



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 26-JAN-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 6CR-TL-L10-930-xxx-DIM-UNV-OM-CS-xx

[LUMINAIRE] 6" DIA SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Surface

CHARACTERISTICS

| | |
|---------------------------------|--------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 849 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 94 |
| Total Luminaire Watts | 9 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 0.56 |
| Spacing Criterion (90-270) | 0.56 |
| Spacing Criterion (Diagonal) | 0.76 |
| Basic Luminous Shape | Circular |
| Luminous Length (0-180) | 0.38 ft (Diameter) |
| Luminous Width (90-270) | 0.38 ft (Diameter) |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 2108 | 2108 | 2108 |
| 55 | 612 | 612 | 612 |
| 65 | 215 | 215 | 215 |
| 75 | 96 | 96 | 96 |
| 85 | 47 | 47 | 47 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

CANDELA TABULATION

| | <u>0</u> |
|------|----------|
| 0.0 | 1718.235 |
| 0.5 | 1719.508 |
| 1.0 | 1724.598 |
| 1.5 | 1729.263 |
| 2.0 | 1739.867 |
| 2.5 | 1746.653 |
| 3.0 | 1747.926 |
| 3.5 | 1748.350 |
| 4.0 | 1738.595 |
| 4.5 | 1725.446 |
| 5.0 | 1700.421 |
| 5.5 | 1668.610 |
| 6.0 | 1632.981 |
| 6.5 | 1593.111 |
| 7.0 | 1549.847 |
| 7.5 | 1504.887 |
| 8.0 | 1458.655 |
| 8.5 | 1412.847 |
| 9.0 | 1367.887 |
| 9.5 | 1324.199 |
| 10.0 | 1282.632 |
| 10.5 | 1243.610 |
| 11.0 | 1207.134 |
| 11.5 | 1172.777 |
| 12.0 | 1140.118 |
| 12.5 | 1109.579 |
| 13.0 | 1080.737 |
| 13.5 | 1053.167 |
| 14.0 | 1026.869 |
| 14.5 | 1002.693 |
| 15.0 | 980.637 |
| 15.5 | 961.126 |
| 16.0 | 945.008 |
| 16.5 | 930.587 |
| 17.0 | 917.014 |
| 17.5 | 905.138 |
| 18.0 | 894.534 |
| 18.5 | 885.627 |
| 19.0 | 879.265 |
| 19.5 | 873.751 |
| 20.0 | 869.085 |
| 20.5 | 863.571 |
| 21.0 | 858.057 |
| 21.5 | 852.119 |
| 22.0 | 845.757 |
| 22.5 | 837.698 |
| 23.0 | 827.943 |
| 23.5 | 816.066 |
| 24.0 | 801.221 |
| 24.5 | 781.710 |
| 25.0 | 759.230 |
| 25.5 | 735.478 |
| 26.0 | 712.149 |
| 26.5 | 686.276 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

CANDELA TABULATION - (Cont.)

| | |
|-------------|---------|
| 27.0 | 659.131 |
| 27.5 | 628.168 |
| 28.0 | 592.963 |
| 28.5 | 554.365 |
| 29.0 | 514.071 |
| 29.5 | 472.928 |
| 30.0 | 429.241 |
| 30.5 | 383.984 |
| 31.0 | 336.606 |
| 31.5 | 289.398 |
| 32.0 | 244.014 |
| 32.5 | 201.557 |
| 33.0 | 164.613 |
| 33.5 | 133.099 |
| 34.0 | 106.547 |
| 34.5 | 84.491 |
| 35.0 | 66.592 |
| 35.5 | 53.104 |
| 36.0 | 44.451 |
| 36.5 | 39.913 |
| 37.0 | 37.198 |
| 37.5 | 34.823 |
| 38.0 | 32.744 |
| 38.5 | 30.836 |
| 39.0 | 29.097 |
| 39.5 | 27.527 |
| 40.0 | 26.043 |
| 40.5 | 24.643 |
| 41.0 | 23.328 |
| 41.5 | 22.141 |
| 42.0 | 20.995 |
| 42.5 | 19.935 |
| 43.0 | 18.875 |
| 43.5 | 17.942 |
| 44.0 | 17.008 |
| 44.5 | 16.118 |
| 45.0 | 15.312 |
| 45.5 | 14.506 |
| 46.0 | 13.700 |
| 46.5 | 12.937 |
| 47.0 | 12.131 |
| 47.5 | 11.367 |
| 48.0 | 10.646 |
| 48.5 | 9.968 |
| 49.0 | 9.289 |
| 49.5 | 8.610 |
| 50.0 | 7.932 |
| 50.5 | 7.295 |
| 51.0 | 6.744 |
| 51.5 | 6.235 |
| 52.0 | 5.726 |
| 52.5 | 5.302 |
| 53.0 | 4.878 |
| 53.5 | 4.538 |
| 54.0 | 4.199 |
| 54.5 | 3.860 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

