

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-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3.013 Family Correlation File

[TESTLAB] Northern Lights Testing Laboratories

[TESTDATE] 5/18/2021

[ISSUEDATE] 8/24/2021

[MANUFAC] Finelite

[LUMCAT] HP-2-P-ID-4ft-S-V-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, 50.2 WATTS

[INPUT_ELECTRICAL]277.0 VOLTS, 51.7 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

[ABSOLUTE LUMENS]5384

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 5385 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 107 |
| Total Luminaire Watts | 50.2 |
| Ballast Factor | 1.00 |
| CIE Type | Semi-Direct |
| Spacing Criterion (0-180) | 1.48 |
| Spacing Criterion (90-270) | 1.20 |
| Spacing Criterion (Diagonal) | 1.36 |
| 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 | 24200 | 25175 | 18213 |
| 55 | 20539 | 22857 | 16246 |
| 65 | 16958 | 19909 | 14363 |
| 75 | 14146 | 16817 | 12054 |
| 85 | 14117 | 16755 | 10025 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.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 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 |
| 2.5 | 1470.400 | 1462.610 | 1455.450 | 1453.410 | 1429.310 | 1407.190 | 1376.190 | 1361.030 | 1362.280 | 1361.030 |
| 5.0 | 1525.610 | 1512.860 | 1491.110 | 1469.050 | 1421.990 | 1380.380 | 1334.680 | 1311.680 | 1306.860 | 1311.680 |
| 7.5 | 1572.250 | 1555.630 | 1522.270 | 1480.860 | 1410.900 | 1347.440 | 1293.580 | 1255.680 | 1261.270 | 1255.680 |
| 10.0 | 1610.940 | 1593.320 | 1545.590 | 1487.820 | 1394.700 | 1313.920 | 1253.640 | 1223.260 | 1220.910 | 1223.260 |
| 12.5 | 1648.580 | 1624.850 | 1563.880 | 1489.020 | 1374.200 | 1277.170 | 1214.630 | 1180.080 | 1178.660 | 1180.080 |
| 15.0 | 1669.910 | 1646.860 | 1577.480 | 1484.780 | 1349.940 | 1242.400 | 1174.170 | 1131.720 | 1136.210 | 1131.720 |
| 17.5 | 1678.070 | 1654.960 | 1583.860 | 1474.060 | 1319.720 | 1202.400 | 1134.750 | 1099.560 | 1097.940 | 1099.560 |
| 20.0 | 1670.750 | 1650.570 | 1580.090 | 1458.070 | 1290.650 | 1163.350 | 1095.330 | 1063.280 | 1059.250 | 1063.280 |
| 22.5 | 1651.720 | 1633.840 | 1571.730 | 1435.170 | 1254.260 | 1121.260 | 1056.430 | 1026.210 | 1023.700 | 1026.210 |
| 25.0 | 1618.680 | 1606.760 | 1544.540 | 1409.500 | 1215.260 | 1079.480 | 1014.910 | 988.990 | 988.560 | 988.990 |
| 27.5 | 1583.120 | 1568.330 | 1516.200 | 1377.080 | 1170.820 | 1036.510 | 976.120 | 952.340 | 953.010 | 952.340 |
| 30.0 | 1530.840 | 1522.060 | 1475.630 | 1338.550 | 1126.280 | 991.440 | 937.010 | 914.280 | 917.460 | 914.280 |
| 32.5 | 1473.120 | 1469.570 | 1432.860 | 1295.990 | 1075.770 | 946.220 | 897.380 | 877.410 | 881.280 | 877.410 |
| 35.0 | 1403.690 | 1408.350 | 1381.520 | 1249.040 | 1026.840 | 898.900 | 855.660 | 840.190 | 842.380 | 840.190 |
| 37.5 | 1331.540 | 1339.590 | 1324.430 | 1193.620 | 975.700 | 850.960 | 813.310 | 801.710 | 805.160 | 801.710 |
| 40.0 | 1253.740 | 1267.550 | 1264.090 | 1138.720 | 926.240 | 804.060 | 771.590 | 762.910 | 767.510 | 762.910 |
| 42.5 | 1166.740 | 1189.860 | 1194.980 | 1078.650 | 869.150 | 757.010 | 729.550 | 725.170 | 726.940 | 725.170 |
| 45.0 | 1082.050 | 1109.910 | 1125.650 | 1016.430 | 814.360 | 708.170 | 685.640 | 683.810 | 658.350 | 683.810 |
| 47.5 | 1001.740 | 1025.580 | 1058.410 | 952.180 | 758.100 | 660.910 | 641.300 | 643.080 | 651.230 | 643.080 |
| 50.0 | 910.560 | 941.410 | 979.470 | 882.220 | 701.320 | 611.870 | 598.950 | 601.830 | 608.570 | 601.830 |
