

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: McGRAW-EDISON

Report Number: P400598

Luminaire Tested: **TT-D1-840-U-RW**

Issue Date: 6/3/2020

#### Test Information

Test Method: LM-79-08  
Report Number: P400598  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P197998)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D1-840-U-RW  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE  
4000K, 80 CRI LEDS AND RECTANGULAR DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

#### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 3219 lumens  
Efficiency: N/A  
Efficacy: 115.0 lumens/watt  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 28  
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



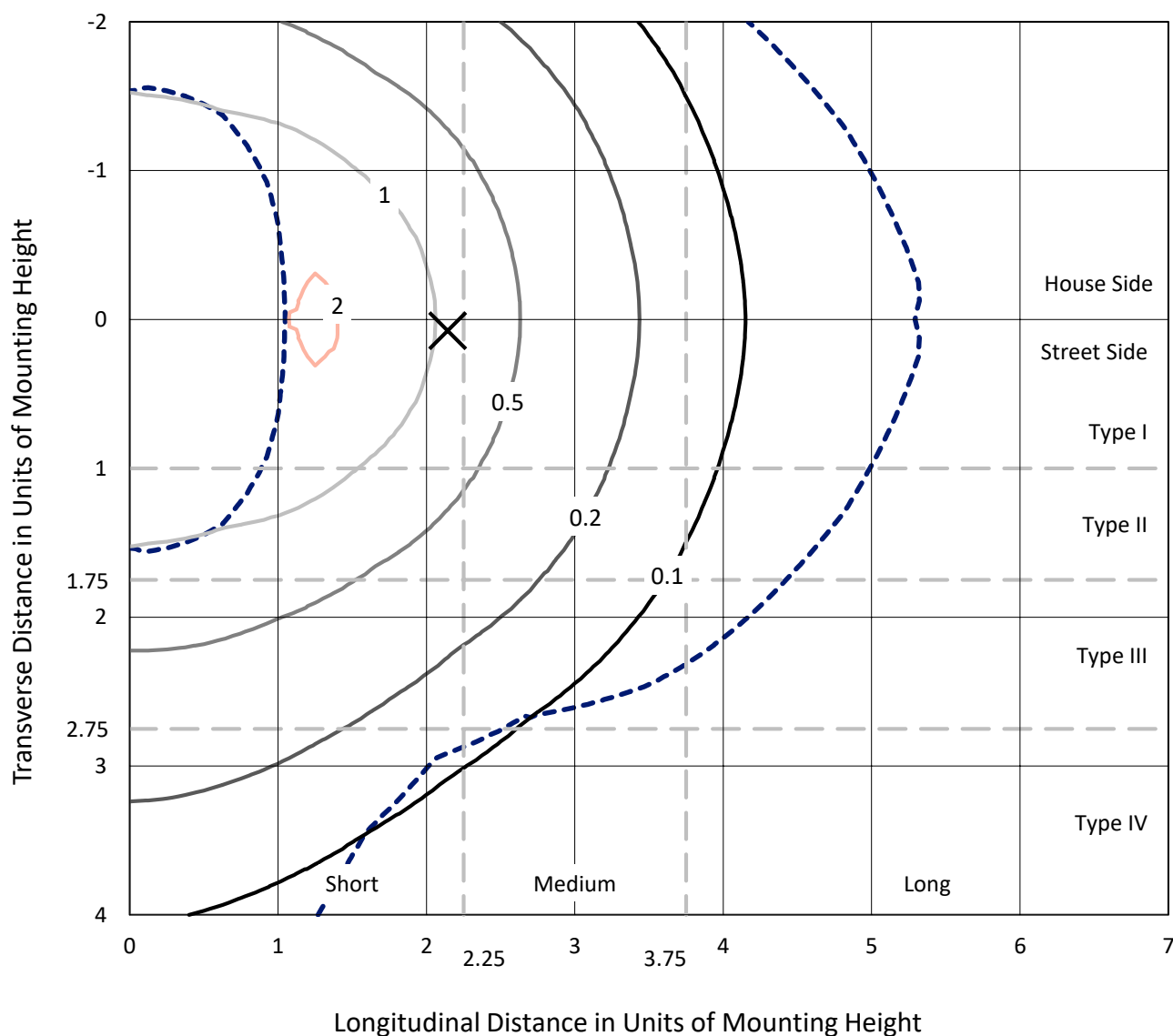
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

