

# 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-ID-4FT-H-B-8-35-ITL85132.008.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]ITL85132.008 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]08/11/15  
[ISSUE DATE]04/26/16  
[MANUFAC]FINELITE, INC.  
[LUMCAT]FINELITE HP-2-ID-4ft-H-B-8-35  
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 46.7 WATTS  
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 48.6 WATTS  
[ABSOLUTE LUMENS]4600  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85132. 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](http://www.finelite.com/download_files/series_downloads/photometry_pdf/FL_Family_Correlation_WhitePaper.pdf)

**CHARACTERISTICS**

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 4600            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 98              |
| Total Luminaire Watts           | 46.7            |
| 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)         | 4.00 ft         |
| Luminous Width (90-270)         | 0.18 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                  | 8276             | 7933              | 7547              |
| 55                  | 7533             | 7165              | 6797              |
| 65                  | 6803             | 6452              | 6138              |
| 75                  | 6128             | 5796              | 5554              |
| 85                  | 5379             | 5199              | 4930              |

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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   | 676.211    | 676.211     | 676.211     | 676.211     | 676.211     |
| 2.5   | 674.667    | 675.696     | 675.181     | 675.181     | 675.181     |
| 5.0   | 672.094    | 672.608     | 671.579     | 671.064     | 671.064     |
| 7.5   | 666.433    | 666.947     | 665.404     | 664.889     | 664.889     |
| 10.0  | 659.228    | 658.199     | 657.170     | 656.655     | 655.626     |
| 12.5  | 649.450    | 647.392     | 646.362     | 644.819     | 642.760     |
| 15.0  | 638.643    | 634.526     | 633.497     | 630.409     | 627.836     |
| 17.5  | 625.263    | 619.602     | 618.058     | 613.427     | 610.339     |
| 20.0  | 609.825    | 603.135     | 600.561     | 594.901     | 590.269     |
| 22.5  | 591.813    | 584.608     | 581.520     | 575.345     | 569.684     |
| 25.0  | 573.287    | 565.053     | 560.421     | 553.731     | 547.556     |
| 27.5  | 552.187    | 544.982     | 539.322     | 530.573     | 523.883     |
| 30.0  | 530.573    | 522.854     | 516.164     | 506.386     | 499.696     |
| 32.5  | 507.415    | 499.696     | 492.491     | 481.684     | 476.538     |
| 35.0  | 484.772    | 476.023     | 468.304     | 456.468     | 451.322     |
| 37.5  | 460.585    | 452.351     | 443.602     | 432.281     | 426.620     |
| 40.0  | 435.883    | 427.135     | 419.415     | 406.550     | 401.404     |
| 42.5  | 410.667    | 402.433     | 394.199     | 381.333     | 376.187     |
| 45.0  | 385.450    | 377.731     | 369.497     | 356.632     | 351.485     |
| 47.5  | 360.234    | 352.515     | 344.281     | 331.930     | 327.298     |
| 50.0  | 334.503    | 327.298     | 319.579     | 307.228     | 303.111     |
| 52.5  | 309.287    | 302.596     | 294.877     | 283.555     | 279.439     |
| 55.0  | 284.585    | 278.924     | 270.690     | 260.398     | 256.795     |
| 57.5  | 260.398    | 255.251     | 247.018     | 237.754     | 234.667     |
| 60.0  | 235.696    | 231.064     | 223.860     | 215.111     | 212.538     |
| 62.5  | 212.538    | 207.906     | 201.216     | 194.526     | 191.439     |
| 65.0  | 189.380    | 185.263     | 179.602     | 173.427     | 170.854     |
| 67.5  | 167.766    | 163.135     | 159.018     | 152.842     | 150.784     |
| 70.0  | 145.637    | 142.550     | 137.918     | 133.801     | 131.228     |
| 72.5  | 124.538    | 121.965     | 118.363     | 114.760     | 112.702     |
| 75.0  | 104.468    | 101.895     | 98.807      | 96.234      | 94.690      |
| 77.5  | 84.912     | 82.854      | 80.795      | 78.737      | 76.678      |
| 80.0  | 65.871     | 64.842      | 62.784      | 61.240      | 60.211      |
| 82.5  | 47.860     | 46.830      | 45.801      | 44.772      | 43.743      |
| 85.0  | 30.877     | 30.363      | 29.848      | 29.333      | 28.304      |
| 87.5  | 13.895     | 13.380      | 13.895      | 14.409      | 13.895      |
| 90.0  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 92.5  | 23.333     | 23.333      | 23.333      | 25.667      | 25.667      |
| 95.0  | 55.222     | 52.889      | 52.889      | 53.667      | 54.444      |
| 97.5  | 87.111     | 84.778      | 83.222      | 84.000      | 84.000      |
| 100.0 | 119.778    | 115.889     | 115.889     | 115.889     | 115.111     |
| 102.5 | 154.000    | 150.889     | 149.333     | 148.556     | 148.556     |
| 105.0 | 189.778    | 187.444     | 183.556     | 182.778     | 182.000     |
| 107.5 | 226.333    | 224.000     | 219.333     | 218.556     | 217.778     |
| 110.0 | 264.445    | 262.111     | 258.222     | 256.667     | 254.333     |
| 112.5 | 304.111    | 300.222     | 297.889     | 294.000     | 291.667     |
| 115.0 | 343.778    | 341.445     | 339.889     | 332.111     | 330.555     |
| 117.5 | 385.778    | 381.889     | 381.889     | 372.555     | 371.000     |
| 120.0 | 428.555    | 422.333     | 423.889     | 414.555     | 411.445     |
| 122.5 | 469.000    | 462.778     | 465.889     | 458.111     | 452.667     |
| 125.0 | 514.111    | 504.778     | 507.889     | 500.111     | 496.222     |
| 127.5 | 558.444    | 548.333     | 549.889     | 543.667     | 542.111     |
| 130.0 | 602.000    | 591.889     | 593.444     | 585.667     | 586.444     |
| 132.5 | 645.556    | 634.667     | 637.000     | 629.222     | 629.222     |

