

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: P969258

Luminaire Tested: **NAV-SB5D-727-U-T4FT-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P969258
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-727-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37002.5 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

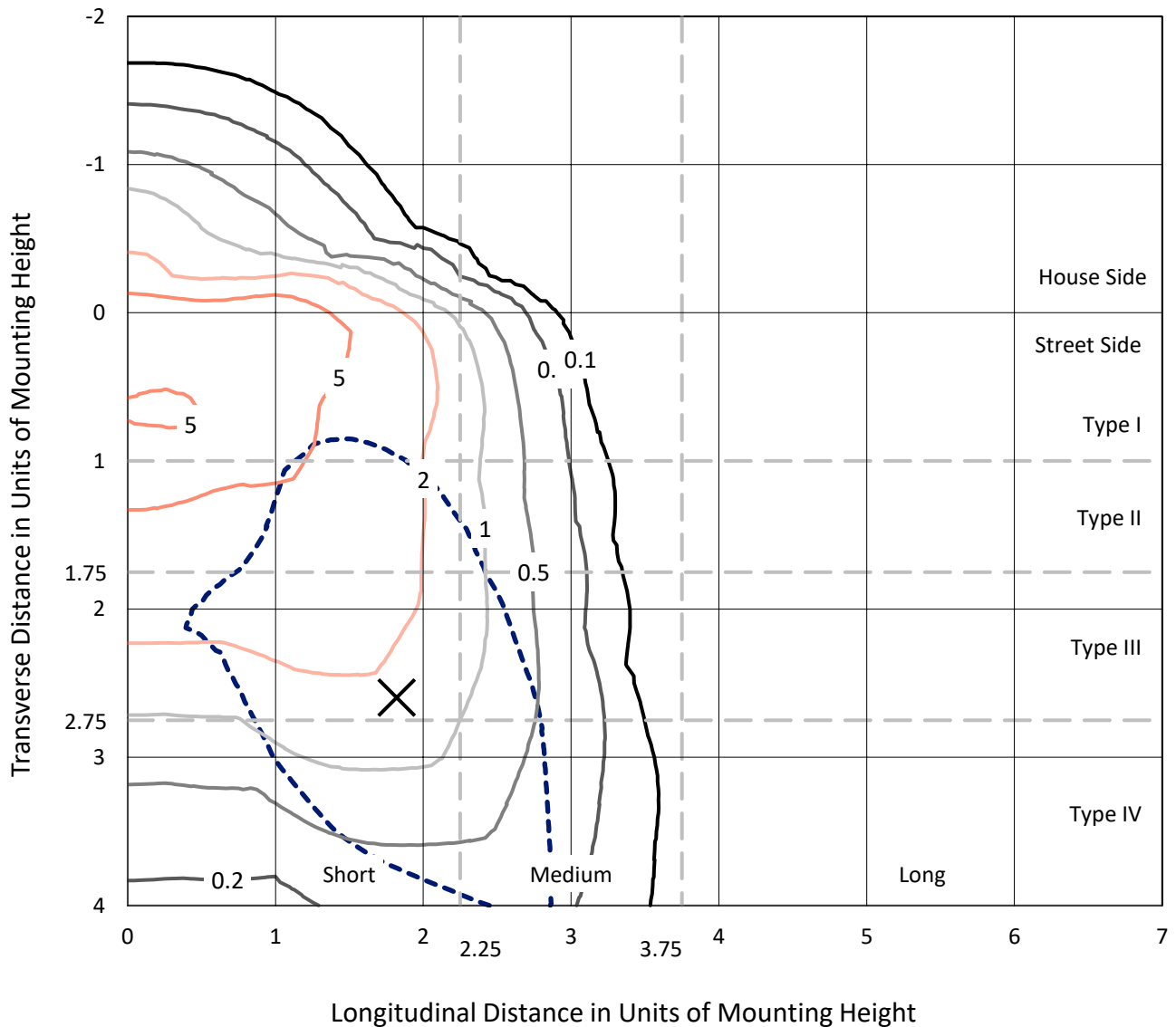
Input Watts (W): 364.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

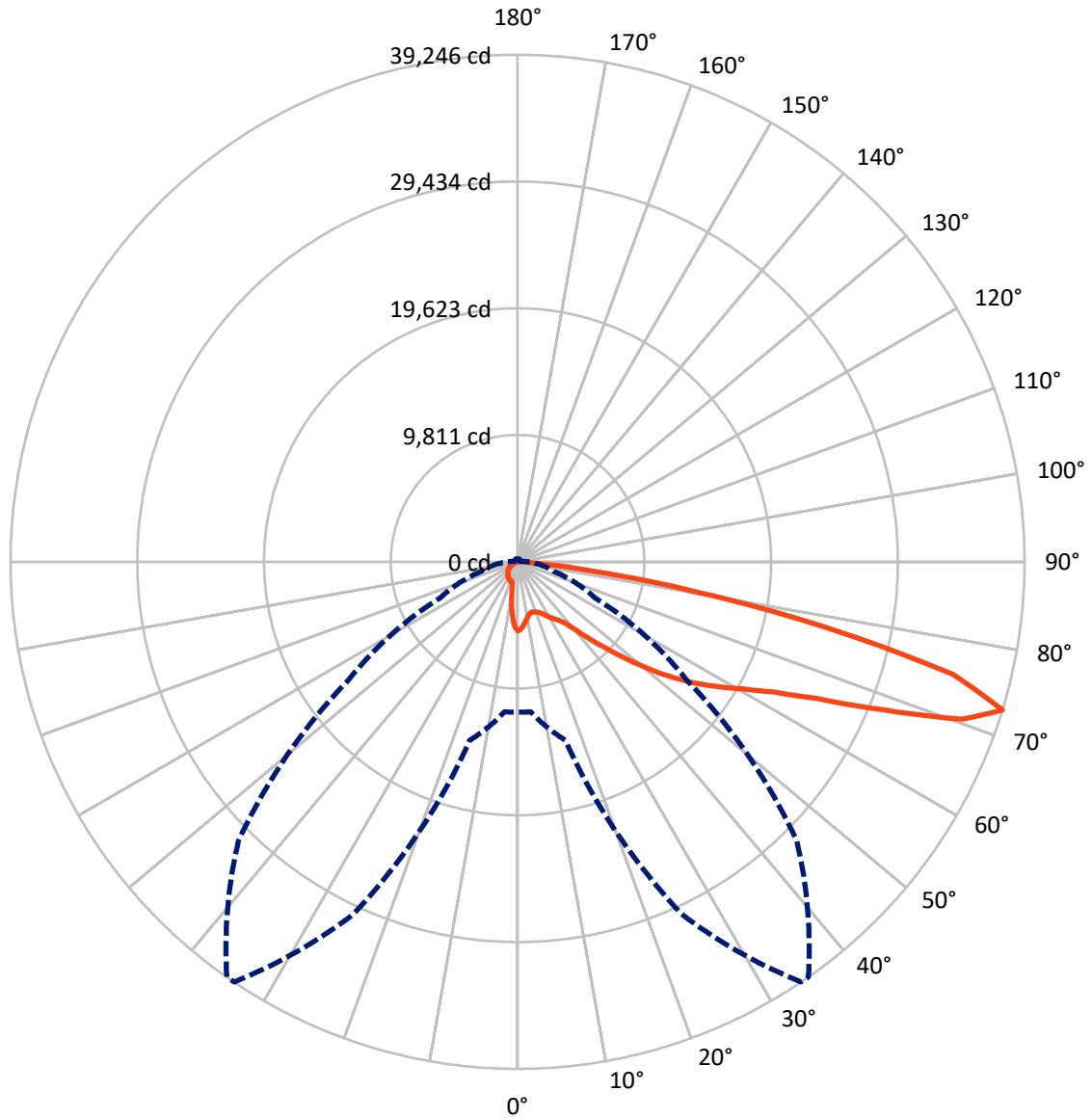
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4164.5 | 0.0 | 4164.5 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| Street Side | Lumens | 32838.0 | 0.0 | 32838.0 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| Total | Lumens | 37002.5 | 0.0 | 37002.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 440.7 | 1.2 |
| 10°-20° | 1030.9 | 2.8 |
| 20°-30° | 1674.7 | 4.5 |
| 30°-40° | 2794.3 | 7.6 |
| 40°-50° | 5286.8 | 14.3 |
| 50°-60° | 8400.7 | 22.7 |
| 60°-70° | 10392.3 | 28.1 |
| 70°-80° | 6459.9 | 17.5 |
| 80°-90° | 522.1 | 1.4 |
| 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° | 37002.5 | 100.0 |
| 0°-180° | 37002.5 | 100.0 |

Coefficient of Utilization



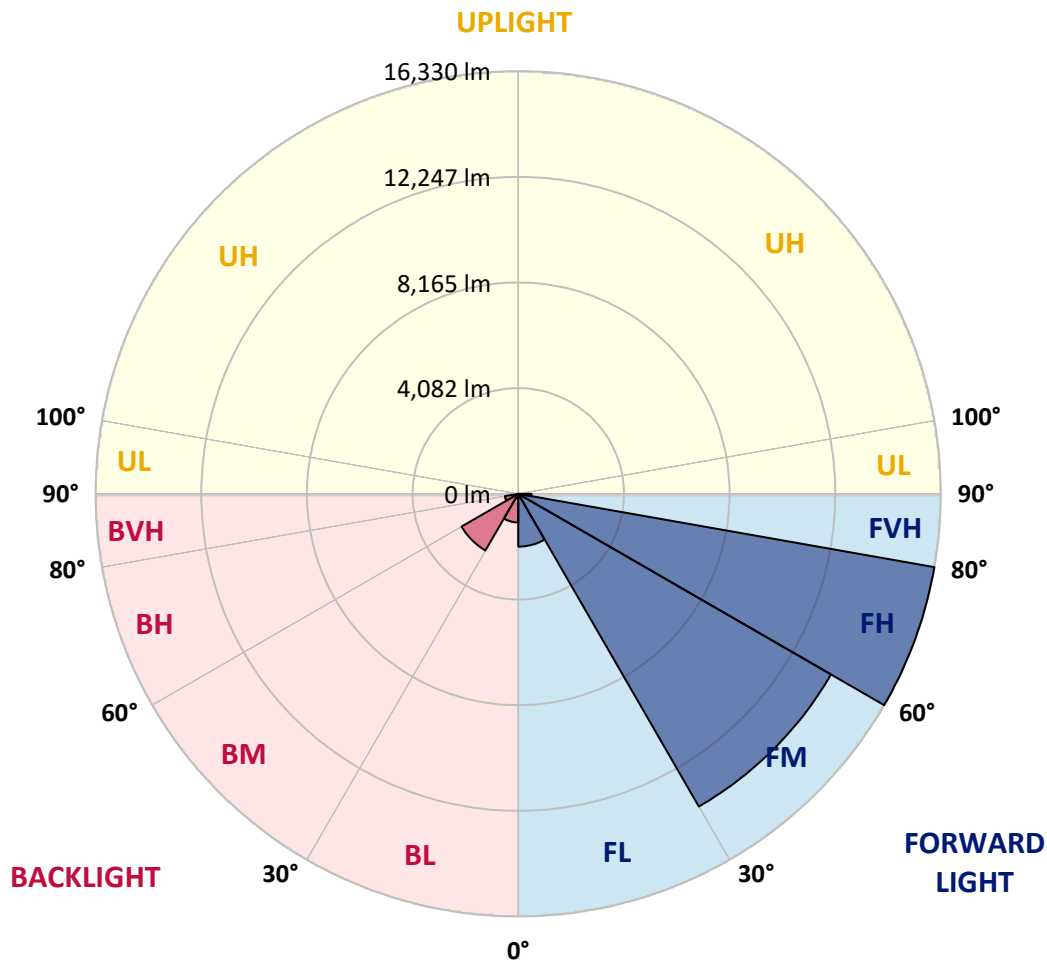
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2039.8 | 5.5 | | | |
| FM (30°-60°) | 13953.6 | 37.7 | | | |
| FH (60°-80°) | 16329.7 | 44.1 | | | G5 |
| FVH (80°-90°) | 515.0 | 1.4 | | | G4/750 |
| BL (0°-30°) | 1106.6 | 3.0 | B3/2500 | | |
| BM (30°-60°) | 2528.2 | 6.8 | B3/5000 | | |
