

# 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 : S18-LED-ID-DCO-4FT-2E-V-8-TW-FTO-ITL85169.900.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85169.900 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]09/15/15

[ISSUEDATE]04/15/16

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S18-LED-ID-DCO-4ft-2E-V-8-TW-FTO

[OTHER]ies file is based on 3500K; see luminaire tech sheet at [www.finelite.com](http://www.finelite.com) for lumen adjustment factors for other CCT's & CRI

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 40.9 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 41.9 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85169. 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)

[\_ABSOLUTE]LUMENS]3831

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 3831            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 94              |
| Total Luminaire Watts           | 40.9            |
| 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)         | 3.71 ft         |
| Luminous Width (90-270)         | 0.10 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                  | 3780             | 3780              | 3780              |
| 55                  | 3592             | 3592              | 3592              |
| 65                  | 3360             | 3294              | 3294              |
| 75                  | 2904             | 2904              | 2797              |
| 85                  | 1917             | 1917              | 1917              |

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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   | 145        | 145         | 145         | 145         | 145         |
| 2.5   | 144        | 144         | 144         | 144         | 144         |
| 5.0   | 144        | 144         | 144         | 144         | 144         |
| 7.5   | 143        | 143         | 143         | 144         | 144         |
| 10.0  | 142        | 142         | 142         | 143         | 143         |
| 12.5  | 141        | 140         | 141         | 142         | 141         |
| 15.0  | 139        | 139         | 140         | 140         | 140         |
| 17.5  | 137        | 136         | 138         | 138         | 137         |
| 20.0  | 135        | 134         | 136         | 136         | 135         |
| 22.5  | 132        | 131         | 133         | 133         | 133         |
| 25.0  | 129        | 128         | 130         | 130         | 130         |
| 27.5  | 126        | 125         | 127         | 127         | 127         |
| 30.0  | 122        | 121         | 123         | 123         | 123         |
| 32.5  | 118        | 117         | 119         | 120         | 119         |
| 35.0  | 114        | 113         | 115         | 115         | 115         |
| 37.5  | 110        | 109         | 110         | 111         | 110         |
| 40.0  | 105        | 104         | 106         | 106         | 106         |
| 42.5  | 100        | 100         | 101         | 101         | 101         |
| 45.0  | 96         | 95          | 96          | 96          | 96          |
| 47.5  | 90         | 90          | 91          | 91          | 90          |
| 50.0  | 85         | 84          | 85          | 85          | 85          |
| 52.5  | 80         | 79          | 80          | 80          | 80          |
| 55.0  | 74         | 74          | 74          | 74          | 74          |
| 57.5  | 69         | 68          | 68          | 68          | 68          |
| 60.0  | 63         | 62          | 63          | 62          | 62          |
| 62.5  | 57         | 57          | 57          | 56          | 56          |
| 65.0  | 51         | 51          | 50          | 50          | 50          |
| 67.5  | 45         | 45          | 44          | 44          | 44          |
| 70.0  | 39         | 39          | 39          | 38          | 37          |
| 72.5  | 33         | 33          | 32          | 32          | 31          |
| 75.0  | 27         | 27          | 27          | 26          | 26          |
| 77.5  | 21         | 22          | 21          | 20          | 20          |
| 80.0  | 16         | 16          | 16          | 15          | 15          |
| 82.5  | 11         | 11          | 11          | 10          | 10          |
| 85.0  | 6          | 7           | 6           | 6           | 6           |
| 87.5  | 2          | 2           | 2           | 2           | 2           |
| 90.0  | 0          | 0           | 0           | 0           | 0           |
| 92.5  | 17         | 23          | 28          | 29          | 30          |
| 95.0  | 39         | 50          | 64          | 78          | 85          |
| 97.5  | 63         | 81          | 106         | 123         | 133         |
| 100.0 | 92         | 119         | 154         | 176         | 184         |
| 102.5 | 123        | 160         | 209         | 241         | 251         |
| 105.0 | 157        | 204         | 270         | 317         | 335         |
| 107.5 | 193        | 253         | 337         | 394         | 418         |
| 110.0 | 230        | 302         | 405         | 474         | 496         |
| 112.5 | 270        | 351         | 475         | 555         | 581         |
| 115.0 | 305        | 399         | 542         | 638         | 665         |
| 117.5 | 340        | 446         | 608         | 716         | 746         |
| 120.0 | 378        | 492         | 670         | 789         | 824         |
| 122.5 | 414        | 534         | 727         | 854         | 892         |
| 125.0 | 449        | 571         | 776         | 911         | 953         |
| 127.5 | 482        | 605         | 819         | 958         | 1002        |
| 130.0 | 513        | 634         | 852         | 995         | 1041        |
| 132.5 | 542        | 660         | 877         | 1021        | 1071        |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S18-LED-ID-DCO-4FT-2E-V-8-TW-FTO-ITL85169.900.IES****CANDELA TABULATION - (Cont.)**

