

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: P596061

Luminaire Tested: **MSA-SA2A-AMB-U-SL3**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596061
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-AMB-U-SL3
Description: POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: (32) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1724 lumens
Efficiency: N/A
Efficacy: 41.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B0 - U0 - G1

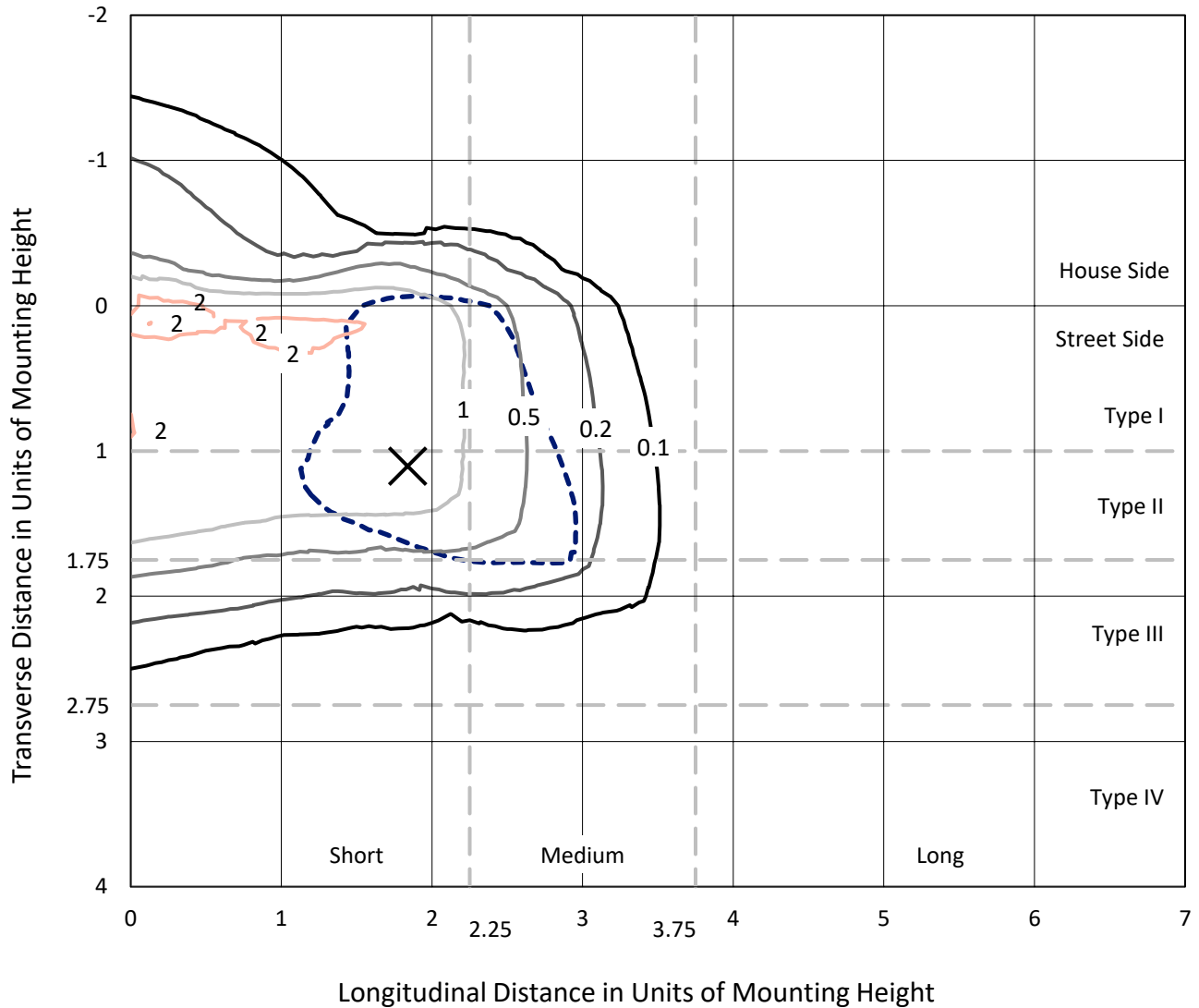
Input Watts (W): 41.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

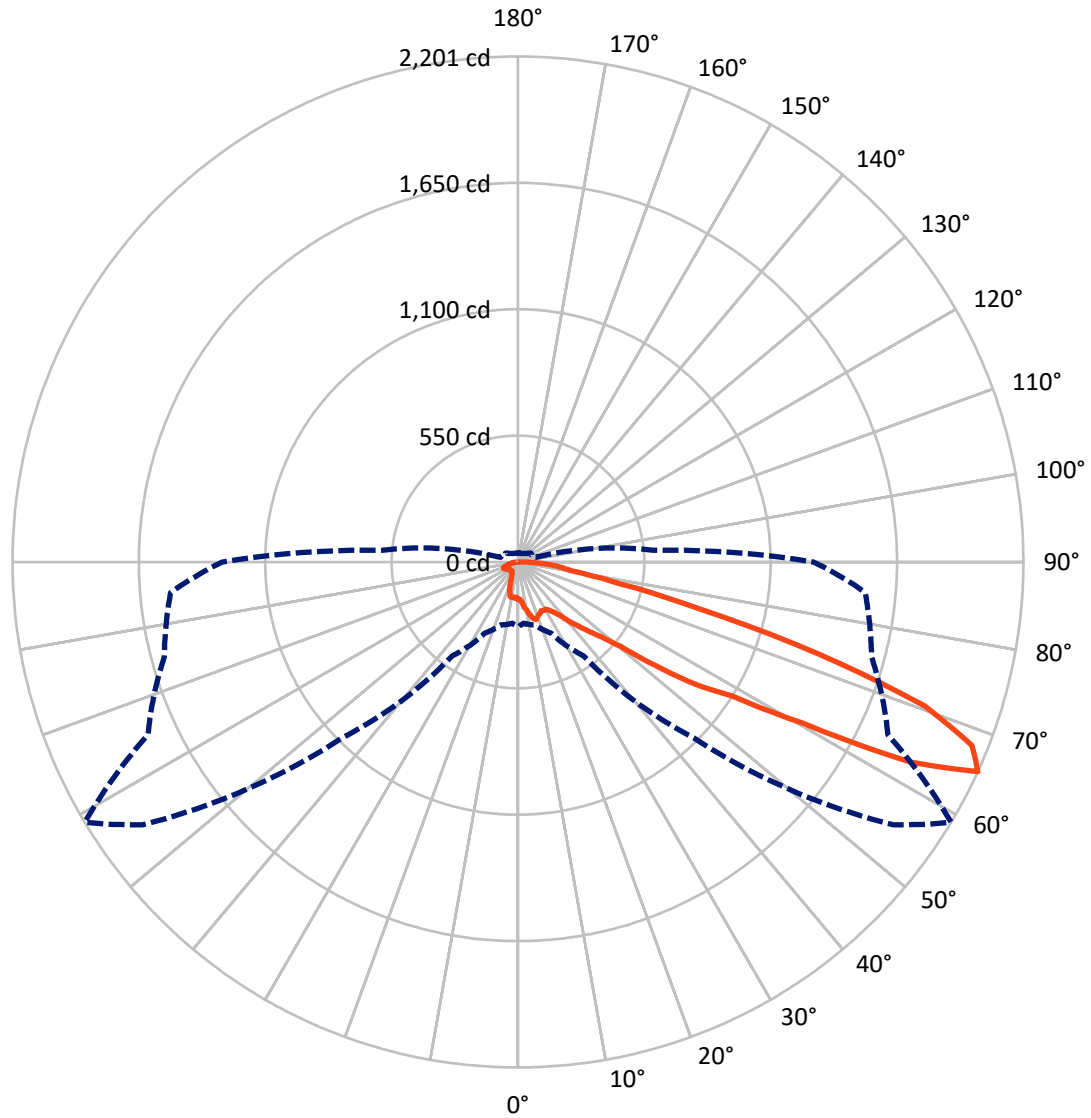
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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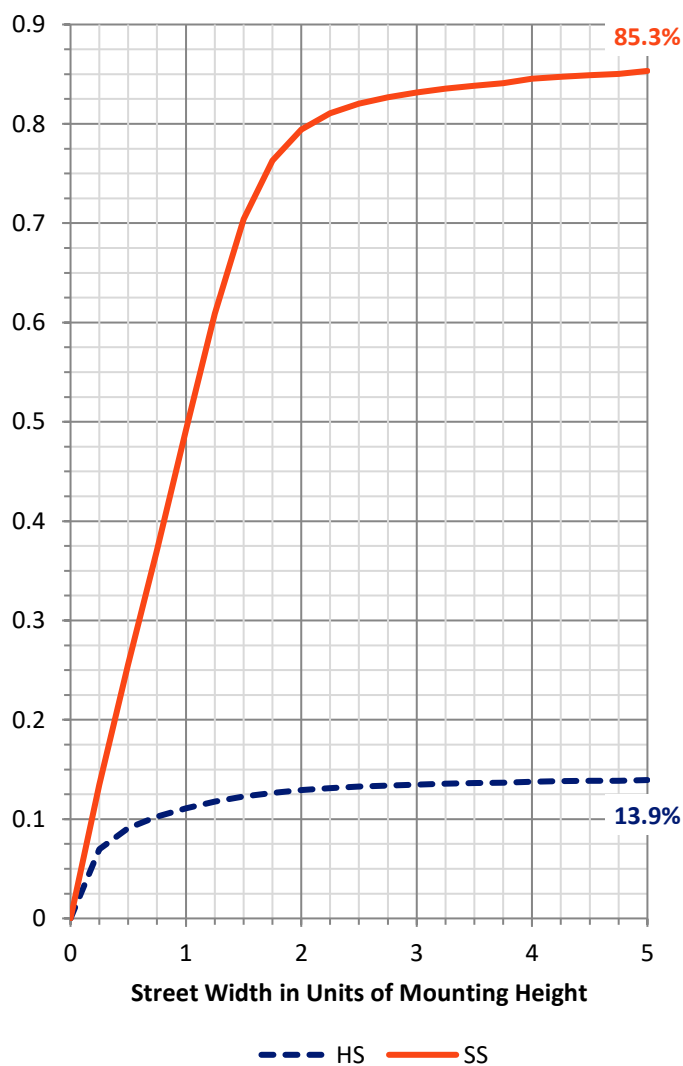
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 243.1 | 0.0 | 243.1 |
| | % Fixture | 14.1 | 0.0 | 14.1 |
| Street Side | Lumens | 1480.9 | 0.0 | 1480.9 |
| | % Fixture | 85.9 | 0.0 | 85.9 |
| Total | Lumens | 1724.0 | 0.0 | 1724.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 17.4 | 1.0 |
| 10°-20° | 50.5 | 2.9 |
| 20°-30° | 76.5 | 4.4 |
| 30°-40° | 120.3 | 7.0 |
| 40°-50° | 224.5 | 13.0 |
| 50°-60° | 442.6 | 25.7 |
| 60°-70° | 551.0 | 32.0 |
