

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: INVUE

Report Number: P188984

Luminaire Tested: **ABW-B1-LED-D1-S**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P188984
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34776)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ABW-B1-LED-D1-S
Description: ARBOR OUTDOOR ARCHITECTURAL WALLMOUNT
70 CRI, 4000K LEDS AND SYMMETRIC OPTIC, GRAPHITE METALLIC PAINTED FINISH
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 735.5 lumens
Efficiency: N/A
Efficacy: 46.0 lumens/watt
Luminous Opening: Circular (Dia: 4.75' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

Input Watts (W): 16
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: 24 FT

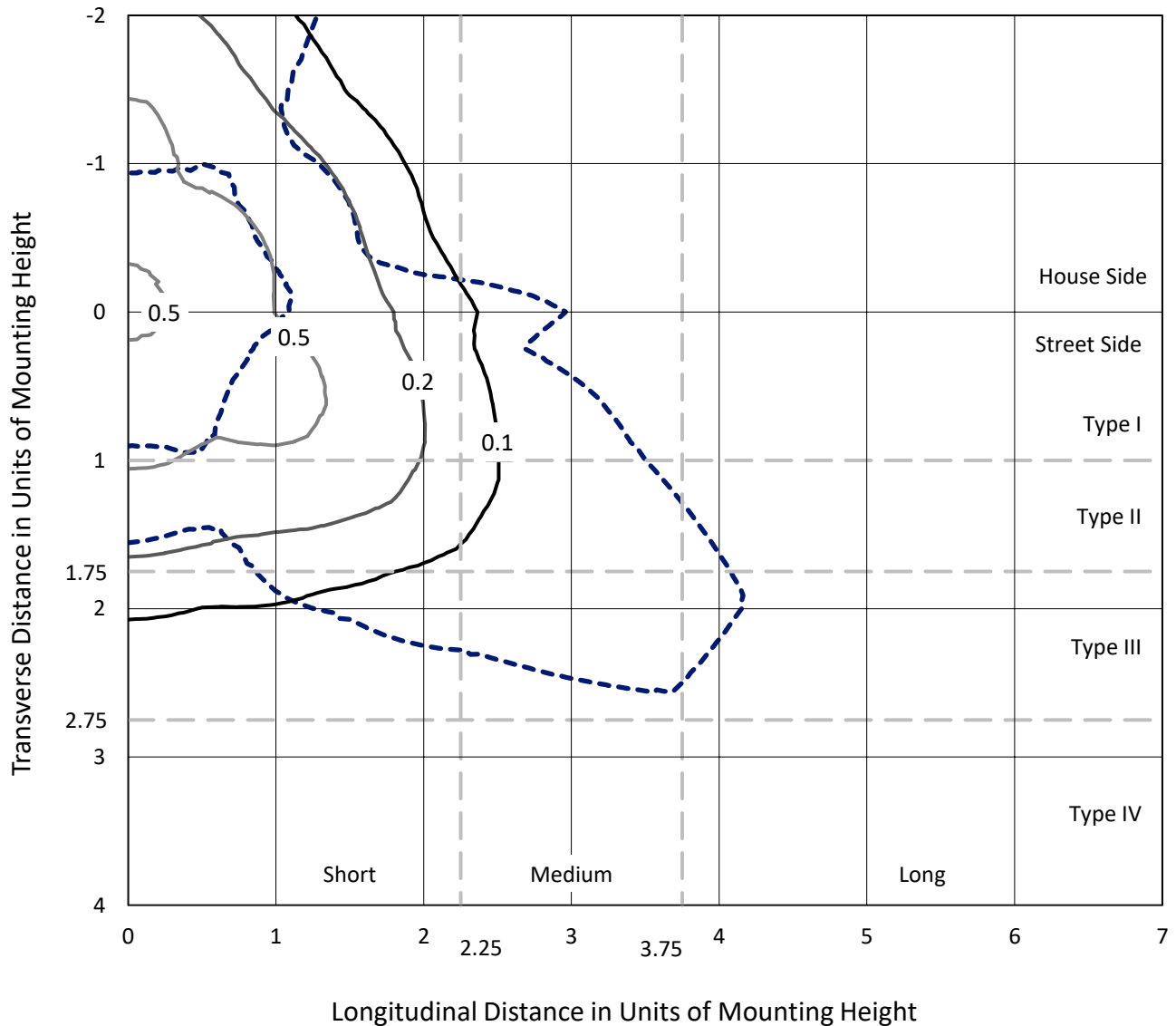


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Iso-Footcandle Lines of Horizontal Illumination

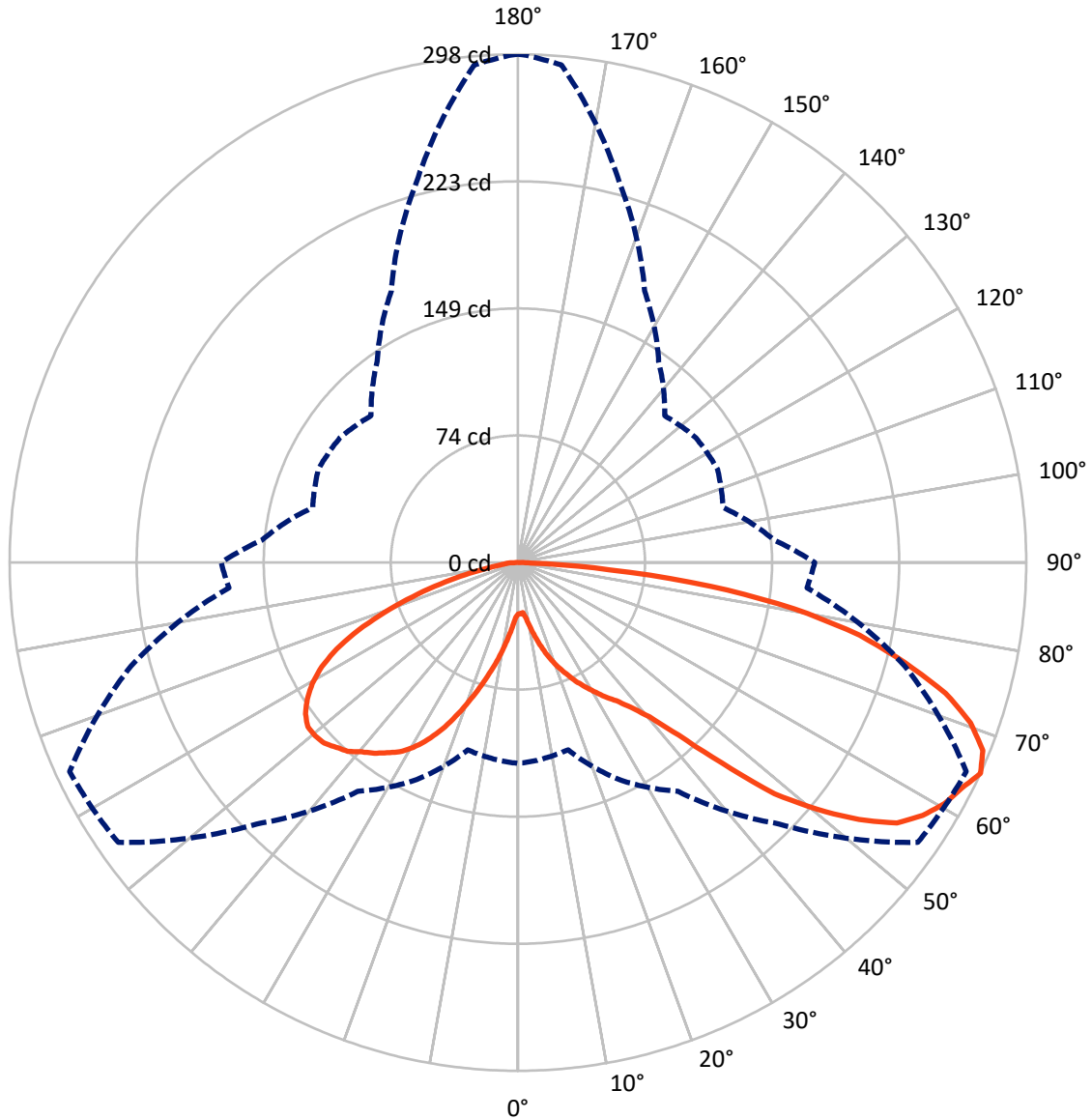
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 180-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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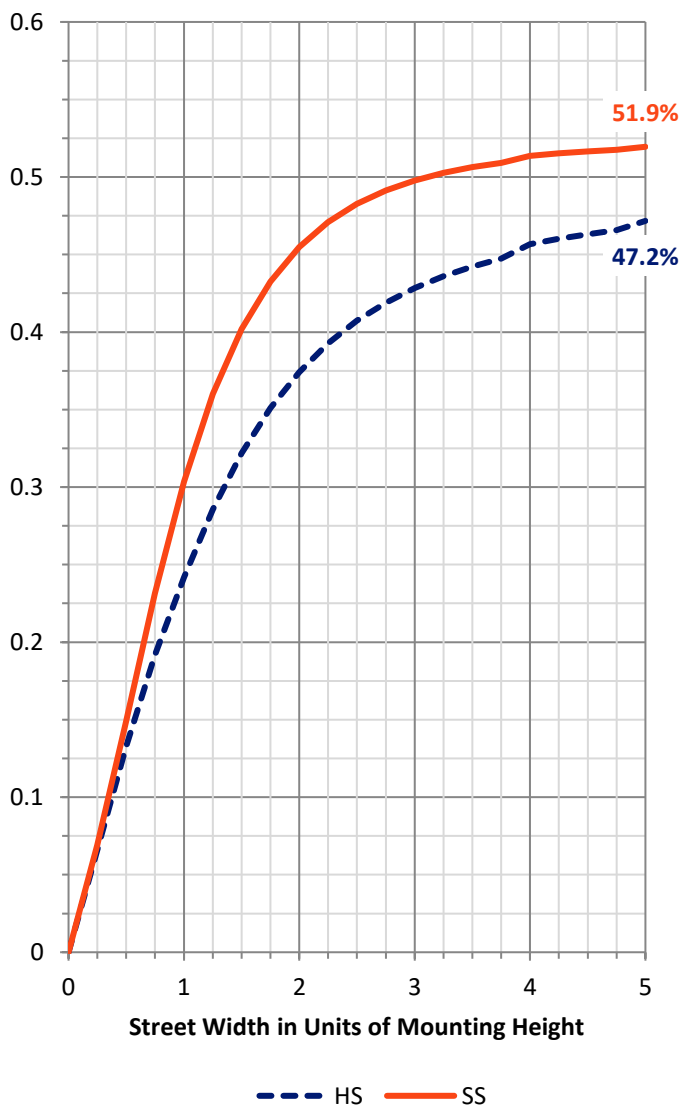
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| House Side | Lumens | 352.0 | 0.0 | 352.0 |
| | % Fixture | 47.9 | 0.0 | 47.9 |