| BH (60°-80°) | 522.6 | 1.4 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 7.1 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 |
| 2.5° | 5124.3 | 5167.6 | 5175.8 | 5189.4 | 5189.4 | 5205.7 | 5232.7 | 5270.8 | 5333.1 | 5365.6 | 5387.3 |
| 5° | 4723.0 | 4755.6 | 4796.3 | 4828.8 | 4891.1 | 4899.3 | 5005.0 | 5108.1 | 5251.7 | 5360.2 | 5436.1 |
| 7.5° | 4319.0 | 4357.1 | 4411.3 | 4489.9 | 4571.2 | 4595.6 | 4755.6 | 4929.1 | 5156.9 | 5360.2 | 5487.6 |
| 10° | 4034.4 | 4037.1 | 4085.9 | 4164.5 | 4294.6 | 4324.5 | 4519.7 | 4766.5 | 5051.1 | 5327.6 | 5536.4 |
| 12.5° | 3874.4 | 3893.4 | 3915.1 | 3974.7 | 4099.5 | 4118.4 | 4327.2 | 4617.3 | 4945.3 | 5308.7 | 5593.3 |
| 15° | 3874.4 | 3887.9 | 3901.6 | 3931.4 | 4031.6 | 4047.9 | 4232.3 | 4522.4 | 4891.1 | 5316.8 | 5685.6 |
| 17.5° | 3915.1 | 3936.8 | 3926.0 | 3961.2 | 4066.9 | 4077.8 | 4240.4 | 4495.3 | 4888.4 | 5368.3 | 5826.5 |
| 20° | 4012.7 | 4029.0 | 4007.2 | 4029.0 | 4134.6 | 4156.4 | 4324.5 | 4546.8 | 4934.6 | 5457.8 | 6002.8 |
| 22.5° | 4167.2 | 4175.3 | 4123.9 | 4140.1 | 4248.5 | 4275.7 | 4470.8 | 4693.2 | 5045.7 | 5601.5 | 6238.7 |
| 25° | 4362.4 | 4378.7 | 4300.1 | 4319.0 | 4422.1 | 4454.6 | 4679.6 | 4912.8 | 5222.0 | 5799.4 | 6539.6 |
| 27.5° | 4587.5 | 4595.6 | 4527.8 | 4525.1 | 4658.0 | 4704.0 | 4931.8 | 5183.9 | 5457.8 | 6048.8 | 6919.2 |
| 30° | 4845.1 | 4869.5 | 4804.4 | 4793.5 | 4961.6 | 4999.6 | 5224.6 | 5517.5 | 5804.9 | 6423.1 | 7458.7 |
| 32.5° | 5048.4 | 5067.4 | 5029.4 | 5056.5 | 5227.3 | 5257.1 | 5579.8 | 5989.2 | 6349.8 | 6954.4 | 8193.4 |
