



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BAR-22-L20-830-DIM-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] GENERATED FROM 15729805.02  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 2025-05-02  
 [TESTDATE] 3/21/2025  
 [MANUFAC] WILLIAMS INDOOR  
 [MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] BAR-22-L20-830-DIM-UNV\_  
 [LUMINAIRE] Recessed 2 x 2 Indirect LED luminaire  
 [MORE] with centered LED rail & white painted housing  
 [LAMP] 56 White LEDs  
 [BALLAST] 0-10v LED DRIVER  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] INDOOR  
 [\_SEARCH\_MOUNTING] RECESSED

**CHARACTERISTICS**

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 2007            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 129             |
| Total Luminaire Watts           | 15.5            |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.28            |
| Spacing Criterion (90-270)      | 1.38            |
| Spacing Criterion (Diagonal)    | 1.46            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 1.92 ft         |
| Luminous Width (90-270)         | 1.92 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                  | 1825             | 1985              | 2107              |
| 55                  | 1773             | 2022              | 2151              |
| 65                  | 1684             | 2014              | 1970              |
| 75                  | 1411             | 1474              | 814               |
| 85                  | 1002             | 860               | 481               |

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**CANDELA TABULATION**

|      | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|------|------------|-------------|-------------|-------------|-------------|
| 0.0  | 652.017    | 652.017     | 652.017     | 652.017     | 652.017     |
| 0.5  | 651.495    | 653.062     | 652.017     | 651.495     | 651.495     |
| 1.0  | 650.973    | 653.062     | 652.017     | 651.495     | 651.495     |
| 1.5  | 650.973    | 652.540     | 652.017     | 650.973     | 651.495     |
| 2.0  | 650.973    | 652.540     | 651.495     | 650.973     | 650.973     |
| 2.5  | 650.973    | 652.540     | 650.973     | 650.450     | 650.450     |
| 3.0  | 650.450    | 652.017     | 650.450     | 649.928     | 650.450     |
| 3.5  | 649.928    | 651.495     | 649.928     | 649.928     | 649.928     |
| 4.0  | 649.405    | 650.973     | 649.928     | 649.405     | 649.405     |
| 4.5  | 648.883    | 650.450     | 648.883     | 648.883     | 648.883     |
| 5.0  | 648.360    | 649.405     | 648.360     | 648.360     | 648.883     |
| 5.5  | 647.838    | 648.883     | 647.838     | 647.838     | 648.360     |
| 6.0  | 646.793    | 648.360     | 647.315     | 647.315     | 647.838     |
| 6.5  | 646.271    | 647.315     | 646.793     | 647.315     | 647.315     |
| 7.0  | 645.748    | 646.793     | 646.271     | 646.793     | 647.315     |
