

# 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 : 2D90 - HP-2-C-D-P-18IN-7-8IN-B-8TW-ITL94330.910.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL94330.910 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]12/28/20

[ISSUEDATE]02/18/2021

[MANUFAC]FINELITE, INC.

[LUMCAT]2D90 HP-2-P-D-18IN-7-8IN-B-835

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 7.7 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 8.1 WATTS

[\_ABSOLUTE]LUMENS]625

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL94330. 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                | 625             |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 81              |
| Total Luminaire Watts           | 7.7             |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.12            |
| Spacing Criterion (90-270)      | 1.18            |
| Spacing Criterion (Diagonal)    | 1.28            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 0.71 ft         |
| Luminous Width (90-270)         | 1.36 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                  | 2138             | 2214              | 2323              |
| 55                  | 1928             | 2012              | 2136              |
| 65                  | 1721             | 1799              | 1926              |
| 75                  | 1451             | 1532              | 1636              |
| 85                  | 1095             | 1129              | 1197              |

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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  | 257.595    | 257.595     | 257.595     | 257.595     | 257.595     | 257.595      | 257.595      | 257.595      | 257.595      |
| 2.5  | 256.523    | 256.791     | 257.327     | 257.059     | 257.327     | 257.327      | 257.327      | 257.327      | 257.059      |
| 5.0  | 254.915    | 254.915     | 255.719     | 255.451     | 255.719     | 255.987      | 255.987      | 255.987      | 255.987      |
| 7.5  | 251.966    | 252.234     | 252.770     | 253.038     | 253.574     | 253.842      | 253.842      | 253.842      | 253.842      |
| 10.0 | 247.945    | 248.481     | 249.286     | 249.822     | 250.626     | 250.894      | 250.626      | 250.894      | 250.358      |
| 12.5 | 243.388    | 243.657     | 244.997     | 245.801     | 246.873     | 247.677      | 247.409      | 247.141      | 246.605      |
| 15.0 | 236.955    | 238.296     | 239.368     | 240.708     | 242.316     | 242.584      | 242.316      | 241.780      | 241.244      |
| 17.5 | 230.790    | 232.130     | 233.203     | 234.811     | 237.759     | 236.955      | 236.419      | 235.615      | 235.347      |
| 20.0 | 223.553    | 225.161     | 227.038     | 228.646     | 231.058     | 231.058      | 230.254      | 228.914      | 228.110      |
| 22.5 | 216.584    | 217.388     | 219.800     | 221.677     | 224.625     | 224.357      | 223.017      | 221.408      | 220.604      |
| 25.0 | 208.274    | 209.614     | 211.759     | 214.171     | 217.388     | 217.120      | 215.779      | 213.099      | 212.563      |
| 27.5 | 199.965    | 201.037     | 203.717     | 206.934     | 209.614     | 209.078      | 207.738      | 205.057      | 204.521      |
| 30.0 | 191.119    | 192.459     | 195.408     | 198.892     | 201.305     | 201.037      | 198.624      | 196.480      | 195.140      |
| 32.5 | 182.273    | 183.346     | 186.562     | 190.047     | 192.995     | 192.995      | 190.315      | 187.634      | 186.294      |
| 35.0 | 173.160    | 174.500     | 177.716     | 181.201     | 184.418     | 183.882      | 181.469      | 177.985      | 177.448      |
| 37.5 | 164.046    | 165.386     | 168.603     | 172.624     | 175.572     | 174.768      | 172.624      | 168.871      | 167.263      |
