  | 9.300   | 6.795   | 5.100   | 4.275   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>120</b> | 8.865   | 6.975   | 5.715   | 4.965   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>125</b> | 7.110   | 6.225   | 5.595   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>130</b> | 6.600   | 6.030   | 5.535   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>135</b> | 6.420   | 5.970   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>140</b> | 6.345   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>145</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>150</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>155</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>160</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>165</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>170</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>175</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| <b>180</b> | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VODE\_707\_Z2\_HO\_359\_S4.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 484.95  | N.A.  | 11.10  |
| 0-30    | 1034.14 | N.A.  | 23.60  |
| 0-40    | 1703.18 | N.A.  | 38.80  |
| 0-60    | 3065.2  | N.A.  | 69.90  |
| 0-80    | 3976.81 | N.A.  | 90.60  |
| 0-90    | 4193.32 | N.A.  | 95.60  |
| 10-90   | 4068.25 | N.A.  | 92.70  |
| 20-40   | 1218.23 | N.A.  | 27.80  |
| 20-50   | 1923.51 | N.A.  | 43.80  |
| 40-70   | 1898.86 | N.A.  | 43.30  |
| 60-80   | 911.61  | N.A.  | 20.80  |
| 70-80   | 374.77  | N.A.  | 8.50   |
| 80-90   | 216.51  | N.A.  | 4.90   |
| 90-110  | 155.75  | N.A.  | 3.50   |
| 90-120  | 176.67  | N.A.  | 4.00   |
| 90-130  | 185.31  | N.A.  | 4.20   |
| 90-150  | 192.16  | N.A.  | 4.40   |
| 90-180  | 194.67  | N.A.  | 4.40   |
| 110-180 | 38.92   | N.A.  | 0.90   |
| 0-180   | 4387.99 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 125.07 |
| 10-20   | 359.87 |
| 20-30   | 549.19 |
| 30-40   | 669.04 |
| 40-50   | 705.28 |
| 50-60   | 656.74 |
| 60-70   | 536.84 |
| 70-80   | 374.77 |
| 80-90   | 216.51 |
| 90-100  | 106.58 |
| 100-110 | 49.17  |
| 110-120 | 20.92  |
| 120-130 | 8.64   |
| 130-140 | 4.29   |
| 140-150 | 2.57   |
| 150-160 | 1.60   |
| 160-170 | 0.82   |
| 170-180 | 0.09   |