| 7.5  | 644.703    | 645.748     | 645.226     | 646.271     | 646.793     |
| 8.0  | 644.181    | 645.226     | 644.703     | 645.748     | 646.271     |
| 8.5  | 643.136    | 644.181     | 644.181     | 645.226     | 645.748     |
| 9.0  | 642.091    | 643.136     | 643.136     | 644.703     | 645.748     |
| 9.5  | 641.046    | 642.091     | 642.613     | 644.181     | 645.226     |
| 10.0 | 640.524    | 641.568     | 642.091     | 643.658     | 644.703     |
| 10.5 | 639.479    | 640.524     | 641.046     | 643.136     | 644.703     |
| 11.0 | 638.434    | 639.479     | 640.524     | 642.613     | 644.181     |
| 11.5 | 637.389    | 638.434     | 639.479     | 642.091     | 643.658     |
| 12.0 | 636.344    | 637.389     | 638.956     | 641.568     | 643.136     |
| 12.5 | 635.299    | 636.344     | 637.911     | 641.046     | 643.136     |
| 13.0 | 633.732    | 635.299     | 637.389     | 640.524     | 642.613     |
| 13.5 | 632.687    | 634.254     | 636.344     | 640.001     | 642.091     |
| 14.0 | 631.119    | 632.687     | 635.299     | 639.479     | 641.568     |
| 14.5 | 630.075    | 631.642     | 634.254     | 638.434     | 641.046     |
| 15.0 | 628.507    | 630.075     | 633.209     | 637.911     | 640.524     |
| 15.5 | 626.940    | 628.507     | 632.164     | 636.866     | 639.479     |
| 16.0 | 625.373    | 626.940     | 631.119     | 635.822     | 638.956     |
| 16.5 | 623.805    | 625.373     | 629.552     | 635.299     | 637.911     |
| 17.0 | 621.715    | 623.805     | 628.507     | 633.732     | 637.389     |
| 17.5 | 620.148    | 622.238     | 626.940     | 632.687     | 635.822     |
| 18.0 | 618.058    | 620.148     | 625.373     | 631.642     | 634.777     |
| 18.5 | 615.968    | 618.058     | 623.805     | 630.075     | 633.732     |
| 19.0 | 613.879    | 616.491     | 622.238     | 629.030     | 632.687     |
| 19.5 | 612.311    | 614.401     | 620.670     | 627.462     | 631.119     |
| 20.0 | 609.699    | 612.311     | 619.103     | 626.417     | 630.075     |
| 20.5 | 607.609    | 610.221     | 617.013     | 624.850     | 629.030     |
| 21.0 | 605.519    | 608.132     | 615.446     | 623.283     | 627.462     |
| 21.5 | 603.430    | 606.042     | 613.356     | 621.715     | 625.895     |
| 22.0 | 600.817    | 603.952     | 611.266     | 620.148     | 624.328     |
| 22.5 | 598.205    | 601.340     | 609.699     | 618.581     | 622.760     |
| 23.0 | 596.115    | 599.250     | 607.609     | 617.013     | 621.715     |
| 23.5 | 593.503    | 597.160     | 606.042     | 615.446     | 620.148     |
| 24.0 | 591.413    | 595.070     | 603.952     | 613.879     | 618.581     |
| 24.5 | 588.279    | 592.458     | 602.385     | 612.311     | 617.536     |
| 25.0 | 586.189    | 589.846     | 600.295     | 610.744     | 615.968     |
| 25.5 | 583.577    | 587.756     | 598.728     | 609.177     | 614.924     |
| 26.0 | 580.964    | 585.144     | 596.638     | 607.609     | 613.356     |
| 26.5 | 578.352    | 583.054     | 594.548     | 606.042     | 612.311     |