| 40.0 | 154.932    | 156.005     | 159.489     | 163.510     | 166.190     | 165.922      | 162.706      | 159.757      | 158.149      |
| 42.5 | 145.819    | 146.623     | 150.375     | 154.396     | 157.077     | 156.809      | 153.592      | 150.375      | 148.767      |
| 45.0 | 135.901    | 137.509     | 140.726     | 145.015     | 147.695     | 146.891      | 144.210      | 140.190      | 138.849      |
| 47.5 | 127.055    | 127.859     | 131.344     | 135.633     | 138.045     | 137.509      | 134.829      | 131.076      | 129.468      |
| 50.0 | 117.405    | 118.746     | 122.498     | 126.519     | 128.932     | 128.395      | 125.179      | 121.694      | 120.354      |
| 52.5 | 108.828    | 109.900     | 113.385     | 116.869     | 119.550     | 118.478      | 115.797      | 112.581      | 111.240      |
| 55.0 | 99.446     | 101.054     | 103.735     | 108.024     | 110.168     | 109.632      | 106.684      | 103.199      | 102.127      |
| 57.5 | 91.137     | 91.941      | 94.889      | 98.910      | 101.054     | 99.982       | 97.302       | 94.085       | 92.745       |
| 60.0 | 82.023     | 83.095      | 85.776      | 89.528      | 91.137      | 90.869       | 88.456       | 85.508       | 84.167       |
| 62.5 | 73.982     | 74.786      | 77.198      | 80.147      | 82.023      | 81.755       | 79.343       | 76.930       | 75.590       |
| 65.0 | 65.404     | 66.208      | 68.352      | 71.301      | 73.177      | 72.641       | 70.497       | 67.816       | 67.280       |
| 67.5 | 57.362     | 57.899      | 60.043      | 62.723      | 63.796      | 63.796       | 61.919       | 59.507       | 58.703       |
| 70.0 | 49.321     | 49.857      | 51.465      | 53.878      | 54.950      | 54.950       | 53.610       | 51.733       | 50.661       |
| 72.5 | 41.816     | 42.084      | 43.692      | 45.300      | 46.372      | 46.372       | 45.300       | 43.692       | 43.156       |
| 75.0 | 33.774     | 34.578      | 35.651      | 37.259      | 38.063      | 38.331       | 37.527       | 35.919       | 35.651       |
| 77.5 | 26.805     | 27.341      | 28.413      | 29.753      | 30.290      | 30.290       | 29.753       | 28.681       | 28.145       |
| 80.0 | 20.372     | 20.372      | 20.908      | 22.248      | 22.516      | 22.784       | 22.516       | 21.712       | 21.444       |
| 82.5 | 14.207     | 14.207      | 14.475      | 15.279      | 15.547      | 15.815       | 15.815       | 15.547       | 15.279       |
| 85.0 | 8.578      | 8.578       | 8.846       | 9.114       | 9.382       | 9.650        | 9.650        | 9.650        | 9.650        |
| 87.5 | 3.485      | 3.485       | 3.753       | 3.485       | 3.753       | 4.289        | 4.289        | 4.289        | 4.289        |
| 90.0 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 2D90 - HP-2-C-D-P-18IN-7-8IN-B-8TW-ITL94330.910.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens | %Lamp | %Fixt  |
|---------|--------|-------|--------|
| 0-20    | 92.02  | N.A.  | 14.70  |
| 0-30    | 190.36 | N.A.  | 30.40  |
| 0-40    | 302.66 | N.A.  | 48.40  |
| 0-60    | 506.93 | N.A.  | 81.10  |
| 0-80    | 614.66 | N.A.  | 98.30  |
| 0-90    | 625.32 | N.A.  | 100.00 |
| 10-90   | 601.10 | N.A.  | 96.10  |
| 20-40   | 210.64 | N.A.  | 33.70  |
| 20-50   | 320.62 | N.A.  | 51.30  |
| 40-70   | 273.23 | N.A.  | 43.70  |
| 60-80   | 107.73 | N.A.  | 17.20  |
| 70-80   | 38.78  | N.A.  | 6.20   |
| 80-90   | 10.66  | N.A.  | 1.70   |
| 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   | 625.32 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 24.22  |
| 10-20   | 67.80  |
| 20-30   | 98.34  |
| 30-40   | 112.29 |
| 40-50   | 109.99 |
| 50-60   | 94.28  |
| 60-70   | 68.95  |
| 70-80   | 38.78  |
| 80-90   | 10.66  |
| 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   |

