

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: P381131

Luminaire Tested: **PRV-XL-PA4B-8540-U-T2U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P381131  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-568-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: PRV-XL-PA4B-8540-U-T2U  
Description: PREVAIL AREA AND ROADWAY LUMINAIRE  
(4) 85 CRI, 4000K, 970mA LIGHT ENGINES WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31043.6 lumens  
Efficiency: N/A  
Efficacy: 102.5 lumens/watt  
Luminous Opening: Rectangular (W 1.42' x L: 1.79' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G4

Input Watts (W): 303  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

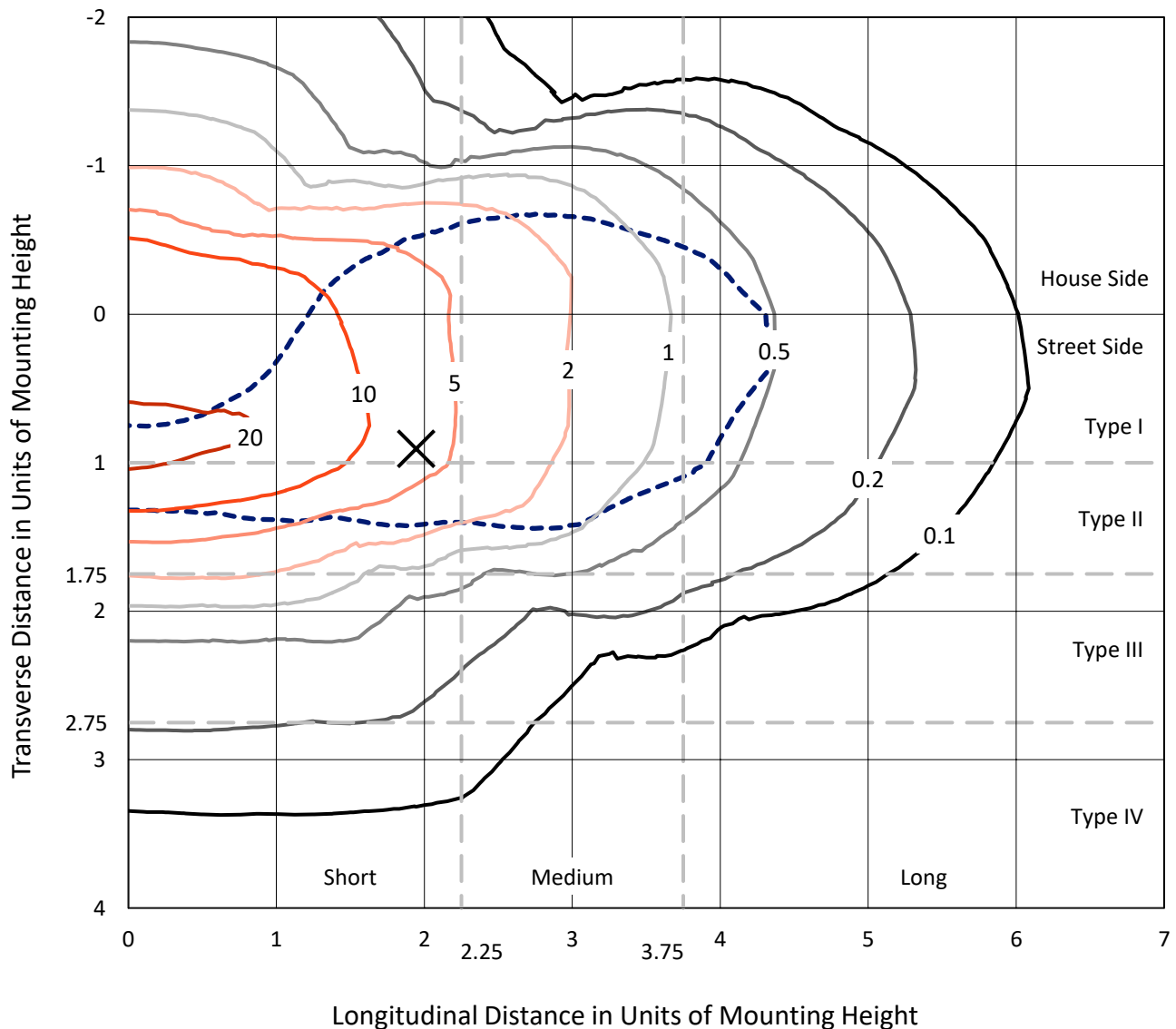


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

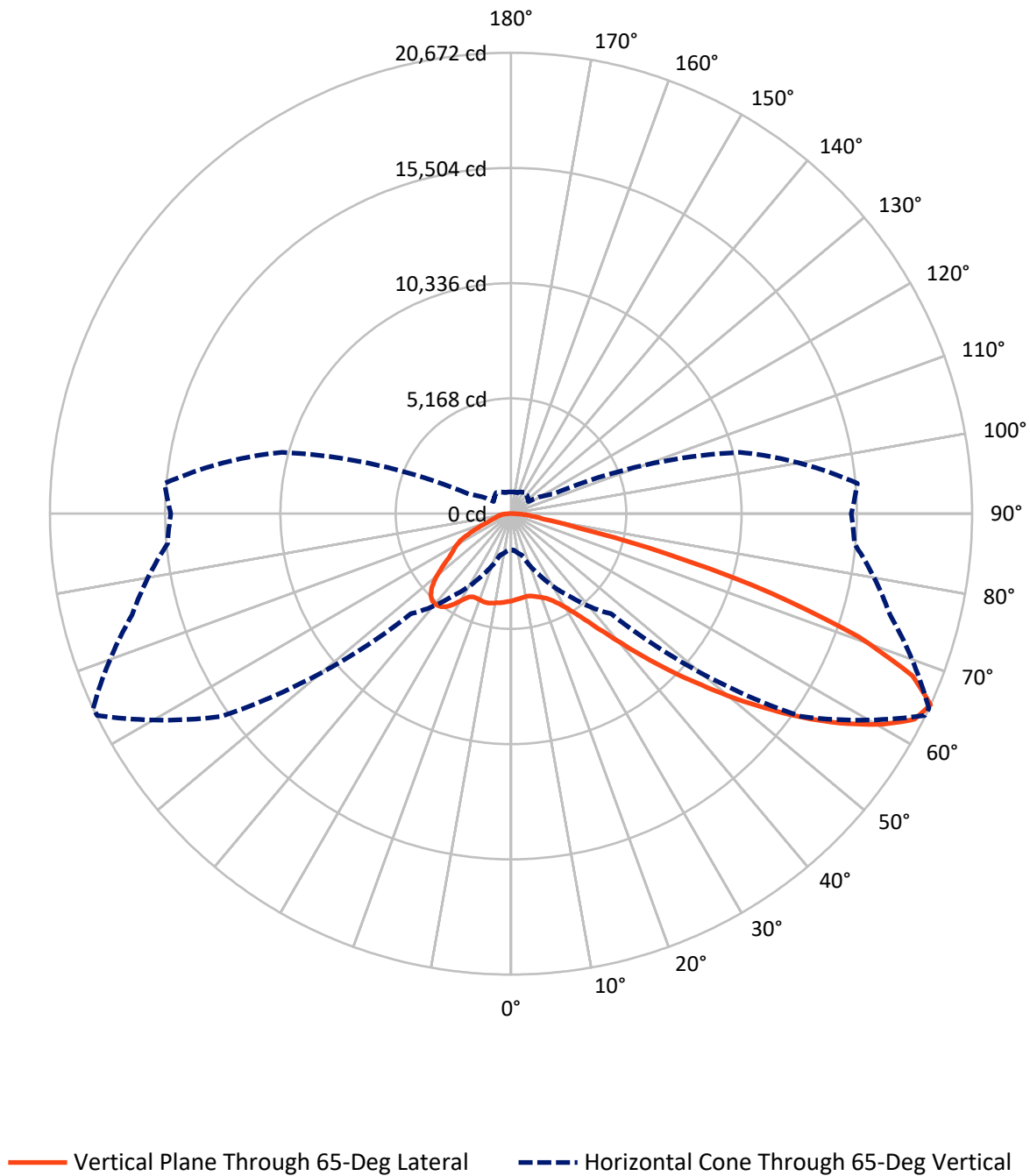


Based on 15 foot mounting height. Maximum calculated value = 23.8 fc  
Type II - Short - N/A

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## Luminous Intensity Polar Plot



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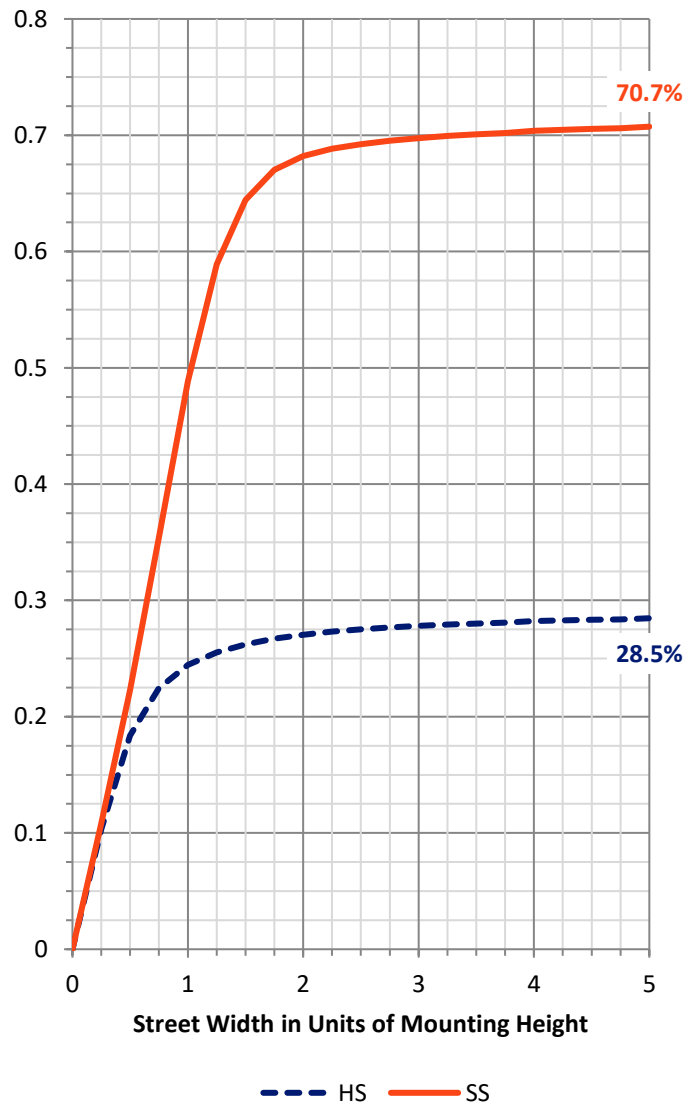
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8975.2   | 0.0    | 8975.2  |
|                    | % Fixture | 28.9     | 0.0    | 28.9    |
| <b>Street Side</b> | Lumens    | 22068.4  | 0.0    | 22068.4 |
|                    | % Fixture | 71.1     | 0.0    | 71.1    |
| <b>Total</b>       | Lumens    | 31043.6  | 0.0    | 31043.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 373.7   | 1.2       |
| 10°-20°   | 1115.8  | 3.6       |
| 20°-30°   | 1981.9  | 6.4       |
| 30°-40°   | 3352.9  | 10.8      |