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**CANDELA TABULATION - (Cont.)**

|              |          |          |          |          |          |
|--------------|----------|----------|----------|----------|----------|
| <b>135.0</b> | 687.556  | 677.444  | 680.556  | 673.556  | 673.556  |
| <b>137.5</b> | 730.333  | 720.222  | 723.333  | 717.111  | 716.333  |
| <b>140.0</b> | 773.111  | 763.000  | 765.333  | 761.444  | 759.111  |
| <b>142.5</b> | 813.556  | 802.667  | 805.778  | 801.889  | 798.778  |
| <b>145.0</b> | 854.778  | 843.111  | 846.222  | 843.111  | 837.667  |
| <b>147.5</b> | 892.889  | 881.222  | 885.111  | 880.444  | 875.000  |
| <b>150.0</b> | 929.444  | 917.778  | 922.444  | 917.000  | 912.333  |
| <b>152.5</b> | 964.444  | 952.778  | 957.444  | 952.778  | 948.111  |
| <b>155.0</b> | 997.889  | 986.222  | 991.667  | 987.000  | 982.333  |
| <b>157.5</b> | 1026.667 | 1015.778 | 1022.000 | 1017.333 | 1012.667 |
| <b>160.0</b> | 1054.667 | 1044.555 | 1050.000 | 1045.333 | 1040.667 |
| <b>162.5</b> | 1078.778 | 1070.222 | 1074.111 | 1071.000 | 1067.889 |
| <b>165.0</b> | 1100.555 | 1092.778 | 1095.111 | 1093.555 | 1091.222 |
| <b>167.5</b> | 1116.889 | 1112.222 | 1113.778 | 1112.222 | 1111.445 |
| <b>170.0</b> | 1131.667 | 1129.333 | 1130.111 | 1128.555 | 1127.778 |
| <b>172.5</b> | 1144.111 | 1143.333 | 1143.333 | 1142.555 | 1142.555 |
| <b>175.0</b> | 1152.667 | 1152.667 | 1152.667 | 1152.667 | 1151.889 |
| <b>177.5</b> | 1157.333 | 1158.111 | 1158.111 | 1158.111 | 1157.333 |
| <b>180.0</b> | 1160.445 | 1160.445 | 1160.445 | 1160.445 | 1160.445 |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 241.75  | N.A.  | 5.30   |
| 0-30    | 499.36  | N.A.  | 10.90  |
| 0-40    | 791.57  | N.A.  | 17.20  |
| 0-60    | 1317.36 | N.A.  | 28.60  |
| 0-80    | 1600.82 | N.A.  | 34.80  |
| 0-90    | 1633.73 | N.A.  | 35.50  |
| 10-90   | 1570.07 | N.A.  | 34.10  |
| 20-40   | 549.81  | N.A.  | 12.00  |
| 20-50   | 833.78  | N.A.  | 18.10  |
| 40-70   | 704.04  | N.A.  | 15.30  |
| 60-80   | 283.46  | N.A.  | 6.20   |
| 70-80   | 105.22  | N.A.  | 2.30   |
| 80-90   | 32.91   | N.A.  | 0.70   |
| 90-110  | 256.05  | N.A.  | 5.60   |
| 90-120  | 590.90  | N.A.  | 12.80  |
| 90-130  | 1042.54 | N.A.  | 22.70  |
| 90-150  | 2093.49 | N.A.  | 45.50  |
| 90-180  | 2965.95 | N.A.  | 64.50  |
| 110-180 | 2709.9  | N.A.  | 58.90  |
| 0-180   | 4599.68 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

