



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-940-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.64836  
 [LUMCAT] 6CR-TL-L10-940-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                | 839                |
| Total Luminaire Efficiency      | N.A.               |
| Luminaire Efficacy Rating (LER) | 93                 |
| 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<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 2084             | 2084              | 2084              |
| 55                  | 605              | 605               | 605               |
| 65                  | 212              | 212               | 212               |
| 75                  | 94               | 94                | 94                |
| 85                  | 47               | 47                | 47                |

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CANDELA TABULATION

|      | <u>0</u> |
|------|----------|
| 0.0  | 1698.020 |
| 0.5  | 1699.278 |
| 1.0  | 1704.308 |
| 1.5  | 1708.919 |
| 2.0  | 1719.398 |
| 2.5  | 1726.104 |
| 3.0  | 1727.362 |
| 3.5  | 1727.781 |
| 4.0  | 1718.140 |
| 4.5  | 1705.146 |
| 5.0  | 1680.416 |
| 5.5  | 1648.979 |
| 6.0  | 1613.769 |
| 6.5  | 1574.368 |
| 7.0  | 1531.614 |
| 7.5  | 1487.183 |
| 8.0  | 1441.494 |
| 8.5  | 1396.225 |
| 9.0  | 1351.794 |
| 9.5  | 1308.620 |
| 10.0 | 1267.542 |
| 10.5 | 1228.980 |
| 11.0 | 1192.932 |
| 11.5 | 1158.980 |
| 12.0 | 1126.704 |
| 12.5 | 1096.525 |
| 13.0 | 1068.022 |
| 13.5 | 1040.776 |
| 14.0 | 1014.788 |
| 14.5 | 990.896  |
| 15.0 | 969.100  |
| 15.5 | 949.818  |
| 16.0 | 933.890  |
| 16.5 | 919.639  |
| 17.0 | 906.226  |
| 17.5 | 894.489  |
| 18.0 | 884.010  |
| 18.5 | 875.208  |
| 19.0 | 868.920  |
| 19.5 | 863.471  |
| 20.0 | 858.861  |
| 20.5 | 853.411  |
| 21.0 | 847.962  |
| 21.5 | 842.094  |
| 22.0 | 835.807  |
| 22.5 | 827.843  |
| 23.0 | 818.202  |
| 23.5 | 806.465  |
| 24.0 | 791.795  |
| 24.5 | 772.513  |
| 25.0 | 750.298  |
| 25.5 | 726.825  |
| 26.0 | 703.771  |
| 26.5 | 678.202  |

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**CANDELA TABULATION - (Cont.)**

|      |         |
|------|---------|
| 27.0 | 651.376 |
| 27.5 | 620.777 |
| 28.0 | 585.987 |
| 28.5 | 547.843 |
| 29.0 | 508.023 |
| 29.5 | 467.364 |
| 30.0 | 424.191 |
| 30.5 | 379.466 |
| 31.0 | 332.646 |
| 31.5 | 285.993 |
| 32.0 | 241.143 |
| 32.5 | 199.185 |
| 33.0 | 162.676 |
| 33.5 | 131.533 |
| 34.0 | 105.293 |
| 34.5 | 83.497  |
| 35.0 | 65.808  |
| 35.5 | 52.479  |
| 36.0 | 43.928  |
| 36.5 | 39.443  |
| 37.0 | 36.760  |
| 37.5 | 34.413  |
| 38.0 | 32.359  |
| 38.5 | 30.473  |
| 39.0 | 28.754  |
| 39.5 | 27.204  |
| 40.0 | 25.736  |
| 40.5 | 24.353  |
| 41.0 | 23.054  |
| 41.5 | 21.880  |
| 42.0 | 20.748  |
| 42.5 | 19.701  |
| 43.0 | 18.653  |
| 43.5 | 17.731  |
| 44.0 | 16.808  |
| 44.5 | 15.928  |
| 45.0 | 15.132  |
| 45.5 | 14.335  |
| 46.0 | 13.539  |
| 46.5 | 12.784  |
| 47.0 | 11.988  |
| 47.5 | 11.234  |
| 48.0 | 10.521  |
| 48.5 | 9.850   |
| 49.0 | 9.180   |
| 49.5 | 8.509   |
| 50.0 | 7.838   |
| 50.5 | 7.210   |
| 51.0 | 6.665   |
| 51.5 | 6.162   |
| 52.0 | 5.659   |
| 52.5 | 5.240   |
| 53.0 | 4.820   |
| 53.5 | 4.485   |
| 54.0 | 4.150   |
| 54.5 | 3.814   |