| 40°-50°   | 5836.8  | 18.8      |
| 50°-60°   | 7543.0  | 24.3      |
| 60°-70°   | 6600.5  | 21.3      |
| 70°-80°   | 3590.2  | 11.6      |
| 80°-90°   | 648.7   | 2.1       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 31043.6 | 100.0     |
| 0°-180°   | 31043.6 | 100.0     |

**Coefficient of Utilization**



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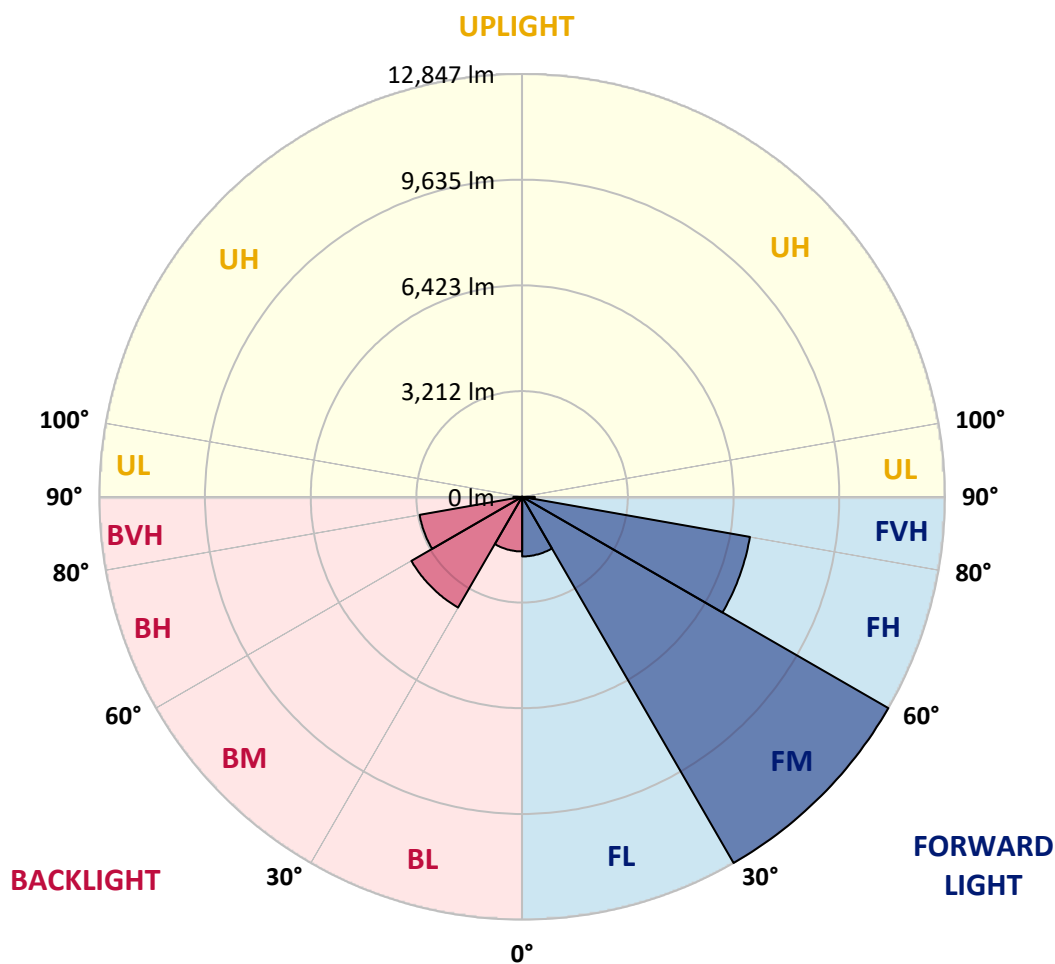
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1811.3  | 5.8       |                         |      |         |
| FM   | (30°-60°)   | 12846.7 | 41.4      |                         |      |         |
| FH   | (60°-80°)   | 7028.7  | 22.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 381.7   | 1.2       |                         |      | G3/500  |
| BL   | (0°-30°)    | 1660.1  | 5.3       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 3886.0  | 12.5      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 3162.1  | 10.2      | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 267.0   | 0.9       |                         |      | G3/500  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G4**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 64°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  | 3922.7  |
| 2.5°  | 3853.2  | 3849.1  | 3840.9  | 3849.1  | 3853.2  | 3861.4  | 3857.3  | 3865.4  | 3861.4  | 3873.7  | 3894.1  |
| 5°    | 3755.1  | 3747.0  | 3742.9  | 3763.3  | 3775.5  | 3796.0  | 3804.1  | 3832.8  | 3828.7  | 3849.1  | 3881.8  |
| 7.5°  | 3644.8  | 3644.8  | 3640.7  | 3665.2  | 3681.6  | 3718.4  | 3747.0  | 3796.0  | 3800.1  | 3836.9  | 3873.7  |
