

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: P884669

Luminaire Tested: **NAV-SB5C-830-U-T3**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884669
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5C-830-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33274 lumens
Efficiency: N/A
Efficacy: 133.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

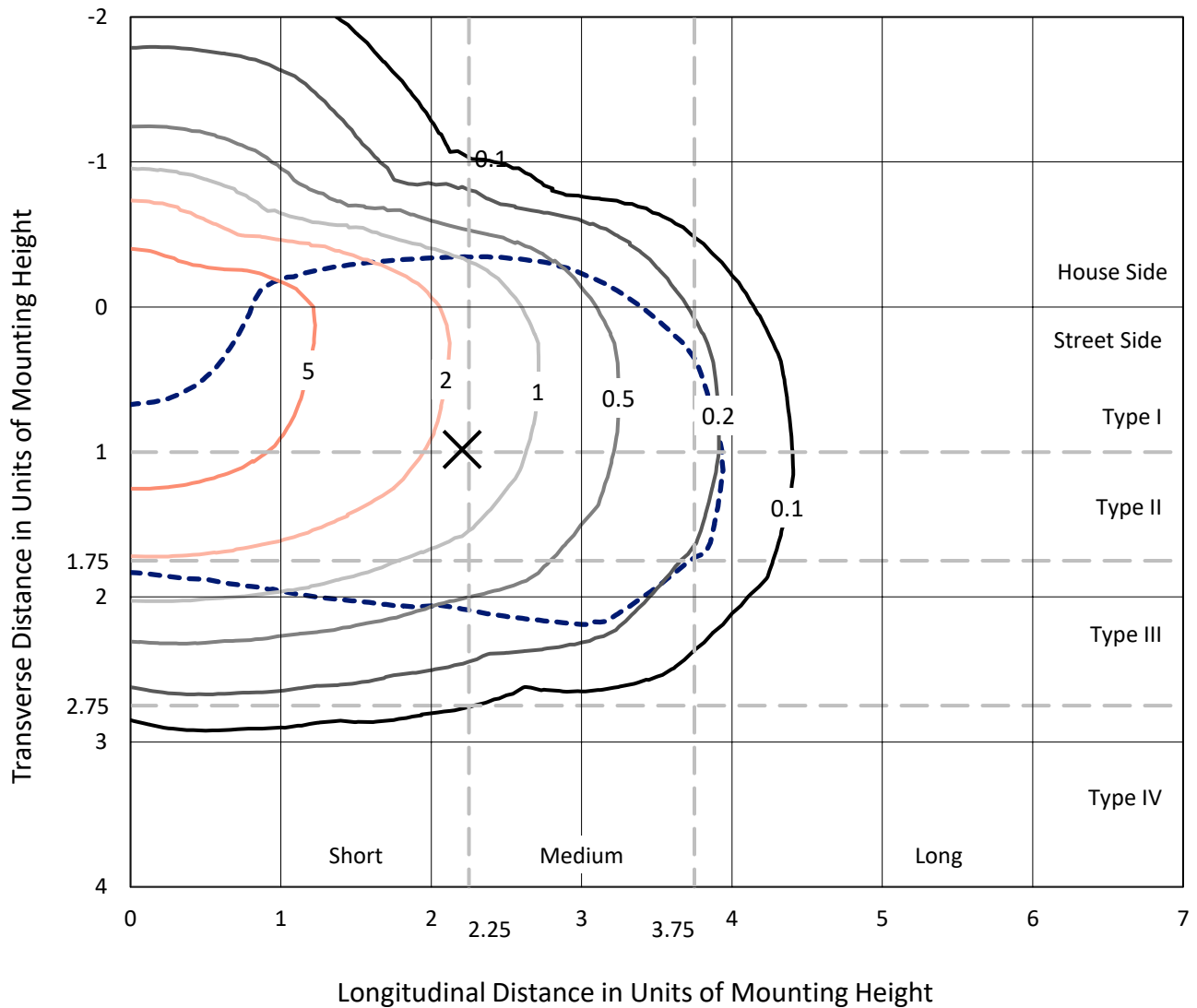
Input Watts (W): 249.5
Input Voltage (V): 120.0
Input Current (Ain): 2.116
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 7.885
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

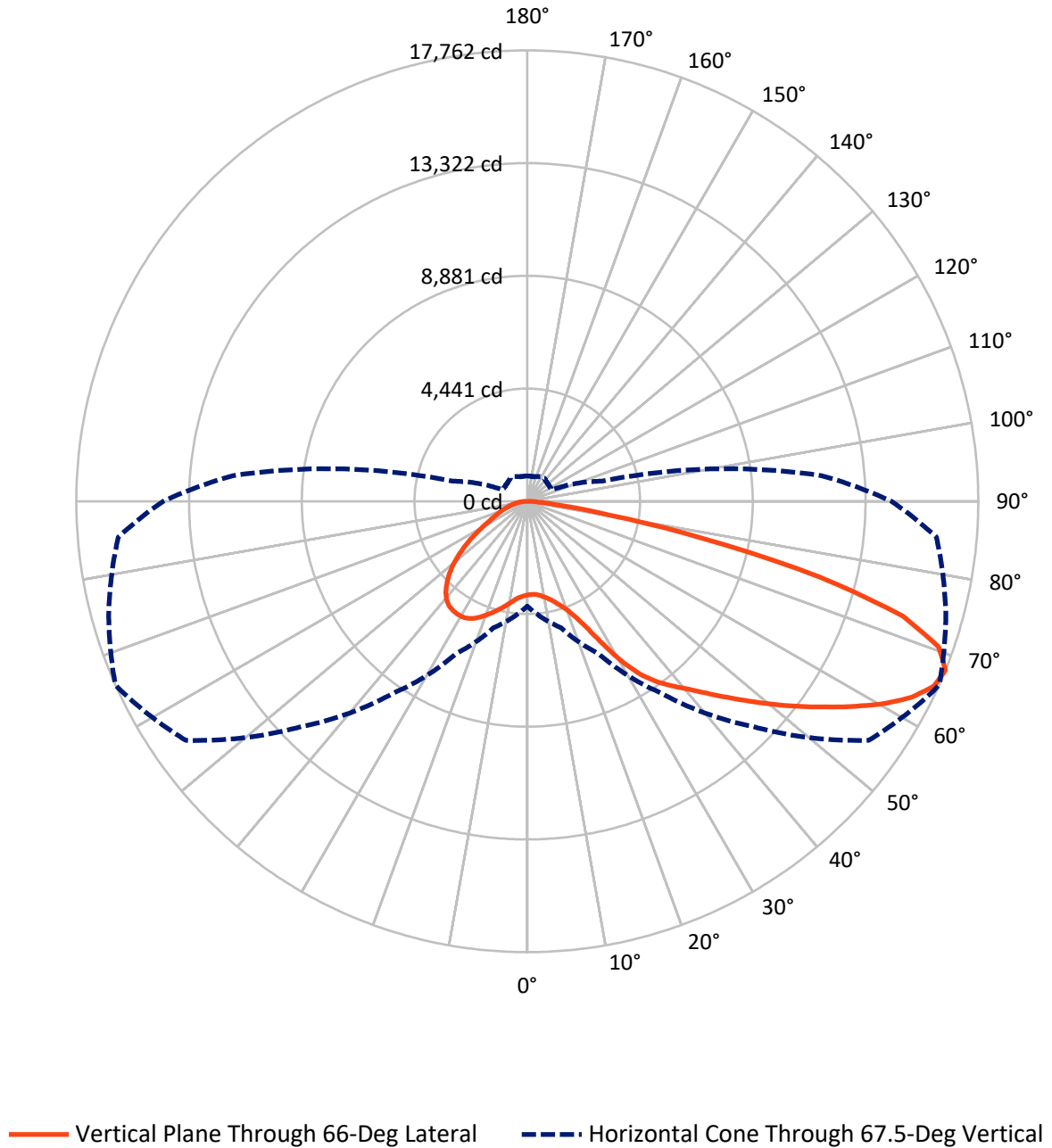
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8273.5 | 0.0 | 8273.5 |
| | % Fixture | 24.9 | 0.0 | 24.9 |
| Street Side | Lumens | 25000.5 | 0.0 | 25000.5 |
| | % Fixture | 75.1 | 0.0 | 75.1 |