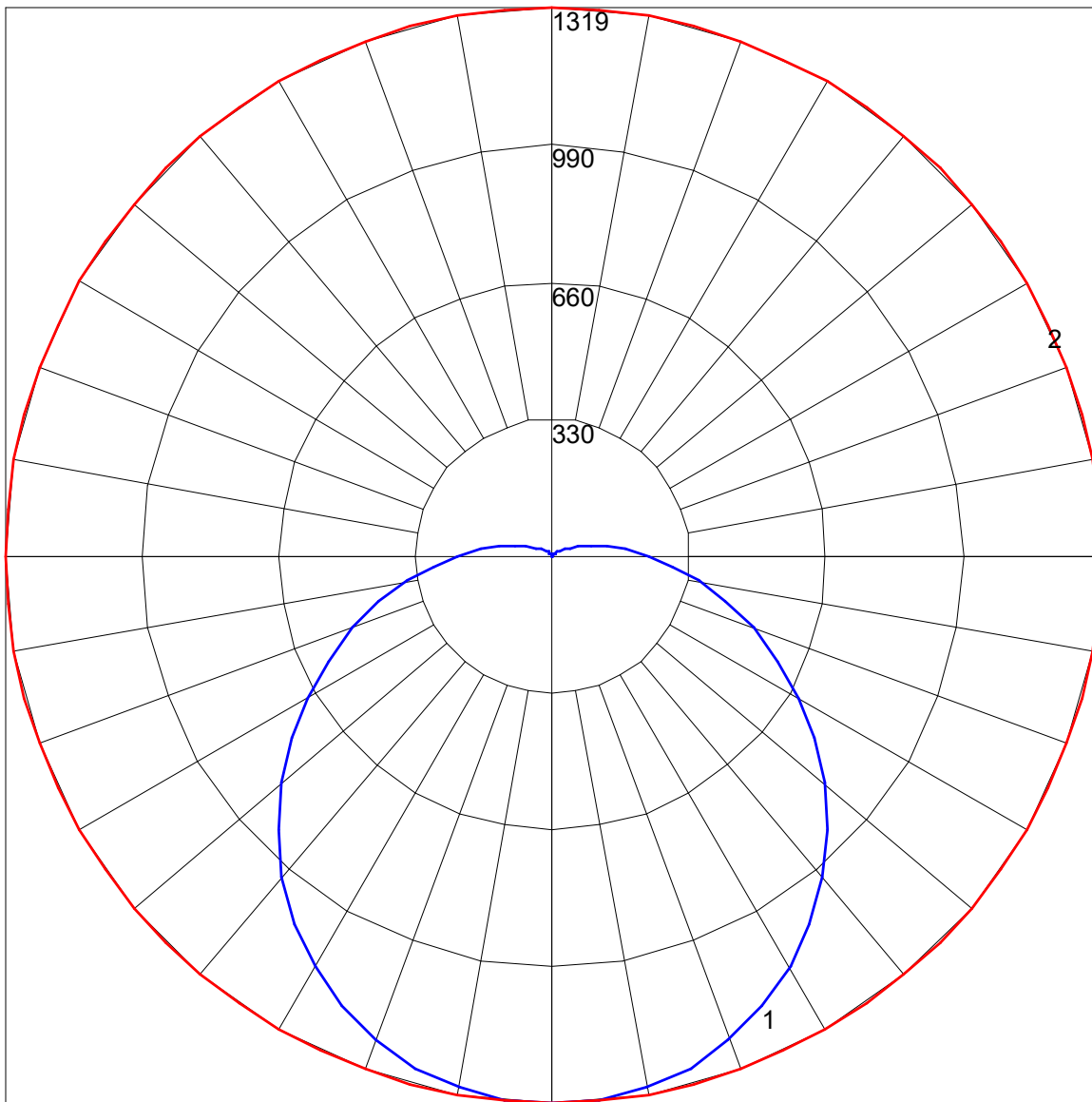
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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  | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 103 | 103 | 103 | 98 | 98 | 98 | 96 |
| 1  | 106 | 101 | 96  | 91  | 103 | 98  | 93  | 89  | 93  | 89  | 86  | 88  | 85  | 82  | 84 | 81 | 79 | 77 |
| 2  | 96  | 87  | 79  | 73  | 93  | 85  | 78  | 72  | 80  | 75  | 70  | 76  | 72  | 67  | 73 | 69 | 65 | 63 |
| 3  | 87  | 76  | 67  | 60  | 84  | 74  | 66  | 59  | 70  | 63  | 58  | 67  | 61  | 56  | 64 | 59 | 55 | 52 |
| 4  | 80  | 67  | 58  | 51  | 77  | 65  | 57  | 50  | 62  | 55  | 49  | 59  | 53  | 48  | 57 | 51 | 47 | 44 |
| 5  | 73  | 60  | 50  | 43  | 71  | 58  | 49  | 43  | 56  | 48  | 42  | 53  | 46  | 41  | 51 | 45 | 40 | 38 |
| 6  | 67  | 54  | 44  | 38  | 65  | 52  | 44  | 37  | 50  | 42  | 37  | 48  | 41  | 36  | 46 | 40 | 35 | 33 |
| 7  | 62  | 48  | 39  | 33  | 60  | 47  | 39  | 33  | 45  | 38  | 32  | 44  | 37  | 32  | 42 | 36 | 31 | 29 |
| 8  | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 42  | 34  | 29  | 40  | 33  | 28  | 38 | 32 | 28 | 26 |
| 9  | 54  | 40  | 32  | 26  | 53  | 40  | 32  | 26  | 38  | 31  | 26  | 37  | 30  | 25  | 35 | 30 | 25 | 23 |
| 10 | 51  | 37  | 29  | 24  | 49  | 37  | 29  | 24  | 35  | 28  | 23  | 34  | 28  | 23  | 33 | 27 | 23 | 21 |

POLAR GRAPH



Maximum Candela = 1319.355 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)