

Family Correlated Photometric Data

The following photometric information is developed using correlated data. Finelite considers a family to be a group of luminaires where critical performance metrics such as photometric performance, thermal performance, and electrical performance can be accurately projected via a combination of LM79 tests at the luminaire level and well-documented specifications at the component level.

For more information, please download [Finelite's Family Correlated White Paper](#)

Additional links:

- [Solid-State Lighting: Early Lessons Learned on the Way to Market](#)
(U.S. Department of Energy)
- [Lighting Facts®](#)
- [Design Lights Consortium®](#)

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-4-P-D-4FT-S-V-835-ASY-DAO-ITL89988-ITL94331.613.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89988-ITL94331.613 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[ISSUEDATE]01/11/21

[_REVISED]08/25/2021

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-4-P-D-4ft-S-V-835-ASY-DAO

[_INPUT_ELECTRICAL]120.0 VOLTS, 51.6 WATTS

[_INPUT_ELECTRICAL]277.0 VOLTS, 53.9 WATTS

[OTHER]see www.finelite.com for source files ITL89988 and ITL94331. For further details on Finelite family correlation files, go to

[more]http://www.finelite.com/download_files/series_downloads/photometry_pdf/FL_Family_Correlation_WhitePaper.pdf

[_ABSOLUTE LUMENS]5700

[_CONVERT] Photometric web converted from original test data

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 5697 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 110 |
| Total Luminaire Watts | 51.6 |
| Ballast Factor | 1.00 |
| CIE Type | Semi-Direct |
| Spacing Criterion (0-180) | 1.34 |
| Spacing Criterion (90-270) | 1.18 |
| Spacing Criterion (Diagonal) | 1.30 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.33 ft |
| Luminous Width (90-270) | 4.00 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 11807 | 12190 | 10104 |
| 55 | 10142 | 10842 | 8985 |
| 65 | 8492 | 9228 | 7832 |
| 75 | 6838 | 7566 | 6775 |
| 85 | 5358 | 5829 | 5923 |