| 10°   | 3559.0  | 3563.1  | 3559.0  | 3579.4  | 3603.9  | 3648.9  | 3698.0  | 3767.4  | 3771.5  | 3824.6  | 3861.4  |
| 12.5° | 3526.3  | 3526.3  | 3526.3  | 3554.9  | 3587.6  | 3648.9  | 3706.1  | 3779.6  | 3787.8  | 3845.0  | 3877.7  |
| 15°   | 3571.3  | 3575.3  | 3567.2  | 3595.8  | 3632.6  | 3706.1  | 3759.2  | 3836.9  | 3845.0  | 3898.2  | 3918.6  |
| 17.5° | 3730.6  | 3747.0  | 3726.5  | 3742.9  | 3734.7  | 3791.9  | 3840.9  | 3918.6  | 3922.7  | 3967.6  | 3975.8  |
| 20°   | 4045.2  | 4061.6  | 4028.9  | 4008.5  | 3934.9  | 3930.8  | 3951.3  | 4012.6  | 4012.6  | 4041.1  | 4020.7  |
| 22.5° | 4531.5  | 4547.8  | 4490.7  | 4413.0  | 4237.3  | 4151.5  | 4106.5  | 4135.1  | 4131.0  | 4143.3  | 4090.2  |
| 25°   | 5177.1  | 5173.0  | 5103.5  | 4960.5  | 4678.6  | 4470.2  | 4359.9  | 4315.0  | 4315.0  | 4290.4  | 4225.1  |
| 27.5° | 5978.0  | 5916.7  | 5794.1  | 5622.5  | 5230.2  | 4940.1  | 4703.1  | 4588.7  | 4568.3  | 4494.7  | 4372.1  |
| 30°   | 6832.0  | 6787.0  | 6611.3  | 6362.0  | 5908.5  | 5536.7  | 5144.4  | 4915.6  | 4903.3  | 4744.0  | 4560.1  |
| 32.5° | 7837.1  | 7763.6  | 7567.5  | 7269.1  | 6725.7  | 6202.7  | 5712.4  | 5365.0  | 5344.6  | 5091.3  | 4837.9  |
| 35°   | 9128.4  | 9067.1  | 8687.1  | 8388.7  | 7690.1  | 7003.5  | 6423.3  | 5961.6  | 5945.2  | 5634.7  | 5312.0  |
| 37.5° | 10677.0 | 10517.6 | 10149.9 | 9590.1  | 8854.6  | 8041.4  | 7305.9  | 6725.7  | 6705.3  | 6362.0  | 5953.5  |
| 40°   | 12058.1 | 11915.1 | 11588.2 | 11073.3 | 10284.7 | 9381.7  | 8384.7  | 7681.9  | 7661.4  | 7244.6  | 6729.8  |
| 42.5° | 13079.6 | 12981.5 | 12769.1 | 12470.8 | 11906.9 | 11359.4 | 9761.7  | 8838.3  | 8801.5  | 8262.1  | 7620.5  |