| 70°-80° | 205.9 | 11.9 |
| 80°-90° | 35.3 | 2.0 |
| 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° | 1724.0 | 100.0 |
| 0°-180° | 1724.0 | 100.0 |

Coefficient of Utilization

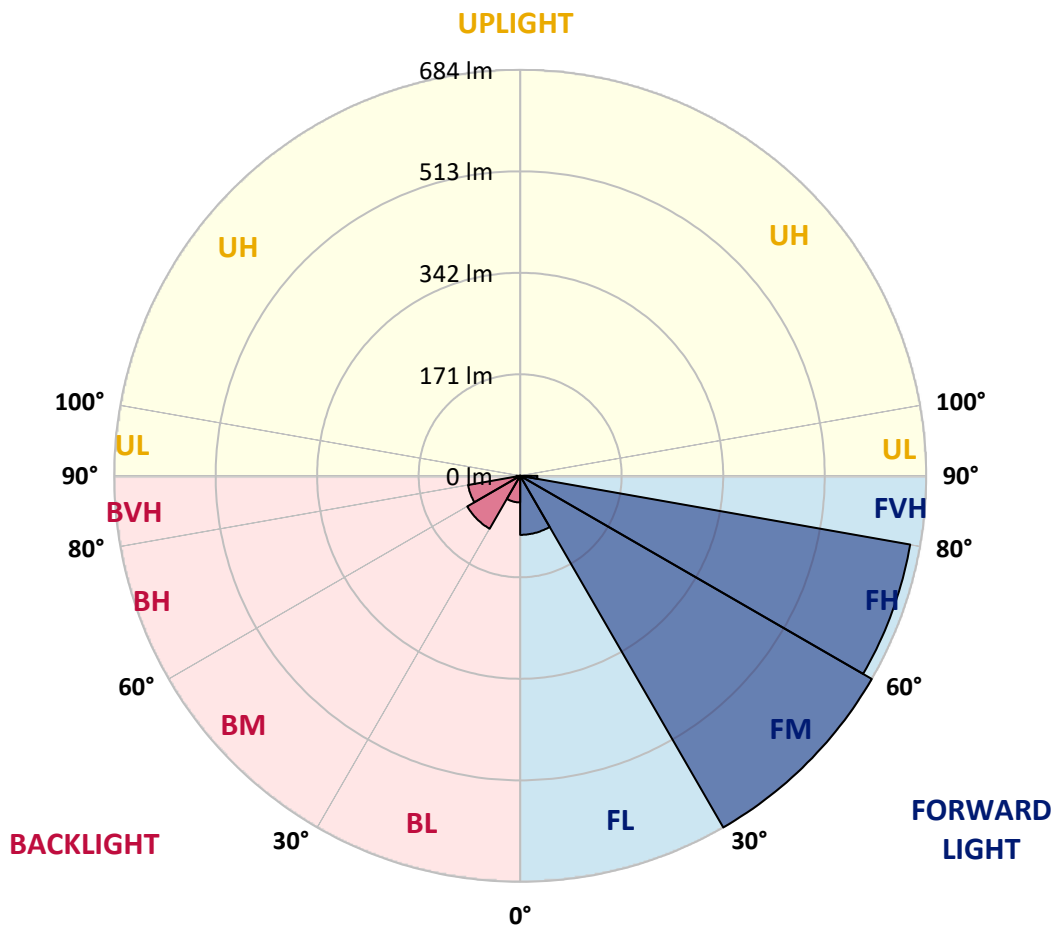


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 99.5 | 5.8 | | | |
| FM (30°-60°) | 684.5 | 39.7 | | | |
| FH (60°-80°) | 667.7 | 38.7 | | | G1/1800 |
| FVH (80°-90°) | 29.2 | 1.7 | | | G1/100 |
| BL (0°-30°) | 44.9 | 2.6 | B0/110 | | |
| BM (30°-60°) | 103.0 | 6.0 | B0/220 | | |
| BH (60°-80°) | 89.1 | 5.2 | B0/110 | | G0/110 |
| BVH (80°-90°) | 6.2 | 0.4 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1
 Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 0° | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 |
| 2.5° | 217.2 | 187.7 | 174.7 | 161.7 | 162.3 | 172.3 | 168.8 | 161.7 | 167.6 | 179.4 | 185.9 |
| 5° | 241.9 | 210.1 | 213.0 | 190.0 | 168.8 | 163.5 | 165.2 | 174.7 | 191.2 | 227.8 | 223.1 |
| 7.5° | 242.5 | 221.9 | 223.6 | 201.8 | 172.9 | 172.9 | 192.4 | 199.5 | 221.9 | 241.4 | 246.1 |
| 10° | 211.3 | 204.8 | 201.2 | 186.5 | 195.3 | 207.1 | 210.1 | 214.8 | 226.0 | 250.2 | 245.5 |
| 12.5° | 188.8 | 188.8 | 203.0 | 201.2 | 216.6 | 233.7 | 241.4 | 238.4 | 253.2 | 260.8 | 250.2 |