| Total | Lumens | 33274.0 | 0.0 | 33274.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 365.9 | 1.1 |
| 10°-20° | 1208.9 | 3.6 |
| 20°-30° | 2330.1 | 7.0 |
| 30°-40° | 4085.5 | 12.3 |
| 40°-50° | 6073.7 | 18.3 |
| 50°-60° | 7699.1 | 23.1 |
| 60°-70° | 7533.3 | 22.6 |
| 70°-80° | 3593.5 | 10.8 |
| 80°-90° | 384.0 | 1.2 |
| 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° | 33274.0 | 100.0 |
| 0°-180° | 33274.0 | 100.0 |

Coefficient of Utilization



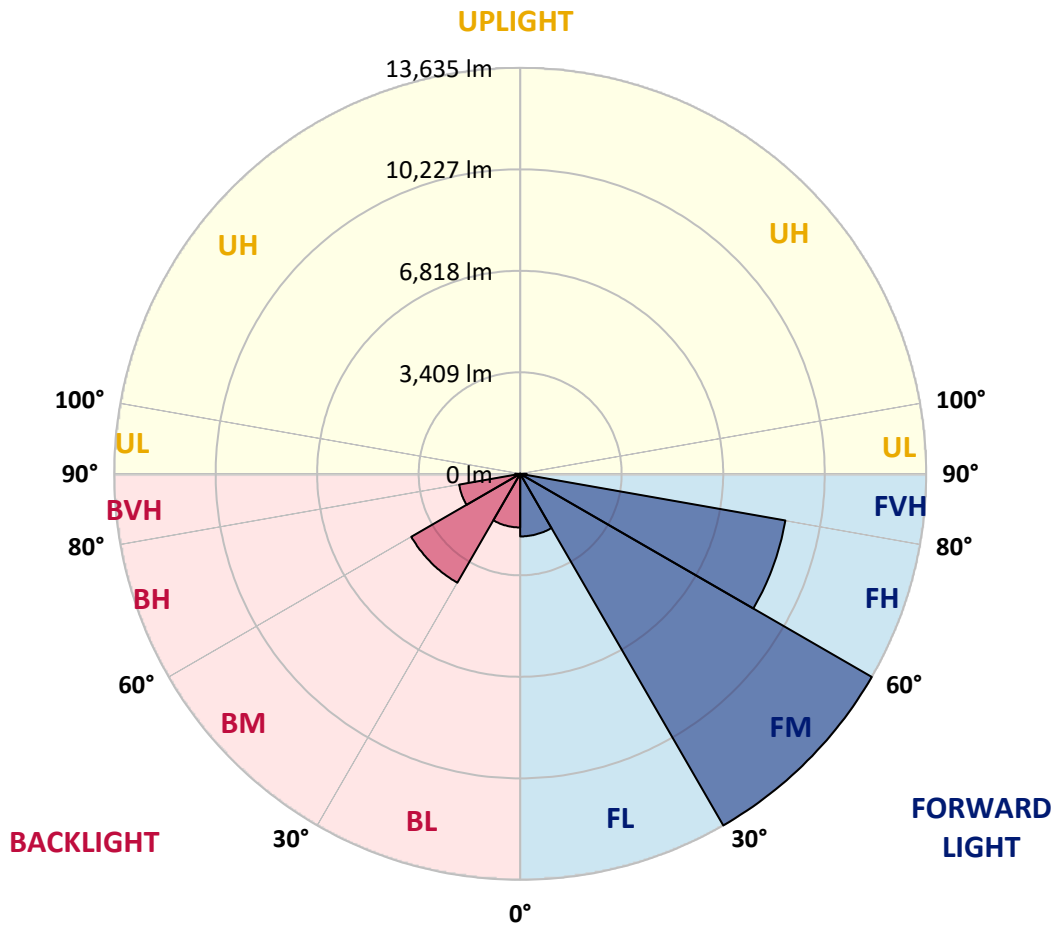
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2102.6 | 6.3 | | | |
| FM (30°-60°) | 13635.4 | 41.0 | | | |
| FH (60°-80°) | 9044.8 | 27.2 | | | G4/12000 |
| FVH (80°-90°) | 217.7 | 0.7 | | | G2/225 |
| BL (0°-30°) | 1802.3 | 5.4 | B3/2500 | | |
| BM (30°-60°) | 4222.9 | 12.7 | B3/5000 | | |
| BH (60°-80°) | 2082.0 | 6.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 166.3 | 0.5 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 |
