

# 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 : S12-LED-ID-DCO-4FT-4E-S-8-35-30U70D-ITL85163.207.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85163.207 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]09/11/15

[ISSUEDATE]08/15/16

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S12-LED-ID-DCO-4ft-4E-S-8-35-30U70D

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 27.0 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 29.8 WATTS

[ABSOLUTE]LUMENS]3002

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85163. 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                | 3002                |
| Total Luminaire Efficiency      | N.A.                |
| Luminaire Efficacy Rating (LER) | 111                 |
| Total Luminaire Watts           | 27                  |
| Ballast Factor                  | 1.00                |
| CIE Type                        | Semi-Direct         |
| Spacing Criterion (0-180)       | 1.22                |
| Spacing Criterion (90-270)      | 1.22                |
| Spacing Criterion (Diagonal)    | 1.34                |
| Basic Luminous Shape            | Rectangular w/Sides |
| Luminous Length (0-180)         | 3.32 ft             |
| Luminous Width (90-270)         | 0.36 ft             |
| Luminous Height                 | 0.03 ft             |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 5978             | 5666              | 5582              |
| 55                  | 5585             | 5178              | 5085              |
| 65                  | 5055             | 4583              | 4467              |
| 75                  | 4188             | 3692              | 3715              |
| 85                  | 2477             | 2506              | 2878              |

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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   | 781.154    | 781.154     | 781.154     | 781.154     | 781.154     |
| 2.5   | 780.118    | 780.118     | 780.118     | 780.118     | 780.118     |
| 5.0   | 777.010    | 777.010     | 777.010     | 777.010     | 777.010     |
| 7.5   | 771.830    | 771.830     | 771.830     | 771.830     | 772.866     |
| 10.0  | 763.542    | 762.506     | 764.578     | 764.578     | 764.578     |
| 12.5  | 755.254    | 753.182     | 756.290     | 756.290     | 755.254     |
| 15.0  | 743.858    | 739.714     | 743.858     | 744.894     | 743.858     |
| 17.5  | 730.390    | 726.246     | 730.390     | 731.426     | 730.390     |
| 20.0  | 714.850    | 709.669     | 714.850     | 715.886     | 715.886     |
| 22.5  | 696.201    | 691.021     | 697.237     | 698.273     | 697.237     |
| 25.0  | 676.517    | 672.373     | 677.553     | 679.625     | 678.589     |
| 27.5  | 656.833    | 651.653     | 657.869     | 658.905     | 658.905     |
| 30.0  | 634.040    | 629.896     | 635.077     | 636.112     | 635.077     |
| 32.5  | 611.248    | 607.104     | 612.284     | 614.356     | 612.284     |
| 35.0  | 587.420    | 583.276     | 588.456     | 589.492     | 588.456     |
| 37.5  | 560.484    | 557.375     | 562.556     | 563.591     | 562.556     |
