

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-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3.009 Family Correlation File

[TESTLAB] Northern Lights Testing Laboratories

[TESTDATE] 5/18/2021

[ISSUEDATE] 8/24/2021

[MANUFAC] Finelite

[LUMCAT] HP-2-P-ID-4ft-H-S-835-WSO-DAO

[LUMINAIRE] HP Series

[LAMPCAT] 160 LEDs with 80 CRI

[LAMP] Samsung

[BALLAST] Osram

[BALLASTCAT] OTI50W/120-277, 700mA

[MORE] extrapolated from KPL2008-3.IES

[INPUT_ELECTRICAL]120.0 VOLTS, 41.9 WATTS

[INPUT_ELECTRICAL]277.0 VOLTS, 44.0 WATTS

[CONVERT] Photometric web converted from original test data

[OTHER]see www.finelite.com for source files ITL89456 and KPL2008-3. 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

[ABSOLUTELUMENS]4657

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 4658 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 111 |
| Total Luminaire Watts | 41.9 |
| Ballast Factor | 1.00 |
| CIE Type | Semi-Indirect |
| Spacing Criterion (0-180) | N.A. |
| Spacing Criterion (90-270) | N.A. |
| Spacing Criterion (Diagonal) | N.A. |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.17 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 | 9913 | 10312 | 7461 |
| 55 | 8413 | 9363 | 6655 |
| 65 | 6947 | 8155 | 5883 |
| 75 | 5795 | 6889 | 4938 |
| 85 | 5783 | 6863 | 4107 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES

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> | <u>202.5</u> |
|--------------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 0.0 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 |
| 2.5 | 602.316 | 599.125 | 596.192 | 595.356 | 585.484 | 576.423 | 563.725 | 557.515 | 558.027 | 557.515 |
| 5.0 | 624.931 | 619.708 | 610.799 | 601.763 | 582.485 | 565.441 | 546.721 | 537.300 | 535.325 | 537.300 |
| 7.5 | 644.036 | 637.228 | 623.563 | 606.600 | 577.943 | 551.948 | 529.885 | 514.360 | 516.650 | 514.360 |
| 10.0 | 659.884 | 652.667 | 633.115 | 609.451 | 571.307 | 538.217 | 513.525 | 501.080 | 500.118 | 501.080 |
| 12.5 | 675.303 | 665.582 | 640.607 | 609.943 | 562.909 | 523.163 | 497.545 | 483.393 | 482.811 | 483.393 |
| 15.0 | 684.040 | 674.598 | 646.178 | 608.206 | 552.972 | 508.921 | 480.972 | 463.583 | 465.422 | 463.583 |
| 17.5 | 687.383 | 677.916 | 648.792 | 603.815 | 540.593 | 492.535 | 464.824 | 450.410 | 449.746 | 450.410 |
| 20.0 | 684.384 | 676.118 | 647.247 | 597.265 | 528.685 | 476.540 | 448.677 | 435.548 | 433.897 | 435.548 |
| 22.5 | 676.589 | 669.265 | 643.823 | 587.884 | 513.779 | 459.298 | 432.742 | 420.363 | 419.335 | 420.363 |
| 25.0 | 663.055 | 658.172 | 632.685 | 577.369 | 497.803 | 442.184 | 415.735 | 405.117 | 404.941 | 405.117 |
| 27.5 | 648.489 | 642.430 | 621.076 | 564.089 | 479.599 | 424.582 | 399.845 | 390.104 | 390.379 | 390.104 |
| 30.0 | 627.073 | 623.477 | 604.458 | 548.306 | 461.355 | 406.121 | 383.825 | 374.514 | 375.816 | 374.514 |
| 32.5 | 603.430 | 601.976 | 586.938 | 530.872 | 440.664 | 387.597 | 367.591 | 359.411 | 360.996 | 359.411 |
| 35.0 | 574.989 | 576.898 | 565.908 | 511.641 | 420.621 | 368.214 | 350.501 | 344.165 | 345.062 | 344.165 |
| 37.5 | 545.435 | 548.732 | 542.522 | 488.939 | 399.673 | 348.576 | 333.154 | 328.402 | 329.815 | 328.402 |
| 40.0 | 513.566 | 519.223 | 517.805 | 466.450 | 379.413 | 329.365 | 316.064 | 312.509 | 314.393 | 312.509 |
| 42.5 | 477.928 | 487.399 | 489.496 | 441.844 | 356.027 | 310.092 | 298.843 | 297.049 | 297.774 | 297.049 |
| 45.0 | 443.237 | 454.649 | 461.097 | 416.357 | 333.584 | 290.086 | 280.857 | 280.107 | 269.678 | 280.107 |
| 47.5 | 410.340 | 420.105 | 433.553 | 390.039 | 310.538 | 270.727 | 262.694 | 263.423 | 266.761 | 263.423 |
| 50.0 | 372.990 | 385.627 | 401.217 | 361.381 | 287.280 | 250.638 | 245.346 | 246.526 | 249.287 | 246.526 |
| 52.5 | 338.467 | 351.894 | 370.504 | 333.862 | 264.836 | 231.554 | 226.843 | 228.900 | 232.582 | 228.900 |
| 55.0 | 305.143 | 318.419 | 339.581 | 306.385 | 241.365 | 212.068 | 208.426 | 212.109 | 214.423 | 212.109 |
| 57.5 | 271.218 | 285.375 | 306.729 | 278.972 | 219.519 | 192.684 | 189.878 | 193.971 | 197.031 | 193.971 |
| 60.0 | 240.979 | 254.731 | 276.400 | 251.089 | 198.788 | 169.610 | 168.754 | 175.124 | 179.470 | 175.124 |
| 62.5 | 210.651 | 224.979 | 245.903 | 224.660 | 173.801 | 155.507 | 154.814 | 159.673 | 161.205 | 159.673 |