| 45°   | 13672.1 | 13594.4 | 13471.9 | 13545.4 | 13537.3 | 13435.1 | 11404.3 | 10215.3 | 10096.8 | 9398.0  | 8613.5  |
| 47.5° | 13529.1 | 13459.6 | 13508.6 | 14080.7 | 14869.3 | 15461.8 | 13316.6 | 11625.0 | 11465.6 | 10554.4 | 9671.8  |
| 50°   | 12495.3 | 12523.9 | 12781.3 | 13876.4 | 15645.7 | 16961.4 | 15437.3 | 13230.8 | 13018.3 | 11718.9 | 10677.0 |
| 52.5° | 10611.6 | 10681.1 | 11306.2 | 12838.5 | 15559.9 | 17933.9 | 17353.7 | 14889.8 | 14607.8 | 12854.9 | 11592.2 |
| 55°   | 8429.6  | 8605.3  | 9414.4  | 11024.3 | 14440.3 | 18003.4 | 18800.1 | 16556.8 | 16246.3 | 13921.3 | 12389.1 |
| 57.5° | 6235.4  | 6496.9  | 7432.6  | 8911.8  | 12295.1 | 16904.2 | 19523.4 | 18150.5 | 17774.6 | 14979.7 | 13230.8 |
| 60°   | 3955.3  | 4114.7  | 5193.4  | 6938.2  | 9410.3  | 14215.5 | 19429.4 | 19507.0 | 19180.1 | 16033.9 | 14109.3 |
| 62.5° | 2525.2  | 2602.8  | 3146.3  | 4948.2  | 6578.6  | 10525.8 | 18403.8 | 20532.7 | 20312.0 | 16994.1 | 14942.9 |
| 65°   | 1622.2  | 1654.9  | 1932.8  | 3044.1  | 4478.4  | 6353.9  | 15850.0 | 20643.0 | 20671.6 | 17594.8 | 15457.8 |
| 67.5° | 1319.8  | 1336.2  | 1438.3  | 1879.6  | 3166.8  | 3510.0  | 11040.6 | 19074.0 | 19421.2 | 17439.4 | 15282.0 |
| 70°   | 1201.3  | 1221.7  | 1328.0  | 1499.6  | 2451.7  | 2423.1  | 5344.6  | 15960.3 | 16528.3 | 16544.6 | 14501.6 |
| 72.5° | 1013.4  | 1041.9  | 1185.0  | 1417.9  | 1896.0  | 1912.3  | 2263.7  | 11367.5 | 12205.2 | 14787.6 | 13328.9 |
| 75°   | 845.8   | 862.2   | 984.8   | 1250.4  | 1605.9  | 1528.2  | 1589.5  | 6027.0  | 7236.5  | 11857.8 | 12082.6 |