| Street Side | Lumens | 383.5 | 0.0 | 383.5 |
| | % Fixture | 52.1 | 0.0 | 52.1 |
| Total | Lumens | 735.5 | 0.0 | 735.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 3.5 | 0.5 |
| 10°-20° | 16.9 | 2.3 |
| 20°-30° | 40.7 | 5.5 |
| 30°-40° | 72.9 | 9.9 |
| 40°-50° | 120.2 | 16.3 |
| 50°-60° | 167.7 | 22.8 |
| 60°-70° | 174.9 | 23.8 |
| 70°-80° | 116.4 | 15.8 |
| 80°-90° | 22.2 | 3.0 |
| 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° | 735.5 | 100.0 |
| 0°-180° | 735.5 | 100.0 |



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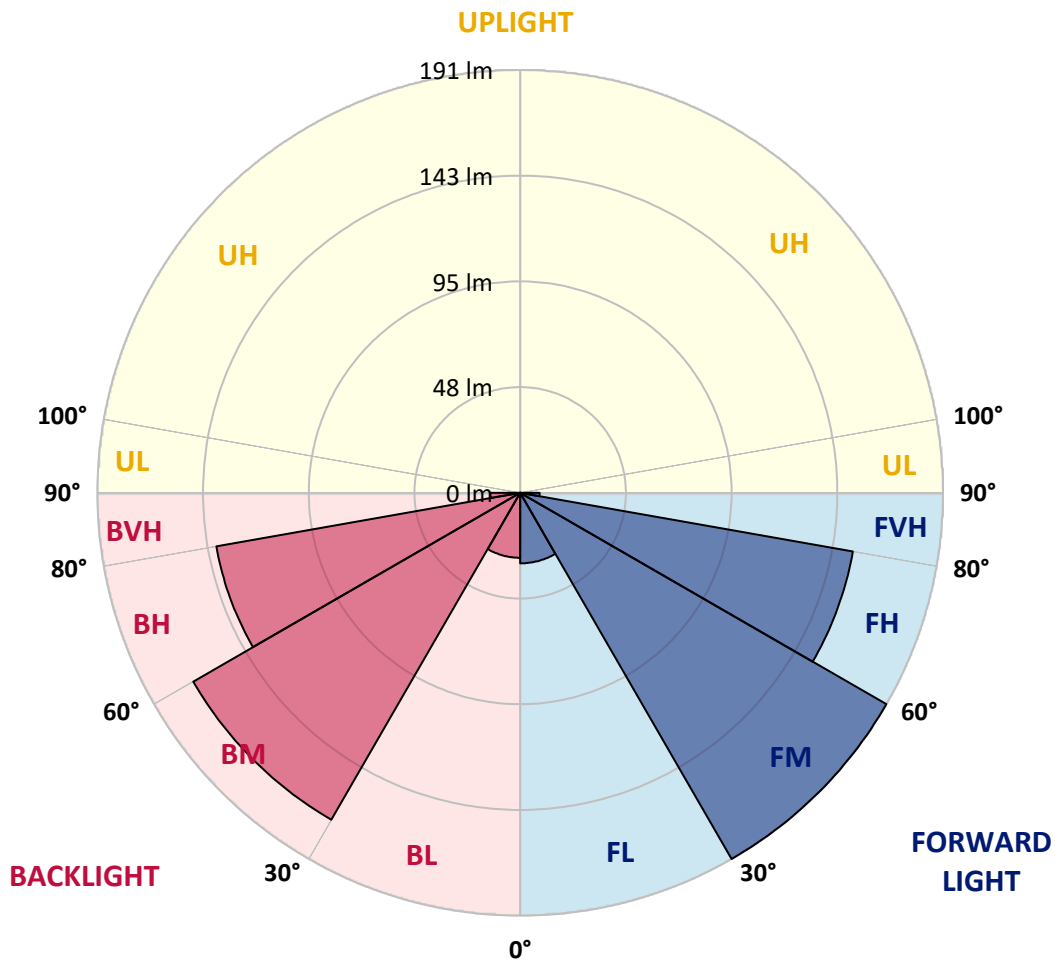
CATALOG NUMBER: ABW-B1-LED-D1-S

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 31.8 | 4.3 | | | |
| FM | (30°-60°) | 190.6 | 25.9 | | | |
| FH | (60°-80°) | 152.3 | 20.7 | | | G0/660 |
| FVH | (80°-90°) | 8.8 | 1.2 | | | G0/10 |
| BL | (0°-30°) | 29.3 | 4.0 | B0/110 | | |
| BM | (30°-60°) | 170.2 | 23.1 | B0/220 | | |
| BH | (60°-80°) | 139.1 | 18.9 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 13.5 | 1.8 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| 2.5° | 31.8 | 31.2 | 31.2 | 30.7 | 31.2 | 30.7 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| 5° | 36.9 | 36.9 | 36.9 | 37.5 | 36.9 | 35.8 | 35.2 | 34.7 | 33.5 | 33.0 | 32.4 |
