

# 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 : 3D90 - HP-2-C-D-P-28IN-9-16IN-V-8TW-ITL94330.904.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL94330.904 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]12/28/20

[ISSUEDATE]02/18/2021

[MANUFAC]FINELITE, INC.

[LUMCAT]3D90 HP-2-P-D-28IN-9-16IN-V-8TW

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 20.1 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 20.0 WATTS

[\_ABSOLUTE]LUMENS]1554

[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                | 1554            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 77              |
| Total Luminaire Watts           | 20.1            |
| 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)         | 2.02 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                  | 3560             | 3686              | 3869              |
| 55                  | 3211             | 3350              | 3558              |
| 65                  | 2866             | 2996              | 3207              |
| 75                  | 2417             | 2551              | 2724              |
| 85                  | 1823             | 1880              | 1994              |

**IES INDOOR REPORT**

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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> |
|-------------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| <b>0.0</b>  | 284.333    | 284.333     | 284.333     | 284.333     | 284.333     | 284.333      | 284.333      | 284.333      | 284.333      |
| <b>2.5</b>  | 283.149    | 283.445     | 284.037     | 283.741     | 284.037     | 284.037      | 284.037      | 284.037      | 283.741      |
| <b>5.0</b>  | 281.374    | 281.374     | 282.262     | 281.966     | 282.262     | 282.558      | 282.558      | 282.558      | 282.558      |
| <b>7.5</b>  | 278.119    | 278.415     | 279.007     | 279.302     | 279.894     | 280.191      | 280.191      | 280.191      | 280.191      |
| <b>10.0</b> | 273.681    | 274.273     | 275.161     | 275.752     | 276.640     | 276.936      | 276.640      | 276.936      | 276.344      |
| <b>12.5</b> | 268.652    | 268.947     | 270.427     | 271.314     | 272.498     | 273.385      | 273.089      | 272.794      | 272.202      |
| <b>15.0</b> | 261.551    | 263.030     | 264.214     | 265.692     | 267.468     | 267.764      | 267.468      | 266.876      | 266.285      |
| <b>17.5</b> | 254.745    | 256.225     | 257.408     | 259.183     | 262.438     | 261.551      | 260.959      | 260.071      | 259.776      |
| <b>20.0</b> | 246.757    | 248.532     | 250.603     | 252.379     | 255.041     | 255.041      | 254.154      | 252.674      | 251.787      |
| <b>22.5</b> | 239.064    | 239.952     | 242.615     | 244.686     | 247.941     | 247.644      | 246.166      | 244.390      | 243.502      |
| <b>25.0</b> | 229.892    | 231.371     | 233.739     | 236.402     | 239.952     | 239.656      | 238.177      | 235.218      | 234.626      |
| <b>27.5</b> | 220.720    | 221.904     | 224.862     | 228.413     | 231.371     | 230.780      | 229.300      | 226.342      | 225.750      |
| <b>30.0</b> | 210.956    | 212.436     | 215.691     | 219.536     | 222.200     | 221.904      | 219.241      | 216.874      | 215.394      |
| <b>32.5</b> | 201.193    | 202.376     | 205.927     | 209.773     | 213.027     | 213.027      | 210.069      | 207.110      | 205.631      |
| <b>35.0</b> | 191.133    | 192.613     | 196.163     | 200.009     | 203.559     | 202.968      | 200.306      | 196.459      | 195.867      |
| <b>37.5</b> | 181.073    | 182.553     | 186.103     | 190.542     | 193.796     | 192.908      | 190.542      | 186.399      | 184.624      |
| <b>40.0</b> | 171.014    | 172.198     | 176.044     | 180.482     | 183.440     | 183.144      | 179.594      | 176.339      | 174.564      |
