

## IES ROAD REPORT

PHOTOMETRIC FILENAME : W4CR-XX-L20-940-XXX-DIM-UNV-S-XXX\_.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] W4CR\_BARBARA-SPOT DISTRIBUTION  
[TESTLAB] LEDIL INC.  
[TESTDATE] 07/03/2025  
[ISSUEDATE] 2025-07-15  
[MANUFAC] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] W4CR-xx-L20-940-xxx-DIM-UNV-S-xxx  
[LUMINAIRE] 4 INCH ROUND OUTDOOR LED CYLINDER  
[MORE] WITH SPOT DISTRIBUTION & MICROPRISM LENS  
[MORE] 0-10 LED DRIVER

### CHARACTERISTICS

|   |                              |
|---|------------------------------|
| IES Classification                              | Type VS                      |
| Longitudinal Classification                     | Very Short                   |
| Lumens Per Lamp                                 | N.A. (absolute)              |
| Total Lamp Lumens                               | N.A. (absolute)              |
| Luminaire Lumens                                | 2214                         |
| Downward Total Efficiency                       | N.A. (absolute)              |
| Total Luminaire Efficiency                      | N.A. (absolute)              |
| Luminaire Efficacy Rating (LER)                 | 122                          |
| Total Luminaire Watts                           | 18.1                         |
| Ballast Factor                                  | 1.00                         |
| Upward Waste Light Ratio                        | 0.00                         |
| Maximum Candela                                 | 9926.472                     |
| Maximum Candela Angle                           | 90H 0V                       |
| Maximum Candela (<90 Degrees Vertical)          | 9926.472                     |
| Maximum Candela Angle (<90 Degrees Vertical)    | 90H 0V                       |
| Maximum Candela At 90 Degrees Vertical          | .102 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | .451 (0.0% Luminaire Lumens) |
| Cutoff Classification (deprecated)              | N.A. (absolute)              |

**IES ROAD REPORT****PHOTOMETRIC FILENAME : W4CR-XX-L20-940-XXX-DIM-UNV-S-XXX\_.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 1005.3   | N.A.   | 45.4        |
| FM - Front-Medium (30-60)     | 98.8     | N.A.   | 4.5         |
| FH - Front-High (60-80)       | 3.0      | N.A.   | 0.1         |
| FVH - Front-Very High (80-90) | 0.2      | N.A.   | 0.0         |
| BL - Back-Low (0-30)          | 1005.3   | N.A.   | 45.4        |
| BM - Back-Medium (30-60)      | 98.8     | N.A.   | 4.5         |
| BH - Back-High (60-80)        | 3.0      | N.A.   | 0.1         |
| BVH - Back-Very High (80-90)  | 0.2      | N.A.   | 0.0         |
| UL - Uplight-Low (90-100)     | 0.1      | N.A.   | 0.0         |
| UH - Uplight-High (100-180)   | < 0.05   | N.A.   | 0.0         |
| Total                         | 2214.7   | N.A.   | 100.0       |
| BUG Rating                    | B3-U1-G0 |        |             |