| 40.0  | 534.583    | 531.475     | 535.619     | 537.691     | 536.655     |
| 42.5  | 508.683    | 505.575     | 508.683     | 511.791     | 509.719     |
| 45.0  | 480.710    | 478.638     | 481.746     | 483.818     | 482.782     |
| 47.5  | 452.738    | 450.666     | 453.774     | 454.810     | 453.774     |
| 50.0  | 422.694    | 421.658     | 425.802     | 426.838     | 425.802     |
| 52.5  | 394.721    | 393.685     | 395.757     | 397.829     | 397.829     |
| 55.0  | 365.713    | 364.677     | 366.749     | 368.821     | 368.821     |
| 57.5  | 335.668    | 335.668     | 338.776     | 339.813     | 339.813     |
| 60.0  | 306.660    | 305.624     | 308.732     | 310.804     | 310.804     |
| 62.5  | 275.580    | 276.616     | 278.688     | 280.760     | 281.796     |
| 65.0  | 245.535    | 246.571     | 249.679     | 250.715     | 251.751     |
| 67.5  | 215.491    | 216.527     | 219.635     | 221.707     | 221.707     |
| 70.0  | 185.446    | 187.518     | 191.663     | 192.699     | 194.771     |
| 72.5  | 155.402    | 158.510     | 162.654     | 165.762     | 168.870     |
| 75.0  | 126.394    | 130.538     | 134.682     | 139.862     | 142.970     |
| 77.5  | 98.421     | 102.565     | 109.817     | 114.998     | 117.070     |
| 80.0  | 71.485     | 76.665      | 84.953      | 91.169      | 93.241      |
| 82.5  | 47.657     | 52.837      | 62.161      | 70.449      | 73.557      |
| 85.0  | 26.936     | 33.152      | 43.513      | 52.837      | 55.945      |
| 87.5  | 9.324      | 16.576      | 29.008      | 37.297      | 40.404      |
| 90.0  | 0.000      | 6.216       | 16.576      | 24.864      | 27.972      |
| 92.5  | 4.641      | 62.475      | 122.451     | 140.659     | 124.415     |
| 95.0  | 9.639      | 73.899      | 140.659     | 182.249     | 194.566     |
| 97.5  | 15.173     | 79.611      | 148.512     | 190.282     | 204.205     |
| 100.0 | 21.063     | 85.859      | 152.440     | 193.852     | 207.775     |
| 102.5 | 26.954     | 86.751      | 154.046     | 194.744     | 208.667     |
| 105.0 | 33.023     | 89.072      | 154.582     | 194.030     | 207.418     |
| 107.5 | 39.270     | 91.928      | 156.367     | 192.424     | 205.276     |
| 110.0 | 45.875     | 94.962      | 154.582     | 191.353     | 203.134     |
| 112.5 | 51.944     | 98.711      | 153.868     | 191.888     | 202.420     |
| 115.0 | 58.013     | 102.638     | 153.868     | 188.854     | 201.706     |
| 117.5 | 64.260     | 106.922     | 154.046     | 186.890     | 197.957     |
| 120.0 | 70.329     | 111.741     | 154.939     | 185.819     | 196.172     |
| 122.5 | 76.398     | 116.561     | 156.010     | 184.748     | 194.566     |
| 125.0 | 82.110     | 121.380     | 157.081     | 184.034     | 193.138     |
| 127.5 | 88.358     | 126.021     | 158.508     | 183.677     | 192.067     |
| 130.0 | 93.713     | 130.305     | 159.936     | 183.142     | 190.996     |
| 132.5 | 99.246     | 133.875     | 161.721     | 182.785     | 190.103     |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-4E-S-8-35-30U70D-ITL85163.207.IES****CANDELA TABULATION - (Cont.)**