| 7.5° | 43.2 | 43.7 | 43.7 | 44.3 | 43.2 | 42.0 | 40.9 | 39.8 | 38.6 | 38.1 | 37.5 |
| 10° | 50.6 | 51.1 | 50.6 | 50.6 | 50.0 | 48.9 | 47.2 | 46.0 | 44.9 | 44.3 | 44.3 |
| 12.5° | 59.1 | 58.5 | 57.9 | 57.9 | 56.2 | 54.5 | 53.4 | 52.3 | 51.7 | 51.1 | 51.1 |
| 15° | 67.0 | 67.6 | 65.9 | 64.8 | 63.1 | 61.4 | 60.2 | 58.5 | 57.9 | 57.9 | 57.9 |
| 17.5° | 76.7 | 76.1 | 73.9 | 72.2 | 69.9 | 67.6 | 65.9 | 65.3 | 64.2 | 64.2 | 64.8 |
| 20° | 86.4 | 85.2 | 82.4 | 79.0 | 76.7 | 74.4 | 72.2 | 71.6 | 70.4 | 71.0 | 71.6 |
| 22.5° | 97.1 | 96.0 | 90.3 | 85.8 | 82.9 | 80.1 | 77.8 | 77.3 | 76.7 | 77.8 | 78.4 |
| 25° | 107.4 | 106.2 | 98.9 | 93.2 | 89.2 | 86.4 | 83.5 | 82.9 | 82.9 | 84.7 | 84.7 |
| 27.5° | 116.5 | 115.3 | 107.4 | 99.4 | 94.9 | 92.0 | 89.8 | 89.2 | 89.2 | 90.3 | 91.5 |
| 30° | 124.4 | 123.3 | 115.3 | 106.2 | 100.6 | 97.7 | 96.0 | 95.4 | 95.4 | 96.6 | 97.1 |
| 32.5° | 130.7 | 129.5 | 122.7 | 112.5 | 106.2 | 104.0 | 103.4 | 102.3 | 102.3 | 102.8 | 104.0 |
| 35° | 135.2 | 134.1 | 129.5 | 119.3 | 111.9 | 110.8 | 111.4 | 110.2 | 109.6 | 109.1 | 109.6 |
| 37.5° | 139.8 | 139.2 | 134.6 | 125.6 | 118.2 | 120.4 | 122.1 | 122.7 | 119.9 | 115.3 | 115.9 |
| 40° | 143.7 | 143.7 | 140.3 | 132.4 | 125.6 | 132.9 | 142.0 | 142.0 | 135.2 | 123.3 | 123.3 |