CANDELA TABULATION - (Cont.)

| | |
|------|-------|
| 55.0 | 3.605 |
| 55.5 | 3.351 |
| 56.0 | 3.096 |
| 56.5 | 2.884 |
| 57.0 | 2.672 |
| 57.5 | 2.502 |
| 58.0 | 2.333 |
| 58.5 | 2.163 |
| 59.0 | 2.036 |
| 59.5 | 1.909 |
| 60.0 | 1.781 |
| 60.5 | 1.654 |
| 61.0 | 1.569 |
| 61.5 | 1.442 |
| 62.0 | 1.357 |
| 62.5 | 1.272 |
| 63.0 | 1.188 |
| 63.5 | 1.145 |
| 64.0 | 1.060 |
| 64.5 | 0.976 |
| 65.0 | 0.933 |
| 65.5 | 0.891 |
| 66.0 | 0.806 |
| 66.5 | 0.763 |
| 67.0 | 0.721 |
| 67.5 | 0.679 |
| 68.0 | 0.636 |
| 68.5 | 0.594 |
| 69.0 | 0.551 |
| 69.5 | 0.509 |
| 70.0 | 0.467 |
| 70.5 | 0.467 |
| 71.0 | 0.424 |
| 71.5 | 0.382 |
| 72.0 | 0.339 |
| 72.5 | 0.339 |
| 73.0 | 0.297 |
| 73.5 | 0.297 |
| 74.0 | 0.254 |
| 74.5 | 0.254 |
| 75.0 | 0.254 |
| 75.5 | 0.212 |
| 76.0 | 0.212 |
| 76.5 | 0.170 |
| 77.0 | 0.170 |
| 77.5 | 0.170 |
| 78.0 | 0.127 |
| 78.5 | 0.127 |
| 79.0 | 0.127 |
| 79.5 | 0.127 |
| 80.0 | 0.085 |
| 80.5 | 0.085 |
| 81.0 | 0.085 |
| 81.5 | 0.085 |
| 82.0 | 0.085 |
| 82.5 | 0.085 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

CANDELA TABULATION - (Cont.)

| | |
|-------|-------|
| 83.0 | 0.085 |
| 83.5 | 0.042 |
| 84.0 | 0.042 |
| 84.5 | 0.042 |
| 85.0 | 0.042 |
| 85.5 | 0.042 |
| 86.0 | 0.042 |
| 86.5 | 0.042 |
| 87.0 | 0.042 |
| 87.5 | 0.042 |
| 88.0 | 0.000 |
| 88.5 | 0.000 |
| 89.0 | 0.000 |
| 89.5 | 0.000 |
| 90.0 | 0.000 |
| 90.5 | 0.000 |
| 91.0 | 0.000 |
| 91.5 | 0.000 |
| 92.0 | 0.000 |
| 92.5 | 0.000 |
| 93.0 | 0.000 |
| 93.5 | 0.000 |
| 94.0 | 0.000 |
| 94.5 | 0.000 |
| 95.0 | 0.000 |
| 95.5 | 0.000 |
| 96.0 | 0.000 |
| 96.5 | 0.000 |
| 97.0 | 0.000 |
| 97.5 | 0.000 |
| 98.0 | 0.000 |
| 98.5 | 0.000 |
| 99.0 | 0.000 |
| 99.5 | 0.000 |
| 100.0 | 0.000 |
| 100.5 | 0.000 |
| 101.0 | 0.000 |
| 101.5 | 0.000 |
| 102.0 | 0.000 |
| 102.5 | 0.000 |
| 103.0 | 0.000 |
| 103.5 | 0.000 |
| 104.0 | 0.000 |
| 104.5 | 0.000 |
| 105.0 | 0.000 |
| 105.5 | 0.000 |
| 106.0 | 0.000 |
| 106.5 | 0.000 |
| 107.0 | 0.000 |
| 107.5 | 0.000 |
| 108.0 | 0.000 |
| 108.5 | 0.000 |
| 109.0 | 0.000 |
| 109.5 | 0.000 |
| 110.0 | 0.000 |
| 110.5 | 0.000 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

