- Used for Additional Tubing \& Angle Adaptors - Develop Factors due to Variance from Test Configuration.
- Table will help you calculate the actual light loss associated with tubing and angles, however, the factors entered into Lighting Design Calculation Tools represent the effective light remaining
- Light Loss Factor = (100 -Tubing Factor Calculated) \%

| Table 1: Spectralight ${ }^{\circledR}$ Infinity Efficiency and Light Loss Factors |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 160 DS Spectralight® Infinity Tubing |  |  | 290 DS Spectralight® Infinity Tubing |  |  | 330 DS \& 750 DS Spectralight® Infinity Tubing |  |  |
| Solar Altitude Angle | $30^{\circ}$ | $40^{\circ}$ | $50^{\circ}$ | $30^{\circ}$ | $40^{\circ}$ | $50^{\circ}$ | $30^{\circ}$ | $40^{\circ}$ | $50^{\circ}$ |
| Light Loss per Linear Foot (304.8mm) | 0.94\% | 0.66\% | 0.47\% | 0.62\% | 0.43\% | 0.31\% | 0.45\% | 0.31\% | 0.22\% |
| Loss for 10 ft ( 3048 mm ) tube run | 9.41\% | 6.57\% | 4.67\% | 6.16\% | 4.30\% | 3.06\% | 4.47\% | 3.12\% | 2.22\% |
| Loss for 20ft ( 6096 mm ) tube run | 18.81\% | 13.13\% | 9.34\% | 12.33\% | 8.61\% | 6.12\% | 8.94\% | 6.24\% | 4.43\% |
| Loss for 30ft ( 9144 mm ) tube run | . $28.22 \%$ | .-79:70\% | -140\% | 18.49\% | 12.91\% | 9.18\% | 13.41\% | 9.36\% | 6.65\% |
| Loss for 40ft (12192mm) tube run | ...37:63\% | . $28.27 \%$ | . | . $2.24: 65 \%$ | - 77.7 21\% | - | 17.87\% | 12.48\% | 8.87\% |
|  |  |  |  |  |  |  |  |  |  |
| 0-90 Degree Extension Tube (loss per elbow)* | 5\% | 5\% | 5\% | 5\% | 5\% | 5\% | 5\% | 5\% | 5\% |
| *Average loss (varies slightly @ lower | Solar Altitude | Angles) <br> For optimal | erformance | tube reco | ends not ex | eding sugge | d tube length |  |  |

- Accounts for Dirt, Additional Tubing, \& Angle Adaptors
- Example: S750DS-C, $25 \mathrm{ft}(7620 \mathrm{~mm}$ ), Two 90-Deg Elbows
- Incremental Tube Light Loss $=(25 \mathrm{ft}-10 \mathrm{ft}) \times 0.0031=\mathbf{0 . 0 4 6 5}$
- Elbow Light Loss $=2 \times 0.05=0.1$
- Total Tube \& Angle Light Loss Factor $=1.0-(0.0465+0.1)=0.8535$
- Dirt Depreciation Factor $=0.92$
- Total LLF $=0.92 \times 0.8535$
$=0.79(79 \%$ of Photometry Output is Emitted from Lens)

|  | 160 DS Spectralight® Infinity Tubing |  |  | 290 DS Spectralight® Infinity Tubing |  |  | 330 DS \& 750 DS Spectralight® Infinity Tubing |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Solar Altitude Angle | $30^{\circ}$ | $40^{\circ}$ | $50^{\circ}$ | $30^{\circ}$ | $40^{\circ}$ | $50^{\circ}$ | $30^{\circ}$ | $40^{\circ}$ | $50^{\circ}$ |
| Light Loss per Linear Foot ( 304.8 mm ) | 0.94\% | 0.66\% | 0.47\% | 0.62\% | 0.43\% | 0.31\% | 0.45\% | 0.31\% | 0.22\% |
| Loss for 10 ft ( 3048 mm ) tube run | 9.41\% | 6.57\% | 4.67\% | 6.16\% | 4.30\% | 3.06\% | 4.47\% | $3.1 \mathrm{k} \%$ | 2.22\% |
| Loss for 20ft (6096mm) tube run | 18.81\% | 13.13\% | 9.34\% | 12.33\% | 8.61\% | 6.12\% | 8.94\% | 6.24\% | 4.43\% |
| Loss for 30ft ( 9144 mm ) tube run | -28:22\% | .-.79:70\% | .-64:00\% | 18.49\% | 12.91\% | 9.18\% | 13.41\% | 9.36\% | 6.65\% |
| Loss for 40ft (12192mm) tube run | . $3763 \%$ | -26:27\% | ...78:67\% | 24:65\% | . $7.772 \%$ | . | 17.87\% | 12.48\% | 8.87\% |
|  |  |  |  |  |  |  |  |  |  |
| 0-90 Degree Extension Tube (loss per elbow)* | 5\% | 5\% | 5\% | 5\% | 5\% | 5\% | $\xrightarrow{5 \%}$ | 5\% | 5\% |