| 15° | 190.6 | 192.4 | 196.5 | 205.9 | 219.5 | 240.8 | 253.7 | 256.7 | 266.1 | 279.7 | 259.6 |
| 17.5° | 201.8 | 204.8 | 201.2 | 208.9 | 221.9 | 238.4 | 253.7 | 262.6 | 266.1 | 298.0 | 280.3 |
| 20° | 213.6 | 214.2 | 208.3 | 199.5 | 216.0 | 229.0 | 249.0 | 250.2 | 262.0 | 300.4 | 289.7 |
| 22.5° | 231.3 | 226.0 | 208.9 | 200.6 | 204.2 | 215.4 | 234.9 | 244.3 | 257.9 | 297.4 | 304.5 |
| 25° | 241.4 | 237.8 | 223.1 | 212.4 | 208.3 | 213.6 | 227.8 | 235.5 | 262.6 | 316.9 | 303.3 |
| 27.5° | 254.9 | 253.7 | 226.0 | 227.8 | 213.6 | 204.2 | 224.2 | 239.6 | 267.3 | 312.8 | 308.0 |
| 30° | 277.3 | 277.3 | 244.3 | 240.2 | 226.6 | 205.9 | 231.9 | 238.4 | 269.1 | 324.0 | 321.6 |
| 32.5° | 311.0 | 307.4 | 276.8 | 254.3 | 241.9 | 233.7 | 232.5 | 250.8 | 270.9 | 348.2 | 339.3 |
| 35° | 341.1 | 342.3 | 303.9 | 284.4 | 261.4 | 246.1 | 258.5 | 268.5 | 291.5 | 378.8 | 355.8 |
| 37.5° | 408.3 | 391.2 | 345.8 | 316.9 | 305.7 | 288.0 | 296.8 | 292.7 | 324.0 | 414.8 | 407.2 |
| 40° | 451.4 | 434.3 | 394.8 | 369.4 | 330.5 | 334.0 | 324.6 | 335.2 | 354.1 | 466.8 | 470.9 |
| 42.5° | 502.2 | 480.9 | 442.0 | 427.2 | 385.3 | 358.8 | 357.0 | 376.5 | 397.7 | 528.7 | 532.9 |
| 45° | 542.9 | 512.8 | 485.7 | 475.6 | 463.8 | 428.4 | 421.9 | 427.2 | 454.4 | 603.1 | 607.2 |