| <b>42.5</b> | 160.954    | 161.842     | 165.984     | 170.422     | 173.381     | 173.085      | 169.534      | 165.984      | 164.209      |
| <b>45.0</b> | 150.007    | 151.782     | 155.333     | 160.066     | 163.025     | 162.138      | 159.179      | 154.741      | 153.261      |
| <b>47.5</b> | 140.243    | 141.131     | 144.977     | 149.711     | 152.374     | 151.782      | 148.823      | 144.681      | 142.906      |
| <b>50.0</b> | 129.591    | 131.071     | 135.213     | 139.651     | 142.314     | 141.723      | 138.172      | 134.326      | 132.846      |
| <b>52.5</b> | 120.124    | 121.307     | 125.153     | 129.000     | 131.959     | 130.775      | 127.816      | 124.266      | 122.787      |
| <b>55.0</b> | 109.768    | 111.543     | 114.503     | 119.236     | 121.603     | 121.011      | 117.756      | 113.911      | 112.727      |
| <b>57.5</b> | 100.596    | 101.483     | 104.739     | 109.176     | 111.543     | 110.360      | 107.401      | 103.851      | 102.372      |
| <b>60.0</b> | 90.537     | 91.720      | 94.679      | 98.821      | 100.596     | 100.301      | 97.638       | 94.383       | 92.904       |
| <b>62.5</b> | 81.660     | 82.548      | 85.211      | 88.466      | 90.537      | 90.241       | 87.578       | 84.915       | 83.435       |
| <b>65.0</b> | 72.193     | 73.080      | 75.447      | 78.702      | 80.773      | 80.181       | 77.814       | 74.856       | 74.264       |
| <b>67.5</b> | 63.316     | 63.908      | 66.275      | 69.234      | 70.418      | 70.418       | 68.346       | 65.683       | 64.796       |
| <b>70.0</b> | 54.441     | 55.032      | 56.807      | 59.470      | 60.654      | 60.654       | 59.174       | 57.103       | 55.920       |
| <b>72.5</b> | 46.156     | 46.452      | 48.227      | 50.002      | 51.186      | 51.186       | 50.002       | 48.227       | 47.635       |
| <b>75.0</b> | 37.280     | 38.168      | 39.351      | 41.126      | 42.014      | 42.310       | 41.422       | 39.647       | 39.351       |
| <b>77.5</b> | 29.587     | 30.179      | 31.362      | 32.842      | 33.433      | 33.433       | 32.842       | 31.658       | 31.066       |
| <b>80.0</b> | 22.486     | 22.486      | 23.078      | 24.558      | 24.853      | 25.149       | 24.853       | 23.965       | 23.670       |
| <b>82.5</b> | 15.681     | 15.681      | 15.977      | 16.865      | 17.160      | 17.456       | 17.456       | 17.160       | 16.865       |
| <b>85.0</b> | 9.468      | 9.468       | 9.763       | 10.060      | 10.356      | 10.652       | 10.652       | 10.652       | 10.652       |
| <b>87.5</b> | 3.847      | 3.847       | 4.142       | 3.847       | 4.142       | 4.734        | 4.734        | 4.734        | 4.734        |
| <b>90.0</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 3D90 - HP-2-C-D-P-28IN-9-16IN-V-8TW-ITL94330.904.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 228.75  | N.A.  | 14.70  |
| 0-30    | 473.23  | N.A.  | 30.40  |
| 0-40    | 752.38  | N.A.  | 48.40  |
| 0-60    | 1260.18 | N.A.  | 81.10  |
| 0-80    | 1527.99 | N.A.  | 98.30  |
| 0-90    | 1554.5  | N.A.  | 100.00 |
| 10-90   | 1494.28 | N.A.  | 96.10  |
| 20-40   | 523.62  | N.A.  | 33.70  |
| 20-50   | 797.05  | N.A.  | 51.30  |
| 40-70   | 679.22  | N.A.  | 43.70  |
| 60-80   | 267.81  | N.A.  | 17.20  |
| 70-80   | 96.40   | N.A.  | 6.20   |
| 80-90   | 26.51   | 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   | 1554.5  | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 60.22  |
| 10-20   | 168.54 |
| 20-30   | 244.47 |
| 30-40   | 279.15 |
| 40-50   | 273.42 |
| 50-60   | 234.38 |
| 60-70   | 171.41 |
| 70-80   | 96.40  |
| 80-90   | 26.51  |
| 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