|              |     |     |     |      |      |
|--------------|-----|-----|-----|------|------|
| <b>135.0</b> | 568 | 681 | 892 | 1037 | 1087 |
| <b>137.5</b> | 593 | 698 | 902 | 1045 | 1093 |
| <b>140.0</b> | 617 | 713 | 906 | 1045 | 1092 |
| <b>142.5</b> | 637 | 723 | 904 | 1038 | 1082 |
| <b>145.0</b> | 656 | 731 | 900 | 1025 | 1066 |
| <b>147.5</b> | 673 | 739 | 892 | 1008 | 1047 |
| <b>150.0</b> | 688 | 744 | 882 | 987  | 1024 |
| <b>152.5</b> | 702 | 750 | 870 | 965  | 999  |
| <b>155.0</b> | 714 | 753 | 857 | 940  | 969  |
| <b>157.5</b> | 725 | 756 | 843 | 914  | 940  |
| <b>160.0</b> | 734 | 758 | 829 | 888  | 910  |
| <b>162.5</b> | 742 | 760 | 816 | 862  | 881  |
| <b>165.0</b> | 748 | 761 | 803 | 838  | 853  |
| <b>167.5</b> | 753 | 762 | 792 | 817  | 828  |
| <b>170.0</b> | 757 | 764 | 782 | 799  | 806  |
| <b>172.5</b> | 761 | 765 | 775 | 784  | 788  |
| <b>175.0</b> | 763 | 765 | 770 | 774  | 775  |
| <b>177.5</b> | 764 | 765 | 766 | 768  | 767  |
| <b>180.0</b> | 765 | 765 | 765 | 765  | 765  |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S18-LED-ID-DCO-4FT-2E-V-8-TW-FTO-ITL85169.900.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 53.04   | N.A.  | 1.40   |
| 0-30    | 112.69  | N.A.  | 2.90   |
| 0-40    | 184.23  | N.A.  | 4.80   |
| 0-60    | 324.03  | N.A.  | 8.50   |
| 0-80    | 402.12  | N.A.  | 10.50  |
| 0-90    | 409.38  | N.A.  | 10.70  |
| 10-90   | 395.68  | N.A.  | 10.30  |
| 20-40   | 131.19  | N.A.  | 3.40   |
| 20-50   | 204.92  | N.A.  | 5.30   |
| 40-70   | 189.73  | N.A.  | 5.00   |
| 60-80   | 78.09   | N.A.  | 2.00   |
| 70-80   | 28.16   | N.A.  | 0.70   |
| 80-90   | 7.26    | N.A.  | 0.20   |
| 90-110  | 348.06  | N.A.  | 9.10   |
| 90-120  | 857.13  | N.A.  | 22.40  |
| 90-130  | 1514.81 | N.A.  | 39.50  |
| 90-150  | 2727.37 | N.A.  | 71.20  |
| 90-180  | 3421.79 | N.A.  | 89.30  |
| 110-180 | 3073.74 | N.A.  | 80.20  |
| 0-180   | 3831.17 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 13.69  |
| 10-20   | 39.35  |
| 20-30   | 59.65  |
| 30-40   | 71.54  |
| 40-50   | 73.73  |
| 50-60   | 66.07  |
| 60-70   | 49.93  |
| 70-80   | 28.16  |
| 80-90   | 7.26   |
| 90-100  | 72.02  |
| 100-110 | 276.04 |
| 110-120 | 509.08 |
| 120-130 | 657.67 |
| 130-140 | 661.39 |
| 140-150 | 551.17 |
| 150-160 | 392.74 |
| 160-170 | 227.84 |
| 170-180 | 73.84  |