CANDELA TABULATION - (Cont.)

|      |       |
|------|-------|
| 55.0 | 3.563 |
| 55.5 | 3.311 |
| 56.0 | 3.060 |
| 56.5 | 2.850 |
| 57.0 | 2.641 |
| 57.5 | 2.473 |
| 58.0 | 2.305 |
| 58.5 | 2.138 |
| 59.0 | 2.012 |
| 59.5 | 1.886 |
| 60.0 | 1.760 |
| 60.5 | 1.635 |
| 61.0 | 1.551 |
| 61.5 | 1.425 |
| 62.0 | 1.341 |
| 62.5 | 1.257 |
| 63.0 | 1.174 |
| 63.5 | 1.132 |
| 64.0 | 1.048 |
| 64.5 | 0.964 |
| 65.0 | 0.922 |
| 65.5 | 0.880 |
| 66.0 | 0.796 |
| 66.5 | 0.754 |
| 67.0 | 0.713 |
| 67.5 | 0.671 |
| 68.0 | 0.629 |
| 68.5 | 0.587 |
| 69.0 | 0.545 |
| 69.5 | 0.503 |
| 70.0 | 0.461 |
| 70.5 | 0.461 |
| 71.0 | 0.419 |
| 71.5 | 0.377 |
| 72.0 | 0.335 |
| 72.5 | 0.335 |
| 73.0 | 0.293 |
| 73.5 | 0.293 |
| 74.0 | 0.251 |
| 74.5 | 0.251 |
| 75.0 | 0.251 |
| 75.5 | 0.210 |
| 76.0 | 0.210 |
| 76.5 | 0.168 |
| 77.0 | 0.168 |
| 77.5 | 0.168 |
| 78.0 | 0.126 |
| 78.5 | 0.126 |
| 79.0 | 0.126 |
| 79.5 | 0.126 |
| 80.0 | 0.084 |
| 80.5 | 0.084 |
| 81.0 | 0.084 |
| 81.5 | 0.084 |
| 82.0 | 0.084 |
| 82.5 | 0.084 |

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CANDELA TABULATION - (Cont.)

|       |       |
|-------|-------|
| 83.0  | 0.084 |
| 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  
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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 |

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 |

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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-L10-940-XXX-DIM-UNV-OM-CS-XX\_.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens | %Lamp | %Fixt  |
|---------|--------|-------|--------|
| 0-20    | 423.29 | N.A.  | 50.40  |
| 0-30    | 747.62 | N.A.  | 89.10  |
| 0-40    | 822.49 | N.A.  | 98.00  |
| 0-60    | 837.91 | N.A.  | 99.80  |
| 0-80    | 839.14 | N.A.  | 100.00 |
| 0-90    | 839.19 | N.A.  | 100.00 |
| 10-90   | 693.79 | N.A.  | 82.70  |
| 20-40   | 399.21 | N.A.  | 47.60  |
| 20-50   | 411.12 | N.A.  | 49.00  |
| 40-70   | 16.38  | N.A.  | 2.00   |
| 60-80   | 1.23   | 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   | 839.19 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 145.40 |
| 10-20   | 277.89 |
| 20-30   | 324.34 |
| 30-40   | 74.87  |
| 40-50   | 11.91  |
| 50-60   | 3.50   |
| 60-70   | 0.97   |
| 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   |

