



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BLS-4A-4000°K-P.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]

[TESTLAB] BEGHELLI

[TESTDATE] 2017/9/29

[ISSUEDATE] 2017/9/29 11:30:05

[NEARFIELD]

[LAMPPOSITION] "0,0"

[MANUFAC] BEGHELLI

[LUMCAT]

[LUMINAIRE] BLS-4A-4000°K-P

IESNA:LM-63-2002

[LAMP] LED

[OTHER] Luminous shape: Rectangle

[OTHER] Luminous dimensions (feet)

[OTHER] 0 - 180 Axis: 4.2

[OTHER] 90 - 270 Axis: 0.6

[OTHER] Height: 0.1

CHARACTERISTICS

| | |
|---------------------------------|------------------|
| Lumens Per Lamp | 2758.16 (1 lamp) |
| Total Lamp Lumens | 2758.16 |
| Luminaire Lumens | 2758 |
| Total Luminaire Efficiency | 100 % |
| Luminaire Efficacy Rating (LER) | 90 |
| Total Luminaire Watts | 30.6 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.96 |
| Spacing Criterion (90-270) | 1.92 |
| Spacing Criterion (Diagonal) | 1.78 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.10 m |
| Luminous Width (90-270) | 0.10 m |
| Luminous Height | 0.00 m |

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LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 112121 | 160693 | 112944 |
| 55 | 68318 | 188517 | 175021 |
| 65 | 20445 | 174444 | 364854 |
| 75 | 12288 | 61859 | 81873 |
| 85 | 12585 | 20236 | 30670 |