| 77.5° | 686.5   | 702.8   | 792.7   | 997.0   | 1426.1  | 1189.1  | 1250.4  | 2496.6  | 3085.0  | 8049.6  | 9876.1  |
| 80°   | 490.3   | 506.7   | 608.9   | 776.3   | 1078.7  | 1070.6  | 927.5   | 1377.0  | 1495.5  | 4351.7  | 6415.2  |
| 82.5° | 351.4   | 363.6   | 461.7   | 555.7   | 747.8   | 1074.7  | 698.7   | 935.7   | 980.6   | 1928.6  | 2586.5  |
| 85°   | 237.0   | 237.0   | 318.7   | 367.8   | 482.2   | 678.3   | 563.9   | 633.4   | 661.9   | 915.2   | 698.7   |
| 87.5° | 102.2   | 102.2   | 171.6   | 188.0   | 253.3   | 314.6   | 420.9   | 318.7   | 326.9   | 494.4   | 286.0   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

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**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°     | 105°    | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3922.7  | 3922.7  | 3922.7  | 3922.7 | 3922.7 | 3922.7 | 3922.7 | 3922.7 | 3922.7 | 3922.7 | 3922.7 |
| 2.5°  | 3906.3  | 3910.4  | 3918.6  | 3943.1 | 3959.4 | 3984.0 | 3996.2 | 4012.6 | 4012.6 | 4004.4 | 4008.5 |
| 5°    | 3898.2  | 3910.4  | 3939.0  | 3984.0 | 4012.6 | 4057.5 | 4090.2 | 4114.7 | 4122.9 | 4114.7 | 4118.8 |
| 7.5°  | 3894.1  | 3914.5  | 3963.5  | 4028.9 | 4069.7 | 4127.0 | 4171.9 | 4200.5 | 4220.9 | 4212.8 | 4216.8 |
| 10°   | 3881.8  | 3914.5  | 3975.8  | 4057.5 | 4118.8 | 4176.0 | 4216.8 | 4229.1 | 4241.4 | 4233.2 | 4229.1 |
| 12.5° | 3898.2  | 3934.9  | 4000.3  | 4098.4 | 4167.8 | 4212.8 | 4225.1 | 4204.6 | 4176.0 | 4159.7 | 4155.5 |
| 15°   | 3930.8  | 3967.6  | 4033.0  | 4135.1 | 4196.4 | 4212.8 | 4184.2 | 4118.8 | 4053.4 | 4016.6 | 4012.6 |