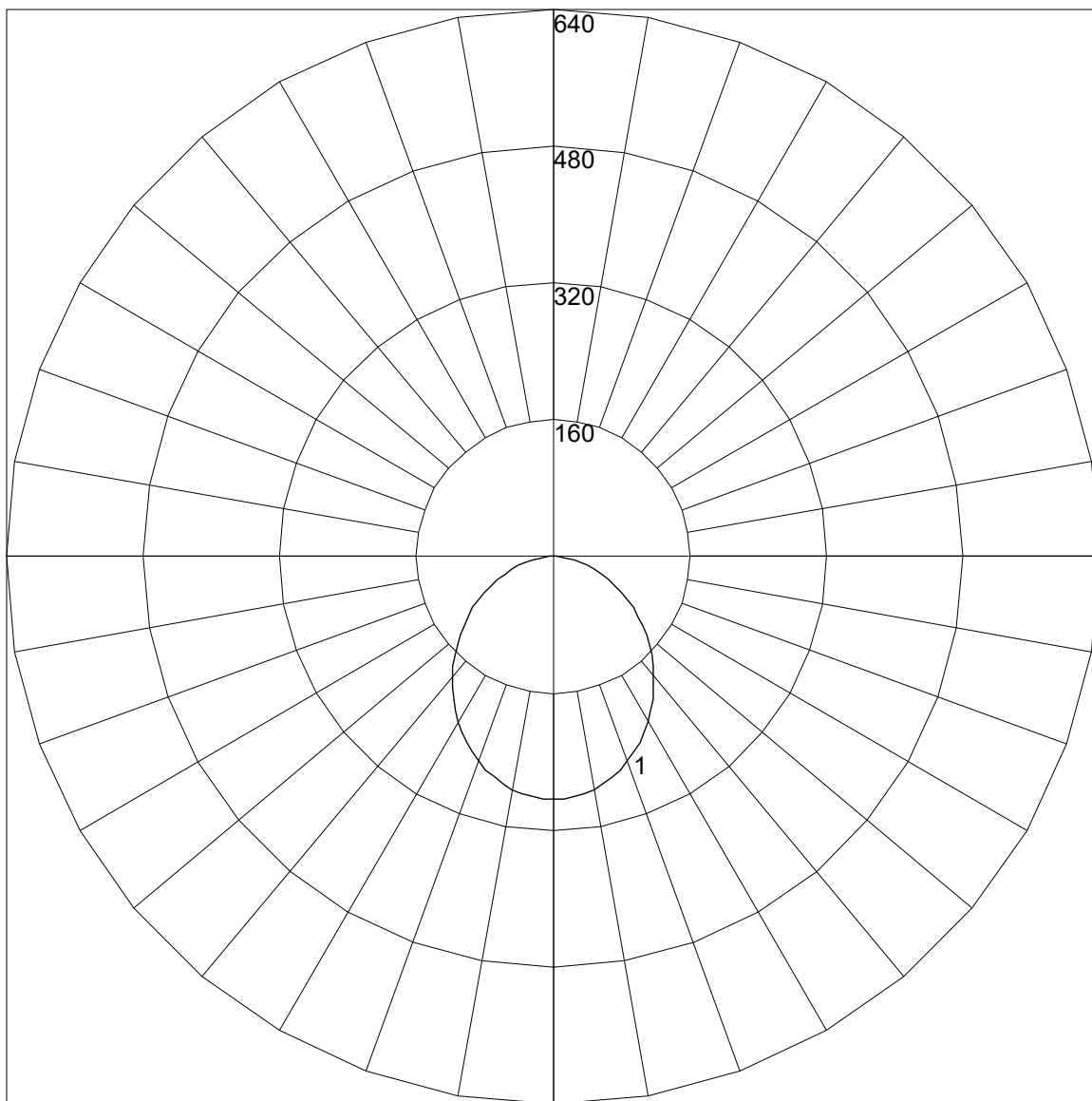
PHOTOMETRIC FILENAME : 3D90 - HP-2-C-D-P-28IN-9-16IN-V-8TW-ITL94330.904.IES

## 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  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 109 | 104 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 90  | 88  | 87  | 85  |
| 2  | 100 | 92  | 85  | 79  | 97  | 90  | 84  | 78  | 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  | 66  | 63  | 60  |
| 4  | 84  | 72  | 63  | 57  | 81  | 71  | 63  | 56  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 58  | 54  | 52  |
| 5  | 77  | 65  | 56  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 48  | 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 = 640.36 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)