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CANDELA TABULATION

| | 0 | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 |
|-----------|----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| 0 | 597.220 | 597.220 | 597.220 | 597.220 | 597.220 | 597.220 | 597.220 | 597.220 | 597.220 | 597.220 |
| 1 | 606.292 | 605.974 | 596.812 | 593.285 | 592.314 | 594.386 | 592.202 | 594.255 | 589.552 | 592.613 |
| 2 | 612.637 | 612.375 | 600.731 | 593.602 | 588.937 | 587.425 | 584.085 | 587.574 | 585.522 | 592.352 |
| 3 | 618.907 | 617.806 | 605.340 | 594.404 | 584.906 | 579.960 | 574.101 | 579.755 | 580.744 | 592.557 |
| 4 | 624.673 | 624.207 | 609.912 | 595.617 | 580.875 | 571.432 | 563.538 | 571.059 | 576.303 | 593.247 |
| 5 | 630.999 | 629.357 | 615.193 | 597.148 | 576.881 | 562.288 | 552.211 | 561.784 | 572.309 | 594.050 |
| 6 | 637.512 | 635.628 | 620.232 | 598.566 | 572.645 | 552.099 | 539.652 | 552.733 | 568.446 | 595.263 |
| 7 | 644.175 | 642.028 | 625.494 | 600.376 | 569.043 | 541.499 | 526.906 | 541.966 | 564.565 | 596.961 |
| 8 | 651.247 | 648.448 | 630.589 | 602.354 | 565.087 | 529.705 | 512.966 | 530.489 | 560.664 | 599.256 |
| 9 | 659.178 | 656.696 | 636.355 | 604.463 | 560.534 | 518.210 | 496.842 | 519.329 | 555.981 | 601.533 |
| 10 | 668.901 | 665.486 | 643.092 | 606.646 | 556.466 | 506.490 | 481.633 | 507.554 | 552.062 | 604.295 |
| 11 | 679.762 | 676.048 | 649.493 | 609.016 | 552.659 | 494.734 | 467.488 | 495.592 | 548.292 | 607.113 |
| 12 | 692.246 | 688.458 | 656.864 | 611.816 | 547.657 | 482.958 | 451.103 | 482.417 | 544.280 | 609.968 |
| 13 | 705.907 | 702.249 | 665.337 | 614.913 | 543.011 | 470.567 | 435.558 | 470.306 | 539.820 | 612.282 |
| 14 | 720.910 | 717.850 | 674.313 | 617.880 | 537.338 | 457.373 | 417.848 | 456.627 | 535.005 | 614.521 |
| 15 | 737.538 | 734.291 | 683.140 | 620.530 | 531.329 | 443.321 | 400.456 | 444.329 | 529.537 | 617.451 |
| 16 | 756.330 | 751.347 | 693.515 | 622.919 | 525.264 | 428.709 | 384.165 | 429.512 | 523.995 | 620.586 |
| 17 | 775.794 | 770.307 | 704.376 | 625.905 | 518.116 | 413.967 | 365.484 | 415.497 | 517.482 | 623.442 |
| 18 | 795.351 | 789.808 | 716.338 | 629.469 | 511.268 | 399.747 | 347.999 | 401.034 | 511.697 | 626.558 |
| 19 | 815.785 | 811.157 | 729.607 | 633.183 | 503.915 | 385.060 | 329.598 | 387.169 | 505.296 | 630.440 |
| 20 | 837.134 | 832.170 | 744.349 | 637.120 | 496.768 | 369.963 | 312.001 | 371.736 | 499.138 | 634.321 |
| 21 | 857.885 | 853.183 | 759.372 | 640.815 | 489.490 | 353.560 | 294.011 | 355.948 | 492.140 | 638.557 |
| 22 | 878.581 | 874.214 | 774.842 | 644.417 | 482.174 | 337.156 | 275.574 | 340.179 | 485.608 | 642.850 |
| 23 | 899.258 | 896.496 | 791.488 | 649.064 | 475.214 | 321.164 | 259.693 | 326.407 | 478.983 | 647.571 |
| 24 | 918.908 | 918.386 | 807.444 | 654.270 | 467.432 | 305.525 | 242.132 | 311.404 | 472.638 | 652.703 |
| 25 | 938.540 | 939.660 | 824.015 | 660.354 | 459.893 | 289.364 | 227.539 | 296.717 | 466.368 | 658.824 |
| 26 | 956.362 | 960.430 | 839.448 | 665.915 | 450.898 | 274.379 | 211.416 | 282.217 | 458.624 | 665.710 |
| 27 | 972.709 | 979.950 | 856.243 | 671.458 | 442.705 | 259.189 | 197.363 | 268.538 | 451.514 | 671.924 |
| 28 | 986.276 | 997.753 | 873.636 | 676.627 | 434.644 | 244.894 | 185.140 | 255.289 | 444.086 | 677.877 |
| 29 | 998.929 | 1016.788 | 892.782 | 682.039 | 426.004 | 231.234 | 172.917 | 241.442 | 436.939 | 684.409 |
| 30 | 1009.286 | 1033.359 | 910.193 | 688.309 | 416.747 | 219.011 | 161.739 | 229.760 | 429.512 | 690.698 |
| 31 | 1017.459 | 1046.944 | 928.388 | 694.280 | 407.827 | 208.056 | 151.456 | 217.499 | 421.711 | 697.285 |
| 32 | 1024.271 | 1059.130 | 945.389 | 701.073 | 399.019 | 197.289 | 142.051 | 206.470 | 413.444 | 703.537 |
| 33 | 1028.806 | 1069.973 | 963.677 | 707.698 | 390.435 | 186.876 | 134.624 | 194.658 | 404.580 | 709.303 |
| 34 | 1031.829 | 1080.610 | 981.536 | 714.640 | 381.365 | 176.052 | 128.092 | 183.871 | 395.641 | 714.920 |
| 35 | 1032.015 | 1088.373 | 1000.645 | 721.433 | 371.008 | 165.751 | 122.419 | 173.309 | 385.228 | 720.649 |
| 36 | 1028.264 | 1095.464 | 1018.654 | 728.226 | 360.688 | 156.066 | 117.884 | 164.015 | 375.431 | 727.125 |
| 37 | 1020.408 | 1100.895 | 1037.539 | 733.152 | 349.268 | 147.388 | 114.507 | 154.890 | 364.794 | 733.600 |
| 38 | 1008.297 | 1104.814 | 1056.238 | 739.236 | 339.302 | 138.449 | 113.014 | 145.541 | 355.295 | 740.449 |
| 39 | 993.610 | 1108.378 | 1075.161 | 745.786 | 328.330 | 130.425 | 111.707 | 136.975 | 345.031 | 746.868 |
| 40 | 971.814 | 1110.114 | 1094.811 | 753.213 | 318.084 | 122.382 | 111.969 | 129.641 | 336.037 | 753.922 |
| 41 | 943.821 | 1107.613 | 1115.525 | 761.630 | 308.287 | 114.843 | 112.864 | 122.382 | 327.378 | 761.406 |
| 42 | 911.705 | 1102.873 | 1138.348 | 770.363 | 297.837 | 107.546 | 117.063 | 115.794 | 317.301 | 770.027 |
| 43 | 874.923 | 1095.278 | 1161.433 | 778.780 | 288.189 | 100.492 | 123.408 | 108.498 | 307.709 | 779.433 |
| 44 | 834.969 | 1083.838 | 1183.266 | 788.315 | 277.533 | 93.998 | 133.560 | 100.791 | 297.445 | 789.510 |
| 45 | 793.149 | 1065.587 | 1207.918 | 798.971 | 268.016 | 87.485 | 147.631 | 94.483 | 288.189 | 799.848 |
| 46 | 752.803 | 1042.111 | 1233.970 | 809.758 | 258.461 | 82.110 | 174.018 | 88.138 | 279.306 | 811.400 |
| 47 | 710.852 | 1013.671 | 1260.898 | 822.391 | 249.242 | 77.221 | 214.644 | 82.950 | 271.244 | 823.828 |
| 48 | 670.842 | 980.939 | 1288.872 | 836.555 | 239.800 | 73.601 | 284.288 | 78.751 | 262.716 | 838.739 |
| 49 | 628.742 | 944.475 | 1319.028 | 852.921 | 231.383 | 70.466 | 325.381 | 74.907 | 254.766 | 855.180 |
| 50 | 588.899 | 904.184 | 1349.950 | 872.143 | 223.210 | 68.208 | 324.168 | 72.425 | 246.536 | 876.043 |
| 51 | 546.258 | 861.674 | 1384.288 | 892.428 | 215.521 | 66.453 | 294.142 | 70.540 | 239.277 | 899.724 |