|              |         |         |         |         |         |
|--------------|---------|---------|---------|---------|---------|
| <b>135.0</b> | 104.423 | 136.553 | 163.506 | 182.606 | 189.389 |
| <b>137.5</b> | 109.421 | 138.695 | 165.470 | 182.428 | 188.497 |
| <b>140.0</b> | 114.419 | 140.659 | 167.791 | 182.428 | 187.783 |
| <b>142.5</b> | 119.060 | 142.265 | 169.576 | 182.606 | 187.247 |
| <b>145.0</b> | 123.344 | 143.336 | 171.361 | 182.963 | 186.712 |
| <b>147.5</b> | 127.449 | 144.050 | 172.253 | 183.499 | 186.712 |
| <b>150.0</b> | 131.198 | 144.764 | 171.896 | 183.856 | 186.712 |
| <b>152.5</b> | 134.768 | 145.299 | 170.647 | 183.677 | 186.533 |
| <b>155.0</b> | 137.981 | 146.192 | 169.040 | 181.892 | 185.641 |
| <b>157.5</b> | 140.837 | 147.263 | 166.541 | 179.036 | 183.142 |
| <b>160.0</b> | 143.336 | 148.155 | 163.685 | 175.466 | 179.393 |
| <b>162.5</b> | 145.656 | 149.226 | 160.650 | 171.004 | 174.931 |
| <b>165.0</b> | 147.441 | 149.940 | 157.794 | 165.827 | 169.397 |
| <b>167.5</b> | 149.048 | 150.833 | 155.831 | 160.829 | 163.685 |
| <b>170.0</b> | 150.298 | 151.369 | 154.403 | 157.259 | 159.044 |
| <b>172.5</b> | 151.190 | 151.904 | 153.511 | 155.117 | 156.010 |
| <b>175.0</b> | 151.904 | 152.440 | 152.975 | 153.689 | 154.046 |
| <b>177.5</b> | 152.440 | 152.618 | 152.618 | 152.975 | 152.975 |
| <b>180.0</b> | 152.618 | 152.618 | 152.618 | 152.618 | 152.618 |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-4E-S-8-35-30U70D-ITL85163.207.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 283.29  | N.A.  | 9.40   |
| 0-30    | 595.01  | N.A.  | 19.80  |
| 0-40    | 961.98  | N.A.  | 32.00  |
| 0-60    | 1661.3  | N.A.  | 55.30  |
| 0-80    | 2050.99 | N.A.  | 68.30  |
| 0-90    | 2100.21 | N.A.  | 70.00  |
| 10-90   | 2026.44 | N.A.  | 67.50  |
| 20-40   | 678.69  | N.A.  | 22.60  |
| 20-50   | 1049.89 | N.A.  | 35.00  |
| 40-70   | 945.77  | N.A.  | 31.50  |
| 60-80   | 389.69  | N.A.  | 13.00  |
| 70-80   | 143.23  | N.A.  | 4.80   |
| 80-90   | 49.22   | N.A.  | 1.60   |
| 90-110  | 264.70  | N.A.  | 8.80   |
| 90-120  | 407.45  | N.A.  | 13.60  |
| 90-130  | 542.07  | N.A.  | 18.10  |
| 90-150  | 766.17  | N.A.  | 25.50  |
| 90-180  | 901.83  | N.A.  | 30.00  |
| 110-180 | 637.13  | N.A.  | 21.20  |
| 0-180   | 3002.04 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 73.77  |
| 10-20   | 209.52 |
| 20-30   | 311.72 |
| 30-40   | 366.98 |
| 40-50   | 371.20 |
| 50-60   | 328.11 |
| 60-70   | 246.46 |
| 70-80   | 143.23 |
| 80-90   | 49.22  |
| 90-100  | 117.25 |
| 100-110 | 147.44 |
| 110-120 | 142.75 |
| 120-130 | 134.63 |
| 130-140 | 121.76 |
| 140-150 | 102.34 |
| 150-160 | 76.07  |
| 160-170 | 44.94  |
| 170-180 | 14.65  |