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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> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> |
|-------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| 0.0 | 1552.000 | 1552.000 | 1552.000 | 1552.000 | 1552.000 | 1552.000 | 1552.000 | 1552.000 | 1552.000 |
| 2.5 | 1584.000 | 1582.000 | 1574.000 | 1563.000 | 1551.000 | 1537.000 | 1527.000 | 1519.000 | 1516.000 |
| 5.0 | 1609.000 | 1605.000 | 1591.000 | 1569.000 | 1543.000 | 1518.000 | 1494.000 | 1481.000 | 1476.000 |
| 7.5 | 1628.000 | 1621.000 | 1602.000 | 1569.000 | 1530.000 | 1491.000 | 1458.000 | 1440.000 | 1433.000 |
| 10.0 | 1641.000 | 1635.000 | 1606.000 | 1563.000 | 1514.000 | 1461.000 | 1422.000 | 1397.000 | 1385.000 |
| 12.5 | 1645.000 | 1640.000 | 1606.000 | 1551.000 | 1495.000 | 1427.000 | 1383.000 | 1352.000 | 1339.000 |
| 15.0 | 1641.000 | 1635.000 | 1599.000 | 1533.000 | 1468.000 | 1389.000 | 1341.000 | 1306.000 | 1292.000 |
| 17.5 | 1628.000 | 1623.000 | 1586.000 | 1512.000 | 1437.000 | 1349.000 | 1293.000 | 1260.000 | 1243.000 |
| 20.0 | 1606.000 | 1603.000 | 1566.000 | 1482.000 | 1403.000 | 1304.000 | 1246.000 | 1212.000 | 1197.000 |
| 22.5 | 1576.000 | 1573.000 | 1539.000 | 1451.000 | 1367.000 | 1257.000 | 1201.000 | 1164.000 | 1153.000 |
| 25.0 | 1538.000 | 1537.000 | 1506.000 | 1415.000 | 1323.000 | 1210.000 | 1153.000 | 1119.000 | 1110.000 |
| 27.5 | 1493.000 | 1493.000 | 1465.000 | 1373.000 | 1277.000 | 1161.000 | 1102.000 | 1075.000 | 1064.000 |
| 30.0 | 1441.000 | 1444.000 | 1419.000 | 1327.000 | 1226.000 | 1108.000 | 1056.000 | 1030.000 | 1023.000 |
| 32.5 | 1383.000 | 1387.000 | 1368.000 | 1279.000 | 1173.000 | 1057.000 | 1007.000 | 985.000 | 982.000 |
| 35.0 | 1315.000 | 1325.000 | 1314.000 | 1224.000 | 1116.000 | 1003.000 | 960.000 | 943.000 | 939.000 |
| 37.5 | 1249.000 | 1261.000 | 1251.000 | 1166.000 | 1056.000 | 950.000 | 911.000 | 901.000 | 900.000 |
| 40.0 | 1175.000 | 1192.000 | 1188.000 | 1106.000 | 998.000 | 895.000 | 862.000 | 856.000 | 861.000 |
| 42.5 | 1102.000 | 1114.000 | 1123.000 | 1045.000 | 938.000 | 842.000 | 815.000 | 815.000 | 819.000 |
| 45.0 | 1019.000 | 1039.000 | 1052.000 | 976.000 | 872.000 | 787.000 | 768.000 | 774.000 | 779.000 |
| 47.5 | 943.000 | 965.000 | 980.000 | 911.000 | 812.000 | 735.000 | 718.000 | 731.000 | 741.000 |
| 50.0 | 866.000 | 885.000 | 906.000 | 846.000 | 749.000 | 683.000 | 672.000 | 688.000 | 699.000 |
| 52.5 | 790.000 | 807.000 | 833.000 | 776.000 | 687.000 | 626.000 | 625.000 | 644.000 | 657.000 |
| 55.0 | 710.000 | 733.000 | 759.000 | 707.000 | 629.000 | 576.000 | 578.000 | 601.000 | 616.000 |
| 57.5 | 638.000 | 657.000 | 685.000 | 642.000 | 569.000 | 524.000 | 531.000 | 558.000 | 573.000 |
| 60.0 | 564.000 | 587.000 | 615.000 | 578.000 | 513.000 | 475.000 | 483.000 | 510.000 | 526.000 |