| 35° | 5341.2 | 5352.0 | 5265.3 | 5314.1 | 5509.3 | 5585.2 | 6065.1 | 6650.7 | 7035.8 | 7621.4 | 9153.2 |
| 37.5° | 6401.3 | 6401.3 | 6032.6 | 5791.2 | 5978.3 | 6046.2 | 6729.4 | 7483.1 | 7881.6 | 8516.1 | 10362.5 |
| 40° | 7868.1 | 7843.7 | 7304.2 | 6810.7 | 6786.3 | 6919.2 | 7675.6 | 8532.4 | 8974.3 | 9589.8 | 11723.5 |
| 42.5° | 9432.6 | 9394.5 | 8659.8 | 8171.8 | 8090.4 | 8136.6 | 8768.3 | 9825.6 | 10275.7 | 10899.3 | 13187.6 |
| 45° | 10820.7 | 10809.9 | 10137.5 | 9481.4 | 9334.9 | 9481.4 | 10132.0 | 11338.6 | 11661.2 | 12317.3 | 14649.0 |
| 47.5° | 11983.8 | 11983.8 | 11493.1 | 11064.7 | 10988.8 | 11075.5 | 11978.5 | 13016.8 | 12987.1 | 13827.5 | 16072.4 |
| 50° | 13323.3 | 13312.4 | 12846.0 | 12661.6 | 12740.2 | 12862.3 | 14104.1 | 14784.6 | 14358.9 | 15310.5 | 17344.0 |
| 52.5° | 14261.3 | 14326.4 | 14166.4 | 14136.6 | 14537.9 | 14749.3 | 16262.2 | 16514.4 | 15587.1 | 16717.8 | 18295.7 |
| 55° | 15004.2 | 15080.1 | 15264.5 | 15473.3 | 16245.9 | 16522.5 | 18352.6 | 18154.7 | 16614.7 | 17937.8 | 18843.4 |
| 57.5° | 16056.2 | 15947.8 | 16232.4 | 16644.6 | 17894.4 | 18227.9 | 20377.9 | 19702.9 | 17441.6 | 18927.4 | 18903.0 |
| 60° | 17333.2 | 17349.5 | 17398.2 | 17918.8 | 19540.2 | 19968.5 | 22373.5 | 21167.0 | 17973.1 | 19534.8 | 18241.4 |
| 62.5° | 18867.8 | 18892.2 | 18992.5 | 19792.3 | 21749.9 | 22153.8 | 24499.0 | 22365.3 | 18217.0 | 19363.9 | 16533.4 |
| 65° | 18762.0 | 18865.0 | 19984.8 | 22720.5 | 25109.1 | 25507.6 | 26979.9 | 23205.8 | 17848.3 | 17802.2 | 13461.5 |