| 47.5° | 584.8 | 555.9 | 531.1 | 526.4 | 516.3 | 535.8 | 491.0 | 486.2 | 515.7 | 695.7 | 682.7 |
| 50° | 662.7 | 619.0 | 599.5 | 583.0 | 609.6 | 640.3 | 595.4 | 574.8 | 588.3 | 786.0 | 791.9 |
| 52.5° | 777.2 | 730.5 | 708.7 | 702.8 | 714.6 | 714.0 | 777.8 | 745.9 | 715.8 | 880.4 | 918.8 |
| 55° | 803.7 | 763.6 | 753.6 | 796.6 | 866.3 | 849.2 | 970.7 | 942.4 | 899.3 | 1000.2 | 1076.9 |
| 57.5° | 769.5 | 728.8 | 721.1 | 772.4 | 897.0 | 1077.5 | 1153.6 | 1101.7 | 1073.4 | 1179.0 | 1303.5 |
| 60° | 589.5 | 553.5 | 575.9 | 679.8 | 871.6 | 1168.4 | 1468.8 | 1423.9 | 1297.0 | 1421.0 | 1536.6 |
| 62.5° | 432.5 | 400.7 | 414.3 | 462.0 | 714.6 | 1206.2 | 1846.4 | 1919.0 | 1583.8 | 1583.2 | 1597.4 |
| 65° | 283.2 | 267.9 | 283.8 | 341.1 | 498.0 | 1081.7 | 1994.5 | 2200.5 | 1776.8 | 1593.3 | 1517.1 |
| 67.5° | 206.5 | 187.7 | 180.0 | 204.8 | 323.4 | 742.9 | 1926.1 | 2132.0 | 1847.6 | 1480.6 | 1274.6 |
| 70° | 164.6 | 154.6 | 140.4 | 153.4 | 209.5 | 452.0 | 1560.2 | 1879.5 | 1596.8 | 1141.8 | 852.7 |
| 72.5° | 134.5 | 122.7 | 117.4 | 128.1 | 181.8 | 238.4 | 975.4 | 1367.3 | 1167.8 | 757.7 | 512.8 |
| 75° | 106.2 | 99.1 | 99.1 | 113.9 | 168.8 | 191.8 | 556.5 | 810.8 | 709.9 | 439.6 | 223.1 |