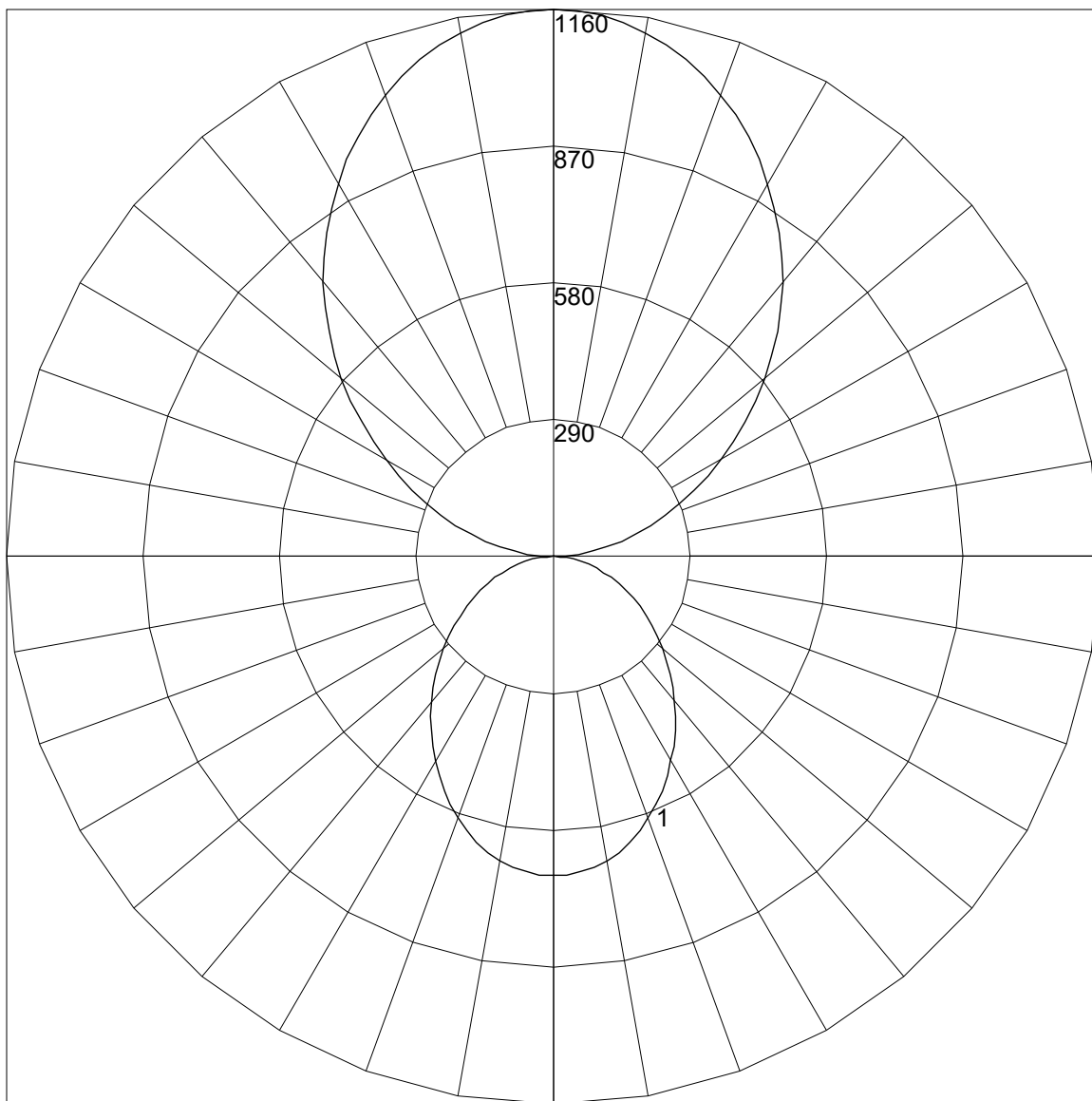
| Zone    | Lumens |
|---------|--------|
| 0-10    | 63.66  |
| 10-20   | 178.09 |
| 20-30   | 257.61 |
| 30-40   | 292.21 |
| 40-50   | 283.97 |
| 50-60   | 241.83 |
| 60-70   | 178.24 |
| 70-80   | 105.22 |
| 80-90   | 32.91  |
| 90-100  | 59.94  |
| 100-110 | 196.12 |
| 110-120 | 334.85 |
| 120-130 | 451.64 |
| 130-140 | 523.10 |
| 140-150 | 527.85 |
| 150-160 | 454.83 |
| 160-170 | 308.34 |
| 170-180 | 109.29 |