| | |
|-------|-------|
| 111.0 | 0.000 |
| 111.5 | 0.000 |
| 112.0 | 0.000 |
| 112.5 | 0.000 |
| 113.0 | 0.000 |
| 113.5 | 0.000 |
| 114.0 | 0.000 |
| 114.5 | 0.000 |
| 115.0 | 0.000 |
| 115.5 | 0.000 |
| 116.0 | 0.000 |
| 116.5 | 0.000 |
| 117.0 | 0.000 |
| 117.5 | 0.000 |
| 118.0 | 0.000 |
| 118.5 | 0.000 |
| 119.0 | 0.000 |
| 119.5 | 0.000 |
| 120.0 | 0.000 |
| 120.5 | 0.000 |
| 121.0 | 0.000 |
| 121.5 | 0.000 |
| 122.0 | 0.000 |
| 122.5 | 0.000 |
| 123.0 | 0.000 |
| 123.5 | 0.000 |
| 124.0 | 0.000 |
| 124.5 | 0.000 |
| 125.0 | 0.000 |
| 125.5 | 0.000 |
| 126.0 | 0.000 |
| 126.5 | 0.000 |
| 127.0 | 0.000 |
| 127.5 | 0.000 |
| 128.0 | 0.000 |
| 128.5 | 0.000 |
| 129.0 | 0.000 |
| 129.5 | 0.000 |
| 130.0 | 0.000 |
| 130.5 | 0.000 |
| 131.0 | 0.000 |
| 131.5 | 0.000 |
| 132.0 | 0.000 |
| 132.5 | 0.000 |
| 133.0 | 0.000 |
| 133.5 | 0.000 |
| 134.0 | 0.000 |
| 134.5 | 0.000 |
| 135.0 | 0.000 |
| 135.5 | 0.000 |
| 136.0 | 0.000 |
| 136.5 | 0.000 |
| 137.0 | 0.000 |
| 137.5 | 0.000 |
| 138.0 | 0.000 |
| 138.5 | 0.000 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

| | |
|-------|-------|
| 139.0 | 0.000 |
| 139.5 | 0.000 |
| 140.0 | 0.000 |
| 140.5 | 0.000 |
| 141.0 | 0.000 |
| 141.5 | 0.000 |
| 142.0 | 0.000 |
| 142.5 | 0.000 |
| 143.0 | 0.000 |
| 143.5 | 0.000 |
| 144.0 | 0.000 |
| 144.5 | 0.000 |
| 145.0 | 0.000 |
| 145.5 | 0.000 |
| 146.0 | 0.000 |
| 146.5 | 0.000 |
| 147.0 | 0.000 |
| 147.5 | 0.000 |
| 148.0 | 0.000 |
| 148.5 | 0.000 |
| 149.0 | 0.000 |
| 149.5 | 0.000 |
| 150.0 | 0.000 |
| 150.5 | 0.000 |
| 151.0 | 0.000 |
| 151.5 | 0.000 |
| 152.0 | 0.000 |
| 152.5 | 0.000 |
| 153.0 | 0.000 |
| 153.5 | 0.000 |
| 154.0 | 0.000 |
| 154.5 | 0.000 |
| 155.0 | 0.000 |
| 155.5 | 0.000 |
| 156.0 | 0.000 |
| 156.5 | 0.000 |
| 157.0 | 0.000 |
| 157.5 | 0.000 |
| 158.0 | 0.000 |
| 158.5 | 0.000 |
| 159.0 | 0.000 |
| 159.5 | 0.000 |
| 160.0 | 0.000 |
| 160.5 | 0.000 |
| 161.0 | 0.000 |
| 161.5 | 0.000 |
| 162.0 | 0.000 |
| 162.5 | 0.000 |
| 163.0 | 0.000 |
| 163.5 | 0.000 |
| 164.0 | 0.000 |
| 164.5 | 0.000 |
| 165.0 | 0.000 |
| 165.5 | 0.000 |
| 166.0 | 0.000 |
| 166.5 | 0.000 |