| 65.0 | 185.639 | 196.752 | 217.934 | 198.681 | 157.223 | 137.106 | 137.114 | 141.870 | 143.148 | 141.870 |
| 67.5 | 160.709 | 171.056 | 190.005 | 173.731 | 137.454 | 119.439 | 119.160 | 123.527 | 123.892 | 123.527 |
| 70.0 | 137.495 | 146.212 | 163.449 | 150.132 | 117.047 | 101.964 | 102.095 | 105.610 | 108.092 | 105.610 |
| 72.5 | 114.622 | 122.524 | 136.467 | 126.444 | 98.650 | 85.407 | 85.518 | 87.816 | 89.102 | 87.816 |
| 75.0 | 94.833 | 101.108 | 112.738 | 105.069 | 80.807 | 69.272 | 69.096 | 67.048 | 71.685 | 67.048 |
| 77.5 | 75.642 | 81.360 | 90.249 | 84.916 | 64.934 | 54.005 | 53.211 | 54.030 | 53.809 | 54.030 |
| 80.0 | 59.281 | 63.500 | 69.862 | 65.708 | 49.307 | 39.668 | 38.128 | 37.714 | 37.845 | 37.714 |
| 82.5 | 44.289 | 46.968 | 51.658 | 48.832 | 35.797 | 26.294 | 24.959 | 21.329 | 22.849 | 21.329 |
| 85.0 | 31.869 | 32.942 | 37.825 | 36.006 | 22.632 | 14.726 | 12.248 | 10.003 | 8.344 | 10.003 |
| 87.5 | 19.130 | 20.104 | 21.239 | 18.773 | 10.675 | 4.018 | 2.151 | 0.770 | 0.524 | 0.770 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.5 | 14.003 | 24.116 | 24.116 | 23.338 | 23.338 | 23.338 | 24.116 | 24.116 | 14.003 | 24.116 |
| 95.0 | 36.563 | 64.569 | 64.569 | 53.678 | 52.900 | 53.678 | 64.569 | 64.569 | 36.563 | 64.569 |
| 97.5 | 61.458 | 105.800 | 129.917 | 93.353 | 87.908 | 93.353 | 129.917 | 105.800 | 61.458 | 105.800 |
| 100.0 | 87.130 | 137.696 | 258.277 | 150.143 | 132.250 | 150.143 | 258.277 | 137.696 | 87.130 | 137.696 |
| 102.5 | 115.136 | 168.036 | 357.076 | 265.279 | 210.823 | 265.279 | 357.076 | 168.036 | 115.136 | 168.036 |
| 105.0 | 142.364 | 200.710 | 413.866 | 432.537 | 356.298 | 432.537 | 413.866 | 200.710 | 142.364 | 200.710 |
| 107.5 | 169.592 | 232.605 | 448.874 | 583.458 | 543.783 | 583.458 | 448.874 | 232.605 | 169.592 | 232.605 |
| 110.0 | 196.820 | 262.167 | 479.991 | 672.144 | 679.145 | 672.144 | 479.991 | 262.167 | 196.820 | 262.167 |
| 112.5 | 224.048 | 290.951 | 516.555 | 730.489 | 760.051 | 730.489 | 516.555 | 290.951 | 224.048 | 290.951 |
| 115.0 | 252.054 | 318.179 | 560.120 | 772.498 | 815.285 | 772.498 | 560.120 | 318.179 | 252.054 | 318.179 |
| 117.5 | 280.060 | 345.407 | 607.574 | 812.174 | 858.072 | 812.174 | 607.574 | 345.407 | 280.060 | 345.407 |
| 120.0 | 308.066 | 374.191 | 646.471 | 854.182 | 900.859 | 854.182 | 646.471 | 374.191 | 308.066 | 374.191 |
| 122.5 | 333.738 | 398.307 | 674.477 | 913.306 | 945.980 | 913.306 | 674.477 | 398.307 | 333.738 | 398.307 |
| 125.0 | 357.854 | 421.646 | 690.036 | 977.876 | 1010.549 | 977.876 | 690.036 | 421.646 | 357.854 | 421.646 |
| 127.5 | 380.415 | 443.428 | 699.372 | 1021.440 | 1082.120 | 1021.440 | 699.372 | 443.428 | 380.415 | 443.428 |
| 130.0 | 399.085 | 462.099 | 704.817 | 1039.333 | 1133.464 | 1039.333 | 704.817 | 462.099 | 399.085 | 462.099 |
| 132.5 | 417.756 | 479.214 | 706.373 | 1032.332 | 1149.801 | 1032.332 | 706.373 | 479.214 | 417.756 | 479.214 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES

CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-------|---------|---------|---------|----------|----------|----------|---------|---------|---------|---------|
| 135.0 | 434.093 | 493.216 | 705.595 | 1010.549 | 1133.464 | 1010.549 | 705.595 | 493.216 | 434.093 | 493.216 |
| 137.5 | 448.874 | 506.442 | 703.261 | 980.987 | 1099.235 | 980.987 | 703.261 | 506.442 | 448.874 | 506.442 |
| 140.0 | 463.655 | 518.111 | 699.372 | 948.314 | 1055.670 | 948.314 | 699.372 | 518.111 | 463.655 | 518.111 |
| 142.5 | 477.658 | 529.002 | 693.926 | 911.750 | 1008.993 | 911.750 | 693.926 | 529.002 | 477.658 | 529.002 |
| 145.0 | 492.439 | 539.115 | 688.480 | 876.743 | 961.539 | 876.743 | 688.480 | 539.115 | 492.439 | 539.115 |
| 147.5 | 504.886 | 546.895 | 682.257 | 840.957 | 913.306 | 840.957 | 682.257 | 546.895 | 504.886 | 546.895 |
| 150.0 | 517.333 | 555.452 | 674.477 | 809.062 | 868.185 | 809.062 | 674.477 | 555.452 | 517.333 | 555.452 |
| 152.5 | 529.002 | 561.676 | 665.142 | 778.722 | 826.177 | 778.722 | 665.142 | 561.676 | 529.002 | 561.676 |
| 155.0 | 539.893 | 566.343 | 655.807 | 749.160 | 787.279 | 749.160 | 655.807 | 566.343 | 539.893 | 566.343 |
| 157.5 | 550.006 | 572.567 | 647.249 | 721.932 | 752.272 | 721.932 | 647.249 | 572.567 | 550.006 | 572.567 |
| 160.0 | 558.564 | 576.456 | 637.136 | 695.482 | 719.598 | 695.482 | 637.136 | 576.456 | 558.564 | 576.456 |
| 162.5 | 566.343 | 579.568 | 627.023 | 672.922 | 689.258 | 672.922 | 627.023 | 579.568 | 566.343 | 579.568 |
| 165.0 | 572.567 | 582.680 | 616.910 | 651.139 | 663.586 | 651.139 | 616.910 | 582.680 | 572.567 | 582.680 |
| 167.5 | 578.012 | 585.014 | 609.130 | 632.468 | 641.026 | 632.468 | 609.130 | 585.014 | 578.012 | 585.014 |
| 170.0 | 582.680 | 587.348 | 603.685 | 617.688 | 623.133 | 617.688 | 603.685 | 587.348 | 582.680 | 587.348 |
| 172.5 | 585.014 | 588.904 | 597.461 | 605.240 | 609.908 | 605.240 | 597.461 | 588.904 | 585.014 | 588.904 |
| 175.0 | 588.126 | 589.682 | 593.571 | 597.461 | 599.017 | 597.461 | 593.571 | 589.682 | 588.126 | 589.682 |
| 177.5 | 589.682 | 589.682 | 591.237 | 591.237 | 592.015 | 591.237 | 591.237 | 589.682 | 589.682 | 589.682 |
| 180.0 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 |