| 67.5° | 17091.9 | 17260.0 | 19133.5 | 26218.1 | 30173.7 | 30618.4 | 29978.6 | 23371.2 | 16256.8 | 13843.8 | 8781.8 |
| 70° | 14901.1 | 14960.8 | 17213.8 | 29363.1 | 36038.3 | 36488.4 | 32662.8 | 21552.0 | 12336.3 | 7721.7 | 3934.1 |
| 72.5° | 11636.8 | 11650.4 | 14293.8 | 30092.5 | 39221.3 | 39245.7 | 30556.1 | 15999.2 | 6634.5 | 2966.1 | 1366.5 |
| 75° | 8312.8 | 8231.5 | 9573.5 | 24404.2 | 34506.4 | 34783.0 | 22907.5 | 7504.8 | 2535.0 | 1401.7 | 680.5 |
| 77.5° | 4457.3 | 4546.8 | 5417.1 | 14472.8 | 23837.5 | 24309.3 | 12499.0 | 2163.6 | 1290.6 | 954.4 | 450.1 |
| 80° | 1377.3 | 1453.2 | 2220.6 | 6626.3 | 13502.1 | 13786.9 | 4633.6 | 962.5 | 900.2 | 680.5 | 295.5 |
| 82.5° | 433.8 | 450.1 | 1035.7 | 2784.5 | 5604.2 | 5734.4 | 1342.0 | 545.0 | 615.4 | 450.1 | 173.5 |
| 85° | 124.7 | 127.4 | 460.9 | 1038.4 | 1385.5 | 1412.6 | 376.9 | 211.5 | 352.5 | 279.3 | 89.5 |
| 87.5° | 13.5 | 43.4 | 173.5 | 173.5 | 122.0 | 119.3 | 40.7 | 46.1 | 100.3 | 35.3 | 16.3 |
| 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° | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 | 5362.9 |
| 2.5° | 5373.8 | 5376.4 | 5341.2 | 5281.5 | 5216.5 | 5162.3 | 5094.5 | 5040.2 | 5002.3 | 4991.4 | 5010.4 |
| 5° | 5411.7 | 5392.7 | 5292.4 | 5110.8 | 4893.9 | 4706.8 | 4498.0 | 4332.6 | 4224.1 | 4178.1 | 4194.3 |
| 7.5° | 5468.7 | 5414.5 | 5194.8 | 4836.9 | 4422.1 | 4053.4 | 3679.2 | 3389.1 | 3204.8 | 3112.5 | 3126.1 |
| 10° | 5517.5 | 5409.0 | 5032.1 | 4441.1 | 3806.6 | 3248.1 | 2743.8 | 2394.1 | 2198.8 | 2106.7 | 2109.3 |