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**CANDELA TABULATION - (Cont.)**

|      |         |         |         |         |         |
|------|---------|---------|---------|---------|---------|
| 27.0 | 575.217 | 580.442 | 592.458 | 604.475 | 610.744 |
| 27.5 | 572.605 | 577.830 | 590.891 | 602.907 | 609.177 |
| 28.0 | 569.993 | 575.217 | 588.801 | 600.817 | 607.087 |
| 28.5 | 566.858 | 572.605 | 586.189 | 598.728 | 605.519 |
| 29.0 | 563.723 | 569.470 | 584.099 | 596.638 | 603.430 |
| 29.5 | 561.111 | 566.858 | 581.487 | 594.548 | 601.340 |
| 30.0 | 557.977 | 564.246 | 578.875 | 592.458 | 599.250 |
| 30.5 | 554.842 | 561.111 | 576.262 | 589.846 | 597.160 |
| 31.0 | 551.707 | 558.499 | 573.650 | 587.756 | 594.548 |
| 31.5 | 548.050 | 555.364 | 571.038 | 585.144 | 592.458 |
| 32.0 | 544.915 | 552.230 | 567.903 | 582.532 | 589.846 |
| 32.5 | 541.781 | 549.095 | 565.291 | 579.919 | 587.234 |
| 33.0 | 538.123 | 545.438 | 562.156 | 577.307 | 584.621 |
| 33.5 | 534.466 | 542.303 | 559.544 | 574.695 | 582.009 |
| 34.0 | 530.809 | 538.646 | 556.409 | 571.560 | 579.397 |
| 34.5 | 527.152 | 535.511 | 553.274 | 568.948 | 576.785 |
| 35.0 | 523.495 | 531.854 | 550.140 | 566.336 | 574.172 |
| 35.5 | 519.890 | 528.719 | 547.005 | 563.723 | 571.560 |
| 36.0 | 516.233 | 525.062 | 543.870 | 560.589 | 568.948 |
| 36.5 | 512.367 | 521.562 | 541.258 | 557.977 | 566.336 |
| 37.0 | 508.605 | 518.009 | 537.601 | 554.842 | 563.723 |
| 37.5 | 504.634 | 514.404 | 534.466 | 552.230 | 560.589 |
| 38.0 | 500.559 | 510.799 | 531.332 | 549.095 | 557.454 |
| 38.5 | 496.536 | 506.985 | 527.674 | 545.960 | 554.842 |
| 39.0 | 492.461 | 503.276 | 524.540 | 542.825 | 551.707 |
| 39.5 | 488.386 | 499.514 | 521.039 | 539.691 | 548.050 |
| 40.0 | 484.311 | 495.544 | 517.434 | 536.034 | 544.915 |
| 40.5 | 480.131 | 491.678 | 513.777 | 532.376 | 541.781 |
| 41.0 | 475.691 | 487.707 | 510.329 | 529.242 | 538.123 |
| 41.5 | 471.563 | 483.684 | 506.620 | 525.585 | 534.989 |
| 42.0 | 467.227 | 479.609 | 502.858 | 521.875 | 531.332 |
| 42.5 | 462.995 | 475.534 | 498.992 | 518.270 | 527.674 |
| 43.0 | 458.607 | 471.511 | 495.230 | 514.665 | 524.017 |
| 43.5 | 454.218 | 467.227 | 491.469 | 511.008 | 520.621 |
| 44.0 | 449.934 | 462.943 | 487.550 | 507.247 | 516.860 |
| 44.5 | 445.545 | 458.763 | 483.632 | 503.537 | 513.098 |
| 45.0 | 440.948 | 454.531 | 479.661 | 499.723 | 509.232 |
| 45.5 | 436.559 | 450.195 | 475.691 | 495.857 | 505.314 |
| 46.0 | 432.014 | 445.963 | 471.616 | 491.991 | 501.395 |
| 46.5 | 427.521 | 441.575 | 467.540 | 488.020 | 497.634 |
| 47.0 | 422.819 | 437.186 | 463.413 | 483.998 | 493.715 |
| 47.5 | 417.960 | 432.798 | 459.338 | 479.818 | 489.536 |
| 48.0 | 413.258 | 428.409 | 455.106 | 475.638 | 485.513 |
| 48.5 | 410.019 | 423.916 | 450.874 | 471.511 | 481.124 |
| 49.0 | 408.347 | 419.632 | 446.486 | 467.279 | 477.101 |
| 49.5 | 403.540 | 416.027 | 442.202 | 463.152 | 472.765 |
| 50.0 | 398.629 | 412.213 | 437.813 | 458.763 | 468.376 |
| 50.5 | 393.770 | 408.817 | 433.424 | 454.270 | 464.040 |
| 51.0 | 388.703 | 404.481 | 429.036 | 449.777 | 459.599 |
| 51.5 | 383.739 | 399.883 | 424.595 | 445.232 | 454.845 |
| 52.0 | 378.672 | 396.174 | 420.624 | 440.686 | 450.195 |
| 52.5 | 373.656 | 391.576 | 416.967 | 436.089 | 445.441 |
| 53.0 | 368.484 | 386.822 | 412.579 | 431.178 | 440.686 |
| 53.5 | 363.207 | 381.963 | 409.026 | 426.371 | 435.566 |
| 54.0 | 357.930 | 377.104 | 405.108 | 421.408 | 430.394 |
| 54.5 | 352.654 | 372.246 | 400.301 | 417.542 | 425.326 |