| 52 | 504.214 | 818.043 | 1415.863 | 915.027 | 208.150 | 65.203 | 238.587 | 69.309 | 232.074 | 924.003 |
| 53 | 466.406 | 769.654 | 1442.530 | 940.164 | 200.517 | 63.766 | 190.907 | 68.488 | 224.908 | 950.372 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-----|---------|---------|----------|----------|---------|--------|---------|--------|---------|----------|
| 54 | 426.862 | 725.445 | 1467.686 | 967.745 | 193.202 | 62.236 | 177.601 | 66.659 | 217.760 | 978.625 |
| 55 | 392.021 | 676.571 | 1486.926 | 1004.303 | 185.868 | 62.049 | 244.838 | 64.251 | 210.968 | 1014.231 |
| 56 | 358.654 | 627.976 | 1499.914 | 1046.515 | 179.542 | 62.535 | 277.813 | 62.665 | 204.287 | 1058.888 |
| 57 | 325.325 | 575.407 | 1505.176 | 1096.080 | 174.055 | 59.773 | 278.709 | 62.161 | 198.465 | 1113.062 |
| 58 | 293.265 | 526.383 | 1502.526 | 1149.583 | 168.625 | 56.302 | 230.599 | 59.735 | 192.661 | 1172.517 |
| 59 | 260.775 | 482.548 | 1490.938 | 1211.445 | 162.989 | 53.446 | 168.811 | 56.656 | 186.838 | 1241.248 |
| 60 | 219.011 | 441.418 | 1469.589 | 1275.846 | 157.801 | 51.338 | 133.803 | 54.211 | 182.136 | 1313.318 |
| 61 | 173.570 | 403.591 | 1441.690 | 1342.355 | 152.763 | 50.834 | 108.255 | 53.484 | 177.340 | 1385.930 |
| 62 | 143.003 | 367.593 | 1405.935 | 1402.147 | 147.967 | 50.479 | 90.377 | 53.988 | 172.842 | 1451.394 |
| 63 | 123.128 | 326.146 | 1365.122 | 1458.747 | 143.824 | 48.986 | 81.961 | 51.804 | 168.606 | 1513.499 |
| 64 | 104.299 | 271.188 | 1314.960 | 1506.053 | 139.793 | 46.038 | 76.232 | 49.770 | 164.445 | 1564.632 |
| 65 | 86.440 | 222.818 | 1252.276 | 1542.593 | 136.919 | 44.396 | 72.164 | 47.792 | 160.918 | 1600.686 |
| 66 | 74.067 | 192.754 | 1193.120 | 1554.088 | 135.389 | 42.772 | 69.066 | 46.392 | 159.929 | 1613.525 |
| 67 | 64.569 | 162.896 | 1125.379 | 1544.291 | 135.184 | 41.634 | 66.472 | 45.366 | 160.059 | 1591.840 |
| 68 | 57.776 | 137.012 | 1055.827 | 1505.027 | 135.967 | 40.775 | 64.009 | 44.190 | 161.328 | 1513.145 |
| 69 | 52.625 | 114.693 | 979.614 | 1411.347 | 138.561 | 40.178 | 62.273 | 43.089 | 164.575 | 1378.932 |
| 70 | 48.035 | 96.704 | 893.958 | 1248.675 | 142.499 | 39.674 | 63.132 | 42.417 | 169.521 | 1175.839 |
| 71 | 44.041 | 82.652 | 799.400 | 1029.701 | 147.276 | 39.301 | 62.721 | 41.876 | 176.817 | 856.542 |
| 72 | 40.495 | 71.548 | 686.928 | 708.146 | 152.221 | 38.797 | 60.556 | 41.540 | 183.461 | 543.421 |
| 73 | 37.416 | 62.273 | 552.472 | 494.734 | 153.360 | 38.424 | 57.160 | 41.092 | 186.223 | 348.913 |
| 74 | 34.505 | 54.454 | 412.138 | 283.094 | 145.503 | 38.219 | 55.070 | 40.533 | 177.657 | 253.236 |
| 75 | 31.818 | 48.128 | 272.215 | 211.994 | 127.327 | 37.976 | 55.051 | 40.029 | 153.584 | 195.404 |
| 76 | 29.261 | 42.735 | 186.726 | 165.135 | 104.094 | 38.069 | 53.838 | 39.618 | 120.590 | 133.037 |
| 77 | 25.473 | 37.995 | 116.858 | 113.088 | 82.166 | 38.181 | 49.957 | 38.890 | 91.199 | 77.464 |
| 78 | 23.905 | 33.852 | 73.918 | 66.136 | 63.971 | 38.125 | 45.329 | 37.771 | 67.928 | 48.986 |
| 79 | 22.618 | 30.493 | 54.939 | 42.735 | 49.714 | 37.118 | 40.943 | 36.334 | 51.636 | 38.275 |
| 80 | 20.528 | 27.992 | 43.332 | 35.830 | 39.320 | 35.084 | 31.482 | 34.412 | 40.122 | 33.124 |
| 81 | 18.587 | 25.734 | 35.531 | 32.452 | 32.322 | 32.116 | 26.387 | 32.210 | 33.161 | 29.410 |
| 82 | 16.534 | 23.439 | 30.250 | 29.802 | 27.414 | 29.093 | 23.140 | 29.466 | 27.973 | 26.966 |
| 83 | 14.351 | 20.434 | 26.611 | 28.757 | 24.335 | 26.033 | 21.498 | 27.134 | 24.726 | 25.062 |
| 84 | 12.540 | 17.579 | 23.439 | 29.093 | 21.610 | 23.327 | 20.098 | 24.764 | 22.020 | 22.823 |
| 85 | 10.973 | 15.004 | 20.285 | 26.742 | 19.315 | 20.733 | 18.587 | 22.916 | 19.669 | 20.098 |
| 86 | 9.853 | 12.839 | 17.635 | 23.700 | 17.075 | 18.419 | 17.075 | 20.994 | 17.523 | 17.411 |
| 87 | 8.790 | 11.216 | 14.724 | 21.498 | 15.265 | 16.142 | 15.881 | 18.885 | 15.582 | 15.116 |
| 88 | 8.211 | 10.171 | 13.287 | 19.912 | 14.145 | 14.145 | 14.966 | 16.833 | 14.444 | 13.343 |
| 89 | 7.875 | 9.891 | 12.466 | 18.307 | 13.380 | 12.522 | 13.828 | 14.369 | 13.884 | 12.597 |
| 90 | 7.651 | 9.853 | 12.597 | 17.113 | 13.026 | 11.384 | 13.194 | 13.119 | 13.698 | 13.044 |
| 91 | 7.409 | 9.760 | 13.026 | 16.963 | 12.988 | 10.880 | 12.354 | 12.410 | 13.698 | 13.324 |
| 92 | 7.259 | 9.685 | 13.492 | 17.150 | 13.287 | 10.917 | 12.149 | 12.447 | 13.996 | 13.530 |
| 93 | 7.259 | 9.741 | 13.996 | 17.355 | 13.548 | 11.010 | 12.149 | 12.597 | 14.276 | 11.906 |
| 94 | 7.315 | 10.208 | 14.799 | 17.411 | 13.735 | 11.066 | 12.149 | 12.671 | 14.444 | 12.298 |
| 95 | 7.427 | 10.992 | 15.433 | 17.150 | 13.847 | 11.066 | 12.149 | 12.690 | 14.612 | 12.839 |
| 96 | 7.558 | 11.607 | 15.825 | 17.635 | 14.052 | 11.066 | 12.205 | 12.746 | 14.799 | 13.268 |
| 97 | 7.465 | 11.141 | 15.657 | 18.587 | 14.295 | 11.085 | 12.242 | 12.802 | 15.060 | 13.436 |
| 98 | 7.203 | 10.226 | 14.705 | 20.042 | 14.463 | 11.160 | 12.317 | 12.839 | 15.265 | 13.735 |
| 99 | 6.923 | 9.592 | 13.026 | 20.229 | 14.556 | 11.309 | 12.242 | 12.970 | 15.433 | 13.828 |
| 100 | 6.737 | 9.237 | 12.018 | 20.677 | 14.500 | 11.439 | 12.055 | 13.119 | 15.508 | 13.530 |
| 101 | 6.587 | 8.958 | 11.066 | 19.240 | 14.500 | 11.589 | 11.943 | 13.287 | 15.433 | 13.380 |
| 102 | 6.494 | 8.640 | 10.171 | 16.833 | 14.519 | 11.794 | 11.943 | 13.492 | 15.470 | 13.418 |
| 103 | 6.494 | 8.398 | 9.909 | 16.329 | 14.668 | 11.999 | 11.962 | 13.735 | 15.470 | 13.138 |
| 104 | 6.532 | 8.118 | 9.853 | 15.620 | 14.911 | 12.242 | 12.093 | 13.996 | 15.620 | 12.876 |
| 105 | 6.587 | 7.931 | 9.853 | 14.966 | 15.228 | 12.503 | 12.317 | 14.295 | 15.937 | 13.138 |
| 106 | 6.699 | 7.856 | 9.853 | 14.873 | 15.508 | 12.820 | 12.540 | 14.612 | 16.198 | 13.474 |
| 107 | 6.849 | 7.763 | 9.816 | 15.116 | 15.750 | 13.119 | 12.876 | 14.966 | 16.497 | 13.791 |