| 2.5° | 3652.1 | 3673.0 | 3667.8 | 3659.1 | 3657.3 | 3660.8 | 3666.1 | 3671.3 | 3669.5 | 3678.3 | 3692.3 |
| 5° | 3641.6 | 3662.6 | 3660.8 | 3660.8 | 3667.8 | 3681.8 | 3690.5 | 3699.3 | 3690.5 | 3701.0 | 3720.2 |
| 7.5° | 3648.6 | 3664.3 | 3671.3 | 3678.3 | 3695.8 | 3722.0 | 3743.0 | 3762.2 | 3751.7 | 3764.0 | 3788.4 |
| 10° | 3737.7 | 3750.0 | 3757.0 | 3757.0 | 3769.2 | 3798.9 | 3819.9 | 3854.9 | 3846.1 | 3865.3 | 3896.8 |
| 12.5° | 3900.3 | 3912.6 | 3912.6 | 3905.6 | 3914.3 | 3933.5 | 3940.5 | 3979.0 | 3963.3 | 3994.7 | 4026.2 |
| 15° | 4099.6 | 4124.1 | 4104.9 | 4092.6 | 4096.1 | 4115.3 | 4113.6 | 4143.3 | 4127.6 | 4153.8 | 4181.8 |
| 17.5° | 4319.9 | 4351.4 | 4319.9 | 4318.1 | 4311.2 | 4332.1 | 4333.9 | 4360.1 | 4332.1 | 4351.4 | 4370.6 |
| 20° | 4580.4 | 4624.1 | 4597.9 | 4606.6 | 4590.9 | 4599.6 | 4608.4 | 4646.8 | 4603.1 | 4617.1 | 4611.8 |