# IES INDOOR REPORT

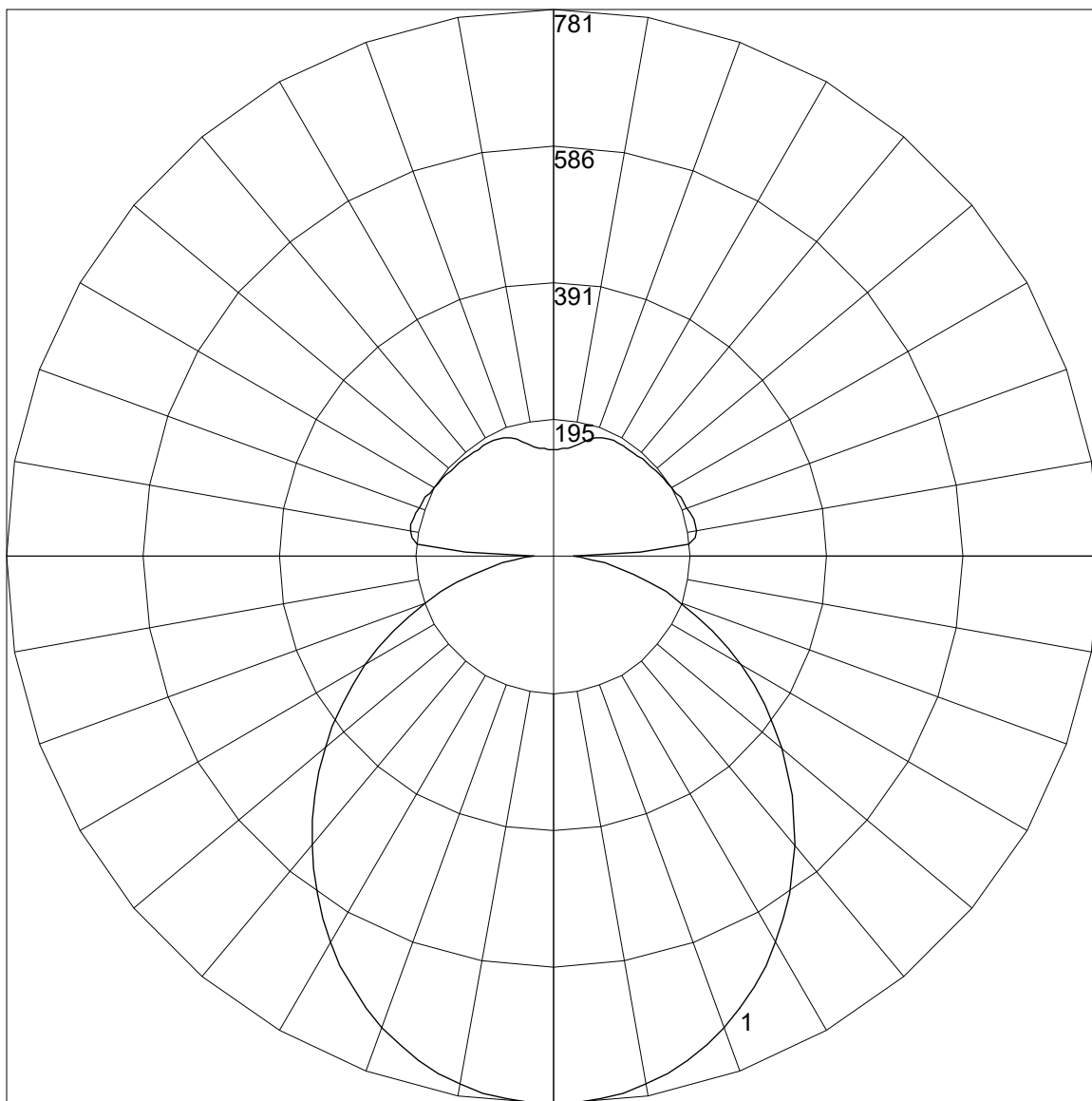
PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-4E-S-8-35-30U70D-ITL85163.207.IES

## 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 | 70 |
| 1  | 102 | 97  | 93  | 90  | 96  | 92  | 89  | 85  | 83 | 80 | 77 | 74 | 72 | 70 | 65 | 64 | 62 | 58 |
| 2  | 93  | 85  | 79  | 73  | 87  | 81  | 75  | 70  | 72 | 68 | 64 | 65 | 61 | 58 | 57 | 55 | 52 | 49 |
| 3  | 85  | 75  | 67  | 61  | 80  | 71  | 64  | 58  | 64 | 58 | 54 | 57 | 53 | 49 | 51 | 47 | 45 | 41 |
| 4  | 77  | 66  | 58  | 51  | 73  | 63  | 55  | 50  | 57 | 50 | 46 | 51 | 46 | 42 | 45 | 42 | 38 | 35 |
| 5  | 71  | 59  | 51  | 44  | 67  | 56  | 48  | 43  | 51 | 44 | 39 | 46 | 40 | 36 | 41 | 37 | 33 | 31 |
| 6  | 66  | 53  | 45  | 38  | 62  | 51  | 43  | 37  | 46 | 39 | 34 | 41 | 36 | 32 | 37 | 33 | 29 | 27 |
| 7  | 61  | 48  | 40  | 34  | 57  | 46  | 38  | 33  | 42 | 35 | 30 | 38 | 32 | 28 | 34 | 29 | 26 | 24 |
| 8  | 56  | 44  | 36  | 30  | 53  | 42  | 34  | 29  | 38 | 32 | 27 | 34 | 29 | 25 | 31 | 27 | 23 | 21 |
| 9  | 53  | 40  | 32  | 27  | 50  | 38  | 31  | 26  | 35 | 29 | 24 | 32 | 26 | 23 | 29 | 24 | 21 | 19 |
| 10 | 49  | 37  | 29  | 24  | 47  | 35  | 28  | 24  | 32 | 26 | 22 | 29 | 24 | 21 | 27 | 22 | 19 | 17 |

POLAR GRAPH



Maximum Candela = 781.154 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)