

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-WW-D-FO-4FT-B-835-ITL85131.002.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]ITL85131.002 Family Correlation File
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[TESTDATE]08/10/15
[ISSUEDATE]02/10/17
[MANUFAC]FINELITE, INC.
[LUMCAT]FINELITE HP-4-WW-D-FO-4ft-B-835
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 10.1 WATTS
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 12.6 WATTS
[ABSOLUTE]LUMENS]1029
[OTHER]see www.finelite.com for source file ITL85131. 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

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1029 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 102 |
| Total Luminaire Watts | 10.1 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.94 |
| Spacing Criterion (90-270) | 1.20 |
| Spacing Criterion (Diagonal) | 1.42 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.27 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 | 6639 | 5873 | 2969 |
| 55 | 6564 | 5816 | 2690 |
| 65 | 6733 | 5609 | 2381 |
| 75 | 6059 | 5724 | 2072 |
| 85 | 3810 | 3927 | 1817 |

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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 | 358.690 | 358.690 | 358.690 | 358.690 | 358.690 | 358.690 | 358.690 | 358.690 | 358.690 |
| 2.5 | 377.731 | 376.187 | 371.041 | 363.322 | 359.719 | 348.398 | 345.825 | 341.708 | 337.591 |
| 5.0 | 396.257 | 393.170 | 383.392 | 370.012 | 358.175 | 339.135 | 328.842 | 321.123 | 315.462 |
| 7.5 | 412.725 | 408.608 | 395.228 | 375.158 | 355.602 | 328.842 | 311.860 | 298.994 | 292.819 |
| 10.0 | 429.193 | 423.018 | 405.006 | 378.760 | 352.000 | 317.520 | 293.848 | 277.380 | 269.146 |
| 12.5 | 444.117 | 437.427 | 414.269 | 381.333 | 347.368 | 305.684 | 275.836 | 255.251 | 246.503 |
| 15.0 | 460.070 | 451.322 | 422.503 | 382.877 | 341.708 | 293.333 | 257.310 | 233.637 | 223.860 |
| 17.5 | 473.965 | 463.673 | 429.708 | 382.363 | 335.018 | 280.468 | 239.298 | 212.538 | 201.216 |
| 20.0 | 487.345 | 475.509 | 436.398 | 381.333 | 327.813 | 266.573 | 221.287 | 191.953 | 181.146 |
| 22.5 | 499.181 | 485.287 | 442.058 | 378.760 | 319.064 | 252.678 | 204.304 | 172.912 | 162.105 |
| 25.0 | 509.988 | 494.035 | 446.175 | 375.158 | 309.287 | 238.269 | 186.807 | 154.901 | 144.094 |
| 27.5 | 518.737 | 501.240 | 449.263 | 371.041 | 299.509 | 224.374 | 170.339 | 138.433 | 128.140 |
| 30.0 | 525.427 | 506.386 | 450.807 | 365.895 | 288.702 | 210.480 | 154.901 | 123.509 | 113.731 |
| 32.5 | 528.000 | 509.474 | 450.807 | 359.719 | 276.351 | 196.070 | 141.006 | 109.614 | 100.351 |
| 35.0 | 524.912 | 508.959 | 449.263 | 353.029 | 264.515 | 182.690 | 127.626 | 97.263 | 88.515 |
| 37.5 | 518.737 | 502.784 | 446.175 | 345.310 | 252.164 | 168.795 | 114.760 | 85.942 | 77.708 |