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**CANDELA TABULATION - (Cont.)**

|      |         |         |         |         |         |
|------|---------|---------|---------|---------|---------|
| 55.0 | 347.534 | 367.335 | 396.331 | 413.467 | 421.669 |
| 55.5 | 342.309 | 362.476 | 391.681 | 408.347 | 417.124 |
| 56.0 | 337.085 | 357.460 | 386.717 | 403.331 | 411.482 |
| 56.5 | 331.808 | 352.445 | 381.597 | 399.674 | 405.735 |
| 57.0 | 326.479 | 347.272 | 376.425 | 394.345 | 399.883 |
| 57.5 | 321.150 | 342.205 | 371.253 | 388.755 | 396.174 |
| 58.0 | 315.925 | 337.189 | 366.133 | 383.165 | 390.061 |
| 58.5 | 310.753 | 332.226 | 360.961 | 377.522 | 383.948 |
| 59.0 | 305.424 | 327.263 | 355.736 | 371.619 | 377.627 |
| 59.5 | 300.147 | 322.090 | 350.407 | 365.663 | 371.253 |
| 60.0 | 294.766 | 317.075 | 345.130 | 359.550 | 364.566 |
| 60.5 | 289.489 | 312.007 | 339.854 | 353.594 | 357.721 |
| 61.0 | 284.369 | 307.044 | 334.577 | 347.429 | 350.825 |
| 61.5 | 279.145 | 302.237 | 329.457 | 341.264 | 343.824 |
| 62.0 | 274.077 | 297.483 | 324.180 | 334.995 | 336.719 |
| 62.5 | 268.905 | 292.572 | 318.851 | 328.360 | 329.143 |
| 63.0 | 263.837 | 287.661 | 313.522 | 321.620 | 321.202 |
| 63.5 | 258.717 | 282.854 | 308.036 | 314.567 | 312.634 |
| 64.0 | 253.545 | 277.996 | 302.498 | 307.148 | 303.700 |
| 64.5 | 248.477 | 272.980 | 296.752 | 299.364 | 294.401 |
| 65.0 | 243.148 | 267.965 | 290.848 | 291.109 | 284.526 |
| 65.5 | 237.662 | 262.740 | 284.787 | 282.436 | 274.077 |
| 66.0 | 232.124 | 257.307 | 278.257 | 273.189 | 262.949 |
| 66.5 | 226.534 | 251.769 | 271.413 | 263.419 | 251.037 |
| 67.0 | 220.578 | 246.022 | 264.464 | 253.284 | 239.282 |
| 67.5 | 214.675 | 240.170 | 257.307 | 242.991 | 226.952 |
| 68.0 | 208.666 | 234.214 | 249.992 | 232.124 | 214.570 |
| 68.5 | 202.711 | 228.154 | 242.365 | 221.101 | 201.875 |
| 69.0 | 196.284 | 221.989 | 234.476 | 209.764 | 189.388 |
| 69.5 | 189.963 | 215.824 | 226.534 | 198.270 | 176.745 |
| 70.0 | 183.798 | 209.607 | 218.593 | 186.776 | 164.728 |
| 70.5 | 177.581 | 203.338 | 210.234 | 175.804 | 152.921 |
| 71.0 | 171.573 | 197.173 | 201.822 | 164.624 | 141.532 |
| 71.5 | 165.617 | 191.008 | 193.150 | 153.861 | 130.612 |
| 72.0 | 159.661 | 184.843 | 184.529 | 143.517 | 120.372 |
| 72.5 | 153.653 | 178.573 | 175.595 | 133.590 | 110.603 |
| 73.0 | 147.801 | 172.356 | 166.296 | 124.030 | 101.773 |
| 73.5 | 142.002 | 166.139 | 157.101 | 115.096 | 93.362  |
| 74.0 | 136.307 | 159.974 | 148.115 | 106.528 | 85.630  |
| 74.5 | 130.508 | 153.548 | 139.181 | 98.639  | 78.524  |
| 75.0 | 124.813 | 147.226 | 130.351 | 91.429  | 71.994  |
| 75.5 | 119.328 | 140.748 | 121.783 | 84.637  | 66.142  |
| 76.0 | 113.842 | 134.374 | 113.633 | 78.159  | 60.500  |
| 76.5 | 108.408 | 128.000 | 105.901 | 72.359  | 55.641  |
| 77.0 | 103.132 | 121.679 | 98.586  | 67.083  | 51.252  |
| 77.5 | 97.855  | 115.461 | 91.690  | 62.276  | 47.229  |
| 78.0 | 92.630  | 109.192 | 85.368  | 57.835  | 43.625  |
| 78.5 | 87.719  | 103.236 | 79.465  | 53.708  | 40.281  |
| 79.0 | 83.017  | 97.437  | 73.927  | 49.842  | 37.251  |
| 79.5 | 78.472  | 91.847  | 68.807  | 46.394  | 34.534  |
| 80.0 | 74.083  | 86.622  | 64.000  | 43.154  | 32.078  |
| 80.5 | 69.538  | 81.659  | 59.507  | 40.072  | 29.884  |
| 81.0 | 64.993  | 76.748  | 55.275  | 37.251  | 27.794  |
| 81.5 | 60.656  | 71.837  | 51.200  | 34.534  | 25.966  |
| 82.0 | 56.216  | 67.083  | 47.282  | 32.026  | 24.033  |
| 82.5 | 51.775  | 62.224  | 43.520  | 29.466  | 22.100  |