| 77.5° | 79.7 | 73.8 | 77.3 | 98.0 | 155.8 | 183.5 | 280.9 | 454.4 | 356.4 | 185.3 | 81.4 |
| 80° | 54.9 | 53.1 | 56.1 | 79.1 | 135.1 | 176.4 | 200.6 | 242.5 | 161.1 | 73.2 | 47.8 |
| 82.5° | 32.5 | 30.1 | 37.8 | 56.1 | 99.1 | 160.5 | 179.4 | 185.9 | 99.1 | 40.1 | 30.1 |
| 85° | 15.9 | 15.3 | 21.2 | 31.9 | 63.7 | 129.8 | 148.7 | 139.3 | 61.4 | 22.4 | 16.5 |
| 87.5° | 2.4 | 3.5 | 4.1 | 7.1 | 14.2 | 31.9 | 48.4 | 51.9 | 20.7 | 7.1 | 4.7 |
| 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° | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 | 165.2 |
| 2.5° | 197.7 | 168.8 | 175.3 | 156.4 | 151.1 | 154.0 | 152.8 | 152.2 | 159.9 | 157.6 | 169.9 |
| 5° | 241.4 | 214.8 | 202.4 | 174.1 | 148.7 | 135.1 | 142.2 | 155.2 | 172.3 | 172.9 | 190.6 |
| 7.5° | 258.5 | 231.3 | 216.0 | 174.7 | 139.3 | 128.6 | 134.5 | 141.0 | 152.2 | 152.8 | 161.7 |
| 10° | 241.4 | 228.4 | 203.6 | 164.0 | 149.9 | 137.5 | 121.0 | 109.8 | 110.9 | 109.8 | 110.3 |
| 12.5° | 244.9 | 229.0 | 200.0 | 166.4 | 147.5 | 123.3 | 102.7 | 92.6 | 81.4 | 76.7 | 77.9 |
| 15° | 247.3 | 234.3 | 200.6 | 162.9 | 128.6 | 104.4 | 84.4 | 72.0 | 65.5 | 62.0 | 61.4 |
| 17.5° | 256.7 | 244.9 | 190.6 | 145.2 | 105.6 | 83.2 | 67.9 | 61.4 | 60.2 | 59.6 | 57.8 |