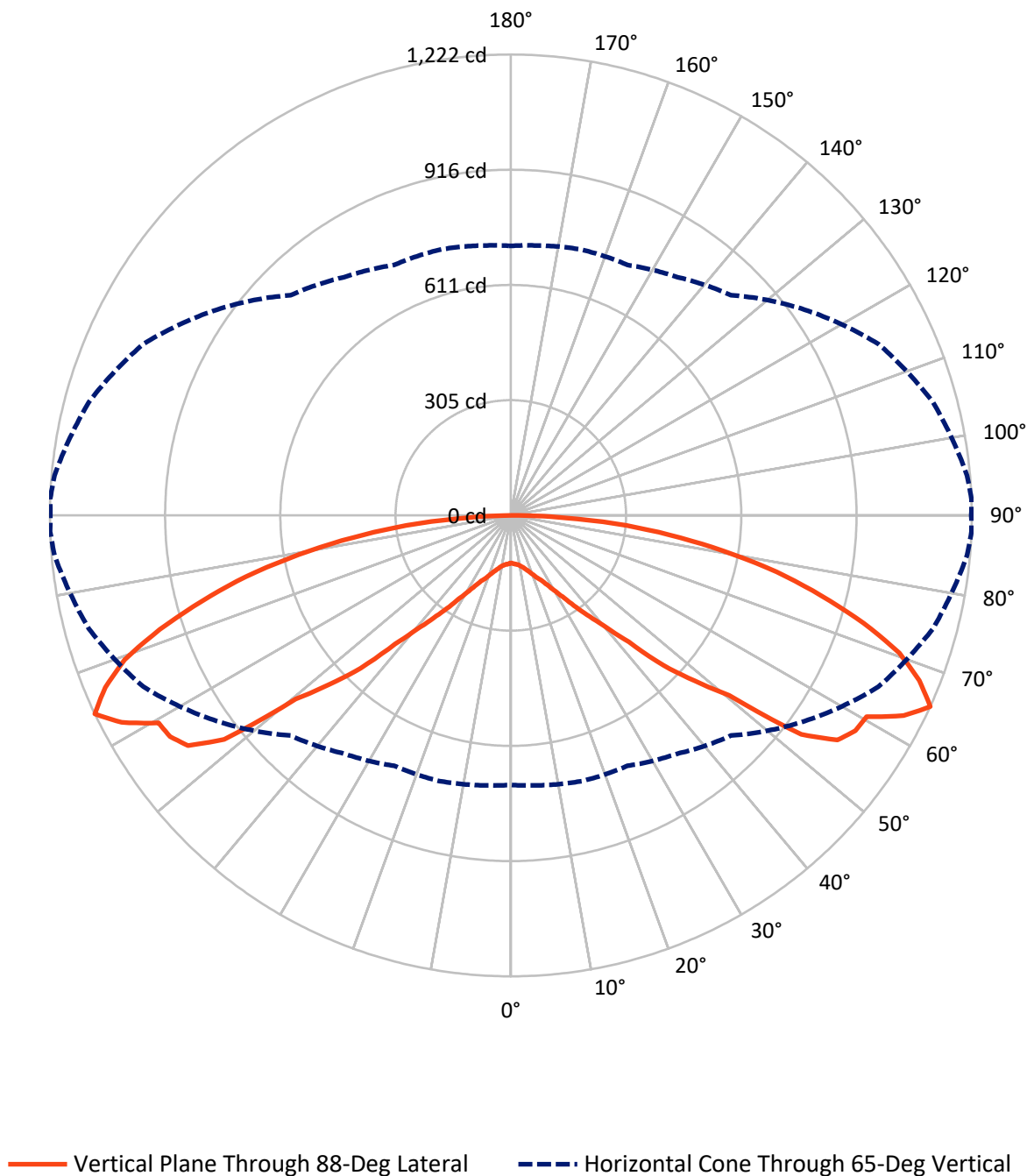


Based on 10 foot mounting height. Maximum calculated value = 2.1 fc  
 Type V - Short - Semi-Cutoff