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**CANDELA TABULATION - (Cont.)**

|       |        |        |        |        |        |
|-------|--------|--------|--------|--------|--------|
| 83.0  | 47.229 | 57.261 | 39.863 | 26.854 | 20.323 |
| 83.5  | 42.893 | 52.402 | 36.258 | 24.398 | 18.704 |
| 84.0  | 38.505 | 47.543 | 32.758 | 22.047 | 17.136 |
| 84.5  | 34.168 | 42.475 | 29.205 | 19.696 | 15.673 |
| 85.0  | 29.832 | 37.407 | 25.600 | 17.502 | 14.315 |
| 85.5  | 25.757 | 32.287 | 22.100 | 15.465 | 13.270 |
| 86.0  | 21.734 | 27.220 | 18.704 | 13.688 | 12.382 |
| 86.5  | 17.868 | 22.204 | 15.360 | 12.016 | 11.337 |
| 87.0  | 14.367 | 17.450 | 12.225 | 10.240 | 9.927  |
| 87.5  | 11.180 | 13.061 | 9.509  | 8.202  | 7.889  |
| 88.0  | 8.411  | 9.247  | 6.949  | 6.583  | 6.844  |
| 88.5  | 5.851  | 6.217  | 5.068  | 5.277  | 5.642  |
| 89.0  | 3.605  | 4.023  | 3.553  | 3.500  | 3.605  |
| 89.5  | 2.978  | 3.082  | 3.030  | 3.500  | 3.448  |
| 90.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 90.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 91.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 91.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 92.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 92.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 93.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 93.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 94.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 94.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 95.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 95.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 96.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 96.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 97.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 97.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 98.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 98.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 99.0  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 99.5  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 100.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 100.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 101.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 101.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 102.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 102.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 103.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 103.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 104.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 104.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 105.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 105.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 106.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 106.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 107.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 107.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 108.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 108.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 109.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 109.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 110.0 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 110.5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : BAR-22-L20-830-DIM-UNV\_.IES

CANDELA TABULATION - (Cont.)

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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : BAR-22-L20-830-DIM-UNV\_.IES

CANDELA TABULATION - (Cont.)

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



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BAR-22-L20-830-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 240.75  | N.A.  | 12.00  |
| 0-30    | 517.95  | N.A.  | 25.80  |
| 0-40    | 861.87  | N.A.  | 42.90  |
| 0-60    | 1578.26 | N.A.  | 78.60  |
| 0-80    | 1977.3  | N.A.  | 98.50  |
| 0-90    | 2006.99 | N.A.  | 100.00 |
| 10-90   | 1945.26 | N.A.  | 96.90  |
| 20-40   | 621.12  | N.A.  | 30.90  |
| 20-50   | 989.38  | N.A.  | 49.30  |
| 40-70   | 987.75  | N.A.  | 49.20  |
| 60-80   | 399.04  | N.A.  | 19.90  |
| 70-80   | 127.68  | N.A.  | 6.40   |
| 80-90   | 29.68   | N.A.  | 1.50   |
| 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   | 2006.99 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 61.72  |
| 10-20   | 179.03 |
| 20-30   | 277.20 |
| 30-40   | 343.92 |
| 40-50   | 368.26 |
| 50-60   | 348.13 |
| 60-70   | 271.36 |
| 70-80   | 127.68 |
| 80-90   | 29.68  |
| 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 : BAR-22-L20-830-DIM-UNV\_.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  | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |
| 2  | 99  | 90  | 84  | 78  | 96  | 88  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 73  | 79  | 75  | 72  | 69  |
| 3  | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 64  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4  | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 51  | 49  |
| 5  | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 44  | 42  |
| 6  | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  | 51  | 44  | 39  | 50  | 44  | 39  | 37  |
| 7  | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 34  | 32  |
| 8  | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 43  | 36  | 31  | 41  | 35  | 31  | 29  |
| 9  | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |
| 10 | 52  | 39  | 31  | 25  | 51  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 35  | 29  | 25  | 23  |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BAR-22-L20-830-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