| 12.5° | 5563.5 | 5406.3 | 4820.7 | 3972.0 | 3112.5 | 2429.4 | 1960.2 | 1786.8 | 1732.5 | 1713.5 | 1708.1 |
| 15° | 5650.3 | 5414.5 | 4554.9 | 3435.2 | 2421.2 | 1835.6 | 1664.7 | 1662.0 | 1672.9 | 1667.5 | 1664.7 |
| 17.5° | 5769.6 | 5422.6 | 4254.0 | 2865.8 | 1868.1 | 1618.7 | 1610.5 | 1634.9 | 1651.2 | 1643.1 | 1640.3 |
| 20° | 5924.1 | 5455.0 | 3934.1 | 2301.8 | 1605.0 | 1564.4 | 1583.4 | 1605.0 | 1618.7 | 1605.0 | 1602.4 |
| 22.5° | 6141.1 | 5512.0 | 3584.3 | 1849.1 | 1521.0 | 1531.9 | 1548.2 | 1572.6 | 1586.1 | 1567.1 | 1564.4 |
| 25° | 6406.8 | 5601.5 | 3240.0 | 1607.8 | 1480.4 | 1493.9 | 1518.3 | 1545.4 | 1561.7 | 1542.7 | 1540.0 |
| 27.5° | 6751.1 | 5745.2 | 2922.8 | 1553.6 | 1439.7 | 1447.8 | 1483.1 | 1523.8 | 1545.4 | 1521.0 | 1521.0 |
| 30° | 7249.9 | 5981.1 | 2648.9 | 1578.0 | 1415.3 | 1396.4 | 1445.1 | 1502.0 | 1526.4 | 1504.8 | 1502.0 |
| 32.5° | 7911.5 | 6314.5 | 2480.8 | 1615.9 | 1404.5 | 1336.7 | 1382.7 | 1455.9 | 1496.6 | 1483.1 | 1483.1 |
| 35° | 8779.1 | 6821.6 | 2415.7 | 1659.3 | 1396.4 | 1274.3 | 1306.9 | 1385.5 | 1455.9 | 1469.5 | 1469.5 |
| 37.5° | 9831.1 | 7526.5 | 2434.7 | 1678.2 | 1371.9 | 1222.8 | 1239.0 | 1306.9 | 1399.0 | 1442.4 | 1453.2 |
| 40° | 11026.7 | 8348.0 | 2543.1 | 1659.3 | 1344.8 | 1179.4 | 1182.1 | 1233.6 | 1315.0 | 1380.1 | 1401.7 |
| 42.5° | 12260.4 | 9307.8 | 2743.8 | 1588.9 | 1320.4 | 1141.4 | 1133.3 | 1168.6 | 1222.8 | 1268.8 | 1287.8 |
| 45° | 13434.4 | 10294.7 | 2941.7 | 1491.2 | 1290.6 | 1103.5 | 1084.6 | 1098.1 | 1108.9 | 1127.9 | 1138.8 |
| 47.5° | 14459.3 | 10988.8 | 2884.8 | 1401.7 | 1249.9 | 1060.2 | 1027.6 | 1022.1 | 989.6 | 986.9 | 984.2 |