| 42.5° | 148.8 | 148.8 | 146.6 | 139.2 | 135.8 | 151.1 | 168.7 | 169.9 | 154.0 | 135.8 | 132.9 |
| 45° | 151.7 | 152.8 | 151.7 | 144.9 | 144.9 | 167.0 | 200.0 | 201.7 | 172.1 | 145.4 | 139.8 |
| 47.5° | 155.1 | 155.1 | 155.1 | 148.8 | 153.4 | 184.1 | 223.3 | 226.7 | 189.8 | 156.8 | 147.7 |
| 50° | 156.2 | 157.4 | 156.8 | 152.8 | 162.5 | 199.4 | 248.8 | 250.5 | 209.1 | 165.9 | 155.1 |
| 52.5° | 156.2 | 156.2 | 155.7 | 152.3 | 168.7 | 214.7 | 268.7 | 271.0 | 226.1 | 173.8 | 161.9 |
| 55° | 152.8 | 152.3 | 151.1 | 151.1 | 173.8 | 223.8 | 280.1 | 284.6 | 236.9 | 178.4 | 165.9 |
| 57.5° | 147.1 | 146.6 | 145.4 | 148.8 | 175.5 | 228.4 | 286.3 | 289.7 | 243.7 | 179.5 | 169.3 |
| 60° | 139.8 | 139.8 | 136.9 | 146.6 | 176.1 | 229.5 | 292.0 | 295.4 | 245.4 | 180.1 | 172.7 |
| 62.5° | 130.1 | 130.1 | 127.3 | 144.9 | 171.6 | 226.1 | 292.6 | 296.6 | 243.7 | 176.7 | 174.4 |
| 65° | 117.6 | 116.5 | 113.6 | 140.3 | 163.6 | 216.5 | 285.8 | 289.7 | 234.6 | 169.9 | 173.8 |
| 67.5° | 101.7 | 100.6 | 98.3 | 132.4 | 150.6 | 199.4 | 272.1 | 276.1 | 217.6 | 159.1 | 168.2 |
| 70° | 83.5 | 84.1 | 81.8 | 119.9 | 134.6 | 176.7 | 250.5 | 255.1 | 196.0 | 143.7 | 156.8 |
| 72.5° | 64.8 | 65.3 | 67.6 | 103.4 | 117.0 | 150.6 | 221.0 | 226.7 | 170.4 | 127.8 | 139.2 |
| 75° | 47.2 | 47.2 | 51.7 | 83.5 | 94.9 | 118.2 | 185.8 | 193.7 | 137.5 | 107.4 | 118.7 |