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## CANDELA TABULATION

| Vert.<br>Angles | Horizontal Angles |             |             |             |             |
|-----------------|-------------------|-------------|-------------|-------------|-------------|
|                 | <u>0.0</u>        | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
| 0               | 9926.472          | 9926.472    | 9926.472    | 9926.472    | 9926.472    |
| 1               | 9908.316          | 9904.079    | 9904.931    | 9901.211    | 9905.018    |
| 2               | 9783.810          | 9782.099    | 9775.518    | 9772.417    | 9783.045    |
| 3               | 9567.782          | 9560.204    | 9554.373    | 9548.389    | 9572.223    |
| 4               | 9244.640          | 9242.158    | 9232.206    | 9229.243    | 9258.573    |
| 5               | 8812.403          | 8804.606    | 8801.803    | 8798.076    | 8835.072    |
| 6               | 8269.812          | 8266.936    | 8269.542    | 8275.155    | 8305.825    |
| 7               | 7632.103          | 7635.065    | 7653.352    | 7669.906    | 7682.231    |
| 8               | 6922.484          | 6935.376    | 6970.727    | 7000.683    | 6992.239    |
| 9               | 6189.177          | 6208.461    | 6263.707    | 6303.338    | 6271.227    |
| 10              | 5475.132          | 5498.522    | 5567.309    | 5615.799    | 5561.346    |
| 11              | 4795.477          | 4822.863    | 4902.745    | 4951.919    | 4884.356    |
| 12              | 4168.003          | 4204.803    | 4282.674    | 4340.804    | 4263.893    |
| 13              | 3622.260          | 3653.264    | 3735.249    | 3796.996    | 3720.122    |
| 14              | 3149.795          | 3175.623    | 3252.600    | 3312.236    | 3241.119    |
| 15              | 2742.789          | 2768.036    | 2844.459    | 2899.035    | 2828.181    |
| 16              | 2402.452          | 2429.278    | 2484.859    | 2533.525    | 2471.894    |
| 17              | 2131.215          | 2133.384    | 2188.485    | 2227.941    | 2180.477    |
| 18              | 1878.803          | 1895.721    | 1938.279    | 1970.193    | 1934.042    |
| 19              | 1679.082          | 1688.480    | 1734.474    | 1762.785    | 1736.265    |
| 20              | 1512.200          | 1524.758    | 1556.279    | 1580.048    | 1553.644    |
| 21              | 1376.854          | 1384.418    | 1411.237    | 1430.841    | 1405.682    |
| 22              | 1261.950          | 1269.172    | 1290.123    | 1303.219    | 1281.897    |
| 23              | 1165.894          | 1169.672    | 1185.804    | 1196.731    | 1177.534    |
| 24              | 1082.220          | 1084.236    | 1097.027    | 1103.084    | 1086.529    |
| 25              | 1006.233          | 1008.730    | 1016.840    | 1018.660    | 1004.734    |
| 26              | 937.716           | 937.534     | 940.774     | 939.543     | 927.401     |
| 27              | 866.993           | 863.426     | 864.693     | 862.399     | 851.312     |
| 28              | 791.473           | 787.309     | 786.035     | 784.695     | 776.636     |
| 29              | 711.977           | 708.083     | 706.656     | 708.978     | 702.798     |
| 30              | 627.437           | 626.054     | 624.926     | 629.723     | 626.221     |
| 31              | 542.053           | 542.388     | 542.693     | 550.446     | 548.357     |
| 32              | 459.587           | 461.160     | 461.895     | 472.065     | 472.982     |
| 33              | 379.073           | 382.101     | 384.766     | 395.052     | 399.653     |
| 34              | 304.441           | 309.631     | 313.089     | 324.060     | 331.237     |
| 35              | 240.706           | 245.125     | 246.581     | 256.947     | 267.132     |
| 36              | 180.939           | 187.265     | 191.800     | 198.651     | 209.898     |
| 37              | 134.268           | 142.363     | 144.249     | 150.306     | 162.652     |
| 38              | 98.801            | 104.428     | 105.979     | 113.128     | 122.526     |
| 39              | 74.974            | 75.863      | 78.520      | 83.208      | 88.799      |
| 40              | 54.191            | 56.549      | 60.211      | 63.611      | 66.676      |
| 41              | 40.891            | 42.849      | 45.338      | 48.163      | 51.293      |
| 42              | 31.827            | 33.465      | 35.962      | 38.146      | 40.628      |
| 43              | 25.763            | 26.921      | 29.243      | 31.165      | 32.970      |
| 44              | 21.555            | 22.393      | 24.402      | 26.113      | 26.892      |
| 45              | 18.498            | 19.131      | 20.878      | 22.196      | 22.545      |
| 46              | 16.278            | 16.744      | 18.265      | 19.219      | 19.437      |
| 47              | 14.567            | 14.953      | 16.248      | 16.911      | 17.027      |
| 48              | 13.213            | 13.584      | 14.647      | 15.120      | 15.186      |
| 49              | 12.150            | 12.456      | 13.409      | 13.708      | 13.715      |
| 50              | 11.284            | 11.553      | 12.376      | 12.572      | 12.536      |
| 51              | 10.519            | 10.774      | 11.509      | 11.648      | 11.575      |
| 52              | 9.820             | 10.039      | 10.687      | 10.730      | 10.578      |

