

# 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-ID-4FT-H-S-835-ITL85125.007.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]ITL85125.007 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]08/06/15  
[ISSUE DATE]02/09/17  
[MANUFACTURER]FINELITE, INC.  
[LUMCAT]FINELITE HP-4-ID-4ft-H-S-835  
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 42.9 WATTS  
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 45.2 WATTS  
[ABSOLUTE LUMENS]4768  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85125. 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                | 4768            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 111             |
| Total Luminaire Watts           | 42.9            |
| 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)         | 4.00 ft         |
| Luminous Width (90-270)         | 0.32 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                  | 4140             | 4082              | 4010              |
| 55                  | 3844             | 3785              | 3708              |
| 65                  | 3508             | 3460              | 3403              |
| 75                  | 3068             | 3068              | 3055              |
| 85                  | 2542             | 2659              | 2737              |

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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   | 590.702    | 590.702     | 590.702     | 590.702     | 590.702     |
| 2.5   | 589.474    | 589.474     | 589.474     | 589.474     | 589.474     |
| 5.0   | 586.608    | 587.018     | 587.018     | 586.608     | 587.018     |
| 7.5   | 582.515    | 582.924     | 582.515     | 581.696     | 582.515     |
| 10.0  | 576.784    | 575.556     | 575.965     | 575.965     | 575.146     |
| 12.5  | 569.825    | 567.778     | 568.187     | 568.187     | 566.140     |
| 15.0  | 560.000    | 556.725     | 558.772     | 557.953     | 555.088     |
| 17.5  | 549.357    | 544.854     | 546.901     | 546.082     | 543.216     |
| 20.0  | 536.667    | 531.754     | 533.392     | 532.164     | 529.298     |
| 22.5  | 522.749    | 517.427     | 518.655     | 517.018     | 514.152     |
| 25.0  | 507.193    | 501.462     | 502.690     | 501.053     | 497.778     |
| 27.5  | 490.409    | 484.678     | 485.497     | 483.450     | 480.585     |
| 30.0  | 472.398    | 466.667     | 467.076     | 465.029     | 461.754     |
| 32.5  | 453.567    | 449.064     | 448.655     | 445.789     | 442.924     |
| 35.0  | 434.737    | 429.825     | 429.415     | 425.731     | 423.275     |
| 37.5  | 414.269    | 409.357     | 409.766     | 405.263     | 402.807     |
| 40.0  | 393.801    | 389.708     | 389.298     | 384.795     | 382.339     |
| 42.5  | 374.152    | 368.830     | 367.602     | 363.918     | 361.462     |
| 45.0  | 351.637    | 347.953     | 346.725     | 343.041     | 340.585     |
| 47.5  | 329.942    | 326.257     | 325.439     | 321.754     | 319.298     |
| 50.0  | 308.246    | 304.971     | 303.743     | 300.058     | 298.012     |
| 52.5  | 286.550    | 283.275     | 282.865     | 278.772     | 276.725     |
| 55.0  | 264.854    | 261.988     | 260.760     | 257.076     | 255.439     |
| 57.5  | 242.749    | 240.292     | 239.064     | 235.790     | 234.152     |
| 60.0  | 221.462    | 218.596     | 217.778     | 214.912     | 213.684     |
| 62.5  | 199.357    | 196.901     | 196.082     | 193.626     | 192.807     |
| 65.0  | 178.070    | 176.023     | 175.614     | 173.567     | 172.749     |
| 67.5  | 156.374    | 155.146     | 154.737     | 153.099     | 152.281     |
| 70.0  | 135.497    | 134.678     | 134.678     | 133.450     | 132.632     |
| 72.5  | 115.029    | 115.439     | 114.620     | 115.029     | 113.801     |
| 75.0  | 95.380     | 95.790      | 95.380      | 95.790      | 94.971      |
| 77.5  | 76.550     | 76.959      | 77.778      | 77.778      | 77.778      |
| 80.0  | 58.947     | 59.357      | 60.175      | 60.585      | 60.585      |
| 82.5  | 42.983     | 43.392      | 43.801      | 44.211      | 44.211      |
| 85.0  | 26.608     | 27.427      | 27.836      | 28.246      | 28.655      |
| 87.5  | 11.462     | 12.281      | 12.690      | 13.918      | 13.918      |
| 90.0  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 92.5  | 23.333     | 24.889      | 26.444      | 29.556      | 30.333      |
| 95.0  | 55.222     | 56.000      | 59.111      | 63.000      | 63.778      |
| 97.5  | 89.444     | 90.222      | 94.111      | 98.000      | 97.222      |
| 100.0 | 124.444    | 126.000     | 129.889     | 133.778     | 133.000     |
| 102.5 | 160.222    | 163.333     | 167.222     | 171.111     | 171.111     |
| 105.0 | 199.889    | 203.000     | 206.889     | 210.000     | 209.222     |
| 107.5 | 241.889    | 244.222     | 246.556     | 249.667     | 249.667     |
| 110.0 | 287.000    | 287.000     | 289.333     | 292.445     | 291.667     |
| 112.5 | 332.111    | 330.555     | 333.667     | 338.333     | 334.445     |
| 115.0 | 377.222    | 375.667     | 377.222     | 381.111     | 378.000     |
| 117.5 | 422.333    | 423.111     | 423.889     | 424.667     | 422.333     |
| 120.0 | 468.222    | 469.778     | 469.000     | 468.222     | 466.667     |
| 122.5 | 514.889    | 516.444     | 516.444     | 514.111     | 511.778     |
| 125.0 | 562.333    | 564.667     | 564.667     | 560.000     | 557.667     |
| 127.5 | 609.778    | 611.333     | 612.889     | 605.889     | 601.222     |
| 130.0 | 655.667    | 656.444     | 658.000     | 653.333     | 649.444     |
| 132.5 | 702.333    | 701.556     | 702.333     | 699.222     | 694.556     |