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  | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 75 | 75 | 75 | 58 | 58 | 58 | 43 | 43 | 43 | 36 |
| 1  | 95  | 90  | 87  | 83  | 85 | 82 | 79 | 76 | 66 | 64 | 62 | 51 | 50 | 49 | 38 | 37 | 36 | 30 |
| 2  | 86  | 79  | 73  | 68  | 78 | 72 | 67 | 62 | 58 | 54 | 51 | 45 | 43 | 41 | 33 | 32 | 31 | 25 |
| 3  | 79  | 69  | 62  | 57  | 71 | 63 | 57 | 52 | 51 | 47 | 43 | 40 | 37 | 34 | 30 | 28 | 26 | 21 |
| 4  | 72  | 61  | 54  | 48  | 65 | 56 | 49 | 44 | 45 | 40 | 37 | 36 | 32 | 29 | 27 | 24 | 22 | 18 |
| 5  | 66  | 55  | 47  | 41  | 59 | 50 | 43 | 38 | 41 | 35 | 32 | 32 | 28 | 26 | 24 | 22 | 20 | 16 |
| 6  | 61  | 49  | 41  | 35  | 55 | 45 | 38 | 33 | 36 | 31 | 28 | 29 | 25 | 22 | 22 | 19 | 17 | 14 |
| 7  | 56  | 44  | 36  | 31  | 51 | 40 | 34 | 29 | 33 | 28 | 24 | 26 | 23 | 20 | 20 | 17 | 15 | 13 |
| 8  | 52  | 40  | 32  | 27  | 47 | 37 | 30 | 25 | 30 | 25 | 21 | 24 | 20 | 18 | 18 | 16 | 14 | 11 |
| 9  | 48  | 36  | 29  | 24  | 44 | 33 | 27 | 23 | 28 | 23 | 19 | 22 | 18 | 16 | 17 | 14 | 12 | 10 |
| 10 | 45  | 33  | 26  | 22  | 41 | 31 | 24 | 20 | 25 | 21 | 17 | 20 | 17 | 14 | 16 | 13 | 11 | 9  |

POLAR GRAPH



Maximum Candela = 1160.445 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)