| 52.5 | 826.280 | 859.060 | 904.490 | 815.040 | 646.530 | 565.280 | 553.780 | 558.800 | 567.790 | 558.800 |
| 55.0 | 744.930 | 777.340 | 829.000 | 747.960 | 589.230 | 517.710 | 508.820 | 517.810 | 523.460 | 517.810 |
| 57.5 | 662.110 | 696.670 | 748.800 | 681.040 | 535.900 | 470.390 | 463.540 | 473.530 | 481.000 | 473.530 |
| 60.0 | 588.290 | 621.860 | 674.760 | 612.970 | 485.290 | 414.060 | 411.970 | 427.520 | 438.130 | 427.520 |
| 62.5 | 514.250 | 549.230 | 600.310 | 548.450 | 424.290 | 379.630 | 377.940 | 389.800 | 393.540 | 389.800 |
| 65.0 | 453.190 | 480.320 | 532.030 | 485.030 | 383.820 | 334.710 | 334.730 | 346.340 | 349.460 | 346.340 |
| 67.5 | 392.330 | 417.590 | 463.850 | 424.120 | 335.560 | 291.580 | 290.900 | 301.560 | 302.450 | 301.560 |
| 70.0 | 335.660 | 356.940 | 399.020 | 366.510 | 285.740 | 248.920 | 249.240 | 257.820 | 263.880 | 257.820 |
| 72.5 | 279.820 | 299.110 | 333.150 | 308.680 | 240.830 | 208.500 | 208.770 | 214.380 | 217.520 | 214.380 |
| 75.0 | 231.510 | 246.830 | 275.220 | 256.500 | 197.270 | 169.110 | 168.680 | 163.680 | 175.000 | 163.680 |
| 77.5 | 184.660 | 198.620 | 220.320 | 207.300 | 158.520 | 131.840 | 129.900 | 131.900 | 131.360 | 131.900 |
| 80.0 | 144.720 | 155.020 | 170.550 | 160.410 | 120.370 | 96.840 | 93.080 | 92.070 | 92.390 | 92.070 |
| 82.5 | 108.120 | 114.660 | 126.110 | 119.210 | 87.390 | 64.190 | 60.930 | 52.070 | 55.780 | 52.070 |
| 85.0 | 77.800 | 80.420 | 92.340 | 87.900 | 55.250 | 35.950 | 29.900 | 24.420 | 20.370 | 24.420 |
| 87.5 | 46.700 | 49.080 | 51.850 | 45.830 | 26.060 | 9.810 | 5.250 | 1.880 | 1.280 | 1.880 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.5 | 7.371 | 12.695 | 12.695 | 12.285 | 12.285 | 12.285 | 12.695 | 12.695 | 7.371 | 12.695 |
| 95.0 | 19.247 | 33.989 | 33.989 | 28.256 | 27.847 | 28.256 | 33.989 | 33.989 | 19.247 | 33.989 |
| 97.5 | 32.351 | 55.693 | 68.388 | 49.141 | 46.275 | 49.141 | 68.388 | 55.693 | 32.351 | 55.693 |
| 100.0 | 45.865 | 72.483 | 135.957 | 79.035 | 69.617 | 79.035 | 135.957 | 72.483 | 45.865 | 72.483 |
| 102.5 | 60.607 | 88.454 | 187.965 | 139.643 | 110.977 | 139.643 | 187.965 | 88.454 | 60.607 | 88.454 |
| 105.0 | 74.940 | 105.654 | 217.859 | 227.688 | 187.556 | 227.688 | 217.859 | 105.654 | 74.940 | 105.654 |
| 107.5 | 89.273 | 122.443 | 236.287 | 307.133 | 286.247 | 307.133 | 236.287 | 122.443 | 89.273 | 122.443 |
| 110.0 | 103.606 | 138.005 | 252.668 | 353.817 | 357.502 | 353.817 | 252.668 | 138.005 | 103.606 | 138.005 |
| 112.5 | 117.939 | 153.157 | 271.915 | 384.530 | 400.091 | 384.530 | 271.915 | 153.157 | 117.939 | 153.157 |
| 115.0 | 132.681 | 167.490 | 294.847 | 406.643 | 429.166 | 406.643 | 294.847 | 167.490 | 132.681 | 167.490 |
| 117.5 | 147.424 | 181.822 | 319.827 | 427.528 | 451.690 | 427.528 | 319.827 | 181.822 | 147.424 | 181.822 |
| 120.0 | 162.166 | 196.974 | 340.303 | 449.642 | 474.213 | 449.642 | 340.303 | 196.974 | 162.166 | 196.974 |
| 122.5 | 175.680 | 209.669 | 355.045 | 480.765 | 497.964 | 480.765 | 355.045 | 209.669 | 175.680 | 209.669 |
| 125.0 | 188.375 | 221.954 | 363.235 | 514.754 | 531.953 | 514.754 | 363.235 | 221.954 | 188.375 | 221.954 |
| 127.5 | 200.250 | 233.421 | 368.149 | 537.687 | 569.628 | 537.687 | 368.149 | 233.421 | 200.250 | 233.421 |
| 130.0 | 210.079 | 243.249 | 371.016 | 547.105 | 596.656 | 547.105 | 371.016 | 243.249 | 210.079 | 243.249 |
| 132.5 | 219.907 | 252.258 | 371.835 | 543.420 | 605.256 | 543.420 | 371.835 | 252.258 | 219.907 | 252.258 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.IES

CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 135.0 | 228.507 | 259.629 | 371.426 | 531.953 | 596.656 | 531.953 | 371.426 | 259.629 | 228.507 | 259.629 |
| 137.5 | 236.287 | 266.591 | 370.197 | 516.392 | 578.638 | 516.392 | 370.197 | 266.591 | 236.287 | 266.591 |
| 140.0 | 244.068 | 272.734 | 368.149 | 499.193 | 555.705 | 499.193 | 368.149 | 272.734 | 244.068 | 272.734 |
| 142.5 | 251.439 | 278.467 | 365.283 | 479.946 | 531.134 | 479.946 | 365.283 | 278.467 | 251.439 | 278.467 |
| 145.0 | 259.220 | 283.790 | 362.416 | 461.518 | 506.154 | 461.518 | 362.416 | 283.790 | 259.220 | 283.790 |
| 147.5 | 265.772 | 287.886 | 359.140 | 442.680 | 480.765 | 442.680 | 359.140 | 287.886 | 265.772 | 287.886 |
| 150.0 | 272.324 | 292.390 | 355.045 | 425.890 | 457.013 | 425.890 | 355.045 | 292.390 | 272.324 | 292.390 |
| 152.5 | 278.467 | 295.666 | 350.131 | 409.920 | 434.900 | 409.920 | 350.131 | 295.666 | 278.467 | 295.666 |
| 155.0 | 284.200 | 298.123 | 345.217 | 394.358 | 414.424 | 394.358 | 345.217 | 298.123 | 284.200 | 298.123 |
| 157.5 | 289.524 | 301.399 | 340.712 | 380.025 | 395.996 | 380.025 | 340.712 | 301.399 | 289.524 | 301.399 |
| 160.0 | 294.028 | 303.447 | 335.389 | 366.102 | 378.797 | 366.102 | 335.389 | 303.447 | 294.028 | 303.447 |
| 162.5 | 298.123 | 305.085 | 330.065 | 354.226 | 362.826 | 354.226 | 330.065 | 305.085 | 298.123 | 305.085 |
| 165.0 | 301.399 | 306.723 | 324.741 | 342.760 | 349.312 | 342.760 | 324.741 | 306.723 | 301.399 | 306.723 |
| 167.5 | 304.266 | 307.952 | 320.646 | 332.932 | 337.436 | 332.932 | 320.646 | 307.952 | 304.266 | 307.952 |
| 170.0 | 306.723 | 309.180 | 317.780 | 325.151 | 328.018 | 325.151 | 317.780 | 309.180 | 306.723 | 309.180 |
| 172.5 | 307.952 | 309.999 | 314.504 | 318.599 | 321.056 | 318.599 | 314.504 | 309.999 | 307.952 | 309.999 |
| 175.0 | 309.590 | 310.409 | 312.456 | 314.504 | 315.323 | 314.504 | 312.456 | 310.409 | 309.590 | 310.409 |
| 177.5 | 310.409 | 310.409 | 311.228 | 311.228 | 311.637 | 311.228 | 311.228 | 310.409 | 310.409 | 310.409 |
| 180.0 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 |

