

# 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 : S16-LED-ID-DCO-4FT-2E-H-8-35-40U60D-ITL87822.003.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87822.003 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/19/16

[ISSUEDATE]07/27/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S16-LED-ID-DCO-4ft-2E-H-8-35-40U60D

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 28.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 29.2 WATTS

[ABSOLUTE]LUMENS]2858

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87822. 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                | 2858            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 100             |
| Total Luminaire Watts           | 28.5            |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Semi-Direct     |
| Spacing Criterion (0-180)       | 1.26            |
| Spacing Criterion (90-270)      | 1.30            |
| Spacing Criterion (Diagonal)    | 1.40            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 3.58 ft         |
| Luminous Width (90-270)         | 0.29 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                  | 5851             | 6036              | 6174              |
| 55                  | 5620             | 5805              | 5961              |
| 65                  | 5252             | 5406              | 5542              |
| 75                  | 4540             | 4666              | 4729              |
| 85                  | 3277             | 3371              | 3183              |

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-H-8-35-40U60D-ITL87822.003.IES

## CANDELA TABULATION

|       | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-------|------------|-------------|-------------|-------------|-------------|
| 0.0   | 593.444    | 593.444     | 593.444     | 593.444     | 593.444     |
| 2.5   | 592.667    | 592.667     | 593.444     | 592.667     | 593.444     |
| 5.0   | 591.111    | 591.111     | 591.889     | 591.889     | 591.889     |
| 7.5   | 588.000    | 588.778     | 588.778     | 589.556     | 589.556     |
| 10.0  | 583.333    | 582.556     | 585.667     | 585.667     | 585.667     |
| 12.5  | 577.889    | 577.111     | 580.222     | 582.556     | 581.778     |
| 15.0  | 572.444    | 569.333     | 575.556     | 577.889     | 577.111     |
| 17.5  | 563.889    | 560.778     | 567.778     | 570.889     | 570.889     |
| 20.0  | 554.556    | 550.667     | 559.222     | 563.889     | 563.889     |
| 22.5  | 543.667    | 539.000     | 549.889     | 554.556     | 555.333     |
| 25.0  | 531.222    | 527.333     | 538.222     | 543.667     | 544.444     |
| 27.5  | 518.000    | 514.889     | 525.778     | 532.000     | 533.556     |
| 30.0  | 503.222    | 500.889     | 511.778     | 518.778     | 521.111     |
| 32.5  | 487.667    | 485.333     | 497.778     | 504.778     | 506.333     |
| 35.0  | 470.556    | 469.000     | 480.667     | 488.444     | 490.778     |
| 37.5  | 452.667    | 452.667     | 464.333     | 472.111     | 474.444     |
| 40.0  | 434.778    | 434.778     | 446.444     | 454.222     | 456.556     |
| 42.5  | 415.333    | 416.111     | 427.000     | 434.778     | 437.111     |
| 45.0  | 394.333    | 395.889     | 406.778     | 413.778     | 416.111     |
| 47.5  | 373.333    | 374.889     | 385.778     | 392.778     | 394.333     |
| 50.0  | 352.333    | 353.111     | 364.000     | 370.222     | 372.556     |
| 52.5  | 329.778    | 331.333     | 340.667     | 346.889     | 348.444     |
| 55.0  | 307.222    | 308.000     | 317.333     | 322.778     | 325.889     |
| 57.5  | 283.111    | 285.444     | 293.222     | 298.667     | 301.000     |
| 60.0  | 260.556    | 262.111     | 268.333     | 273.778     | 275.333     |
| 62.5  | 236.444    | 238.000     | 243.444     | 247.333     | 249.667     |
| 65.0  | 211.556    | 213.111     | 217.778     | 221.667     | 223.222     |
| 67.5  | 186.667    | 187.444     | 192.111     | 195.222     | 196.000     |
| 70.0  | 161.778    | 162.556     | 166.444     | 168.778     | 169.556     |
| 72.5  | 136.889    | 137.667     | 140.778     | 142.333     | 143.111     |
| 75.0  | 112.000    | 112.778     | 115.111     | 115.889     | 116.667     |
| 77.5  | 89.444     | 89.444      | 91.000      | 91.778      | 91.778      |
| 80.0  | 67.667     | 66.889      | 68.444      | 68.444      | 68.444      |
| 82.5  | 46.667     | 46.667      | 46.667      | 46.667      | 46.667      |
| 85.0  | 27.222     | 28.000      | 28.000      | 28.000      | 26.444      |
| 87.5  | 10.889     | 10.889      | 10.111      | 10.111      | 9.333       |
| 90.0  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 92.5  | 6.222      | 5.444       | 3.111       | 2.333       | 1.556       |
| 95.0  | 14.778     | 15.556      | 17.111      | 17.889      | 17.111      |
| 97.5  | 23.333     | 26.444      | 30.333      | 35.000      | 35.778      |
| 100.0 | 33.444     | 38.111      | 45.889      | 52.889      | 56.000      |
| 102.5 | 43.556     | 50.556      | 63.000      | 73.889      | 77.778      |
| 105.0 | 55.222     | 65.333      | 80.889      | 95.667      | 101.111     |
| 107.5 | 67.667     | 80.111      | 101.111     | 119.778     | 126.778     |
| 110.0 | 80.111     | 95.667      | 121.333     | 144.667     | 153.222     |
| 112.5 | 93.333     | 111.222     | 143.111     | 170.333     | 180.444     |
| 115.0 | 105.778    | 127.556     | 164.889     | 196.000     | 208.444     |
| 117.5 | 118.222    | 142.333     | 185.889     | 220.889     | 235.667     |
| 120.0 | 131.444    | 158.667     | 207.667     | 246.556     | 262.111     |
| 122.5 | 143.889    | 173.444     | 227.889     | 270.667     | 287.778     |
| 125.0 | 154.778    | 187.444     | 246.556     | 292.444     | 311.111     |
| 127.5 | 166.444    | 200.667     | 263.667     | 312.667     | 332.111     |
| 130.0 | 177.333    | 212.333     | 279.222     | 330.556     | 350.000     |
| 132.5 | 186.667    | 223.222     | 291.667     | 344.556     | 364.778     |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-H-8-35-40U60D-ITL87822.003.IES****CANDELA TABULATION - (Cont.)**