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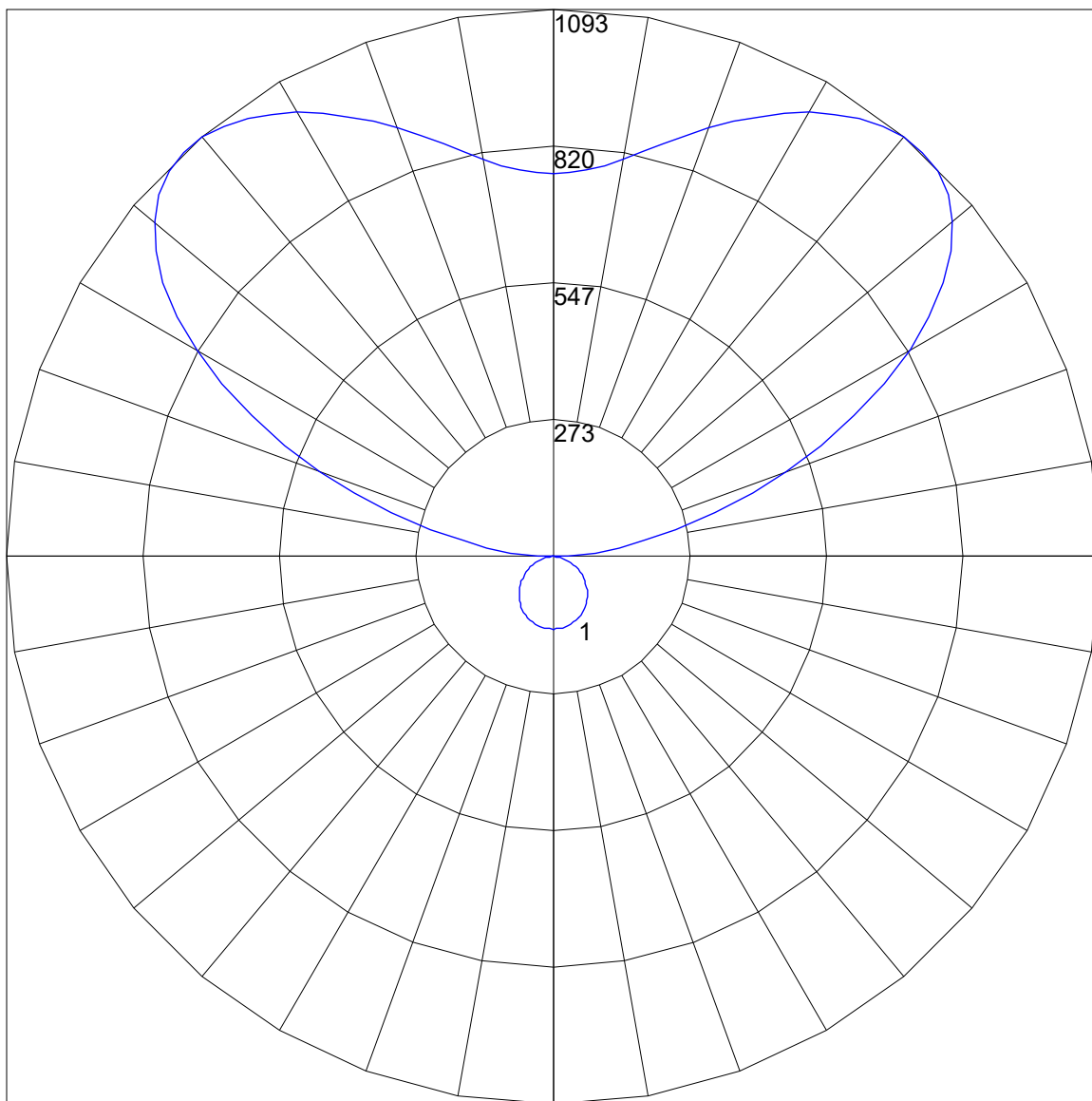
PHOTOMETRIC FILENAME : S18-LED-ID-DCO-4FT-2E-V-8-TW-FTO-ITL85169.900.IES

## 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  | 98 | 98 | 98 | 98 | 85 | 85 | 85 | 85 | 61 | 61 | 61 | 40 | 40 | 40 | 20 | 20 | 20 | 11 |
| 1  | 89 | 85 | 81 | 78 | 77 | 74 | 71 | 68 | 54 | 52 | 50 | 35 | 34 | 33 | 18 | 17 | 17 | 9  |
| 2  | 81 | 74 | 68 | 64 | 70 | 65 | 60 | 56 | 47 | 44 | 41 | 31 | 29 | 27 | 15 | 15 | 14 | 7  |
| 3  | 74 | 65 | 58 | 53 | 64 | 57 | 51 | 46 | 41 | 38 | 35 | 27 | 25 | 23 | 14 | 13 | 12 | 6  |
| 4  | 67 | 57 | 50 | 44 | 58 | 50 | 44 | 39 | 36 | 32 | 29 | 24 | 21 | 20 | 12 | 11 | 10 | 5  |
| 5  | 62 | 51 | 43 | 38 | 53 | 44 | 38 | 33 | 32 | 28 | 25 | 21 | 19 | 17 | 11 | 10 | 9  | 5  |
| 6  | 56 | 45 | 38 | 32 | 49 | 40 | 33 | 29 | 29 | 25 | 21 | 19 | 16 | 15 | 10 | 9  | 8  | 4  |
| 7  | 52 | 41 | 33 | 28 | 45 | 36 | 29 | 25 | 26 | 22 | 19 | 17 | 15 | 13 | 9  | 8  | 7  | 4  |
| 8  | 48 | 37 | 29 | 24 | 42 | 32 | 26 | 22 | 24 | 19 | 16 | 16 | 13 | 11 | 8  | 7  | 6  | 3  |
| 9  | 45 | 33 | 26 | 21 | 39 | 29 | 23 | 19 | 21 | 17 | 14 | 14 | 12 | 10 | 7  | 6  | 5  | 3  |
| 10 | 41 | 30 | 23 | 19 | 36 | 27 | 21 | 17 | 20 | 16 | 13 | 13 | 11 | 9  | 7  | 6  | 5  | 3  |

POLAR GRAPH



Maximum Candela = 1093 Located At Horizontal Angle = 90, Vertical Angle = 137.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)