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## Luminous Intensity Polar Plot



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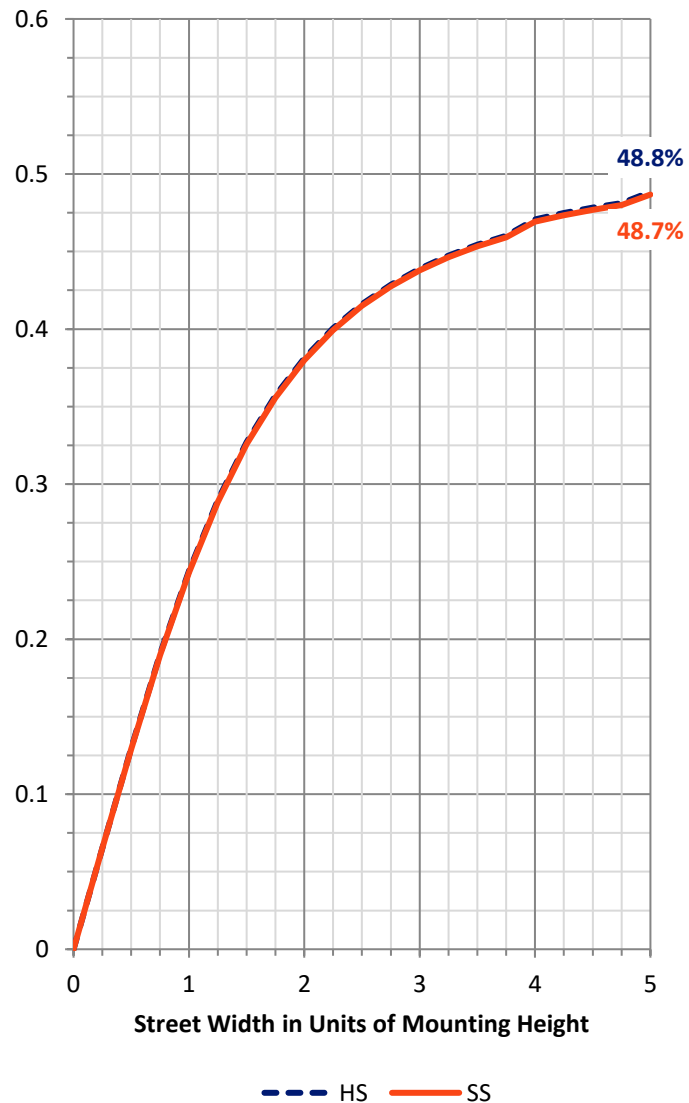
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1609.5   | 0.0    | 1609.5 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 1609.5   | 0.0    | 1609.5 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 3219.0   | 0.0    | 3219.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 12.6   | 0.4       |
| 10°-20°   | 43.8   | 1.4       |
| 20°-30°   | 96.8   | 3.0       |
| 30°-40°   | 192.9  | 6.0       |
| 40°-50°   | 369.3  | 11.5      |
| 50°-60°   | 661.0  | 20.5      |
| 60°-70°   | 875.8  | 27.2      |
| 70°-80°   | 730.9  | 22.7      |
| 80°-90°   | 235.8  | 7.3       |
| 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°    | 3219.0 | 100.0     |
| 0°-180°   | 3219.0 | 100.0     |