| 108 | 6.979 | 7.726 | 9.741 | 15.414 | 16.030 | 13.474 | 13.194 | 15.302 | 16.758 | 14.052 |
| 109 | 7.054 | 7.670 | 9.704 | 15.676 | 16.291 | 13.772 | 13.530 | 15.657 | 17.038 | 14.313 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 110 | 7.147 | 7.614 | 9.629 | 15.937 | 16.534 | 14.127 | 13.847 | 15.993 | 17.262 | 14.556 |
| 111 | 7.166 | 7.558 | 9.555 | 16.198 | 16.739 | 14.369 | 14.145 | 16.329 | 17.523 | 14.761 |
| 112 | 7.222 | 7.502 | 9.499 | 16.478 | 16.963 | 14.705 | 14.444 | 16.683 | 17.766 | 14.966 |
| 113 | 7.278 | 7.502 | 9.461 | 16.702 | 17.187 | 15.004 | 14.724 | 16.963 | 18.008 | 15.116 |
| 114 | 7.353 | 7.465 | 9.443 | 16.926 | 17.337 | 15.302 | 15.078 | 17.280 | 18.214 | 15.302 |
| 115 | 7.409 | 7.465 | 9.405 | 17.113 | 17.467 | 15.545 | 15.377 | 17.579 | 18.382 | 15.414 |
| 116 | 7.521 | 7.409 | 9.349 | 17.262 | 17.579 | 15.844 | 15.694 | 17.878 | 18.568 | 15.508 |
| 117 | 7.577 | 7.409 | 9.312 | 17.355 | 17.672 | 16.086 | 15.993 | 18.176 | 18.680 | 15.582 |
| 118 | 7.651 | 7.465 | 9.312 | 17.411 | 17.728 | 16.347 | 16.254 | 18.438 | 18.811 | 15.657 |
| 119 | 7.707 | 7.465 | 9.293 | 17.504 | 17.784 | 16.553 | 16.553 | 18.680 | 18.904 | 15.694 |
| 120 | 7.763 | 7.502 | 9.312 | 17.523 | 17.784 | 16.702 | 16.795 | 18.885 | 18.997 | 15.806 |
| 121 | 7.819 | 7.558 | 9.312 | 17.560 | 17.784 | 16.851 | 17.038 | 19.091 | 19.053 | 15.844 |
| 122 | 7.875 | 7.651 | 9.349 | 17.616 | 17.784 | 17.001 | 17.225 | 19.296 | 19.109 | 15.937 |
| 123 | 7.968 | 7.707 | 9.349 | 17.672 | 17.728 | 17.150 | 17.430 | 19.501 | 19.147 | 16.030 |
| 124 | 8.062 | 7.763 | 9.387 | 17.766 | 17.728 | 17.280 | 17.635 | 19.706 | 19.165 | 16.105 |
| 125 | 8.118 | 7.875 | 9.405 | 17.822 | 17.672 | 17.430 | 17.878 | 19.912 | 19.165 | 16.198 |
| 126 | 8.230 | 8.006 | 9.405 | 17.915 | 17.635 | 17.560 | 18.083 | 20.061 | 19.203 | 16.329 |
| 127 | 8.323 | 8.155 | 9.461 | 17.971 | 17.635 | 17.672 | 18.288 | 20.229 | 19.203 | 16.385 |
| 128 | 8.398 | 8.286 | 9.536 | 18.064 | 17.635 | 17.766 | 18.456 | 20.378 | 19.203 | 16.478 |
| 129 | 8.510 | 8.398 | 9.592 | 18.139 | 17.635 | 17.878 | 18.643 | 20.528 | 19.165 | 16.553 |
| 130 | 8.603 | 8.528 | 9.685 | 18.232 | 17.672 | 17.971 | 18.811 | 20.640 | 19.147 | 16.646 |
| 131 | 8.734 | 8.640 | 9.760 | 18.288 | 17.766 | 18.064 | 18.960 | 20.733 | 19.091 | 16.758 |
| 132 | 8.846 | 8.790 | 9.891 | 18.419 | 17.859 | 18.120 | 19.091 | 20.826 | 19.053 | 16.889 |
| 133 | 8.958 | 8.901 | 10.040 | 18.531 | 17.934 | 18.176 | 19.203 | 20.882 | 18.997 | 17.001 |
| 134 | 9.088 | 9.032 | 10.133 | 18.717 | 18.120 | 18.232 | 19.296 | 20.919 | 18.960 | 17.187 |
| 135 | 9.200 | 9.144 | 10.282 | 18.848 | 18.270 | 18.288 | 19.389 | 20.919 | 18.941 | 17.337 |
| 136 | 9.349 | 9.256 | 10.413 | 19.053 | 18.438 | 18.307 | 19.445 | 20.919 | 18.904 | 17.504 |
| 137 | 9.499 | 9.405 | 10.562 | 19.240 | 18.605 | 18.382 | 19.464 | 20.919 | 18.848 | 17.635 |
| 138 | 9.629 | 9.536 | 10.712 | 19.408 | 18.811 | 18.438 | 19.501 | 20.919 | 18.792 | 17.784 |
| 139 | 9.760 | 9.629 | 10.824 | 19.557 | 18.997 | 18.456 | 19.501 | 20.845 | 18.736 | 17.934 |
| 140 | 9.909 | 9.779 | 10.936 | 19.669 | 19.165 | 18.531 | 19.501 | 20.826 | 18.717 | 18.064 |
| 141 | 10.059 | 9.928 | 11.010 | 19.818 | 19.352 | 18.605 | 19.501 | 20.789 | 18.680 | 18.214 |
| 142 | 10.226 | 10.059 | 11.141 | 19.949 | 19.501 | 18.680 | 19.501 | 20.733 | 18.680 | 18.288 |
| 143 | 10.376 | 10.171 | 11.234 | 20.061 | 19.669 | 18.755 | 19.501 | 20.640 | 18.643 | 18.382 |
| 144 | 10.562 | 10.282 | 11.309 | 20.173 | 19.818 | 18.811 | 19.501 | 20.584 | 18.643 | 18.456 |
| 145 | 10.730 | 10.413 | 11.439 | 20.266 | 19.968 | 18.904 | 19.501 | 20.490 | 18.643 | 18.568 |
| 146 | 10.917 | 10.525 | 11.551 | 20.322 | 20.117 | 18.960 | 19.464 | 20.416 | 18.643 | 18.587 |
| 147 | 11.085 | 10.618 | 11.663 | 20.378 | 20.229 | 19.053 | 19.445 | 20.322 | 18.643 | 18.680 |
| 148 | 11.272 | 10.730 | 11.794 | 20.434 | 20.341 | 19.147 | 19.408 | 20.229 | 18.643 | 18.717 |
| 149 | 11.458 | 10.842 | 11.887 | 20.472 | 20.434 | 19.203 | 19.408 | 20.136 | 18.680 | 18.736 |
| 150 | 11.645 | 10.936 | 12.018 | 20.472 | 20.490 | 19.259 | 19.389 | 20.098 | 18.680 | 18.755 |
| 151 | 11.850 | 11.066 | 12.149 | 20.472 | 20.584 | 19.352 | 19.389 | 19.986 | 18.717 | 18.755 |
| 152 | 12.018 | 11.216 | 12.261 | 20.472 | 20.677 | 19.445 | 19.389 | 19.912 | 18.717 | 18.755 |
| 153 | 12.205 | 11.309 | 12.410 | 20.472 | 20.714 | 19.501 | 19.389 | 19.837 | 18.717 | 18.736 |
| 154 | 12.373 | 11.439 | 12.522 | 20.472 | 20.770 | 19.594 | 19.408 | 19.800 | 18.717 | 18.717 |
| 155 | 12.540 | 11.589 | 12.671 | 20.434 | 20.789 | 19.651 | 19.408 | 19.744 | 18.717 | 18.680 |
| 156 | 12.746 | 11.738 | 12.820 | 20.434 | 20.789 | 19.706 | 19.464 | 19.669 | 18.680 | 18.643 |
| 157 | 12.932 | 11.887 | 12.970 | 20.434 | 20.826 | 19.744 | 19.501 | 19.613 | 18.680 | 18.605 |
| 158 | 13.119 | 12.055 | 13.119 | 20.416 | 20.826 | 19.800 | 19.557 | 19.594 | 18.680 | 18.605 |
| 159 | 13.324 | 12.205 | 13.287 | 20.416 | 20.826 | 19.818 | 19.594 | 19.539 | 18.643 | 18.605 |
| 160 | 13.530 | 12.354 | 13.436 | 20.378 | 20.789 | 19.837 | 19.613 | 19.464 | 18.605 | 18.643 |
| 161 | 13.698 | 12.540 | 13.586 | 20.341 | 20.770 | 19.893 | 19.613 | 19.445 | 18.587 | 18.717 |
| 162 | 13.903 | 12.764 | 13.735 | 20.285 | 20.714 | 19.893 | 19.651 | 19.408 | 18.531 | 18.755 |
| 163 | 14.127 | 12.970 | 13.903 | 20.229 | 20.621 | 19.893 | 19.669 | 19.389 | 18.456 | 18.811 |
| 164 | 14.295 | 13.175 | 14.089 | 20.136 | 20.584 | 19.837 | 19.651 | 19.315 | 18.419 | 18.885 |
| 165 | 14.519 | 13.418 | 14.276 | 20.061 | 20.490 | 19.837 | 19.651 | 19.259 | 18.307 | 18.960 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : BLS-4A-4000°K-P.IES

CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 166 | 14.724 | 13.679 | 14.444 | 19.968 | 20.434 | 19.800 | 19.651 | 19.203 | 18.232 | 19.035 |
| 167 | 15.004 | 13.903 | 14.575 | 19.893 | 20.341 | 19.762 | 19.613 | 19.091 | 18.139 | 19.091 |
| 168 | 15.172 | 14.127 | 14.724 | 19.800 | 20.266 | 19.744 | 19.557 | 19.035 | 18.027 | 19.109 |
| 169 | 15.377 | 14.295 | 14.873 | 19.706 | 20.173 | 19.669 | 19.464 | 18.941 | 17.934 | 19.147 |
| 170 | 15.620 | 14.500 | 15.060 | 19.613 | 20.098 | 19.613 | 19.389 | 18.811 | 17.859 | 19.165 |
| 171 | 15.844 | 14.724 | 15.228 | 19.594 | 19.986 | 19.539 | 19.315 | 18.717 | 17.766 | 19.203 |
| 172 | 16.086 | 14.948 | 15.433 | 19.557 | 19.949 | 19.464 | 19.240 | 18.568 | 17.635 | 19.203 |
| 173 | 16.254 | 15.153 | 15.582 | 19.539 | 19.893 | 19.352 | 19.109 | 18.419 | 17.560 | 19.240 |
| 174 | 16.385 | 15.358 | 15.750 | 19.501 | 19.800 | 19.259 | 18.904 | 18.232 | 17.430 | 19.240 |
| 175 | 16.553 | 15.582 | 15.937 | 19.501 | 19.706 | 19.147 | 18.717 | 18.027 | 17.355 | 19.259 |
| 176 | 16.795 | 15.844 | 16.105 | 19.501 | 19.594 | 19.035 | 18.512 | 17.822 | 17.225 | 19.315 |
| 177 | 17.038 | 16.179 | 16.329 | 19.501 | 19.539 | 18.885 | 18.363 | 17.635 | 17.113 | 19.389 |
| 178 | 17.280 | 16.478 | 16.534 | 19.501 | 19.445 | 18.736 | 18.176 | 17.430 | 17.057 | 19.408 |
| 179 | 17.560 | 16.795 | 16.758 | 19.501 | 19.352 | 18.605 | 18.008 | 17.225 | 16.907 | 19.445 |
| 180 | 17.784 | 17.784 | 17.784 | 17.784 | 17.784 | 17.784 | 17.784 | 17.784 | 17.784 | 17.784 |