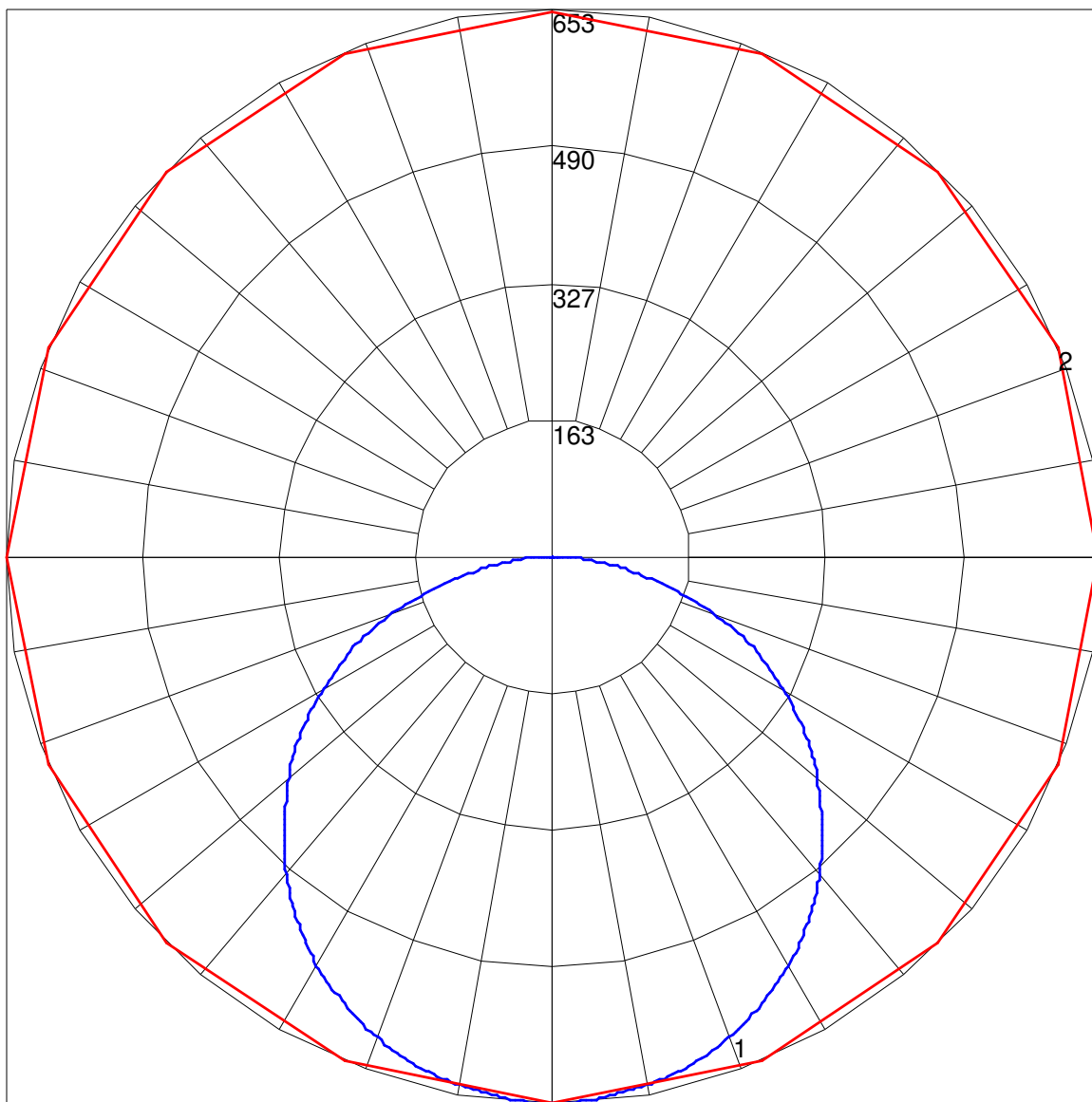
Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| Ceiling Cavity | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls          | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity   | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