| 50° | 15166.9 | 11140.6 | 2562.2 | 1312.3 | 1190.2 | 1011.3 | 959.8 | 927.2 | 870.3 | 843.2 | 845.9 |
| 52.5° | 15391.9 | 10541.4 | 2093.2 | 1222.8 | 1092.6 | 946.3 | 873.0 | 821.5 | 751.0 | 726.6 | 724.0 |
| 55° | 15093.6 | 9367.5 | 1672.9 | 1114.4 | 957.0 | 859.5 | 778.2 | 710.3 | 653.4 | 623.6 | 623.6 |
| 57.5° | 14364.4 | 7873.5 | 1323.1 | 986.9 | 813.3 | 761.9 | 680.5 | 612.7 | 564.0 | 534.1 | 528.7 |
| 60° | 13155.2 | 6252.2 | 1046.5 | 835.1 | 694.1 | 656.1 | 572.1 | 528.7 | 485.3 | 450.1 | 442.0 |
| 62.5° | 11319.6 | 4462.7 | 821.5 | 661.5 | 580.3 | 536.8 | 488.0 | 455.5 | 404.0 | 355.2 | 347.1 |
| 65° | 8833.3 | 2730.3 | 634.5 | 485.3 | 466.4 | 444.6 | 414.8 | 385.0 | 322.7 | 273.9 | 265.7 |
| 67.5° | 5571.7 | 1293.2 | 452.7 | 366.0 | 368.7 | 357.9 | 344.3 | 319.9 | 273.9 | 230.4 | 225.0 |
| 70° | 2453.7 | 626.3 | 298.3 | 279.3 | 273.9 | 273.9 | 284.6 | 276.5 | 233.2 | 192.5 | 184.4 |
| 72.5° | 835.1 | 336.2 | 222.3 | 211.5 | 197.9 | 195.3 | 238.6 | 230.4 | 187.1 | 149.1 | 140.9 |
| 75° | 436.5 | 225.0 | 162.7 | 151.8 | 119.3 | 143.7 | 189.8 | 179.0 | 132.8 | 97.6 | 89.5 |
| 77.5° | 284.6 | 160.0 | 111.2 | 97.6 | 67.8 | 94.9 | 140.9 | 124.7 | 78.6 | 48.8 | 43.4 |
| 80° | 179.0 | 105.8 | 65.1 | 46.1 | 32.5 | 51.6 | 76.0 | 54.2 | 29.8 | 10.9 | 8.1 |
| 82.5° | 94.9 | 54.2 | 24.4 | 16.3 | 13.5 | 16.3 | 19.0 | 13.5 | 5.4 | 0.0 | 0.0 |
| 85° | 37.9 | 19.0 | 8.1 | 5.4 | 2.7 | 0.0 | 5.4 | 2.7 | 0.0 | 0.0 | 0.0 |
| 87.5° | 13.5 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)