| 40.0 | 508.444 | 493.006 | 441.029 | 336.561 | 238.784 | 155.415 | 101.895 | 75.135 | 67.930 |
| 42.5 | 494.035 | 480.140 | 431.766 | 326.784 | 224.889 | 143.064 | 91.088 | 65.871 | 58.667 |
| 45.0 | 472.936 | 462.129 | 418.386 | 315.977 | 211.509 | 130.713 | 80.281 | 57.123 | 50.433 |
| 47.5 | 449.778 | 440.515 | 402.947 | 304.140 | 197.099 | 118.363 | 70.503 | 48.889 | 43.228 |
| 50.0 | 425.591 | 415.813 | 384.421 | 291.789 | 183.205 | 107.041 | 61.240 | 41.170 | 36.023 |
| 52.5 | 402.433 | 391.111 | 361.778 | 278.409 | 169.310 | 95.719 | 52.491 | 34.480 | 29.848 |
| 55.0 | 379.275 | 366.924 | 336.047 | 262.971 | 155.415 | 84.912 | 44.257 | 27.789 | 23.673 |
| 57.5 | 359.205 | 345.310 | 310.316 | 248.047 | 141.520 | 74.105 | 37.053 | 22.129 | 18.012 |
| 60.0 | 335.532 | 322.152 | 285.614 | 231.064 | 127.626 | 64.327 | 30.363 | 16.468 | 13.380 |
| 62.5 | 313.404 | 298.994 | 261.942 | 212.023 | 114.246 | 55.064 | 23.673 | 11.836 | 8.749 |
| 65.0 | 286.643 | 274.807 | 238.784 | 191.439 | 101.380 | 45.801 | 17.497 | 7.205 | 4.632 |
| 67.5 | 259.368 | 250.105 | 216.655 | 170.339 | 89.544 | 37.053 | 11.836 | 3.602 | 1.544 |
| 70.0 | 230.035 | 222.830 | 195.041 | 148.725 | 76.678 | 29.333 | 6.690 | 1.544 | 1.544 |
| 72.5 | 196.585 | 193.497 | 172.912 | 129.170 | 64.842 | 21.614 | 2.573 | 1.544 | 1.029 |
| 75.0 | 157.988 | 160.047 | 149.240 | 109.614 | 54.035 | 14.409 | 1.544 | 1.029 | 1.029 |
| 77.5 | 116.304 | 122.480 | 124.023 | 93.661 | 43.228 | 8.234 | 1.544 | 1.029 | 1.029 |
| 80.0 | 77.708 | 83.368 | 95.205 | 77.193 | 33.450 | 2.573 | 1.029 | 1.029 | 1.029 |
| 82.5 | 50.947 | 52.491 | 62.784 | 59.696 | 24.702 | 1.029 | 1.029 | 0.515 | 0.515 |
| 85.0 | 33.450 | 32.936 | 34.480 | 40.655 | 15.953 | 1.029 | 0.515 | 0.515 | 0.515 |
| 87.5 | 15.953 | 15.953 | 15.439 | 17.497 | 8.234 | 0.515 | 0.515 | 0.515 | 0.515 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 129.91 | N.A. | 12.60 |
| 0-30 | 275.97 | N.A. | 26.80 |
| 0-40 | 454.89 | N.A. | 44.20 |
| 0-60 | 807.16 | N.A. | 78.40 |
| 0-80 | 1008.73 | N.A. | 98.00 |
| 0-90 | 1029.29 | N.A. | 100.00 |
| 10-90 | 995.49 | N.A. | 96.70 |
| 20-40 | 324.98 | N.A. | 31.60 |
| 20-50 | 511.49 | N.A. | 49.70 |
| 40-70 | 478.95 | N.A. | 46.50 |
| 60-80 | 201.57 | N.A. | 19.60 |
| 70-80 | 74.89 | N.A. | 7.30 |
| 80-90 | 20.56 | N.A. | 2.00 |
| 90-110 | 0.00 | N.A. | 0.00 |
| 90-120 | 0.00 | N.A. | 0.00 |
| 90-130 | 0.00 | N.A. | 0.00 |
| 90-150 | 0.00 | N.A. | 0.00 |
| 90-180 | 0.00 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 1029.29 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 33.79 |
| 10-20 | 96.12 |
| 20-30 | 146.06 |
| 30-40 | 178.92 |
| 40-50 | 186.51 |
| 50-60 | 165.76 |
| 60-70 | 126.67 |
| 70-80 | 74.89 |
| 80-90 | 20.56 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