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|     |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|
| 53  | 9.180 | 9.376 | 9.937 | 9.893 | 9.689 |
| 54  | 8.619 | 8.809 | 9.274 | 9.151 | 8.918 |
| 55  | 8.132 | 8.292 | 8.685 | 8.510 | 8.226 |
| 56  | 7.695 | 7.811 | 8.161 | 7.957 | 7.615 |
| 57  | 7.280 | 7.374 | 7.651 | 7.454 | 7.098 |
| 58  | 6.887 | 6.967 | 7.200 | 7.003 | 6.668 |
| 59  | 6.523 | 6.581 | 6.756 | 6.581 | 6.268 |
| 60  | 6.159 | 6.210 | 6.348 | 6.173 | 5.868 |
| 61  | 5.795 | 5.838 | 5.962 | 5.795 | 5.504 |
| 62  | 5.431 | 5.467 | 5.576 | 5.409 | 5.125 |
| 63  | 5.067 | 5.110 | 5.198 | 5.030 | 4.761 |
| 64  | 4.710 | 4.746 | 4.834 | 4.659 | 4.397 |
| 65  | 4.361 | 4.404 | 4.470 | 4.302 | 4.055 |
| 66  | 4.018 | 4.055 | 4.120 | 3.960 | 3.705 |
| 67  | 3.691 | 3.735 | 3.793 | 3.647 | 3.392 |
| 68  | 3.392 | 3.421 | 3.487 | 3.327 | 3.087 |
| 69  | 3.101 | 3.138 | 3.196 | 3.043 | 2.795 |
| 70  | 2.825 | 2.861 | 2.926 | 2.759 | 2.512 |
| 71  | 2.562 | 2.592 | 2.657 | 2.490 | 2.242 |
| 72  | 2.308 | 2.337 | 2.388 | 2.228 | 1.987 |
| 73  | 2.053 | 2.082 | 2.126 | 1.958 | 1.747 |
| 74  | 1.791 | 1.820 | 1.849 | 1.703 | 1.485 |
| 75  | 1.521 | 1.543 | 1.551 | 1.434 | 1.216 |
| 76  | 1.259 | 1.274 | 1.238 | 1.165 | 0.968 |
| 77  | 1.026 | 1.034 | 0.968 | 0.903 | 0.743 |
| 78  | 0.793 | 0.772 | 0.670 | 0.619 | 0.546 |
| 79  | 0.495 | 0.510 | 0.488 | 0.480 | 0.459 |
| 80  | 0.451 | 0.451 | 0.451 | 0.444 | 0.430 |
| 81  | 0.422 | 0.422 | 0.430 | 0.422 | 0.400 |
| 82  | 0.400 | 0.400 | 0.408 | 0.400 | 0.379 |
| 83  | 0.371 | 0.371 | 0.379 | 0.379 | 0.357 |
| 84  | 0.342 | 0.342 | 0.342 | 0.335 | 0.328 |
| 85  | 0.298 | 0.306 | 0.313 | 0.306 | 0.291 |
| 86  | 0.262 | 0.262 | 0.262 | 0.262 | 0.255 |
| 87  | 0.218 | 0.218 | 0.218 | 0.218 | 0.211 |
| 88  | 0.167 | 0.167 | 0.175 | 0.167 | 0.160 |
| 89  | 0.124 | 0.116 | 0.124 | 0.116 | 0.116 |
| 90  | 0.102 | 0.087 | 0.095 | 0.087 | 0.087 |
| 91  | 0.095 | 0.087 | 0.087 | 0.087 | 0.080 |
| 92  | 0.087 | 0.087 | 0.087 | 0.087 | 0.080 |
| 93  | 0.095 | 0.087 | 0.087 | 0.087 | 0.080 |
| 94  | 0.095 | 0.087 | 0.087 | 0.087 | 0.080 |
| 95  | 0.095 | 0.087 | 0.087 | 0.087 | 0.080 |
| 96  | 0.095 | 0.095 | 0.087 | 0.087 | 0.080 |
| 97  | 0.095 | 0.095 | 0.087 | 0.087 | 0.087 |
| 98  | 0.095 | 0.095 | 0.087 | 0.087 | 0.080 |
| 99  | 0.095 | 0.095 | 0.087 | 0.095 | 0.080 |
| 100 | 0.095 | 0.095 | 0.087 | 0.095 | 0.087 |
| 101 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 102 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 103 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 104 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 105 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 106 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 107 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 108 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