|              |         |         |         |         |         |
|--------------|---------|---------|---------|---------|---------|
| <b>135.0</b> | 195.222 | 231.778 | 301.778 | 355.444 | 375.667 |
| <b>137.5</b> | 203.000 | 238.778 | 308.778 | 362.444 | 382.667 |
| <b>140.0</b> | 209.222 | 244.222 | 313.444 | 366.333 | 385.000 |
| <b>142.5</b> | 214.667 | 247.333 | 315.000 | 367.111 | 385.000 |
| <b>145.0</b> | 219.333 | 249.667 | 314.222 | 364.000 | 381.889 |
| <b>147.5</b> | 223.222 | 251.222 | 311.889 | 358.556 | 374.889 |
| <b>150.0</b> | 226.333 | 251.222 | 307.222 | 350.778 | 365.556 |
| <b>152.5</b> | 228.667 | 250.444 | 301.000 | 341.444 | 354.667 |
| <b>155.0</b> | 231.000 | 248.889 | 294.000 | 329.778 | 342.222 |
| <b>157.5</b> | 231.778 | 247.333 | 286.222 | 317.333 | 329.000 |
| <b>160.0</b> | 233.333 | 245.000 | 277.667 | 304.111 | 314.222 |
| <b>162.5</b> | 233.333 | 243.444 | 269.889 | 290.889 | 299.444 |
| <b>165.0</b> | 234.111 | 241.111 | 261.333 | 278.444 | 285.444 |
| <b>167.5</b> | 234.889 | 239.556 | 253.556 | 266.000 | 271.444 |
| <b>170.0</b> | 234.889 | 238.000 | 247.333 | 255.889 | 259.778 |
| <b>172.5</b> | 234.889 | 236.444 | 241.889 | 247.333 | 249.667 |
| <b>175.0</b> | 234.889 | 235.667 | 238.000 | 240.333 | 241.889 |
| <b>177.5</b> | 234.889 | 234.889 | 235.667 | 236.444 | 236.444 |
| <b>180.0</b> | 234.889 | 234.889 | 234.889 | 234.889 | 234.889 |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-H-8-35-40U60D-ITL87822.003.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 218.33  | N.A.  | 7.60   |
| 0-30    | 465.81  | N.A.  | 16.30  |
| 0-40    | 766.09  | N.A.  | 26.80  |
| 0-60    | 1361.32 | N.A.  | 47.60  |
| 0-80    | 1698.2  | N.A.  | 59.40  |
| 0-90    | 1730.47 | N.A.  | 60.50  |
| 10-90   | 1674.22 | N.A.  | 58.60  |
| 20-40   | 547.76  | N.A.  | 19.20  |
| 20-50   | 860.46  | N.A.  | 30.10  |
| 40-70   | 810.21  | N.A.  | 28.30  |
| 60-80   | 336.88  | N.A.  | 11.80  |
| 70-80   | 121.90  | N.A.  | 4.30   |
| 80-90   | 32.27   | N.A.  | 1.10   |
| 90-110  | 105.37  | N.A.  | 3.70   |
| 90-120  | 264.73  | N.A.  | 9.30   |
| 90-130  | 478.41  | N.A.  | 16.70  |
| 90-150  | 896.00  | N.A.  | 31.40  |
| 90-180  | 1127.51 | N.A.  | 39.50  |
| 110-180 | 1022.14 | N.A.  | 35.80  |
| 0-180   | 2857.99 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 56.25  |
| 10-20   | 162.08 |
| 20-30   | 247.48 |
| 30-40   | 300.29 |
| 40-50   | 312.70 |
| 50-60   | 282.53 |
| 60-70   | 214.98 |
| 70-80   | 121.90 |
| 80-90   | 32.27  |
| 90-100  | 19.94  |
| 100-110 | 85.43  |
| 110-120 | 159.36 |
| 120-130 | 213.67 |
| 130-140 | 225.49 |
| 140-150 | 192.11 |
| 150-160 | 134.24 |
| 160-170 | 74.26  |
| 170-180 | 23.02  |