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 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 | 1421.990 |
| 2.5 | 1376.190 | 1407.190 | 1429.310 | 1453.410 | 1455.450 | 1462.610 | 1470.400 |
| 5.0 | 1334.680 | 1380.380 | 1421.990 | 1469.050 | 1491.110 | 1512.860 | 1525.610 |
| 7.5 | 1293.580 | 1347.440 | 1410.900 | 1480.860 | 1522.270 | 1555.630 | 1572.250 |
| 10.0 | 1253.640 | 1313.920 | 1394.700 | 1487.820 | 1545.590 | 1593.320 | 1610.940 |
| 12.5 | 1214.630 | 1277.170 | 1374.200 | 1489.020 | 1563.880 | 1624.850 | 1648.580 |
| 15.0 | 1174.170 | 1242.400 | 1349.940 | 1484.780 | 1577.480 | 1646.860 | 1669.910 |
| 17.5 | 1134.750 | 1202.400 | 1319.720 | 1474.060 | 1583.860 | 1654.960 | 1678.070 |
| 20.0 | 1095.330 | 1163.350 | 1290.650 | 1458.070 | 1580.090 | 1650.570 | 1670.750 |
| 22.5 | 1056.430 | 1121.260 | 1254.260 | 1435.170 | 1571.730 | 1633.840 | 1651.720 |
| 25.0 | 1014.910 | 1079.480 | 1215.260 | 1409.500 | 1544.540 | 1606.760 | 1618.680 |
| 27.5 | 976.120 | 1036.510 | 1170.820 | 1377.080 | 1516.200 | 1568.330 | 1583.120 |
| 30.0 | 937.010 | 991.440 | 1126.280 | 1338.550 | 1475.630 | 1522.060 | 1530.840 |
| 32.5 | 897.380 | 946.220 | 1075.770 | 1295.990 | 1432.860 | 1469.570 | 1473.120 |
| 35.0 | 855.660 | 898.900 | 1026.840 | 1249.040 | 1381.520 | 1408.350 | 1403.690 |
| 37.5 | 813.310 | 850.960 | 975.700 | 1193.620 | 1324.430 | 1339.590 | 1331.540 |
| 40.0 | 771.590 | 804.060 | 926.240 | 1138.720 | 1264.090 | 1267.550 | 1253.740 |
| 42.5 | 729.550 | 757.010 | 869.150 | 1078.650 | 1194.980 | 1189.860 | 1166.740 |
| 45.0 | 685.640 | 708.170 | 814.360 | 1016.430 | 1125.650 | 1109.910 | 1082.050 |
| 47.5 | 641.300 | 660.910 | 758.100 | 952.180 | 1058.410 | 1025.580 | 1001.740 |
| 50.0 | 598.950 | 611.870 | 701.320 | 882.220 | 979.470 | 941.410 | 910.560 |
| 52.5 | 553.780 | 565.280 | 646.530 | 815.040 | 904.490 | 859.060 | 826.280 |
| 55.0 | 508.820 | 517.710 | 589.230 | 747.960 | 829.000 | 777.340 | 744.930 |
| 57.5 | 463.540 | 470.390 | 535.900 | 681.040 | 748.800 | 696.670 | 662.110 |
| 60.0 | 411.970 | 414.060 | 485.290 | 612.970 | 674.760 | 621.860 | 588.290 |
| 62.5 | 377.940 | 379.630 | 424.290 | 548.450 | 600.310 | 549.230 | 514.250 |
| 65.0 | 334.730 | 334.710 | 383.820 | 485.030 | 532.030 | 480.320 | 453.190 |
| 67.5 | 290.900 | 291.580 | 335.560 | 424.120 | 463.850 | 417.590 | 392.330 |
| 70.0 | 249.240 | 248.920 | 285.740 | 366.510 | 399.020 | 356.940 | 335.660 |
| 72.5 | 208.770 | 208.500 | 240.830 | 308.680 | 333.150 | 299.110 | 279.820 |
| 75.0 | 168.680 | 169.110 | 197.270 | 256.500 | 275.220 | 246.830 | 231.510 |
| 77.5 | 129.900 | 131.840 | 158.520 | 207.300 | 220.320 | 198.620 | 184.660 |
| 80.0 | 93.080 | 96.840 | 120.370 | 160.410 | 170.550 | 155.020 | 144.720 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.IES****CANDELA TABULATION - (Cont.)**