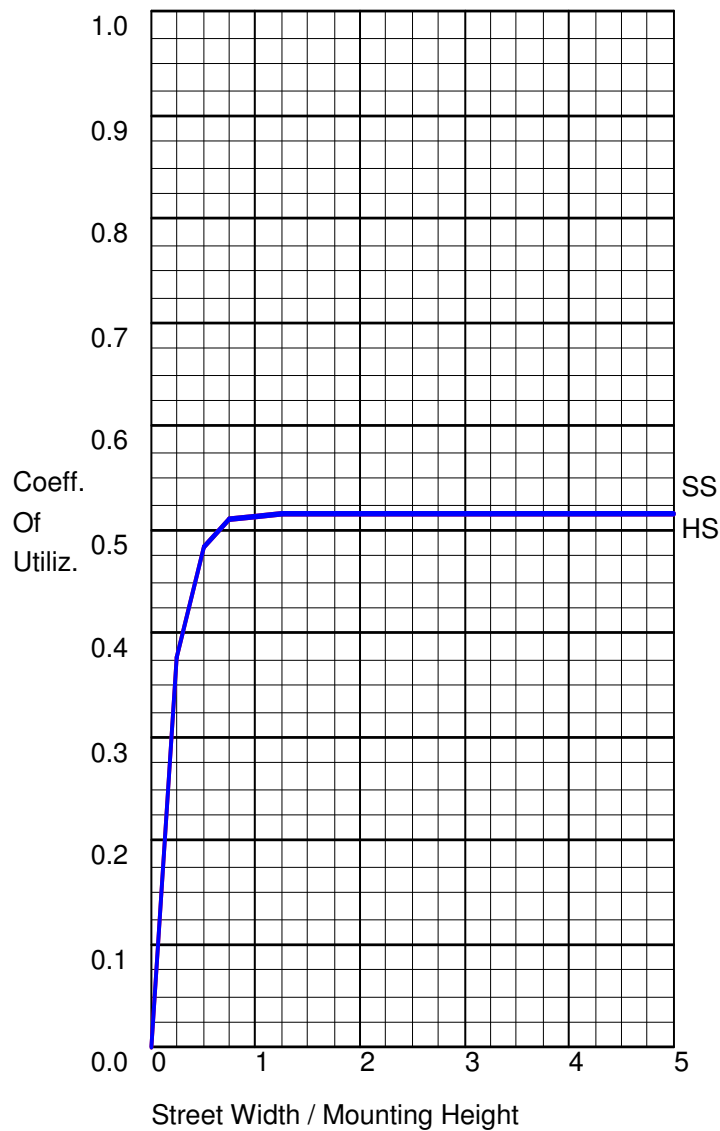
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|     |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|
| 109 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 111 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 112 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 113 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 114 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 116 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 117 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 118 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 119 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 121 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 122 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 123 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 124 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 126 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 127 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 128 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 129 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 131 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 132 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 133 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 134 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 136 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 137 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 138 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 139 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 141 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 142 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 143 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 144 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 146 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 147 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 148 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 149 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 151 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 152 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 153 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 154 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 156 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 157 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 158 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 159 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 161 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 162 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 163 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 164 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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|     |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|
| 165 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 166 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 167 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 168 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 169 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 171 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 172 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 173 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 174 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 176 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 177 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 178 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 179 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