# IES INDOOR REPORT

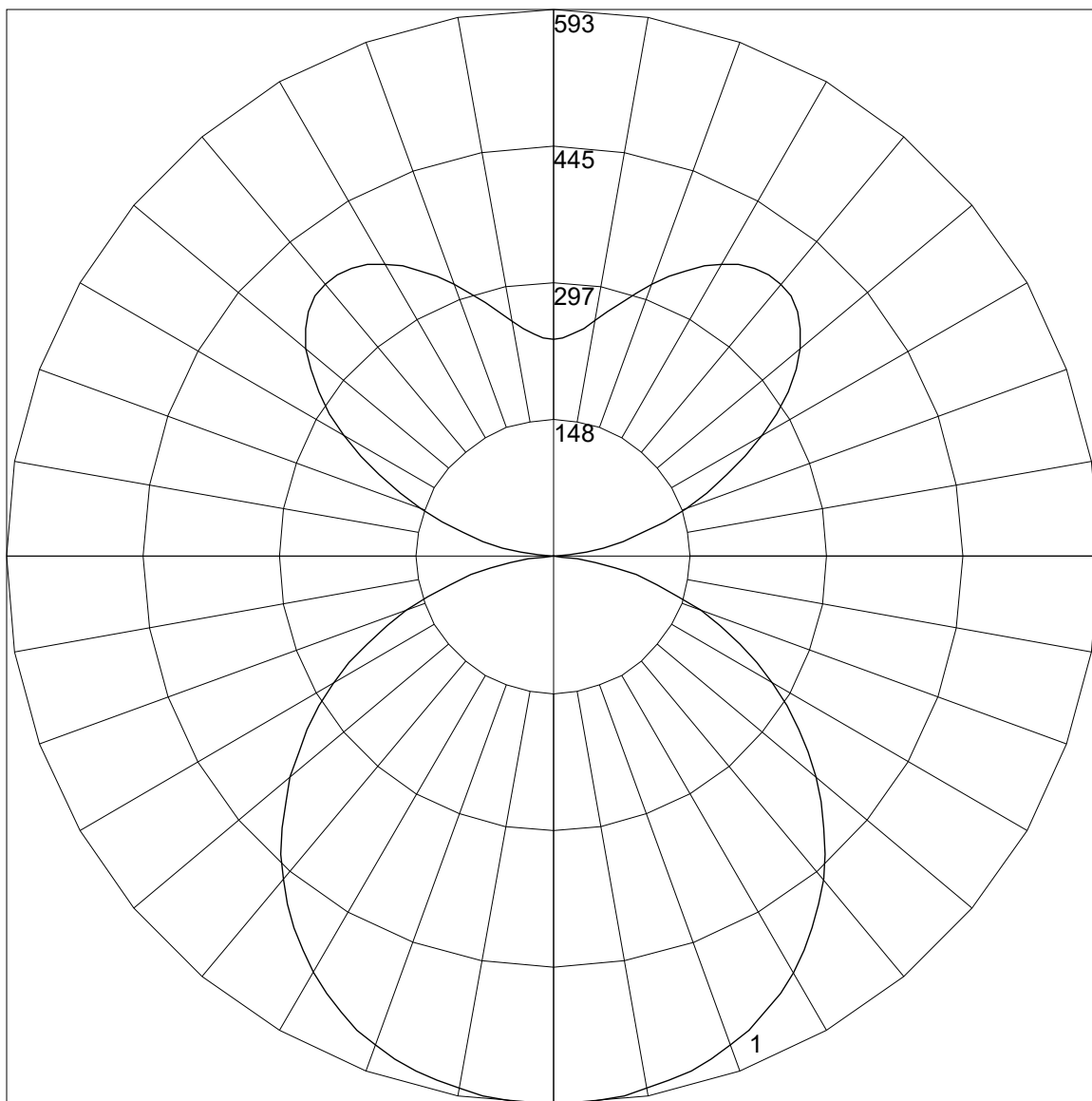
PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-H-8-35-40U60D-ITL87822.003.IES