Vert. Angles **Horizontal Angles**

| | <u>300</u> | <u>330</u> | <u>360</u> |
|----|------------|------------|------------|
| 0 | 597.220 | 597.220 | 597.220 |
| 1 | 599.256 | 606.236 | 606.292 |
| 2 | 602.280 | 611.536 | 612.637 |
| 3 | 606.142 | 617.526 | 618.907 |
| 4 | 610.099 | 623.236 | 624.673 |
| 5 | 614.465 | 628.443 | 630.999 |
| 6 | 618.888 | 633.799 | 637.512 |
| 7 | 622.994 | 638.893 | 644.175 |
| 8 | 627.305 | 644.828 | 651.247 |
| 9 | 631.765 | 651.303 | 659.178 |
| 10 | 636.729 | 658.693 | 668.901 |
| 11 | 641.823 | 667.128 | 679.762 |
| 12 | 646.918 | 677.149 | 692.246 |
| 13 | 652.945 | 688.346 | 705.907 |
| 14 | 659.981 | 700.812 | 720.910 |
| 15 | 667.930 | 713.912 | 737.538 |
| 16 | 676.832 | 728.711 | 756.330 |
| 17 | 686.107 | 744.386 | 775.794 |
| 18 | 695.829 | 761.350 | 795.351 |
| 19 | 707.045 | 779.787 | 815.785 |
| 20 | 718.970 | 798.542 | 837.134 |
| 21 | 731.977 | 817.857 | 857.885 |
| 22 | 744.629 | 837.358 | 878.581 |
| 23 | 758.942 | 857.195 | 899.258 |
| 24 | 773.050 | 877.275 | 918.908 |
| 25 | 787.662 | 897.056 | 938.540 |
| 26 | 802.200 | 916.762 | 956.362 |
| 27 | 816.774 | 936.208 | 972.709 |
| 28 | 831.647 | 954.981 | 986.276 |
| 29 | 847.304 | 972.336 | 998.929 |
| 30 | 862.457 | 987.881 | 1009.286 |
| 31 | 877.555 | 1002.978 | 1017.459 |
| 32 | 892.372 | 1017.179 | 1024.271 |
| 33 | 908.999 | 1030.093 | 1028.806 |
| 34 | 923.350 | 1041.215 | 1031.829 |
| 35 | 940.014 | 1050.901 | 1032.015 |
| 36 | 955.839 | 1060.008 | 1028.264 |

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

| | | | |
|----|----------|----------|----------|
| 37 | 972.019 | 1066.726 | 1020.408 |
| 38 | 988.161 | 1071.746 | 1008.297 |
| 39 | 1005.087 | 1075.720 | 993.610 |
| 40 | 1022.685 | 1076.430 | 971.814 |
| 41 | 1041.421 | 1073.033 | 943.821 |
| 42 | 1059.336 | 1066.595 | 911.705 |
| 43 | 1078.837 | 1055.286 | 874.923 |
| 44 | 1099.812 | 1040.114 | 834.969 |
| 45 | 1122.505 | 1019.755 | 793.149 |
| 46 | 1145.645 | 996.204 | 752.803 |
| 47 | 1170.502 | 967.876 | 710.852 |
| 48 | 1194.053 | 932.009 | 670.842 |
| 49 | 1220.552 | 895.376 | 628.742 |
| 50 | 1245.820 | 855.329 | 588.899 |
| 51 | 1272.282 | 814.740 | 546.258 |
| 52 | 1297.661 | 773.218 | 504.214 |
| 53 | 1318.823 | 727.274 | 466.406 |
| 54 | 1337.615 | 680.079 | 426.862 |
| 55 | 1350.940 | 630.720 | 392.021 |
| 56 | 1359.804 | 578.841 | 358.654 |
| 57 | 1361.017 | 526.943 | 325.325 |
| 58 | 1356.799 | 480.010 | 293.265 |
| 59 | 1347.674 | 433.729 | 260.775 |
| 60 | 1331.438 | 394.055 | 219.011 |
| 61 | 1309.623 | 355.631 | 173.570 |
| 62 | 1280.007 | 315.490 | 143.003 |
| 63 | 1237.329 | 266.150 | 123.128 |
| 64 | 1184.722 | 215.950 | 104.299 |
| 65 | 1131.761 | 187.118 | 86.440 |
| 66 | 1078.986 | 158.529 | 74.067 |
| 67 | 1015.388 | 133.859 | 64.569 |
| 68 | 943.280 | 110.756 | 57.776 |
| 69 | 866.544 | 92.878 | 52.625 |
| 70 | 777.287 | 78.639 | 48.035 |
| 71 | 686.909 | 68.338 | 44.041 |
| 72 | 582.573 | 60.538 | 40.495 |
| 73 | 440.765 | 54.566 | 37.416 |
| 74 | 299.255 | 49.826 | 34.505 |
| 75 | 187.361 | 45.161 | 31.818 |
| 76 | 120.907 | 40.458 | 29.261 |
| 77 | 83.286 | 36.595 | 25.473 |
| 78 | 64.699 | 33.236 | 23.905 |
| 79 | 51.356 | 30.399 | 22.618 |
| 80 | 42.026 | 28.179 | 20.528 |
| 81 | 35.718 | 25.324 | 18.587 |
| 82 | 30.885 | 22.412 | 16.534 |
| 83 | 26.798 | 19.259 | 14.351 |
| 84 | 23.327 | 16.105 | 12.540 |
| 85 | 20.621 | 13.474 | 10.973 |
| 86 | 18.064 | 11.514 | 9.853 |
| 87 | 15.358 | 10.133 | 8.790 |
| 88 | 13.772 | 9.293 | 8.211 |
| 89 | 13.772 | 9.256 | 7.875 |
| 90 | 13.996 | 9.200 | 7.651 |
| 91 | 14.313 | 9.051 | 7.409 |
| 92 | 14.724 | 9.032 | 7.259 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : BLS-4A-4000°K-P.IES

CANDELA TABULATION - (Cont.)