| 77.5° | 31.8 | 31.2 | 36.9 | 58.5 | 70.4 | 86.4 | 146.6 | 152.8 | 104.5 | 82.4 | 92.0 |
| 80° | 18.7 | 18.7 | 21.6 | 31.2 | 41.5 | 50.0 | 98.3 | 105.1 | 68.7 | 53.4 | 59.1 |
| 82.5° | 10.2 | 10.2 | 9.7 | 10.2 | 14.8 | 16.5 | 42.0 | 50.6 | 34.1 | 22.2 | 23.9 |
| 85° | 7.4 | 6.8 | 6.8 | 6.2 | 6.8 | 7.4 | 9.1 | 9.7 | 10.2 | 8.5 | 8.0 |
| 87.5° | 5.7 | 5.7 | 5.7 | 4.5 | 5.1 | 5.7 | 7.4 | 7.4 | 6.2 | 5.7 | 5.1 |
| 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 179° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| 2.5° | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.7 | 30.1 | 30.1 | 30.1 | 30.1 |
| 5° | 31.8 | 31.2 | 30.7 | 30.1 | 29.5 | 29.5 | 29.0 | 29.0 | 29.0 | 29.5 | 29.5 |
| 7.5° | 37.5 | 36.9 | 35.8 | 34.7 | 34.1 | 33.0 | 31.8 | 31.8 | 31.8 | 32.4 | 32.4 |
| 10° | 43.7 | 43.2 | 42.0 | 40.9 | 39.2 | 39.2 | 38.1 | 38.1 | 37.5 | 38.1 | 38.1 |
| 12.5° | 50.6 | 50.0 | 49.4 | 47.7 | 47.2 | 46.0 | 44.9 | 44.9 | 44.9 | 44.3 | 44.3 |
| 15° | 57.4 | 57.4 | 56.2 | 55.1 | 54.0 | 52.8 | 52.3 | 51.1 | 51.1 | 51.1 | 51.1 |
| 17.5° | 64.8 | 64.2 | 64.2 | 63.1 | 61.4 | 59.7 | 59.1 | 57.9 | 57.4 | 57.9 | 57.9 |
| 20° | 72.2 | 72.2 | 73.3 | 72.7 | 69.9 | 67.0 | 65.9 | 64.8 | 63.6 | 64.2 | 64.2 |