| | | | | | | | |
|--------------|---------|---------|---------|---------|---------|---------|---------|
| 82.5 | 60.930 | 64.190 | 87.390 | 119.210 | 126.110 | 114.660 | 108.120 |
| 85.0 | 29.900 | 35.950 | 55.250 | 87.900 | 92.340 | 80.420 | 77.800 |
| 87.5 | 5.250 | 9.810 | 26.060 | 45.830 | 51.850 | 49.080 | 46.700 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.5 | 12.695 | 12.285 | 12.285 | 12.285 | 12.695 | 12.695 | 7.371 |
| 95.0 | 33.989 | 28.256 | 27.847 | 28.256 | 33.989 | 33.989 | 19.247 |
| 97.5 | 68.388 | 49.141 | 46.275 | 49.141 | 68.388 | 55.693 | 32.351 |
| 100.0 | 135.957 | 79.035 | 69.617 | 79.035 | 135.957 | 72.483 | 45.865 |
| 102.5 | 187.965 | 139.643 | 110.977 | 139.643 | 187.965 | 88.454 | 60.607 |
| 105.0 | 217.859 | 227.688 | 187.556 | 227.688 | 217.859 | 105.654 | 74.940 |
| 107.5 | 236.287 | 307.133 | 286.247 | 307.133 | 236.287 | 122.443 | 89.273 |
| 110.0 | 252.668 | 353.817 | 357.502 | 353.817 | 252.668 | 138.005 | 103.606 |
| 112.5 | 271.915 | 384.530 | 400.091 | 384.530 | 271.915 | 153.157 | 117.939 |
| 115.0 | 294.847 | 406.643 | 429.166 | 406.643 | 294.847 | 167.490 | 132.681 |
| 117.5 | 319.827 | 427.528 | 451.690 | 427.528 | 319.827 | 181.822 | 147.424 |
| 120.0 | 340.303 | 449.642 | 474.213 | 449.642 | 340.303 | 196.974 | 162.166 |
| 122.5 | 355.045 | 480.765 | 497.964 | 480.765 | 355.045 | 209.669 | 175.680 |
| 125.0 | 363.235 | 514.754 | 531.953 | 514.754 | 363.235 | 221.954 | 188.375 |
| 127.5 | 368.149 | 537.687 | 569.628 | 537.687 | 368.149 | 233.421 | 200.250 |
| 130.0 | 371.016 | 547.105 | 596.656 | 547.105 | 371.016 | 243.249 | 210.079 |
| 132.5 | 371.835 | 543.420 | 605.256 | 543.420 | 371.835 | 252.258 | 219.907 |
| 135.0 | 371.426 | 531.953 | 596.656 | 531.953 | 371.426 | 259.629 | 228.507 |
| 137.5 | 370.197 | 516.392 | 578.638 | 516.392 | 370.197 | 266.591 | 236.287 |
| 140.0 | 368.149 | 499.193 | 555.705 | 499.193 | 368.149 | 272.734 | 244.068 |
| 142.5 | 365.283 | 479.946 | 531.134 | 479.946 | 365.283 | 278.467 | 251.439 |
| 145.0 | 362.416 | 461.518 | 506.154 | 461.518 | 362.416 | 283.790 | 259.220 |
| 147.5 | 359.140 | 442.680 | 480.765 | 442.680 | 359.140 | 287.886 | 265.772 |