# IES INDOOR REPORT

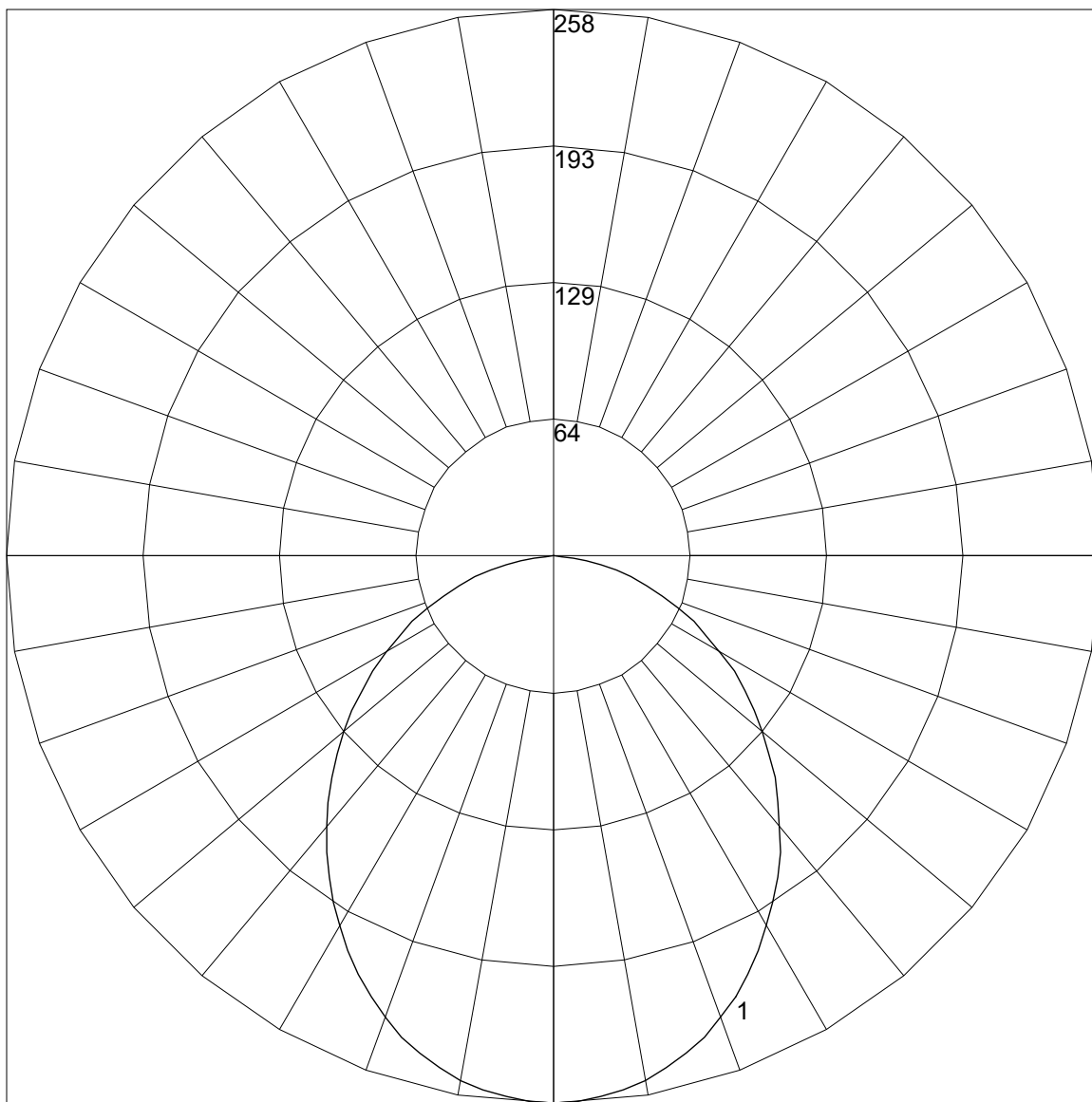
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 105 | 100 | 97  | 106 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |
| 2  | 100 | 92  | 85  | 79  | 97  | 90  | 84  | 79  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 76  | 73  | 71  |
| 3  | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  | 60  |
| 4  | 84  | 72  | 63  | 57  | 81  | 71  | 63  | 56  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 59  | 54  | 52  |
| 5  | 77  | 65  | 56  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 58  | 52  | 47  | 45  |
| 6  | 71  | 58  | 50  | 43  | 69  | 57  | 49  | 43  | 56  | 48  | 43  | 54  | 47  | 42  | 52  | 47  | 42  | 40  |
| 7  | 66  | 53  | 44  | 38  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 37  | 36  |
| 8  | 62  | 49  | 40  | 34  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9  | 58  | 45  | 37  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |
| 10 | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |

POLAR GRAPH



Maximum Candela = 257.595 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)