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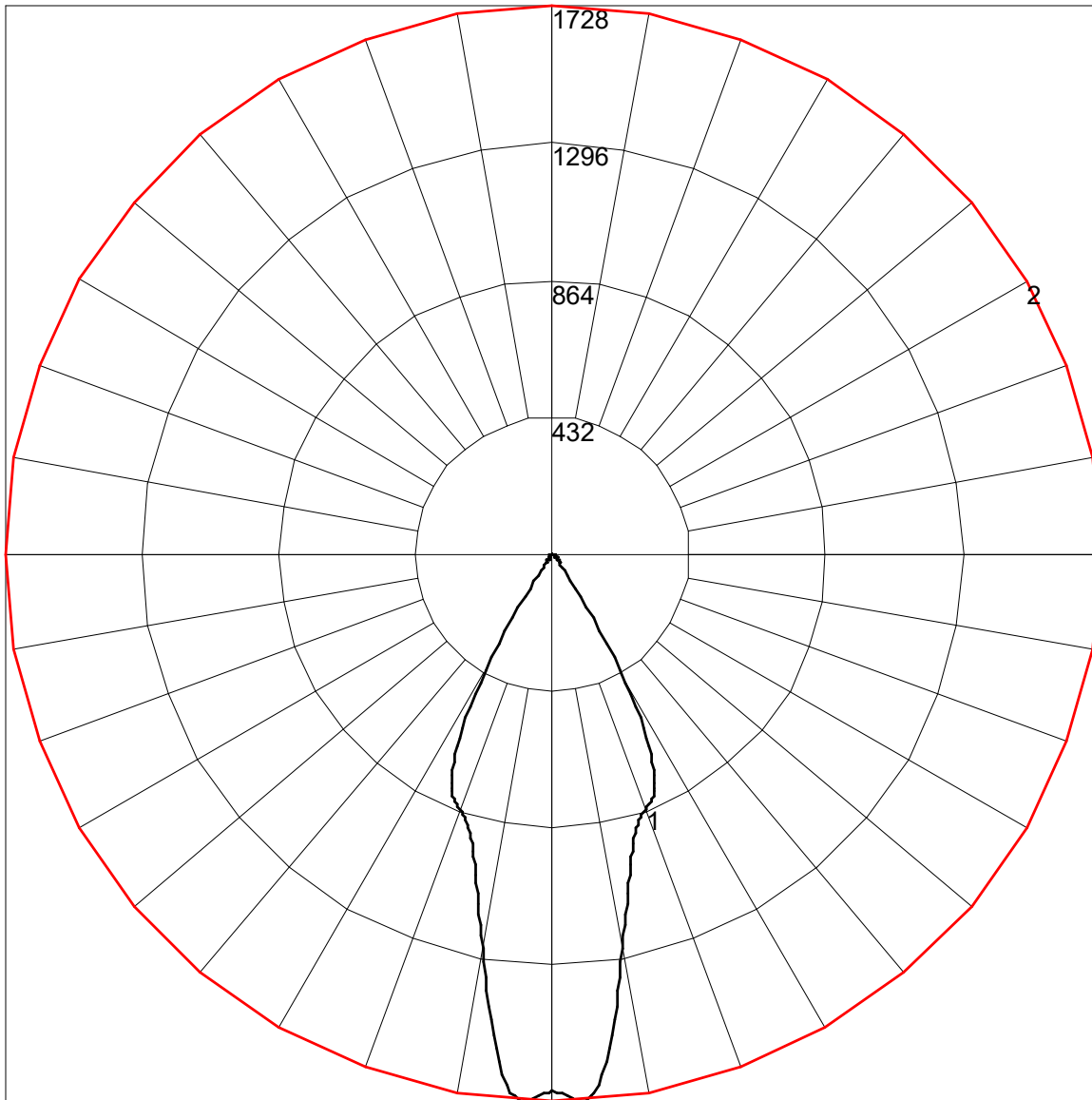
PHOTOMETRIC FILENAME : 6CR-TL-L10-940-XXX-DIM-UNV-OM-CS-XX\_.IES

## 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  | 81  | 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 = 1727.781 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.)