Vert. Angles

Horizontal Angles

| | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.0 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 | 582.485 |
| 2.5 | 563.725 | 576.423 | 585.484 | 595.356 | 596.192 | 599.125 | 602.316 |
| 5.0 | 546.721 | 565.441 | 582.485 | 601.763 | 610.799 | 619.708 | 624.931 |
| 7.5 | 529.885 | 551.948 | 577.943 | 606.600 | 623.563 | 637.228 | 644.036 |
| 10.0 | 513.525 | 538.217 | 571.307 | 609.451 | 633.115 | 652.667 | 659.884 |
| 12.5 | 497.545 | 523.163 | 562.909 | 609.943 | 640.607 | 665.582 | 675.303 |
| 15.0 | 480.972 | 508.921 | 552.972 | 608.206 | 646.178 | 674.598 | 684.040 |
| 17.5 | 464.824 | 492.535 | 540.593 | 603.815 | 648.792 | 677.916 | 687.383 |
| 20.0 | 448.677 | 476.540 | 528.685 | 597.265 | 647.247 | 676.118 | 684.384 |
| 22.5 | 432.742 | 459.298 | 513.779 | 587.884 | 643.823 | 669.265 | 676.589 |
| 25.0 | 415.735 | 442.184 | 497.803 | 577.369 | 632.685 | 658.172 | 663.055 |
| 27.5 | 399.845 | 424.582 | 479.599 | 564.089 | 621.076 | 642.430 | 648.489 |
| 30.0 | 383.825 | 406.121 | 461.355 | 548.306 | 604.458 | 623.477 | 627.073 |
| 32.5 | 367.591 | 387.597 | 440.664 | 530.872 | 586.938 | 601.976 | 603.430 |
| 35.0 | 350.501 | 368.214 | 420.621 | 511.641 | 565.908 | 576.898 | 574.989 |
| 37.5 | 333.154 | 348.576 | 399.673 | 488.939 | 542.522 | 548.732 | 545.435 |
| 40.0 | 316.064 | 329.365 | 379.413 | 466.450 | 517.805 | 519.223 | 513.566 |
| 42.5 | 298.843 | 310.092 | 356.027 | 441.844 | 489.496 | 487.399 | 477.928 |
| 45.0 | 280.857 | 290.086 | 333.584 | 416.357 | 461.097 | 454.649 | 443.237 |
| 47.5 | 262.694 | 270.727 | 310.538 | 390.039 | 433.553 | 420.105 | 410.340 |
| 50.0 | 245.346 | 250.638 | 287.280 | 361.381 | 401.217 | 385.627 | 372.990 |
| 52.5 | 226.843 | 231.554 | 264.836 | 333.862 | 370.504 | 351.894 | 338.467 |
| 55.0 | 208.426 | 212.068 | 241.365 | 306.385 | 339.581 | 318.419 | 305.143 |
| 57.5 | 189.878 | 192.684 | 219.519 | 278.972 | 306.729 | 285.375 | 271.218 |
| 60.0 | 168.754 | 169.610 | 198.788 | 251.089 | 276.400 | 254.731 | 240.979 |
| 62.5 | 154.814 | 155.507 | 173.801 | 224.660 | 245.903 | 224.979 | 210.651 |
| 65.0 | 137.114 | 137.106 | 157.223 | 198.681 | 217.934 | 196.752 | 185.639 |
| 67.5 | 119.160 | 119.439 | 137.454 | 173.731 | 190.005 | 171.056 | 160.709 |
| 70.0 | 102.095 | 101.964 | 117.047 | 150.132 | 163.449 | 146.212 | 137.495 |
| 72.5 | 85.518 | 85.407 | 98.650 | 126.444 | 136.467 | 122.524 | 114.622 |
| 75.0 | 69.096 | 69.272 | 80.807 | 105.069 | 112.738 | 101.108 | 94.833 |
| 77.5 | 53.211 | 54.005 | 64.934 | 84.916 | 90.249 | 81.360 | 75.642 |
| 80.0 | 38.128 | 39.668 | 49.307 | 65.708 | 69.862 | 63.500 | 59.281 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES****CANDELA TABULATION - (Cont.)**