| 17.5° | 3975.8  | 4000.3  | 4053.4  | 4143.3 | 4192.3 | 4171.9 | 4114.7 | 4037.1 | 3988.1 | 3959.4 | 3963.5 |
| 20°   | 4004.4  | 4004.4  | 4045.2  | 4114.7 | 4155.5 | 4139.3 | 4069.7 | 3984.0 | 3906.3 | 3869.5 | 3857.3 |
| 22.5° | 4045.2  | 4024.8  | 4028.9  | 4090.2 | 4147.4 | 4122.9 | 3975.8 | 3824.6 | 3714.2 | 3673.4 | 3669.3 |
| 25°   | 4155.5  | 4098.4  | 4061.6  | 4098.4 | 4233.2 | 4033.0 | 3738.7 | 3563.1 | 3460.9 | 3424.1 | 3428.2 |
| 27.5° | 4290.4  | 4212.8  | 4135.1  | 4196.4 | 4302.7 | 3828.7 | 3436.4 | 3236.2 | 3174.9 | 3146.3 | 3158.5 |
| 30°   | 4425.3  | 4323.1  | 4220.9  | 4441.6 | 4253.6 | 3510.0 | 3048.2 | 2852.1 | 2799.0 | 2778.6 | 2794.9 |
| 32.5° | 4674.5  | 4506.9  | 4384.4  | 4768.5 | 4102.5 | 3146.3 | 2627.4 | 2447.6 | 2398.6 | 2374.1 | 2365.8 |
| 35°   | 5091.3  | 4878.8  | 4756.3  | 5054.5 | 3889.9 | 2741.8 | 2243.3 | 2116.6 | 2063.5 | 2010.4 | 2002.2 |
| 37.5° | 5691.9  | 5434.5  | 5324.2  | 5218.0 | 3591.7 | 2341.3 | 1949.0 | 1863.2 | 1785.6 | 1703.9 | 1699.8 |
| 40°   | 6411.1  | 6076.0  | 5994.3  | 5291.5 | 3179.0 | 1965.4 | 1744.8 | 1663.0 | 1565.0 | 1487.3 | 1491.5 |
| 42.5° | 7240.6  | 6811.6  | 6635.8  | 5271.1 | 2668.2 | 1765.2 | 1597.6 | 1507.7 | 1421.9 | 1352.5 | 1348.4 |
| 45°   | 8127.2  | 7641.0  | 7236.5  | 5128.0 | 2161.5 | 1626.3 | 1507.7 | 1401.6 | 1315.8 | 1238.1 | 1229.9 |
| 47.5° | 9107.9  | 8564.5  | 7792.2  | 4850.2 | 1785.6 | 1528.2 | 1454.7 | 1303.5 | 1225.9 | 1176.8 | 1176.8 |
| 50°   | 10096.8 | 9447.1  | 8302.9  | 4429.4 | 1565.0 | 1454.7 | 1377.0 | 1250.4 | 1189.1 | 1148.2 | 1148.2 |
| 52.5° | 10942.6 | 10366.5 | 8723.8  | 3926.7 | 1426.1 | 1393.3 | 1323.9 | 1225.9 | 1160.5 | 1123.7 | 1119.6 |