**Coefficient of Utilization**



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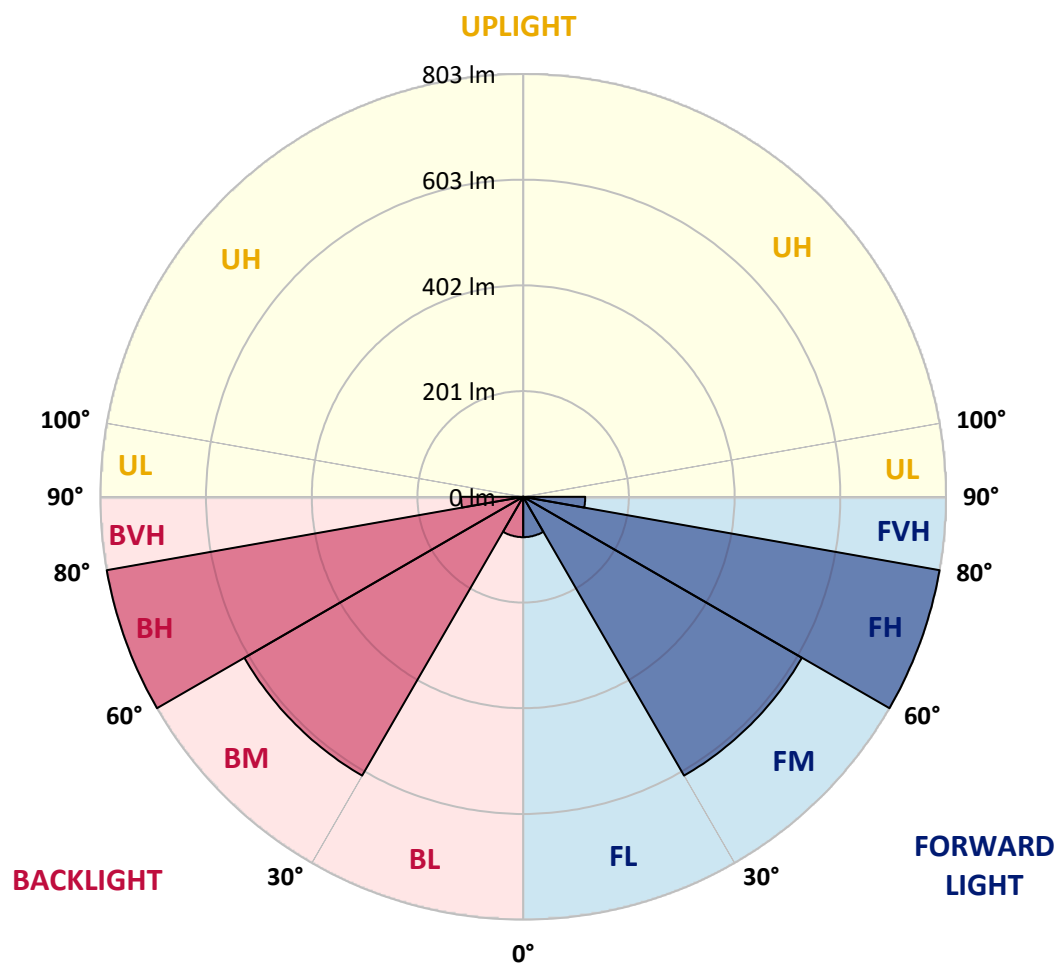
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 76.6   | 2.4       |                         |      |         |
| FM   | (30°-60°)   | 611.6  | 19.0      |                         |      |         |
| FH   | (60°-80°)   | 803.4  | 25.0      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 117.9  | 3.7       |                         |      | G2/225  |
| BL   | (0°-30°)    | 76.6   | 2.4       | B0/110                  |      |         |
| BM   | (30°-60°)   | 611.6  | 19.0      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 803.4  | 25.0      | B2/1000                 |      | G1/1800 |
| BVH  | (80°-90°)   | 117.9  | 3.7       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 15°   | 25°   | 35°   | 45°   | 55°   | 65°    | 75°    | 85°    | 88°    |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0°    | 126.0 | 126.0 | 126.0 | 126.0 | 126.0 | 126.0 | 126.0 | 126.0  | 126.0  | 126.0  | 126.0  |
| 2.5°  | 127.3 | 127.3 | 127.3 | 127.3 | 127.9 | 127.9 | 127.9 | 127.9  | 127.9  | 127.9  | 127.9  |
| 5°    | 129.2 | 129.2 | 129.8 | 129.8 | 130.5 | 130.5 | 130.5 | 130.5  | 129.8  | 129.8  | 129.8  |
| 7.5°  | 132.4 | 133.0 | 133.6 | 133.6 | 133.6 | 133.0 | 132.4 | 132.4  | 131.7  | 131.7  | 131.7  |
| 10°   | 138.1 | 138.1 | 138.7 | 138.7 | 138.1 | 137.4 | 136.8 | 136.2  | 136.2  | 136.2  | 135.5  |
| 12.5° | 145.0 | 145.0 | 145.7 | 145.0 | 143.8 | 143.1 | 141.9 | 141.2  | 141.2  | 140.6  | 140.6  |
| 15°   | 154.5 | 155.8 | 155.8 | 153.9 | 152.0 | 150.1 | 149.5 | 148.2  | 148.2  | 148.2  | 148.2  |
| 17.5° | 169.1 | 168.5 | 165.9 | 164.0 | 162.8 | 159.6 | 158.3 | 157.7  | 156.4  | 156.4  | 156.4  |