| 22.5° | 79.0 | 80.1 | 82.4 | 82.4 | 78.4 | 75.0 | 72.7 | 71.0 | 70.4 | 70.4 | 69.9 |
| 25° | 85.8 | 88.1 | 91.5 | 93.7 | 87.5 | 81.8 | 79.0 | 76.7 | 76.1 | 76.1 | 76.1 |
| 27.5° | 92.6 | 96.0 | 101.7 | 104.0 | 96.6 | 89.8 | 85.2 | 82.9 | 81.8 | 81.8 | 81.8 |
| 30° | 98.9 | 104.0 | 111.9 | 113.6 | 105.7 | 97.7 | 92.0 | 88.6 | 87.5 | 87.5 | 87.5 |
| 32.5° | 105.7 | 111.9 | 119.9 | 121.6 | 113.1 | 105.1 | 97.7 | 94.9 | 93.2 | 93.2 | 93.7 |
| 35° | 111.9 | 119.9 | 127.3 | 128.4 | 121.6 | 111.9 | 104.0 | 101.1 | 100.0 | 99.4 | 99.4 |
| 37.5° | 118.2 | 126.1 | 132.9 | 133.5 | 127.8 | 118.2 | 110.2 | 109.1 | 107.9 | 107.4 | 107.4 |
| 40° | 125.0 | 132.9 | 137.5 | 137.5 | 133.5 | 125.0 | 117.0 | 118.2 | 119.3 | 119.9 | 118.7 |
| 42.5° | 133.5 | 139.2 | 143.2 | 142.6 | 139.2 | 132.4 | 125.0 | 131.2 | 136.9 | 138.1 | 138.1 |
| 45° | 139.2 | 144.9 | 148.3 | 147.1 | 144.9 | 139.8 | 136.9 | 150.6 | 163.6 | 167.6 | 167.0 |
| 47.5° | 146.0 | 150.0 | 151.7 | 150.6 | 150.0 | 144.9 | 145.4 | 168.2 | 194.3 | 201.1 | 202.3 |
| 50° | 151.1 | 154.0 | 154.5 | 152.8 | 152.8 | 149.4 | 154.0 | 183.5 | 219.9 | 225.0 | 227.2 |
| 52.5° | 155.7 | 155.7 | 156.2 | 154.5 | 154.5 | 152.3 | 162.5 | 199.4 | 244.9 | 250.5 | 250.0 |
| 55° | 156.8 | 154.0 | 155.7 | 154.0 | 152.8 | 152.8 | 168.7 | 214.2 | 265.9 | 269.9 | 269.3 |