| | | | | | | | |
|-------|---------|----------|----------|----------|---------|---------|---------|
| 82.5 | 24.959 | 26.294 | 35.797 | 48.832 | 51.658 | 46.968 | 44.289 |
| 85.0 | 12.248 | 14.726 | 22.632 | 36.006 | 37.825 | 32.942 | 31.869 |
| 87.5 | 2.151 | 4.018 | 10.675 | 18.773 | 21.239 | 20.104 | 19.130 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.5 | 24.116 | 23.338 | 23.338 | 23.338 | 24.116 | 24.116 | 14.003 |
| 95.0 | 64.569 | 53.678 | 52.900 | 53.678 | 64.569 | 64.569 | 36.563 |
| 97.5 | 129.917 | 93.353 | 87.908 | 93.353 | 129.917 | 105.800 | 61.458 |
| 100.0 | 258.277 | 150.143 | 132.250 | 150.143 | 258.277 | 137.696 | 87.130 |
| 102.5 | 357.076 | 265.279 | 210.823 | 265.279 | 357.076 | 168.036 | 115.136 |
| 105.0 | 413.866 | 432.537 | 356.298 | 432.537 | 413.866 | 200.710 | 142.364 |
| 107.5 | 448.874 | 583.458 | 543.783 | 583.458 | 448.874 | 232.605 | 169.592 |
| 110.0 | 479.991 | 672.144 | 679.145 | 672.144 | 479.991 | 262.167 | 196.820 |
| 112.5 | 516.555 | 730.489 | 760.051 | 730.489 | 516.555 | 290.951 | 224.048 |
| 115.0 | 560.120 | 772.498 | 815.285 | 772.498 | 560.120 | 318.179 | 252.054 |
| 117.5 | 607.574 | 812.174 | 858.072 | 812.174 | 607.574 | 345.407 | 280.060 |
| 120.0 | 646.471 | 854.182 | 900.859 | 854.182 | 646.471 | 374.191 | 308.066 |
| 122.5 | 674.477 | 913.306 | 945.980 | 913.306 | 674.477 | 398.307 | 333.738 |
| 125.0 | 690.036 | 977.876 | 1010.549 | 977.876 | 690.036 | 421.646 | 357.854 |
| 127.5 | 699.372 | 1021.440 | 1082.120 | 1021.440 | 699.372 | 443.428 | 380.415 |
| 130.0 | 704.817 | 1039.333 | 1133.464 | 1039.333 | 704.817 | 462.099 | 399.085 |
| 132.5 | 706.373 | 1032.332 | 1149.801 | 1032.332 | 706.373 | 479.214 | 417.756 |
| 135.0 | 705.595 | 1010.549 | 1133.464 | 1010.549 | 705.595 | 493.216 | 434.093 |
| 137.5 | 703.261 | 980.987 | 1099.235 | 980.987 | 703.261 | 506.442 | 448.874 |
| 140.0 | 699.372 | 948.314 | 1055.670 | 948.314 | 699.372 | 518.111 | 463.655 |
| 142.5 | 693.926 | 911.750 | 1008.993 | 911.750 | 693.926 | 529.002 | 477.658 |
| 145.0 | 688.480 | 876.743 | 961.539 | 876.743 | 688.480 | 539.115 | 492.439 |
| 147.5 | 682.257 | 840.957 | 913.306 | 840.957 | 682.257 | 546.895 | 504.886 |