| | | | |
|-----|--------|--------|--------|
| 93 | 15.172 | 9.051 | 7.259 |
| 94 | 15.937 | 9.461 | 7.315 |
| 95 | 16.907 | 10.133 | 7.427 |
| 96 | 16.590 | 10.413 | 7.558 |
| 97 | 15.900 | 9.891 | 7.465 |
| 98 | 14.799 | 9.256 | 7.203 |
| 99 | 13.679 | 8.883 | 6.923 |
| 100 | 12.671 | 8.678 | 6.737 |
| 101 | 11.439 | 8.528 | 6.587 |
| 102 | 11.141 | 8.360 | 6.494 |
| 103 | 11.085 | 8.230 | 6.494 |
| 104 | 11.085 | 8.006 | 6.532 |
| 105 | 11.141 | 7.931 | 6.587 |
| 106 | 11.216 | 7.912 | 6.699 |
| 107 | 11.216 | 7.912 | 6.849 |
| 108 | 11.160 | 7.912 | 6.979 |
| 109 | 11.122 | 7.912 | 7.054 |
| 110 | 11.010 | 7.875 | 7.147 |
| 111 | 11.010 | 7.875 | 7.166 |
| 112 | 11.066 | 7.875 | 7.222 |
| 113 | 11.141 | 7.875 | 7.278 |
| 114 | 11.272 | 7.931 | 7.353 |
| 115 | 11.309 | 8.006 | 7.409 |
| 116 | 11.384 | 8.062 | 7.521 |
| 117 | 11.458 | 8.118 | 7.577 |
| 118 | 11.589 | 8.174 | 7.651 |
| 119 | 11.738 | 8.230 | 7.707 |
| 120 | 11.887 | 8.323 | 7.763 |
| 121 | 12.055 | 8.435 | 7.819 |
| 122 | 12.242 | 8.547 | 7.875 |
| 123 | 12.373 | 8.696 | 7.968 |
| 124 | 12.540 | 8.808 | 8.062 |
| 125 | 12.746 | 8.958 | 8.118 |
| 126 | 12.876 | 9.107 | 8.230 |
| 127 | 13.026 | 9.256 | 8.323 |
| 128 | 13.194 | 9.405 | 8.398 |
| 129 | 13.343 | 9.555 | 8.510 |
| 130 | 13.492 | 9.741 | 8.603 |
| 131 | 13.641 | 9.891 | 8.734 |
| 132 | 13.791 | 10.040 | 8.846 |
| 133 | 13.940 | 10.208 | 8.958 |
| 134 | 14.089 | 10.357 | 9.088 |
| 135 | 14.220 | 10.488 | 9.200 |
| 136 | 14.313 | 10.674 | 9.349 |
| 137 | 14.444 | 10.824 | 9.499 |
| 138 | 14.575 | 10.973 | 9.629 |
| 139 | 14.668 | 11.122 | 9.760 |
| 140 | 14.799 | 11.290 | 9.909 |
| 141 | 14.911 | 11.439 | 10.059 |
| 142 | 15.004 | 11.607 | 10.226 |
| 143 | 15.078 | 11.794 | 10.376 |
| 144 | 15.209 | 11.943 | 10.562 |
| 145 | 15.302 | 12.093 | 10.730 |
| 146 | 15.377 | 12.261 | 10.917 |
| 147 | 15.433 | 12.447 | 11.085 |
| 148 | 15.526 | 12.597 | 11.272 |

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

| | | | |
|------------|--------|--------|--------|
| 149 | 15.620 | 12.746 | 11.458 |
| 150 | 15.694 | 12.876 | 11.645 |
| 151 | 15.806 | 13.026 | 11.850 |
| 152 | 15.844 | 13.194 | 12.018 |
| 153 | 15.974 | 13.343 | 12.205 |
| 154 | 16.030 | 13.492 | 12.373 |
| 155 | 16.105 | 13.641 | 12.540 |
| 156 | 16.179 | 13.828 | 12.746 |
| 157 | 16.291 | 13.977 | 12.932 |
| 158 | 16.385 | 14.145 | 13.119 |
| 159 | 16.478 | 14.295 | 13.324 |
| 160 | 16.590 | 14.463 | 13.530 |
| 161 | 16.702 | 14.649 | 13.698 |
| 162 | 16.833 | 14.817 | 13.903 |
| 163 | 16.926 | 15.004 | 14.127 |
| 164 | 17.057 | 15.209 | 14.295 |
| 165 | 17.206 | 15.414 | 14.519 |
| 166 | 17.355 | 15.620 | 14.724 |
| 167 | 17.467 | 15.825 | 15.004 |
| 168 | 17.616 | 16.030 | 15.172 |
| 169 | 17.728 | 16.235 | 15.377 |
| 170 | 17.878 | 16.441 | 15.620 |
| 171 | 18.027 | 16.683 | 15.844 |
| 172 | 18.176 | 16.851 | 16.086 |
| 173 | 18.288 | 17.057 | 16.254 |
| 174 | 18.438 | 17.262 | 16.385 |
| 175 | 18.587 | 17.504 | 16.553 |
| 176 | 18.736 | 17.710 | 16.795 |
| 177 | 18.885 | 17.915 | 17.038 |
| 178 | 18.997 | 18.120 | 17.280 |
| 179 | 19.109 | 18.363 | 17.560 |
| 180 | 17.784 | 17.784 | 17.784 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : BLS-4A-4000°K-P.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|--------|
| 0-20 | 225.47 | 8.20 | 8.20 |
| 0-30 | 513.04 | 18.60 | 18.60 |
| 0-40 | 919.10 | 33.30 | 33.30 |
| 0-60 | 1963.78 | 71.20 | 71.20 |
| 0-80 | 2646.46 | 96.00 | 96.00 |
| 0-90 | 2668.45 | 96.70 | 96.80 |
| 10-90 | 2611.83 | 94.70 | 94.70 |
| 20-40 | 693.64 | 25.10 | 25.20 |
| 20-50 | 1191.33 | 43.20 | 43.20 |
| 40-70 | 1566.07 | 56.80 | 56.80 |
| 60-80 | 682.68 | 24.80 | 24.80 |
| 70-80 | 161.29 | 5.80 | 5.80 |
| 80-90 | 21.99 | 0.80 | 0.80 |
| 90-110 | 26.62 | 1.00 | 1.00 |
| 90-120 | 39.85 | 1.40 | 1.40 |
| 90-130 | 52.78 | 1.90 | 1.90 |
| 90-150 | 74.99 | 2.70 | 2.70 |
| 90-180 | 89.54 | 3.20 | 3.20 |
| 110-180 | 62.93 | 2.30 | 2.30 |
| 0-180 | 2757.99 | 100.00 | 100.00 |