| 150.0 | 355.045 | 425.890 | 457.013 | 425.890 | 355.045 | 292.390 | 272.324 |
| 152.5 | 350.131 | 409.920 | 434.900 | 409.920 | 350.131 | 295.666 | 278.467 |
| 155.0 | 345.217 | 394.358 | 414.424 | 394.358 | 345.217 | 298.123 | 284.200 |
| 157.5 | 340.712 | 380.025 | 395.996 | 380.025 | 340.712 | 301.399 | 289.524 |
| 160.0 | 335.389 | 366.102 | 378.797 | 366.102 | 335.389 | 303.447 | 294.028 |
| 162.5 | 330.065 | 354.226 | 362.826 | 354.226 | 330.065 | 305.085 | 298.123 |
| 165.0 | 324.741 | 342.760 | 349.312 | 342.760 | 324.741 | 306.723 | 301.399 |
| 167.5 | 320.646 | 332.932 | 337.436 | 332.932 | 320.646 | 307.952 | 304.266 |
| 170.0 | 317.780 | 325.151 | 328.018 | 325.151 | 317.780 | 309.180 | 306.723 |
| 172.5 | 314.504 | 318.599 | 321.056 | 318.599 | 314.504 | 309.999 | 307.952 |
| 175.0 | 312.456 | 314.504 | 315.323 | 314.504 | 312.456 | 310.409 | 309.590 |
| 177.5 | 311.228 | 311.228 | 311.637 | 311.228 | 311.228 | 310.409 | 310.409 |
| 180.0 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 | 310.818 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 523.14 | N.A. | 9.70 |
| 0-30 | 1107.93 | N.A. | 20.60 |
| 0-40 | 1793.79 | N.A. | 33.30 |
| 0-60 | 3043.17 | N.A. | 56.50 |
| 0-80 | 3676.09 | N.A. | 68.30 |
| 0-90 | 3739.99 | N.A. | 69.40 |
| 10-90 | 3605.19 | N.A. | 66.90 |
| 20-40 | 1270.65 | N.A. | 23.60 |
| 20-50 | 1947.83 | N.A. | 36.20 |
| 40-70 | 1657.72 | N.A. | 30.80 |
| 60-80 | 632.92 | N.A. | 11.80 |
| 70-80 | 224.58 | N.A. | 4.20 |
| 80-90 | 63.90 | N.A. | 1.20 |
| 90-110 | 215.32 | N.A. | 4.00 |
| 90-120 | 499.39 | N.A. | 9.30 |
| 90-130 | 824.12 | N.A. | 15.30 |
| 90-150 | 1361.84 | N.A. | 25.30 |
| 90-180 | 1645.33 | N.A. | 30.60 |
| 110-180 | 1430.02 | N.A. | 26.60 |
| 0-180 | 5385.32 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 134.80 |
| 10-20 | 388.33 |
| 20-30 | 584.80 |
| 30-40 | 685.86 |
| 40-50 | 677.18 |
| 50-60 | 572.20 |
| 60-70 | 408.34 |
| 70-80 | 224.58 |
| 80-90 | 63.90 |
| 90-100 | 37.56 |
| 100-110 | 177.76 |
| 110-120 | 284.08 |
| 120-130 | 324.73 |
| 130-140 | 303.50 |
| 140-150 | 234.21 |
| 150-160 | 161.00 |
| 160-170 | 92.52 |
| 170-180 | 29.98 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