| Room Size |      | UGR Viewed Crosswise |      |      |      |      | UGR Viewed Endwise |      |      |      |      |
|-----------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| X=2H      | Y=2H | 14.3                 | 16.0 | 14.7 | 16.3 | 16.6 | 15.3               | 17.0 | 15.7 | 17.3 | 17.6 |
|           | 3H   | 16.2                 | 17.7 | 16.6 | 18.0 | 18.4 | 16.7               | 18.3 | 17.1 | 18.6 | 18.9 |
|           | 4H   | 16.9                 | 18.3 | 17.3 | 18.6 | 19.0 | 17.0               | 18.4 | 17.4 | 18.7 | 19.1 |
|           | 6H   | 17.3                 | 18.6 | 17.7 | 19.0 | 19.4 | 17.0               | 18.3 | 17.4 | 18.7 | 19.1 |
|           | 8H   | 17.5                 | 18.7 | 17.9 | 19.1 | 19.5 | 17.0               | 18.3 | 17.5 | 18.7 | 19.1 |
|           | 12H  | 17.5                 | 18.7 | 18.0 | 19.1 | 19.5 | 17.0               | 18.2 | 17.4 | 18.6 | 19.0 |
| 4H        | 2H   | 15.2                 | 16.6 | 15.6 | 17.0 | 17.3 | 16.0               | 17.4 | 16.4 | 17.7 | 18.1 |
|           | 3H   | 17.3                 | 18.5 | 17.7 | 18.9 | 19.3 | 17.6               | 18.8 | 18.0 | 19.2 | 19.6 |
|           | 4H   | 18.1                 | 19.1 | 18.5 | 19.5 | 20.0 | 17.8               | 18.9 | 18.3 | 19.3 | 19.8 |
|           | 6H   | 18.6                 | 19.6 | 19.1 | 20.0 | 20.5 | 18.0               | 18.9 | 18.4 | 19.3 | 19.8 |
|           | 8H   | 18.8                 | 19.7 | 19.3 | 20.1 | 20.6 | 18.0               | 18.9 | 18.4 | 19.3 | 19.8 |
|           | 12H  | 18.9                 | 19.7 | 19.4 | 20.2 | 20.7 | 18.0               | 18.8 | 18.5 | 19.3 | 19.7 |
| 8H        | 4H   | 18.3                 | 19.2 | 18.8 | 19.6 | 20.1 | 18.1               | 19.0 | 18.6 | 19.4 | 19.9 |
|           | 6H   | 19.0                 | 19.7 | 19.5 | 20.2 | 20.7 | 18.3               | 19.0 | 18.8 | 19.5 | 20.0 |
|           | 8H   | 19.3                 | 19.9 | 19.8 | 20.4 | 20.9 | 18.3               | 19.0 | 18.9 | 19.5 | 20.0 |
|           | 12H  | 19.5                 | 20.1 | 20.0 | 20.5 | 21.1 | 18.4               | 19.0 | 18.9 | 19.4 | 20.0 |
| 12H       | 4H   | 18.3                 | 19.1 | 18.8 | 19.6 | 20.0 | 18.1               | 18.9 | 18.6 | 19.4 | 19.9 |
|           | 6H   | 19.0                 | 19.7 | 19.6 | 20.1 | 20.7 | 18.4               | 19.0 | 18.9 | 19.5 | 20.0 |
|           | 8H   | 19.3                 | 19.9 | 19.8 | 20.4 | 21.0 | 18.4               | 19.0 | 18.9 | 19.5 | 20.0 |

Maximum UGR = 21.1

POLAR GRAPH



Maximum Candela = 653.062 Located At Horizontal Angle = 22.5, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)