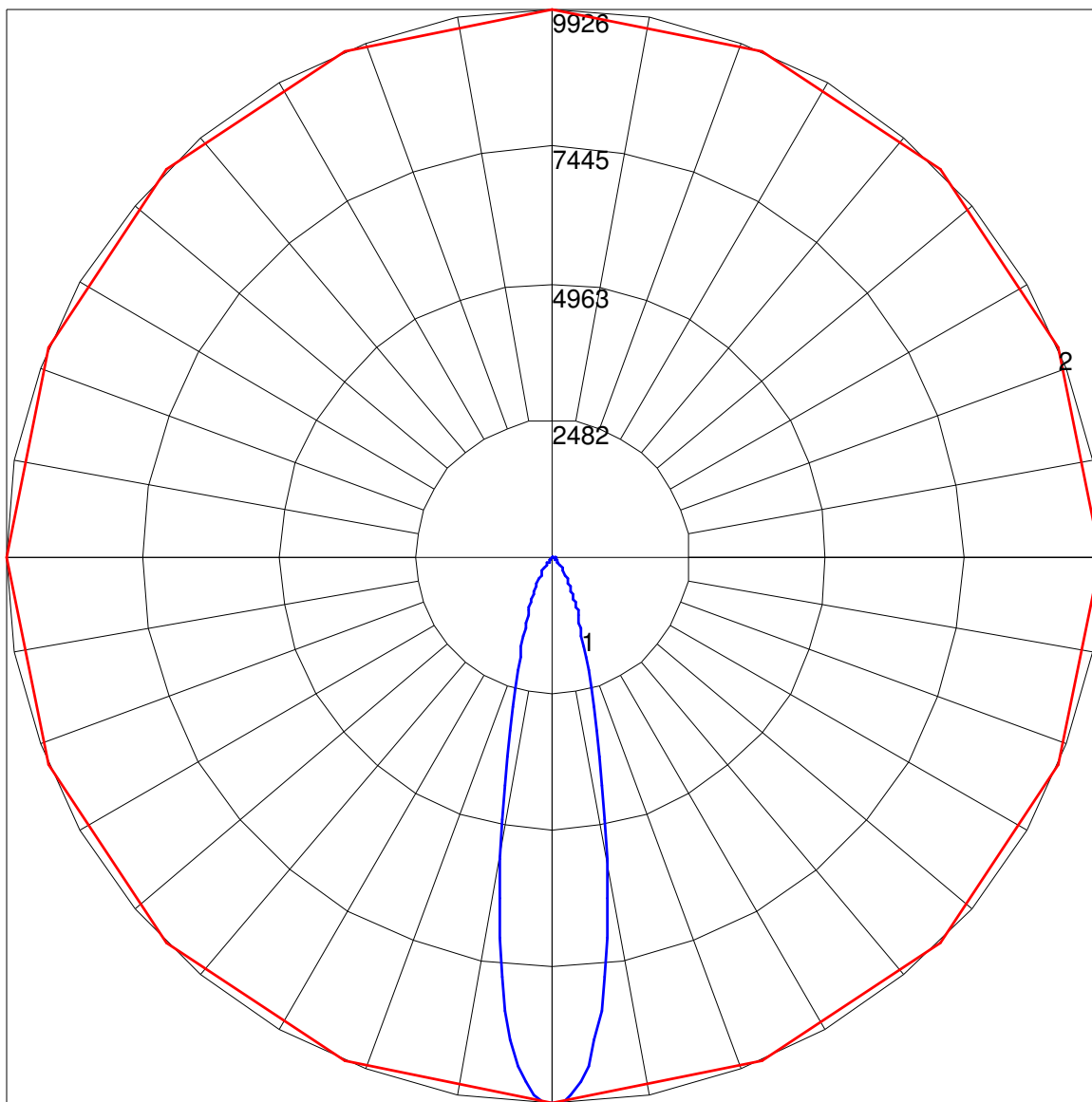
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

|                      | Lumens | Percent<br>Of Luminaire |
|----------------------|--------|-------------------------|
| Downward Street Side | 1107.2 | 50.0                    |
| Downward House Side  | 1107.2 | 50.0                    |
| Downward Total       | 2214.4 | 100.0                   |
| Upward Street Side   | 0.1    | 0.0                     |
| Upward House Side    | 0.1    | 0.0                     |
| Upward Total         | 0.2    | 0.0                     |
| Total Flux           | 2214.6 | 100.0                   |