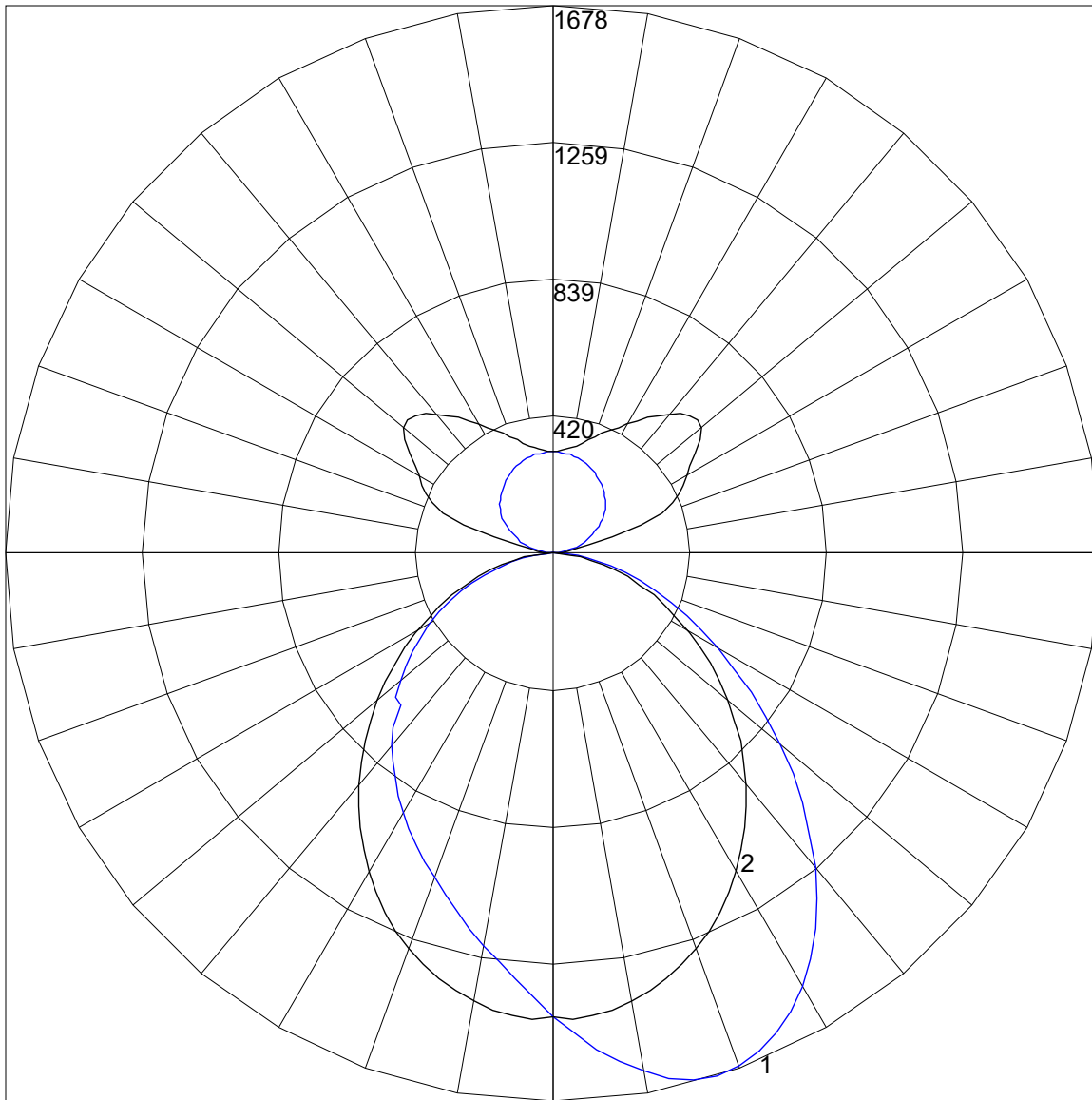
Effective Floor Cavity Reflectance 0.20

| 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 | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 94 | 94 | 94 | 84 | 84 | 84 | 74 | 74 | 74 | 69 |
| 1 | 102 | 98 | 94 | 90 | 96 | 93 | 89 | 86 | 83 | 80 | 78 | 74 | 72 | 70 | 66 | 64 | 63 | 59 |
| 2 | 93 | 86 | 79 | 74 | 88 | 81 | 76 | 71 | 73 | 68 | 65 | 65 | 62 | 59 | 58 | 55 | 53 | 49 |
| 3 | 85 | 75 | 68 | 62 | 80 | 72 | 65 | 59 | 64 | 59 | 54 | 58 | 53 | 50 | 51 | 48 | 45 | 42 |
| 4 | 78 | 67 | 59 | 52 | 73 | 64 | 56 | 50 | 57 | 51 | 47 | 51 | 47 | 43 | 46 | 42 | 39 | 36 |
| 5 | 72 | 60 | 51 | 45 | 68 | 57 | 49 | 44 | 51 | 45 | 40 | 46 | 41 | 37 | 41 | 37 | 34 | 31 |
| 6 | 66 | 54 | 45 | 39 | 62 | 51 | 44 | 38 | 46 | 40 | 35 | 42 | 37 | 33 | 38 | 33 | 30 | 28 |
| 7 | 61 | 49 | 40 | 35 | 58 | 46 | 39 | 34 | 42 | 36 | 31 | 38 | 33 | 29 | 34 | 30 | 27 | 24 |
| 8 | 57 | 44 | 36 | 31 | 54 | 42 | 35 | 30 | 39 | 32 | 28 | 35 | 30 | 26 | 32 | 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 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-V-835-WSO-DAO-ITL89456-KPL2008-3.13.IES

POLAR GRAPH



Maximum Candela = 1678.07 Located At Horizontal Angle = 0, Vertical Angle = 17.5

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

2 - Vertical Plane Through Horizontal Angles (90 - 270)