| 20°   | 185.6 | 184.3 | 181.1 | 178.6 | 176.1 | 172.3 | 169.7 | 168.5  | 167.8  | 167.2  | 167.2  |
| 22.5° | 204.0 | 202.1 | 197.6 | 195.7 | 190.7 | 186.8 | 183.7 | 181.1  | 179.2  | 178.6  | 179.9  |
| 25°   | 223.0 | 223.0 | 219.2 | 214.1 | 209.0 | 203.3 | 198.9 | 195.7  | 193.2  | 192.6  | 191.9  |
| 27.5° | 243.2 | 244.5 | 239.4 | 234.4 | 228.7 | 221.1 | 216.6 | 212.2  | 211.6  | 210.9  | 210.3  |
| 30°   | 264.8 | 267.3 | 262.2 | 257.2 | 249.6 | 242.0 | 236.3 | 234.4  | 232.5  | 233.7  | 233.7  |
| 32.5° | 291.4 | 292.6 | 286.9 | 283.1 | 273.0 | 265.4 | 260.3 | 259.1  | 259.7  | 259.1  | 261.0  |
| 35°   | 322.4 | 320.5 | 316.1 | 308.5 | 299.6 | 292.6 | 288.8 | 291.4  | 298.3  | 300.9  | 299.6  |
| 37.5° | 356.6 | 349.6 | 347.1 | 337.6 | 329.4 | 323.7 | 324.9 | 331.3  | 337.0  | 341.4  | 340.1  |
| 40°   | 381.9 | 383.2 | 376.2 | 367.4 | 359.8 | 358.5 | 365.5 | 373.7  | 384.5  | 388.3  | 389.5  |
| 42.5° | 407.9 | 415.5 | 407.3 | 398.4 | 394.6 | 397.1 | 407.3 | 423.7  | 447.8  | 460.5  | 458.6  |
| 45°   | 437.7 | 445.9 | 437.0 | 430.1 | 429.4 | 438.9 | 461.1 | 504.2  | 539.6  | 565.0  | 567.5  |
| 47.5° | 468.7 | 475.0 | 466.8 | 462.4 | 468.7 | 487.1 | 525.1 | 582.7  | 620.7  | 650.5  | 655.6  |
| 50°   | 508.0 | 505.4 | 499.1 | 498.5 | 512.4 | 546.0 | 597.3 | 655.6  | 724.0  | 743.6  | 749.9  |
| 52.5° | 546.6 | 537.1 | 535.8 | 539.0 | 563.7 | 601.7 | 670.1 | 784.8  | 885.5  | 956.4  | 964.0  |
| 55°   | 582.7 | 572.0 | 574.5 | 582.7 | 617.6 | 675.2 | 770.2 | 910.2  | 998.2  | 1048.3 | 1050.8 |
| 57.5° | 615.7 | 609.3 | 615.0 | 626.4 | 678.4 | 752.5 | 853.2 | 968.5  | 1035.0 | 1070.4 | 1076.8 |
| 60°   | 649.2 | 648.0 | 654.9 | 675.8 | 731.6 | 797.4 | 881.7 | 983.7  | 1050.2 | 1077.4 | 1083.7 |
| 62.5° | 680.9 | 685.3 | 694.2 | 714.5 | 757.5 | 808.8 | 890.5 | 1015.3 | 1114.8 | 1157.8 | 1168.6 |