CANDELA TABULATION - (Cont.)

| | |
|-------|-------|
| 167.0 | 0.000 |
| 167.5 | 0.000 |
| 168.0 | 0.000 |
| 168.5 | 0.000 |
| 169.0 | 0.000 |
| 169.5 | 0.000 |
| 170.0 | 0.000 |
| 170.5 | 0.000 |
| 171.0 | 0.000 |
| 171.5 | 0.000 |
| 172.0 | 0.000 |
| 172.5 | 0.000 |
| 173.0 | 0.000 |
| 173.5 | 0.000 |
| 174.0 | 0.000 |
| 174.5 | 0.000 |
| 175.0 | 0.000 |
| 175.5 | 0.000 |
| 176.0 | 0.000 |
| 176.5 | 0.000 |
| 177.0 | 0.000 |
| 177.5 | 0.000 |
| 178.0 | 0.000 |
| 178.5 | 0.000 |
| 179.0 | 0.000 |
| 179.5 | 0.000 |
| 180.0 | 0.000 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|--------|-------|--------|
| 0-20 | 428.33 | N.A. | 50.40 |
| 0-30 | 756.52 | N.A. | 89.10 |
| 0-40 | 832.29 | N.A. | 98.00 |
| 0-60 | 847.88 | N.A. | 99.80 |
| 0-80 | 849.13 | N.A. | 100.00 |
| 0-90 | 849.18 | N.A. | 100.00 |
| 10-90 | 702.05 | N.A. | 82.70 |
| 20-40 | 403.96 | N.A. | 47.60 |
| 20-50 | 416.01 | N.A. | 49.00 |
| 40-70 | 16.58 | N.A. | 2.00 |
| 60-80 | 1.24 | N.A. | 0.10 |
| 70-80 | 0.26 | N.A. | 0.00 |
| 80-90 | 0.05 | N.A. | 0.00 |
| 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 | 849.18 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 147.13 |
| 10-20 | 281.20 |
| 20-30 | 328.20 |
| 30-40 | 75.76 |
| 40-50 | 12.06 |
| 50-60 | 3.54 |
| 60-70 | 0.98 |
| 70-80 | 0.26 |
| 80-90 | 0.05 |
| 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 |