| 62.5 | 499.000 | 515.000 | 546.000 | 512.000 | 459.000 | 426.000 | 439.000 | 466.000 | 482.000 |
| 65.0 | 438.000 | 452.000 | 476.000 | 450.000 | 404.000 | 381.000 | 391.000 | 421.000 | 436.000 |
| 67.5 | 374.000 | 386.000 | 411.000 | 392.000 | 352.000 | 334.000 | 348.000 | 376.000 | 386.000 |
| 70.0 | 320.000 | 329.000 | 351.000 | 335.000 | 305.000 | 289.000 | 303.000 | 329.000 | 340.000 |
| 72.5 | 264.000 | 274.000 | 294.000 | 280.000 | 259.000 | 246.000 | 261.000 | 282.000 | 294.000 |
| 75.0 | 216.000 | 224.000 | 239.000 | 230.000 | 214.000 | 206.000 | 218.000 | 238.000 | 248.000 |
| 77.5 | 172.000 | 177.000 | 189.000 | 184.000 | 172.000 | 166.000 | 178.000 | 193.000 | 199.000 |
| 80.0 | 130.000 | 134.000 | 143.000 | 142.000 | 132.000 | 129.000 | 138.000 | 151.000 | 155.000 |
| 82.5 | 92.000 | 93.000 | 100.000 | 99.000 | 96.000 | 94.000 | 100.000 | 108.000 | 112.000 |
| 85.0 | 57.000 | 57.000 | 62.000 | 62.000 | 63.000 | 60.000 | 64.000 | 67.000 | 70.000 |
| 87.5 | 22.000 | 24.000 | 26.000 | 28.000 | 29.000 | 28.000 | 29.000 | 30.000 | 31.000 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.5 | 27.428 | 27.838 | 23.744 | 24.972 | 9.006 | 23.744 | 37.253 | 44.622 | 47.488 |
| 95.0 | 58.132 | 59.360 | 59.769 | 60.997 | 23.334 | 37.663 | 57.722 | 68.366 | 71.641 |
| 97.5 | 91.701 | 97.841 | 111.351 | 92.519 | 38.072 | 49.944 | 76.144 | 91.701 | 96.204 |
| 100.0 | 142.054 | 150.242 | 162.932 | 122.813 | 53.219 | 63.454 | 91.291 | 110.532 | 117.082 |
| 102.5 | 191.998 | 201.414 | 212.877 | 152.698 | 69.185 | 76.963 | 107.666 | 124.860 | 131.410 |
| 105.0 | 238.258 | 256.680 | 264.868 | 182.173 | 84.741 | 89.654 | 120.357 | 140.826 | 145.329 |
| 107.5 | 293.524 | 325.046 | 319.315 | 209.192 | 101.116 | 101.116 | 132.638 | 154.745 | 158.839 |
| 110.0 | 369.668 | 400.781 | 371.306 | 232.117 | 117.492 | 112.579 | 145.329 | 169.073 | 173.167 |
| 112.5 | 462.188 | 475.697 | 422.478 | 252.177 | 134.276 | 123.632 | 158.020 | 182.992 | 187.905 |
| 115.0 | 546.520 | 548.976 | 464.235 | 270.599 | 151.060 | 135.095 | 169.482 | 196.501 | 201.823 |
| 117.5 | 625.530 | 613.248 | 493.710 | 286.565 | 167.845 | 146.967 | 180.126 | 210.011 | 215.742 |
| 120.0 | 688.983 | 661.145 | 511.723 | 301.712 | 186.267 | 159.657 | 189.542 | 221.883 | 229.252 |
| 122.5 | 734.833 | 692.668 | 521.957 | 317.268 | 205.098 | 171.939 | 198.548 | 233.755 | 242.352 |
| 125.0 | 761.852 | 707.405 | 527.279 | 332.006 | 223.111 | 183.811 | 206.327 | 242.761 | 253.814 |
| 127.5 | 771.268 | 709.452 | 530.554 | 346.334 | 241.533 | 196.092 | 213.695 | 250.130 | 264.049 |
| 130.0 | 767.174 | 703.311 | 533.010 | 361.481 | 259.546 | 207.964 | 220.655 | 254.633 | 270.190 |
| 132.5 | 754.484 | 693.077 | 535.876 | 377.037 | 277.968 | 219.836 | 228.024 | 257.908 | 272.236 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-4-P-D-4FT-S-V-835-ASY-DAO-ITL89988-ITL94331.613.IES****CANDELA TABULATION - (Cont.)**