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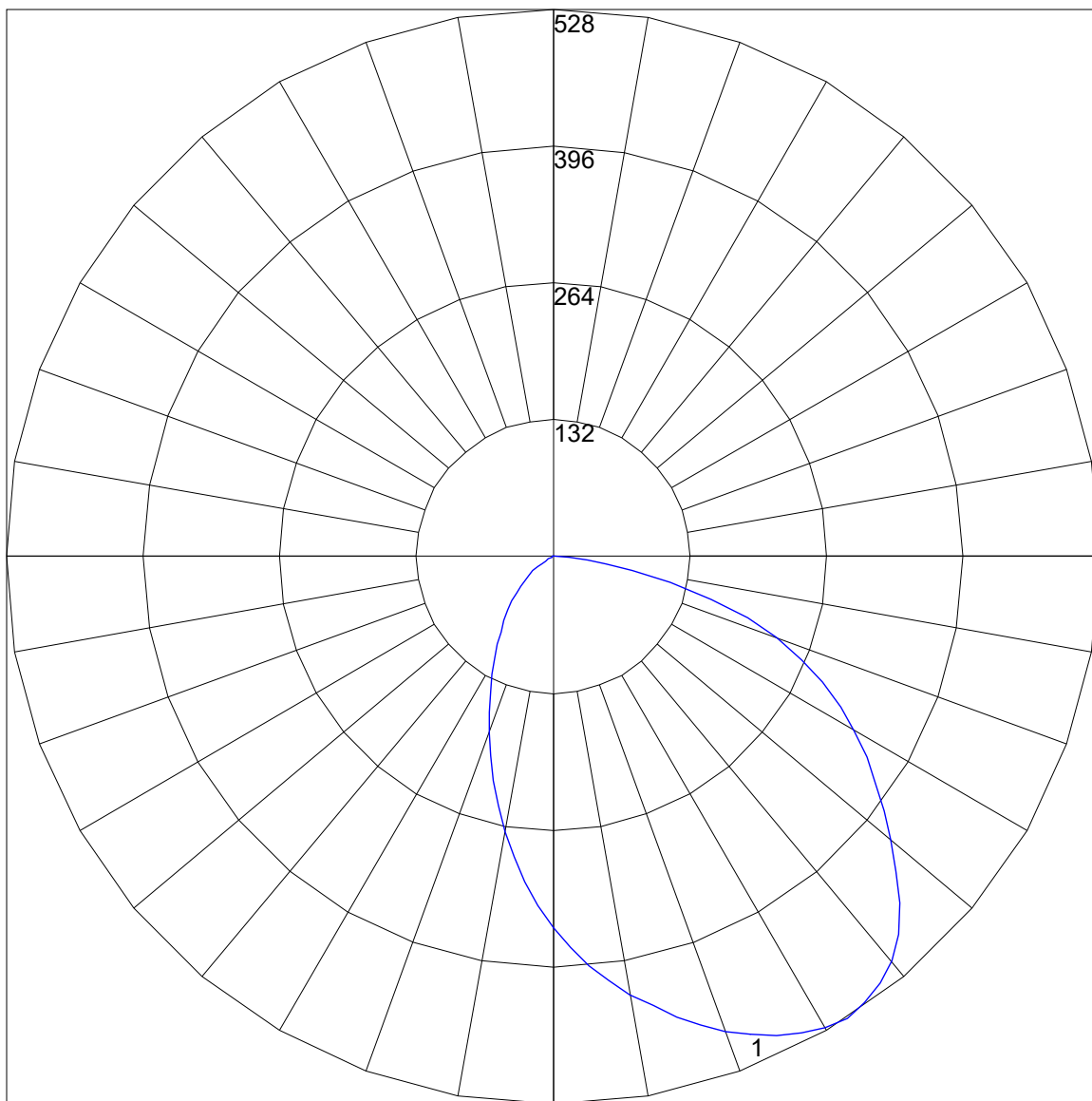
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 104 | 99 | 95 | 106 | 101 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 83 |
| 2 | 99 | 90 | 83 | 78 | 96 | 88 | 82 | 77 | 85 | 79 | 75 | 82 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 52 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 59 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

POLAR GRAPH



Maximum Candela = 528 Located At Horizontal Angle = 0, Vertical Angle = 32.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)