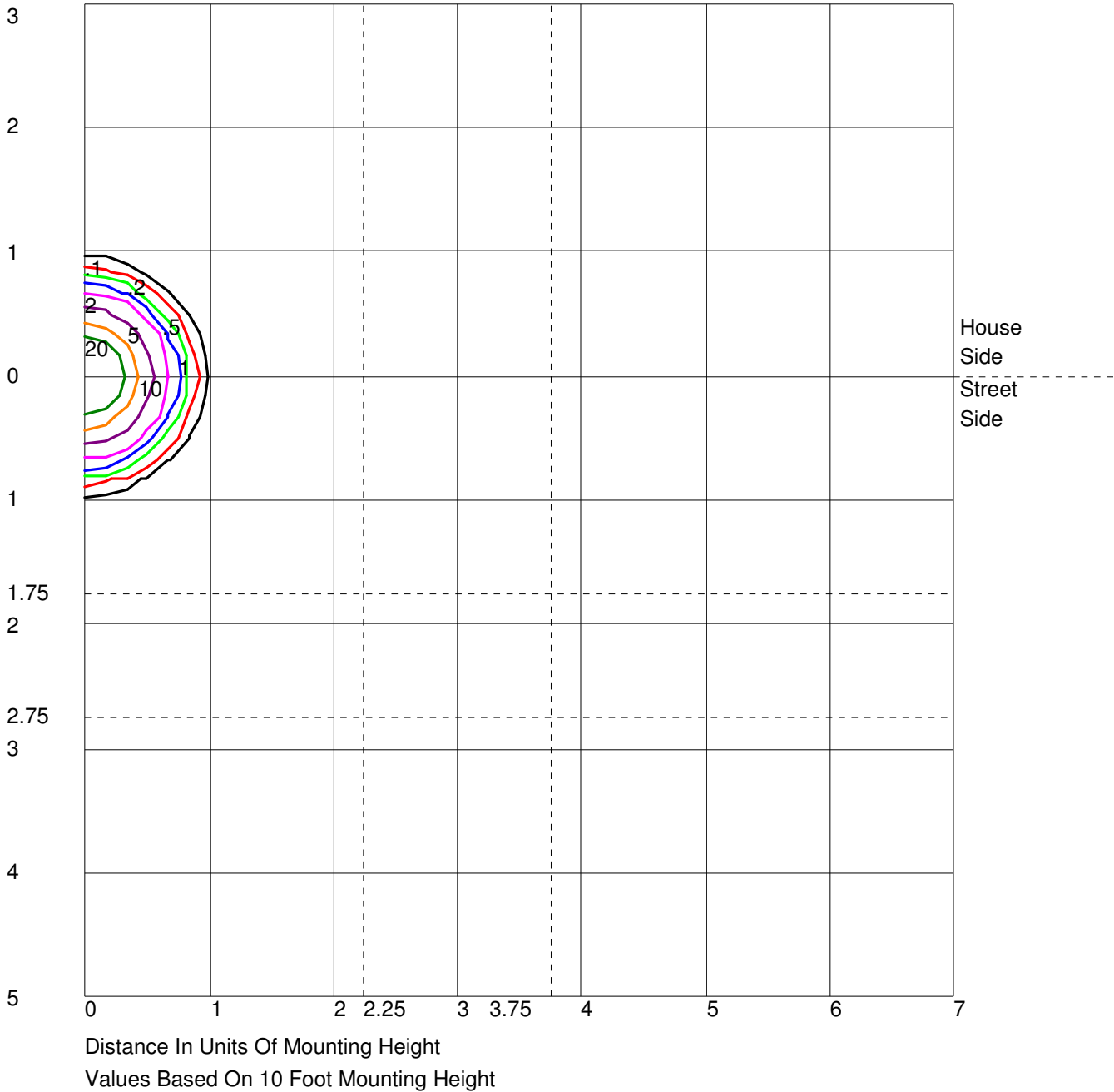
POLAR GRAPH



Maximum Candela = 9926.472 Located At Horizontal Angle = 90, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)



ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



# PHOTO IES R

