

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 : HPW-LED-4FT-FR-LED-V-8-TW-ITL85170.900.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]ITL85170.900 Family Correlation File
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[TESTDATE]09/15/15
[ISSUE DATE]04/20/16
[MANUFAC]FINELITE, INC.
[LUMCAT]FINELITE HPW-LED-4ft-FR-LED-V-8-TW
[OTHER]ies file is based on 3500K; see luminaire tech sheet at www.finelite.com for lumen adjustment factors for other CCT's & CRI
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 40.7 WATTS
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 41.6 WATTS
[OTHER]see www.finelite.com for source file ITL85170. 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]3906

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3906 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 96 |
| Total Luminaire Watts | 40.7 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.92 |
| Spacing Criterion (90-270) | 1.24 |
| Spacing Criterion (Diagonal) | 1.36 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.48 ft |
| Luminous Width (90-270) | 3.91 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 14987 | 13161 | 7230 |
| 55 | 15045 | 13204 | 6702 |
| 65 | 13468 | 12748 | 6028 |
| 75 | 10308 | 10796 | 5121 |
| 85 | 4674 | 5859 | 3818 |

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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 | 1416 | 1416 | 1416 | 1416 | 1416 | 1416 | 1416 | 1416 | 1416 |
| 2.5 | 1518 | 1514 | 1487 | 1456 | 1415 | 1375 | 1343 | 1320 | 1312 |
| 5.0 | 1620 | 1609 | 1558 | 1491 | 1410 | 1331 | 1267 | 1224 | 1208 |
| 7.5 | 1725 | 1703 | 1627 | 1524 | 1401 | 1284 | 1191 | 1130 | 1108 |
| 10.0 | 1819 | 1791 | 1691 | 1550 | 1390 | 1236 | 1116 | 1038 | 1010 |
| 12.5 | 1898 | 1869 | 1750 | 1572 | 1374 | 1184 | 1041 | 948 | 915 |
| 15.0 | 1962 | 1929 | 1801 | 1589 | 1355 | 1132 | 966 | 860 | 824 |
| 17.5 | 2009 | 1975 | 1840 | 1602 | 1332 | 1077 | 891 | 773 | 734 |
| 20.0 | 2049 | 2011 | 1866 | 1611 | 1309 | 1021 | 818 | 691 | 649 |
| 22.5 | 2070 | 2032 | 1881 | 1613 | 1279 | 964 | 746 | 614 | 566 |
| 25.0 | 2083 | 2043 | 1887 | 1609 | 1247 | 906 | 675 | 536 | 489 |
| 27.5 | 2089 | 2044 | 1884 | 1599 | 1212 | 848 | 605 | 466 | 415 |
| 30.0 | 2083 | 2034 | 1869 | 1581 | 1174 | 790 | 537 | 395 | 345 |
| 32.5 | 2069 | 2016 | 1849 | 1556 | 1132 | 731 | 472 | 330 | 282 |
| 35.0 | 2043 | 1989 | 1819 | 1524 | 1088 | 673 | 409 | 270 | 222 |
| 37.5 | 2007 | 1954 | 1781 | 1484 | 1042 | 615 | 348 | 213 | 170 |
| 40.0 | 1965 | 1908 | 1735 | 1439 | 993 | 558 | 292 | 164 | 128 |
| 42.5 | 1910 | 1854 | 1683 | 1388 | 943 | 501 | 240 | 124 | 88 |
| 45.0 | 1847 | 1790 | 1622 | 1330 | 891 | 445 | 190 | 87 | 41 |
| 47.5 | 1778 | 1721 | 1555 | 1269 | 838 | 391 | 146 | 42 | 33 |
| 50.0 | 1705 | 1645 | 1481 | 1203 | 781 | 338 | 110 | 34 | 27 |
| 52.5 | 1614 | 1568 | 1402 | 1133 | 726 | 290 | 79 | 29 | 23 |
| 55.0 | 1504 | 1472 | 1320 | 1063 | 670 | 239 | 42 | 25 | 19 |
| 57.5 | 1383 | 1360 | 1234 | 987 | 614 | 194 | 34 | 21 | 16 |
| 60.0 | 1257 | 1240 | 1148 | 908 | 557 | 152 | 29 | 18 | 13 |
| 62.5 | 1126 | 1113 | 1047 | 829 | 503 | 116 | 25 | 15 | 11 |
| 65.0 | 992 | 983 | 939 | 744 | 444 | 84 | 21 | 13 | 9 |
| 67.5 | 861 | 858 | 826 | 664 | 388 | 57 | 18 | 11 | 8 |
| 70.0 | 728 | 729 | 713 | 587 | 334 | 34 | 15 | 9 | 6 |
| 72.5 | 594 | 599 | 599 | 513 | 283 | 27 | 12 | 8 | 5 |
| 75.0 | 465 | 473 | 487 | 430 | 231 | 22 | 10 | 6 | 4 |
| 77.5 | 342 | 355 | 377 | 348 | 183 | 17 | 8 | 5 | 4 |
| 80.0 | 229 | 244 | 271 | 266 | 137 | 13 | 6 | 4 | 3 |
| 82.5 | 148 | 149 | 174 | 185 | 96 | 9 | 5 | 3 | 2 |
| 85.0 | 71 | 76 | 89 | 107 | 58 | 6 | 3 | 2 | 2 |
| 87.5 | 11 | 13 | 18 | 37 | 26 | 2 | 1 | 1 | 1 |
| 90.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 523.20 | N.A. | 13.40 |
| 0-30 | 1109.81 | N.A. | 28.40 |
| 0-40 | 1805.58 | N.A. | 46.20 |
| 0-60 | 3134.72 | N.A. | 80.30 |
| 0-80 | 3847.76 | N.A. | 98.50 |
| 0-90 | 3905.75 | N.A. | 100.00 |
| 10-90 | 3771.15 | N.A. | 96.60 |
| 20-40 | 1282.38 | N.A. | 32.80 |
| 20-50 | 1986.7 | N.A. | 50.90 |
| 40-70 | 1791.03 | N.A. | 45.90 |
| 60-80 | 713.05 | N.A. | 18.30 |
| 70-80 | 251.16 | N.A. | 6.40 |
| 80-90 | 57.98 | N.A. | 1.50 |
| 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 | 3905.75 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 134.59 |
| 10-20 | 388.61 |
| 20-30 | 586.61 |
| 30-40 | 695.77 |
| 40-50 | 704.32 |
| 50-60 | 624.81 |
| 60-70 | 461.89 |
| 70-80 | 251.16 |
| 80-90 | 57.98 |
| 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 |