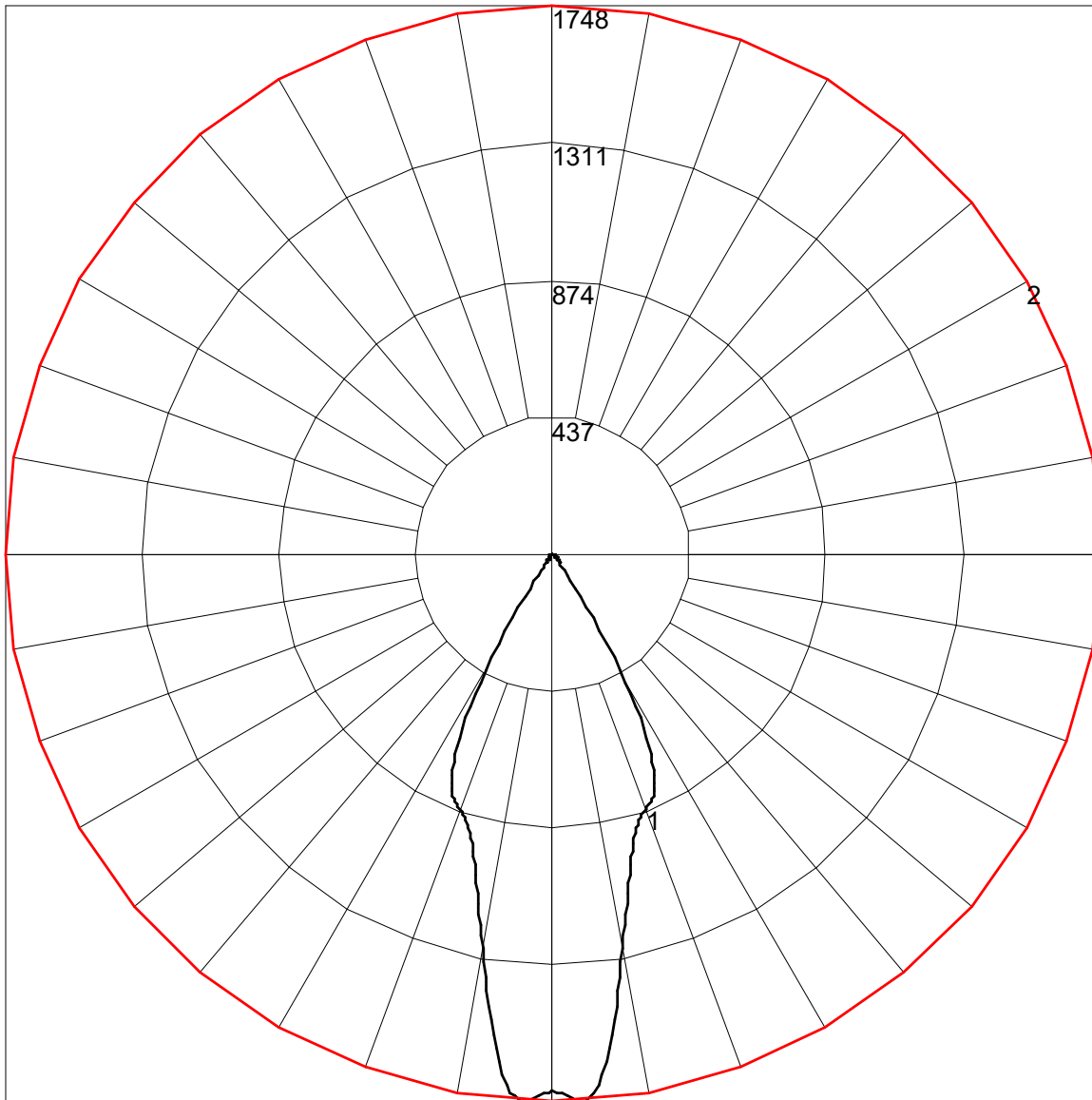
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L10-930-XXX-DIM-UNV-OM-CS-XX_.IES

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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 98 | 98 | 97 | 95 |
| 2 | 109 | 105 | 102 | 99 | 107 | 103 | 100 | 98 | 100 | 98 | 95 | 97 | 95 | 93 | 95 | 93 | 91 | 90 |
| 3 | 105 | 99 | 95 | 91 | 103 | 98 | 94 | 91 | 95 | 92 | 89 | 93 | 90 | 88 | 91 | 89 | 87 | 85 |
| 4 | 100 | 94 | 89 | 85 | 99 | 93 | 88 | 85 | 91 | 87 | 84 | 89 | 86 | 83 | 87 | 84 | 82 | 81 |
| 5 | 96 | 89 | 84 | 80 | 95 | 88 | 83 | 80 | 86 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 78 | 77 |
| 6 | 92 | 85 | 79 | 76 | 91 | 84 | 79 | 75 | 82 | 78 | 75 | 81 | 77 | 74 | 80 | 77 | 74 | 73 |
| 7 | 89 | 80 | 75 | 72 | 87 | 80 | 75 | 71 | 79 | 74 | 71 | 78 | 74 | 71 | 76 | 73 | 70 | 69 |
| 8 | 85 | 77 | 72 | 68 | 84 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 73 | 70 | 67 | 66 |
| 9 | 82 | 73 | 68 | 65 | 81 | 73 | 68 | 65 | 72 | 67 | 64 | 71 | 67 | 64 | 70 | 67 | 64 | 63 |
| 10 | 79 | 70 | 65 | 62 | 78 | 70 | 65 | 62 | 69 | 64 | 61 | 68 | 64 | 61 | 68 | 64 | 61 | 60 |

POLAR GRAPH



Maximum Candela = 1748.35 Located At Horizontal Angle = 0, Vertical Angle = 3.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)