| 57.5° | 156.2 | 149.4 | 151.1 | 150.6 | 148.3 | 151.1 | 173.3 | 223.3 | 275.5 | 280.7 | 279.5 |
| 60° | 155.1 | 143.2 | 145.4 | 144.3 | 141.5 | 148.8 | 176.1 | 227.8 | 282.9 | 287.5 | 286.9 |
| 62.5° | 153.4 | 135.8 | 138.1 | 136.9 | 132.9 | 147.1 | 178.4 | 231.8 | 286.9 | 292.6 | 291.4 |
| 65° | 150.6 | 124.4 | 129.0 | 127.3 | 121.6 | 143.7 | 175.5 | 230.1 | 292.6 | 297.1 | 297.7 |
| 67.5° | 145.4 | 111.4 | 115.9 | 114.8 | 111.4 | 140.3 | 167.6 | 222.1 | 287.5 | 292.6 | 293.7 |
| 70° | 135.8 | 95.4 | 98.9 | 100.6 | 98.9 | 134.1 | 156.8 | 206.8 | 273.8 | 278.9 | 281.2 |
| 72.5° | 122.7 | 80.1 | 81.8 | 85.2 | 84.7 | 124.4 | 142.0 | 185.8 | 254.0 | 260.8 | 261.9 |
| 75° | 104.5 | 67.0 | 64.8 | 67.0 | 70.4 | 109.6 | 123.3 | 160.2 | 228.4 | 234.6 | 234.1 |
| 77.5° | 83.5 | 52.8 | 47.2 | 48.9 | 55.7 | 90.9 | 102.8 | 131.2 | 195.4 | 202.3 | 204.5 |
| 80° | 56.2 | 37.5 | 30.7 | 33.0 | 40.3 | 67.6 | 77.8 | 96.0 | 157.9 | 163.6 | 164.2 |
| 82.5° | 27.3 | 21.6 | 19.3 | 20.5 | 24.4 | 39.8 | 50.6 | 60.8 | 111.9 | 112.5 | 113.6 |
| 85° | 8.5 | 10.2 | 9.7 | 10.8 | 11.4 | 13.6 | 20.5 | 24.4 | 52.3 | 52.8 | 54.0 |
| 87.5° | 5.7 | 6.2 | 6.2 | 6.2 | 6.2 | 5.7 | 6.2 | 6.2 | 7.4 | 7.4 | 7.4 |
| 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)