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**CANDELA TABULATION - (Cont.)**

|              |          |          |          |          |          |
|--------------|----------|----------|----------|----------|----------|
| <b>135.0</b> | 749.000  | 745.111  | 747.444  | 745.111  | 739.667  |
| <b>137.5</b> | 794.111  | 787.889  | 791.778  | 788.667  | 783.222  |
| <b>140.0</b> | 839.222  | 832.222  | 836.889  | 833.778  | 827.556  |
| <b>142.5</b> | 880.444  | 875.000  | 880.444  | 875.778  | 870.333  |
| <b>145.0</b> | 924.778  | 915.444  | 921.667  | 917.000  | 911.556  |
| <b>147.5</b> | 964.444  | 955.111  | 961.333  | 956.667  | 951.222  |
| <b>150.0</b> | 1003.333 | 993.222  | 999.444  | 994.778  | 990.111  |
| <b>152.5</b> | 1037.555 | 1029.778 | 1036.000 | 1030.555 | 1026.667 |
| <b>155.0</b> | 1071.000 | 1063.222 | 1068.667 | 1064.000 | 1060.111 |
| <b>157.5</b> | 1103.667 | 1095.889 | 1100.555 | 1095.889 | 1092.778 |
| <b>160.0</b> | 1131.667 | 1125.445 | 1130.111 | 1125.445 | 1123.111 |
| <b>162.5</b> | 1158.111 | 1151.111 | 1156.555 | 1151.889 | 1150.333 |
| <b>165.0</b> | 1179.889 | 1174.445 | 1177.555 | 1175.222 | 1174.445 |
| <b>167.5</b> | 1199.333 | 1194.667 | 1197.000 | 1195.445 | 1195.445 |
| <b>170.0</b> | 1215.667 | 1212.555 | 1214.111 | 1212.555 | 1212.555 |
| <b>172.5</b> | 1227.333 | 1227.333 | 1226.555 | 1226.555 | 1226.555 |
| <b>175.0</b> | 1236.667 | 1236.667 | 1236.667 | 1235.889 | 1236.667 |
| <b>177.5</b> | 1242.111 | 1242.889 | 1242.889 | 1242.889 | 1242.889 |
| <b>180.0</b> | 1244.445 | 1244.445 | 1244.445 | 1244.445 | 1244.445 |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 212.80  | N.A.  | 4.50   |
| 0-30    | 443.81  | N.A.  | 9.30   |
| 0-40    | 711.69  | N.A.  | 14.90  |
| 0-60    | 1211.11 | N.A.  | 25.40  |
| 0-80    | 1486.02 | N.A.  | 31.20  |
| 0-90    | 1517.15 | N.A.  | 31.80  |
| 10-90   | 1461.48 | N.A.  | 30.60  |
| 20-40   | 498.90  | N.A.  | 10.50  |
| 20-50   | 765.76  | N.A.  | 16.10  |
| 40-70   | 672.82  | N.A.  | 14.10  |
| 60-80   | 274.92  | N.A.  | 5.80   |
| 70-80   | 101.52  | N.A.  | 2.10   |
| 80-90   | 31.13   | N.A.  | 0.70   |
| 90-110  | 285.32  | N.A.  | 6.00   |
| 90-120  | 660.00  | N.A.  | 13.80  |
| 90-130  | 1162.64 | N.A.  | 24.40  |
| 90-150  | 2311.66 | N.A.  | 48.50  |
| 90-180  | 3251.3  | N.A.  | 68.20  |
| 110-180 | 2965.98 | N.A.  | 62.20  |
| 0-180   | 4768.45 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 55.67  |
| 10-20   | 157.12 |
| 20-30   | 231.01 |
| 30-40   | 267.88 |
| 40-50   | 266.86 |
| 50-60   | 232.55 |
| 60-70   | 173.40 |
| 70-80   | 101.52 |
| 80-90   | 31.13  |
| 90-100  | 66.67  |
| 100-110 | 218.65 |
| 110-120 | 374.68 |
| 120-130 | 502.64 |
| 130-140 | 575.02 |
| 140-150 | 574.00 |
| 150-160 | 490.79 |
| 160-170 | 331.54 |
| 170-180 | 117.30 |