| | | | | | | | | | |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 135.0 | 738.109 | 681.205 | 539.560 | 392.594 | 296.390 | 233.755 | 234.983 | 260.364 | 273.055 |
| 137.5 | 721.324 | 669.742 | 544.063 | 408.969 | 315.221 | 248.902 | 242.352 | 262.821 | 273.055 |
| 140.0 | 704.540 | 659.099 | 548.976 | 425.344 | 334.462 | 265.277 | 249.311 | 264.868 | 273.055 |
| 142.5 | 689.802 | 651.320 | 554.298 | 441.719 | 353.293 | 282.471 | 256.271 | 266.914 | 273.055 |
| 145.0 | 678.339 | 644.770 | 559.620 | 457.685 | 372.125 | 299.255 | 263.639 | 269.780 | 273.464 |
| 147.5 | 668.514 | 639.858 | 566.170 | 473.241 | 390.956 | 316.449 | 272.646 | 273.874 | 275.511 |
| 150.0 | 660.736 | 636.173 | 573.129 | 487.979 | 409.787 | 334.871 | 284.108 | 278.377 | 278.786 |
| 152.5 | 653.777 | 632.898 | 580.089 | 501.488 | 426.981 | 354.521 | 300.483 | 284.108 | 282.471 |
| 155.0 | 647.227 | 630.851 | 586.229 | 513.360 | 443.766 | 375.400 | 320.543 | 292.705 | 289.021 |
| 157.5 | 643.542 | 630.033 | 590.732 | 524.004 | 459.731 | 396.687 | 342.240 | 307.443 | 299.665 |
| 160.0 | 640.677 | 629.214 | 593.598 | 533.010 | 474.469 | 417.156 | 364.346 | 330.368 | 319.315 |
| 162.5 | 635.355 | 626.348 | 594.008 | 539.970 | 487.979 | 437.216 | 387.272 | 356.159 | 345.515 |
| 165.0 | 629.214 | 620.208 | 591.961 | 545.292 | 499.441 | 455.638 | 413.062 | 381.950 | 372.534 |
| 167.5 | 618.980 | 611.611 | 586.639 | 548.157 | 509.266 | 472.422 | 437.625 | 409.787 | 400.372 |
| 170.0 | 605.880 | 600.148 | 579.679 | 549.385 | 517.863 | 487.979 | 460.960 | 440.900 | 433.531 |
| 172.5 | 589.504 | 585.820 | 569.854 | 548.157 | 524.004 | 501.488 | 482.247 | 468.328 | 463.416 |
| 175.0 | 573.539 | 569.854 | 559.210 | 545.292 | 529.326 | 513.769 | 501.488 | 492.891 | 489.616 |
| 177.5 | 553.070 | 551.432 | 546.110 | 539.560 | 531.782 | 524.004 | 517.863 | 513.360 | 511.723 |
| 180.0 | 533.010 | 533.010 | 533.010 | 533.010 | 533.010 | 533.010 | 533.010 | 533.010 | 533.010 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-4-P-D-4FT-S-V-835-ASY-DAO-ITL89988-ITL94331.613.IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 559.67 | N.A. | 9.80 |
| 0-30 | 1168.58 | N.A. | 20.50 |
| 0-40 | 1872.64 | N.A. | 32.90 |
| 0-60 | 3150.8 | N.A. | 55.30 |
| 0-80 | 3813.23 | N.A. | 66.90 |
| 0-90 | 3883.51 | N.A. | 68.20 |
| 10-90 | 3737.17 | N.A. | 65.60 |
| 20-40 | 1312.97 | N.A. | 23.00 |
| 20-50 | 2004.47 | N.A. | 35.20 |
| 40-70 | 1701.22 | N.A. | 29.90 |
| 60-80 | 662.43 | N.A. | 11.60 |
| 70-80 | 239.36 | N.A. | 4.20 |
| 80-90 | 70.28 | N.A. | 1.20 |
| 90-110 | 236.42 | N.A. | 4.10 |
| 90-120 | 519.83 | N.A. | 9.10 |
| 90-130 | 845.82 | N.A. | 14.80 |
| 90-150 | 1412.67 | N.A. | 24.80 |
| 90-180 | 1813.96 | N.A. | 31.80 |
| 110-180 | 1577.54 | N.A. | 27.70 |
| 0-180 | 5697.47 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 146.34 |
| 10-20 | 413.34 |
| 20-30 | 608.90 |
| 30-40 | 704.07 |
| 40-50 | 691.50 |
| 50-60 | 586.66 |
| 60-70 | 423.06 |
| 70-80 | 239.36 |
| 80-90 | 70.28 |
| 90-100 | 59.67 |
| 100-110 | 176.75 |
| 110-120 | 283.42 |
| 120-130 | 325.98 |
| 130-140 | 304.33 |
| 140-150 | 262.52 |
| 150-160 | 209.87 |
| 160-170 | 141.15 |
| 170-180 | 50.27 |