| 20° | 265.5 | 239.0 | 172.9 | 116.8 | 86.2 | 66.7 | 59.6 | 56.1 | 56.6 | 59.0 | 58.4 |
| 22.5° | 272.0 | 236.0 | 151.7 | 93.8 | 66.7 | 57.2 | 53.7 | 52.5 | 54.9 | 59.0 | 59.6 |
| 25° | 272.0 | 230.7 | 129.8 | 77.9 | 57.2 | 50.7 | 50.2 | 51.3 | 54.3 | 58.4 | 58.4 |
| 27.5° | 273.8 | 218.9 | 107.4 | 64.3 | 50.7 | 46.6 | 47.8 | 50.2 | 51.3 | 57.2 | 57.8 |
| 30° | 268.5 | 217.2 | 91.5 | 56.6 | 47.2 | 44.3 | 46.0 | 47.8 | 50.2 | 55.5 | 56.1 |
| 32.5° | 283.8 | 198.3 | 80.3 | 51.9 | 45.4 | 43.7 | 44.8 | 46.6 | 49.6 | 54.3 | 55.5 |
| 35° | 292.1 | 195.3 | 72.6 | 49.6 | 44.8 | 43.1 | 44.3 | 46.0 | 49.6 | 54.3 | 54.9 |
| 37.5° | 332.8 | 191.8 | 67.3 | 49.6 | 45.4 | 43.7 | 44.3 | 46.0 | 50.2 | 54.3 | 56.1 |
| 40° | 377.7 | 195.3 | 64.9 | 50.2 | 45.4 | 44.8 | 44.8 | 46.6 | 50.2 | 54.9 | 56.6 |
| 42.5° | 427.2 | 202.4 | 64.9 | 50.7 | 46.6 | 44.8 | 44.8 | 47.2 | 50.7 | 55.5 | 57.2 |
| 45° | 483.9 | 211.8 | 64.3 | 51.9 | 47.2 | 46.6 | 45.4 | 47.8 | 50.7 | 55.5 | 57.8 |
| 47.5° | 551.2 | 229.0 | 66.1 | 51.9 | 48.4 | 47.8 | 47.2 | 47.8 | 50.7 | 55.5 | 58.4 |
| 50° | 629.6 | 262.6 | 67.3 | 53.1 | 51.3 | 49.6 | 47.8 | 48.4 | 50.7 | 55.5 | 57.8 |
| 52.5° | 752.4 | 328.1 | 69.6 | 54.9 | 53.1 | 50.7 | 49.0 | 48.4 | 50.2 | 53.7 | 56.1 |