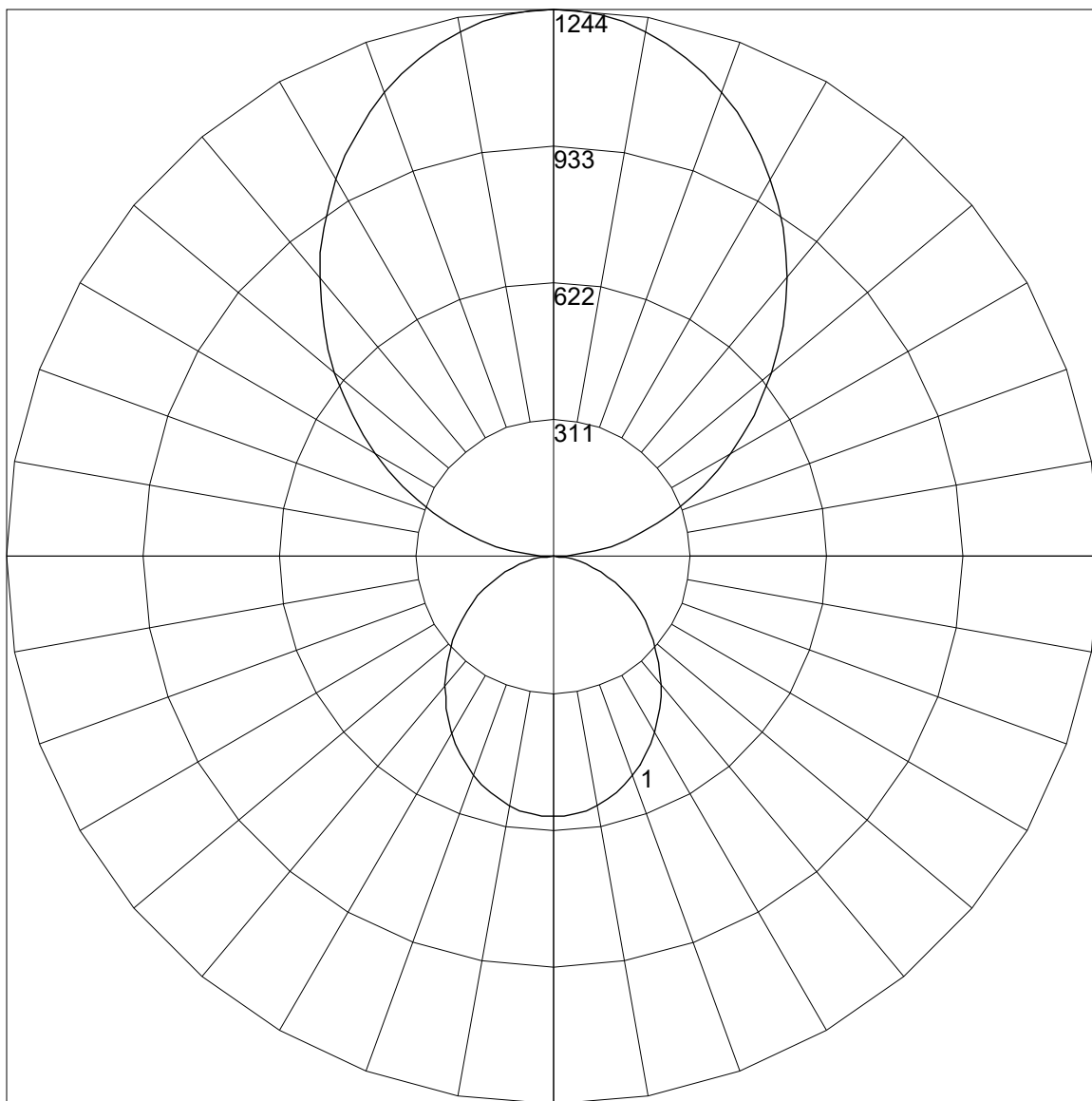
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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  | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 73 | 73 | 73 | 56 | 56 | 56 | 39 | 39 | 39 | 32 |
| 1  | 94  | 89  | 86  | 82  | 84 | 81 | 77 | 75 | 64 | 62 | 60 | 49 | 47 | 46 | 35 | 34 | 33 | 27 |
| 2  | 85  | 78  | 72  | 67  | 76 | 70 | 65 | 61 | 56 | 53 | 50 | 43 | 40 | 38 | 31 | 29 | 28 | 22 |
| 3  | 78  | 69  | 61  | 56  | 70 | 62 | 56 | 51 | 49 | 45 | 42 | 38 | 35 | 32 | 27 | 25 | 24 | 19 |
| 4  | 71  | 61  | 53  | 47  | 64 | 55 | 48 | 43 | 44 | 39 | 35 | 34 | 30 | 28 | 24 | 22 | 20 | 16 |
| 5  | 65  | 54  | 46  | 40  | 58 | 49 | 42 | 37 | 39 | 34 | 30 | 30 | 27 | 24 | 22 | 20 | 18 | 14 |
| 6  | 60  | 48  | 40  | 35  | 54 | 44 | 37 | 32 | 35 | 30 | 26 | 27 | 24 | 21 | 20 | 17 | 16 | 12 |
| 7  | 55  | 43  | 36  | 30  | 50 | 39 | 33 | 28 | 32 | 27 | 23 | 25 | 21 | 18 | 18 | 16 | 14 | 11 |
| 8  | 51  | 39  | 32  | 27  | 46 | 36 | 29 | 25 | 29 | 24 | 20 | 23 | 19 | 16 | 16 | 14 | 12 | 10 |
| 9  | 48  | 36  | 28  | 24  | 43 | 33 | 26 | 22 | 26 | 22 | 18 | 21 | 17 | 15 | 15 | 13 | 11 | 9  |
| 10 | 44  | 33  | 26  | 21  | 40 | 30 | 24 | 19 | 24 | 20 | 16 | 19 | 16 | 13 | 14 | 12 | 10 | 8  |

POLAR GRAPH



Maximum Candela = 1244.445 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)