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

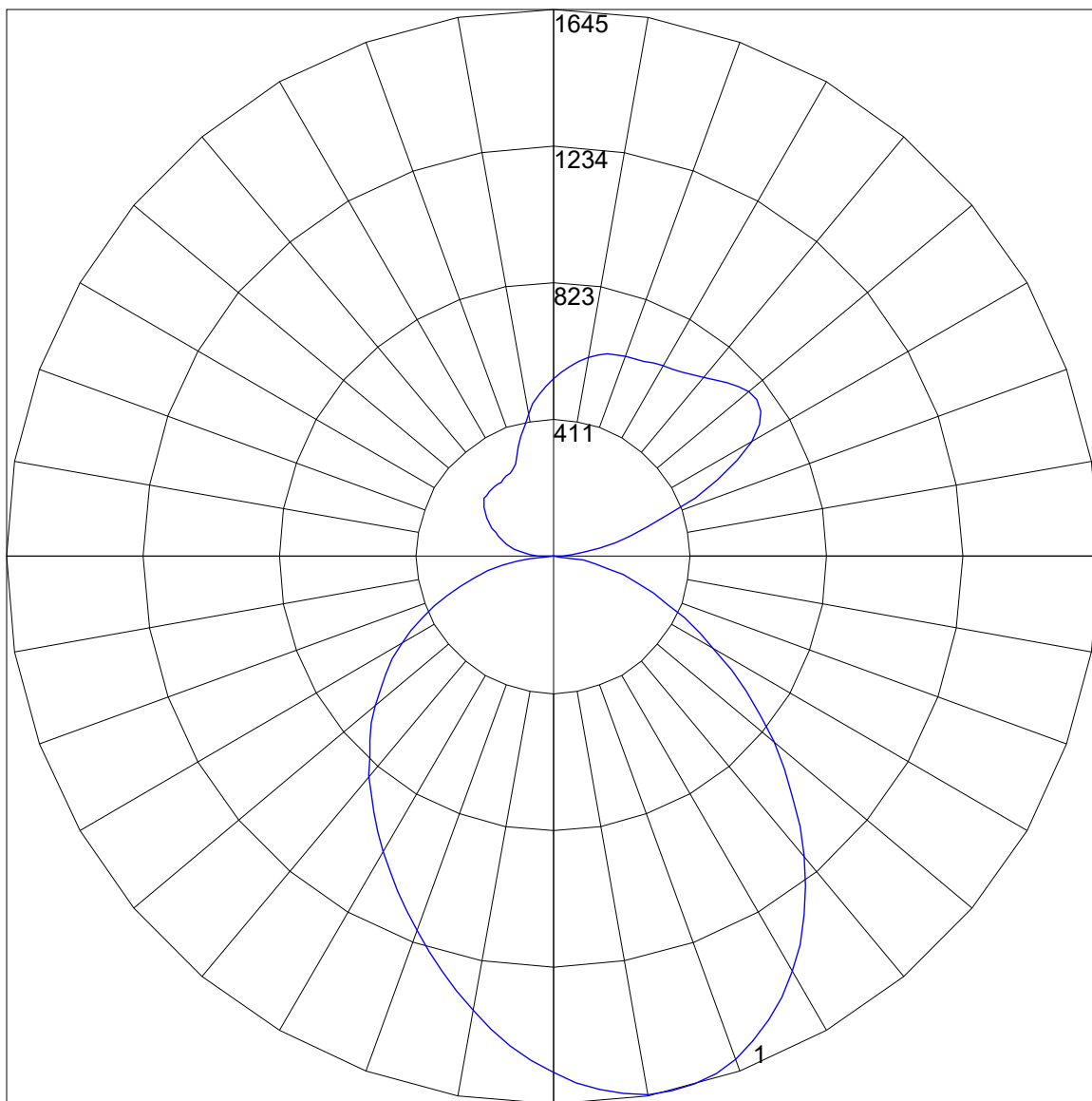
Effective Floor Cavity Reflectance 0.20

| 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 | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 83 | 83 | 83 | 73 | 73 | 73 | 68 |
| 1 | 102 | 98 | 94 | 90 | 96 | 92 | 89 | 86 | 82 | 80 | 77 | 73 | 71 | 69 | 65 | 63 | 62 | 58 |
| 2 | 93 | 85 | 79 | 74 | 87 | 81 | 75 | 70 | 72 | 68 | 64 | 64 | 61 | 58 | 57 | 54 | 52 | 48 |
| 3 | 85 | 75 | 68 | 62 | 80 | 71 | 64 | 59 | 64 | 58 | 54 | 57 | 53 | 49 | 51 | 47 | 45 | 41 |
| 4 | 78 | 67 | 59 | 52 | 73 | 63 | 56 | 50 | 57 | 51 | 46 | 51 | 46 | 42 | 45 | 42 | 38 | 35 |
| 5 | 72 | 60 | 51 | 45 | 67 | 57 | 49 | 43 | 51 | 45 | 40 | 46 | 41 | 37 | 41 | 37 | 34 | 31 |
| 6 | 66 | 54 | 45 | 39 | 62 | 51 | 43 | 38 | 46 | 40 | 35 | 41 | 36 | 32 | 37 | 33 | 30 | 27 |
| 7 | 61 | 49 | 40 | 35 | 58 | 46 | 39 | 33 | 42 | 36 | 31 | 38 | 33 | 29 | 34 | 30 | 26 | 24 |
| 8 | 57 | 44 | 36 | 31 | 54 | 42 | 35 | 30 | 38 | 32 | 28 | 35 | 30 | 26 | 31 | 27 | 24 | 22 |
| 9 | 53 | 41 | 33 | 28 | 50 | 39 | 32 | 27 | 35 | 29 | 25 | 32 | 27 | 23 | 29 | 25 | 22 | 20 |
| 10 | 50 | 37 | 30 | 25 | 47 | 36 | 29 | 24 | 33 | 27 | 23 | 30 | 25 | 21 | 27 | 23 | 20 | 18 |

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POLAR GRAPH



Maximum Candela = 1645 Located At Horizontal Angle = 0, Vertical Angle = 12.5

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)