| 150.0 | 674.477 | 809.062 | 868.185 | 809.062 | 674.477 | 555.452 | 517.333 |
| 152.5 | 665.142 | 778.722 | 826.177 | 778.722 | 665.142 | 561.676 | 529.002 |
| 155.0 | 655.807 | 749.160 | 787.279 | 749.160 | 655.807 | 566.343 | 539.893 |
| 157.5 | 647.249 | 721.932 | 752.272 | 721.932 | 647.249 | 572.567 | 550.006 |
| 160.0 | 637.136 | 695.482 | 719.598 | 695.482 | 637.136 | 576.456 | 558.564 |
| 162.5 | 627.023 | 672.922 | 689.258 | 672.922 | 627.023 | 579.568 | 566.343 |
| 165.0 | 616.910 | 651.139 | 663.586 | 651.139 | 616.910 | 582.680 | 572.567 |
| 167.5 | 609.130 | 632.468 | 641.026 | 632.468 | 609.130 | 585.014 | 578.012 |
| 170.0 | 603.685 | 617.688 | 623.133 | 617.688 | 603.685 | 587.348 | 582.680 |
| 172.5 | 597.461 | 605.240 | 609.908 | 605.240 | 597.461 | 588.904 | 585.014 |
| 175.0 | 593.571 | 597.461 | 599.017 | 597.461 | 593.571 | 589.682 | 588.126 |
| 177.5 | 591.237 | 591.237 | 592.015 | 591.237 | 591.237 | 589.682 | 589.682 |
| 180.0 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 | 590.459 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 214.29 | N.A. | 4.60 |
| 0-30 | 453.84 | N.A. | 9.70 |
| 0-40 | 734.78 | N.A. | 15.80 |
| 0-60 | 1246.57 | N.A. | 26.80 |
| 0-80 | 1505.83 | N.A. | 32.30 |
| 0-90 | 1532.00 | N.A. | 32.90 |
| 10-90 | 1476.78 | N.A. | 31.70 |
| 20-40 | 520.49 | N.A. | 11.20 |
| 20-50 | 797.89 | N.A. | 17.10 |
| 40-70 | 679.05 | N.A. | 14.60 |
| 60-80 | 259.26 | N.A. | 5.60 |
| 70-80 | 91.99 | N.A. | 2.00 |
| 80-90 | 26.18 | N.A. | 0.60 |
| 90-110 | 409.03 | N.A. | 8.80 |
| 90-120 | 948.69 | N.A. | 20.40 |
| 90-130 | 1565.58 | N.A. | 33.60 |
| 90-150 | 2587.08 | N.A. | 55.50 |
| 90-180 | 3125.63 | N.A. | 67.10 |
| 110-180 | 2716.59 | N.A. | 58.30 |
| 0-180 | 4657.63 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 55.22 |
| 10-20 | 159.07 |
| 20-30 | 239.55 |
| 30-40 | 280.95 |
| 40-50 | 277.39 |
| 50-60 | 234.39 |
| 60-70 | 167.27 |
| 70-80 | 91.99 |
| 80-90 | 26.18 |
| 90-100 | 71.35 |
| 100-110 | 337.69 |
| 110-120 | 539.66 |
| 120-130 | 616.89 |
| 130-140 | 576.56 |
| 140-150 | 444.94 |
| 150-160 | 305.84 |
| 160-170 | 175.76 |
| 170-180 | 56.94 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