## 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  | 110 | 110 | 110 | 110 | 103 | 103 | 103 | 103 | 89 | 89 | 89 | 77 | 77 | 77 | 66 | 66 | 66 | 61 |
| 1  | 100 | 95  | 91  | 88  | 93  | 89  | 86  | 83  | 78 | 75 | 73 | 68 | 66 | 64 | 58 | 56 | 55 | 51 |
| 2  | 91  | 83  | 77  | 71  | 85  | 78  | 72  | 68  | 68 | 64 | 60 | 59 | 56 | 53 | 51 | 48 | 46 | 42 |
| 3  | 83  | 73  | 65  | 59  | 77  | 68  | 62  | 56  | 60 | 55 | 50 | 52 | 48 | 45 | 45 | 42 | 39 | 35 |
| 4  | 76  | 64  | 56  | 50  | 70  | 60  | 53  | 47  | 53 | 47 | 43 | 46 | 42 | 38 | 40 | 36 | 33 | 30 |
| 5  | 69  | 57  | 49  | 43  | 65  | 54  | 46  | 41  | 47 | 41 | 37 | 41 | 37 | 33 | 36 | 32 | 29 | 26 |
| 6  | 64  | 51  | 43  | 37  | 59  | 48  | 41  | 35  | 43 | 37 | 32 | 37 | 32 | 29 | 32 | 28 | 25 | 23 |
| 7  | 59  | 46  | 38  | 32  | 55  | 44  | 36  | 31  | 39 | 33 | 28 | 34 | 29 | 25 | 29 | 26 | 22 | 20 |
| 8  | 55  | 42  | 34  | 29  | 51  | 40  | 32  | 27  | 35 | 29 | 25 | 31 | 26 | 22 | 27 | 23 | 20 | 18 |
| 9  | 51  | 38  | 31  | 26  | 48  | 36  | 29  | 24  | 32 | 26 | 22 | 28 | 24 | 20 | 25 | 21 | 18 | 16 |
| 10 | 48  | 35  | 28  | 23  | 45  | 33  | 27  | 22  | 30 | 24 | 20 | 26 | 22 | 18 | 23 | 19 | 16 | 14 |

POLAR GRAPH



Maximum Candela = 593.444 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)