| 55°   | 11763.9 | 11220.5 | 9099.7  | 3428.2 | 1311.6 | 1311.6 | 1311.6 | 1205.4 | 1131.8 | 1099.2 | 1095.1 |
| 57.5° | 12581.1 | 12119.4 | 9492.0  | 3101.4 | 1209.5 | 1242.2 | 1287.1 | 1180.9 | 1107.3 | 1078.7 | 1074.7 |
| 60°   | 13504.6 | 13198.1 | 9945.6  | 2872.5 | 1119.6 | 1168.6 | 1254.4 | 1152.3 | 1066.4 | 1041.9 | 1037.9 |
| 62.5° | 14485.3 | 14485.3 | 10358.3 | 2549.8 | 1037.9 | 1107.3 | 1205.4 | 1115.5 | 1029.7 | 1009.3 | 1005.2 |
| 65°   | 15253.4 | 15584.4 | 10623.9 | 2067.6 | 956.1  | 1046.0 | 1148.2 | 1066.4 | 980.6  | 976.6  | 968.4  |
| 67.5° | 15343.3 | 15862.2 | 10456.3 | 1560.9 | 882.6  | 980.6  | 1091.0 | 1013.4 | 931.6  | 931.6  | 919.4  |
| 70°   | 14697.7 | 15224.8 | 9933.3  | 1168.6 | 829.5  | 915.2  | 1017.4 | 948.0  | 870.3  | 878.5  | 858.1  |
| 72.5° | 13619.0 | 13749.7 | 8633.9  | 923.5  | 768.2  | 845.8  | 927.5  | 874.5  | 804.9  | 804.9  | 776.3  |
| 75°   | 12197.0 | 11469.7 | 6272.1  | 772.3  | 694.6  | 764.1  | 837.7  | 792.7  | 731.4  | 711.0  | 694.6  |
| 77.5° | 9708.6  | 8311.2  | 3644.8  | 666.0  | 633.4  | 686.5  | 735.5  | 702.8  | 649.7  | 604.7  | 604.7  |
| 80°   | 5916.7  | 4870.7  | 1609.9  | 576.1  | 559.8  | 600.6  | 633.4  | 596.6  | 551.6  | 506.7  | 494.4  |
| 82.5° | 2251.4  | 1879.6  | 780.4   | 494.4  | 490.3  | 514.8  | 539.3  | 502.6  | 469.9  | 449.4  | 388.2  |
| 85°   | 617.0   | 568.0   | 535.3   | 412.7  | 404.5  | 400.4  | 429.0  | 412.7  | 367.8  | 302.4  | 269.7  |
| 87.5° | 232.9   | 265.6   | 290.1   | 253.3  | 269.7  | 249.2  | 286.0  | 261.5  | 232.9  | 151.2  | 134.8  |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)