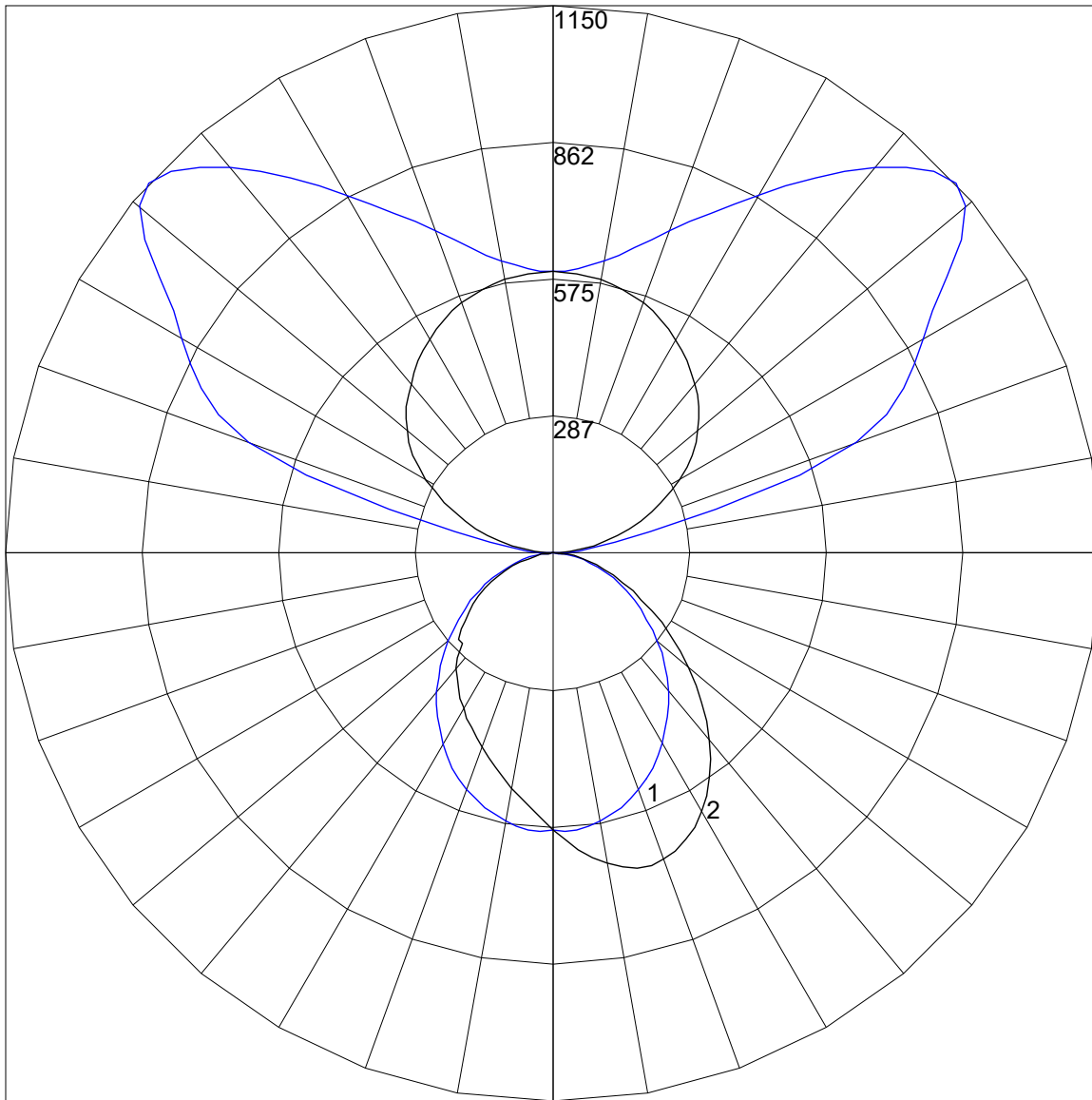
Effective Floor Cavity Reflectance 0.20

| 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 | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 74 | 74 | 74 | 56 | 56 | 56 | 40 | 40 | 40 | 33 |
| 1 | 94 | 90 | 86 | 83 | 85 | 81 | 78 | 75 | 65 | 63 | 61 | 50 | 48 | 47 | 36 | 35 | 34 | 28 |
| 2 | 86 | 78 | 73 | 68 | 77 | 71 | 66 | 62 | 57 | 53 | 50 | 44 | 41 | 39 | 32 | 30 | 29 | 23 |
| 3 | 78 | 69 | 62 | 56 | 70 | 62 | 56 | 51 | 50 | 46 | 42 | 39 | 36 | 33 | 28 | 26 | 25 | 20 |
| 4 | 71 | 61 | 53 | 47 | 64 | 55 | 49 | 44 | 44 | 40 | 36 | 34 | 31 | 28 | 25 | 23 | 21 | 17 |
| 5 | 65 | 54 | 46 | 41 | 59 | 49 | 42 | 37 | 40 | 35 | 31 | 31 | 27 | 25 | 23 | 20 | 18 | 15 |
| 6 | 60 | 49 | 41 | 35 | 54 | 44 | 37 | 32 | 36 | 31 | 27 | 28 | 24 | 21 | 20 | 18 | 16 | 13 |
| 7 | 56 | 44 | 36 | 31 | 50 | 40 | 33 | 28 | 32 | 27 | 24 | 25 | 22 | 19 | 19 | 16 | 14 | 12 |
| 8 | 51 | 40 | 32 | 27 | 46 | 36 | 29 | 25 | 29 | 24 | 21 | 23 | 19 | 17 | 17 | 15 | 13 | 10 |
| 9 | 48 | 36 | 29 | 24 | 43 | 33 | 26 | 22 | 27 | 22 | 19 | 21 | 18 | 15 | 16 | 13 | 12 | 9 |
| 10 | 45 | 33 | 26 | 21 | 40 | 30 | 24 | 20 | 25 | 20 | 17 | 19 | 16 | 14 | 15 | 12 | 11 | 8 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-S-835-WSO-DAO-ITL89456-KPL2008-3.009.IES

POLAR GRAPH



Maximum Candela = 1149.801 Located At Horizontal Angle = 90, Vertical Angle = 132.5

1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (0 - 180)