| 55° | 909.3 | 433.1 | 73.8 | 57.2 | 54.9 | 52.5 | 50.2 | 47.8 | 49.0 | 51.3 | 54.3 |
| 57.5° | 1148.9 | 580.7 | 79.1 | 59.0 | 55.5 | 53.1 | 49.6 | 46.6 | 46.6 | 49.0 | 50.7 |
| 60° | 1341.3 | 689.2 | 82.0 | 60.8 | 57.8 | 52.5 | 48.4 | 44.8 | 44.3 | 45.4 | 47.2 |
| 62.5° | 1375.5 | 670.9 | 83.8 | 64.3 | 61.4 | 52.5 | 46.6 | 42.5 | 41.3 | 42.5 | 43.7 |
| 65° | 1287.0 | 589.5 | 81.4 | 67.3 | 66.1 | 51.9 | 45.4 | 40.7 | 38.9 | 39.5 | 40.1 |
| 67.5° | 1070.4 | 460.9 | 73.8 | 68.5 | 67.3 | 50.2 | 44.3 | 38.9 | 36.6 | 36.6 | 37.2 |
| 70° | 718.7 | 322.8 | 66.1 | 65.5 | 61.4 | 46.0 | 41.3 | 36.6 | 34.2 | 34.2 | 34.2 |
| 72.5° | 416.6 | 191.2 | 58.4 | 58.4 | 51.3 | 40.7 | 37.8 | 34.2 | 31.9 | 31.3 | 31.9 |
| 75° | 184.1 | 86.2 | 49.0 | 48.4 | 40.1 | 33.6 | 33.6 | 31.9 | 29.5 | 28.3 | 28.3 |
| 77.5° | 70.8 | 49.6 | 36.6 | 37.2 | 32.5 | 28.9 | 28.9 | 27.7 | 26.0 | 24.8 | 24.8 |
| 80° | 47.2 | 35.4 | 28.3 | 27.7 | 24.2 | 21.8 | 23.6 | 23.0 | 21.2 | 20.1 | 19.5 |
| 82.5° | 28.3 | 24.2 | 21.2 | 18.9 | 17.7 | 14.8 | 17.1 | 15.9 | 15.3 | 13.6 | 13.0 |
| 85° | 15.3 | 14.2 | 13.0 | 11.8 | 10.6 | 7.1 | 9.4 | 9.4 | 9.4 | 8.9 | 7.7 |
| 87.5° | 3.5 | 5.3 | 5.3 | 5.3 | 4.1 | 2.4 | 4.1 | 4.7 | 4.7 | 4.7 | 3.0 |
| 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)