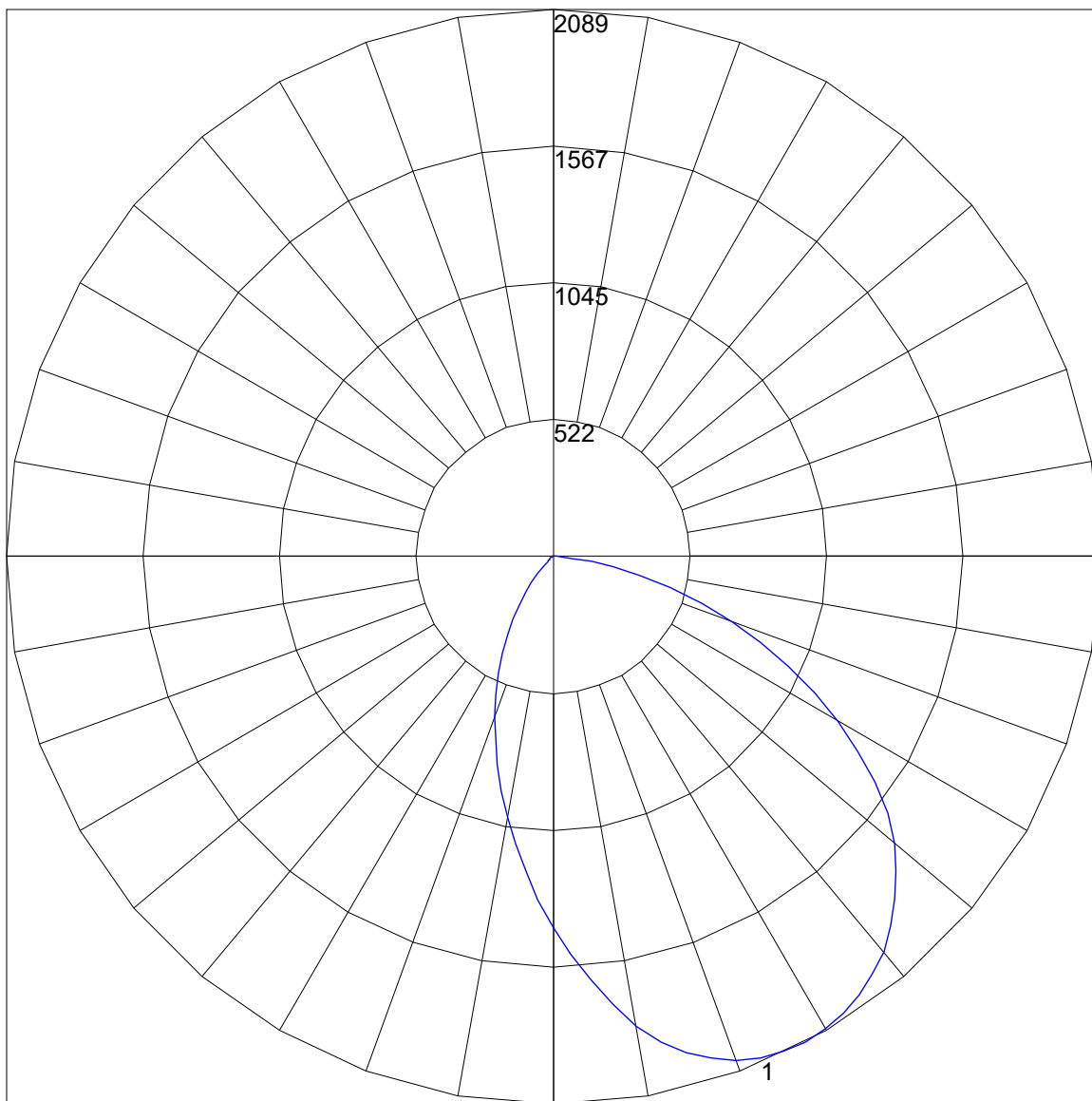
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 62 | 55 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 56 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 31 |
| 9 | 57 | 44 | 35 | 30 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

POLAR GRAPH



Maximum Candela = 2089 Located At Horizontal Angle = 0, Vertical Angle = 27.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)