| 65°   | 714.5 | 718.3 | 729.0 | 732.2 | 770.8 | 825.3 | 950.7 | 1074.9 | 1158.5 | 1214.2 | 1221.8 |
| 67.5° | 744.9 | 749.9 | 746.1 | 743.6 | 777.2 | 825.3 | 938.7 | 1047.6 | 1117.3 | 1159.7 | 1168.0 |
| 70°   | 774.0 | 768.3 | 753.1 | 733.5 | 743.0 | 775.9 | 879.8 | 974.2  | 1044.5 | 1084.4 | 1092.6 |
| 72.5° | 781.6 | 774.0 | 733.5 | 688.5 | 674.6 | 699.3 | 794.9 | 878.5  | 936.1  | 973.5  | 978.6  |
| 75°   | 762.0 | 746.1 | 677.7 | 615.7 | 589.1 | 613.8 | 693.6 | 765.1  | 805.7  | 846.2  | 849.4  |
| 77.5° | 683.4 | 673.3 | 597.3 | 521.9 | 492.1 | 510.5 | 577.0 | 627.7  | 674.6  | 713.8  | 721.4  |
| 80°   | 561.2 | 552.3 | 485.2 | 423.7 | 383.8 | 396.5 | 445.3 | 485.8  | 530.8  | 561.8  | 571.3  |
| 82.5° | 413.0 | 411.7 | 363.6 | 305.9 | 278.1 | 276.8 | 313.5 | 353.4  | 387.6  | 417.4  | 423.7  |
| 85°   | 259.7 | 259.7 | 226.8 | 191.9 | 162.8 | 163.4 | 185.6 | 214.7  | 257.8  | 276.8  | 278.7  |
| 87.5° | 88.0  | 83.6  | 77.9  | 63.3  | 50.7  | 45.6  | 48.8  | 55.7   | 84.9   | 105.1  | 108.9  |
| 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°    |
|-------|--------|
| 0°    | 126.0  |
| 2.5°  | 127.9  |
| 5°    | 129.8  |
| 7.5°  | 131.7  |
| 10°   | 135.5  |
| 12.5° | 141.2  |
| 15°   | 147.6  |
| 17.5° | 156.4  |
| 20°   | 167.2  |
| 22.5° | 179.2  |
| 25°   | 191.9  |
| 27.5° | 210.9  |
| 30°   | 233.1  |
| 32.5° | 260.3  |
| 35°   | 300.2  |
| 37.5° | 341.4  |
| 40°   | 392.7  |
| 42.5° | 463.6  |
| 45°   | 561.2  |
| 47.5° | 655.6  |
| 50°   | 743.0  |
| 52.5° | 948.2  |
| 55°   | 1053.3 |
| 57.5° | 1076.1 |
| 60°   | 1081.8 |
| 62.5° | 1162.9 |
| 65°   | 1220.5 |
| 67.5° | 1167.3 |
| 70°   | 1090.7 |
| 72.5° | 974.8  |
| 75°   | 854.4  |
| 77.5° | 721.4  |
| 80°   | 563.7  |
| 82.5° | 423.7  |
| 85°   | 274.3  |
| 87.5° | 105.8  |
| 90°   | 0.0    |

(END OF REPORT)