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 56.62 |
| 10-20 | 168.85 |
| 20-30 | 287.57 |
| 30-40 | 406.07 |
| 40-50 | 497.69 |
| 50-60 | 546.98 |
| 60-70 | 521.40 |
| 70-80 | 161.29 |
| 80-90 | 21.99 |
| 90-100 | 13.83 |
| 100-110 | 12.78 |
| 110-120 | 13.23 |
| 120-130 | 12.94 |
| 130-140 | 11.95 |
| 140-150 | 10.26 |
| 150-160 | 7.86 |
| 160-170 | 4.98 |
| 170-180 | 1.71 |

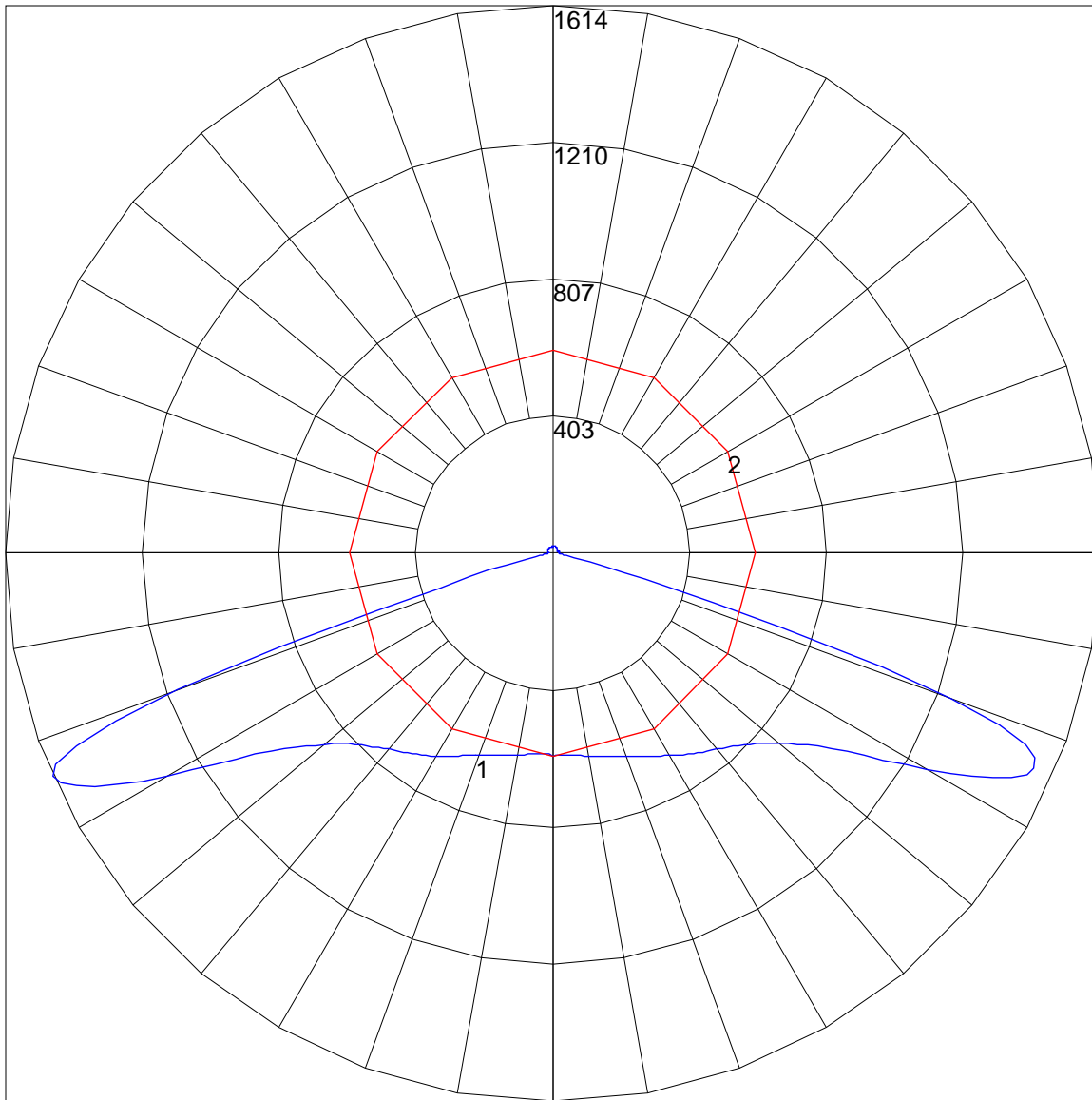
IES INDOOR REPORT
PHOTOMETRIC FILENAME : BLS-4A-4000°K-P.IES

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 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 104 | 104 | 104 | 99 | 99 | 99 | 97 |
| 1 | 108 | 103 | 98 | 94 | 104 | 100 | 96 | 92 | 95 | 92 | 89 | 91 | 88 | 86 | 87 | 84 | 82 | 80 |
| 2 | 97 | 88 | 81 | 75 | 94 | 86 | 79 | 74 | 82 | 76 | 71 | 78 | 73 | 69 | 74 | 71 | 67 | 65 |
| 3 | 87 | 76 | 67 | 60 | 84 | 74 | 66 | 59 | 71 | 64 | 58 | 67 | 61 | 57 | 64 | 59 | 55 | 53 |
| 4 | 79 | 66 | 57 | 49 | 76 | 65 | 56 | 49 | 62 | 54 | 48 | 59 | 52 | 47 | 56 | 51 | 46 | 43 |
| 5 | 72 | 58 | 48 | 41 | 69 | 57 | 48 | 41 | 54 | 46 | 40 | 52 | 45 | 39 | 50 | 44 | 39 | 36 |
| 6 | 66 | 52 | 42 | 35 | 64 | 50 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 44 | 38 | 33 | 31 |
| 7 | 61 | 46 | 37 | 30 | 59 | 45 | 36 | 30 | 43 | 35 | 30 | 42 | 34 | 29 | 40 | 34 | 29 | 27 |
| 8 | 56 | 42 | 33 | 27 | 54 | 41 | 32 | 26 | 39 | 32 | 26 | 38 | 31 | 26 | 36 | 30 | 25 | 23 |
| 9 | 52 | 38 | 29 | 23 | 50 | 37 | 29 | 23 | 36 | 28 | 23 | 34 | 28 | 23 | 33 | 27 | 22 | 20 |
| 10 | 49 | 35 | 26 | 21 | 47 | 34 | 26 | 21 | 33 | 26 | 21 | 32 | 25 | 20 | 31 | 24 | 20 | 18 |

POLAR GRAPH



Maximum Candela = 1613.525 Located At Horizontal Angle = 270, Vertical Angle = 66
1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0)