| 22.5° | 4947.5 | 5000.0 | 4972.0 | 5005.2 | 4994.7 | 4987.7 | 4986.0 | 5054.2 | 4986.0 | 4991.2 | 4940.5 |
| 25° | 5482.5 | 5545.4 | 5496.5 | 5541.9 | 5541.9 | 5564.6 | 5590.9 | 5678.3 | 5564.6 | 5531.4 | 5400.3 |
| 27.5° | 6272.7 | 6335.6 | 6239.5 | 6267.4 | 6258.7 | 6314.6 | 6286.7 | 6503.4 | 6381.1 | 6326.9 | 6062.9 |
| 30° | 7223.7 | 7335.6 | 7153.8 | 7146.8 | 7138.0 | 7227.2 | 7267.4 | 7410.8 | 7286.6 | 7232.5 | 6914.3 |
| 32.5° | 8251.7 | 8368.8 | 8152.0 | 8089.1 | 8055.9 | 8110.1 | 8076.9 | 8192.2 | 8106.6 | 8022.7 | 7629.3 |
| 35° | 9339.1 | 9454.5 | 9248.2 | 9125.8 | 8992.9 | 8879.3 | 8760.4 | 8790.1 | 8709.7 | 8582.1 | 8174.8 |
| 37.5° | 10367.0 | 10578.6 | 10360.0 | 10228.9 | 9984.2 | 9762.2 | 9430.0 | 9291.9 | 9216.7 | 9099.6 | 8688.7 |
| 40° | 11414.2 | 11534.9 | 11368.8 | 11256.9 | 10991.2 | 10643.3 | 10111.8 | 9819.8 | 9718.4 | 9604.8 | 9256.9 |
| 42.5° | 12185.2 | 12300.6 | 12211.4 | 12134.5 | 11926.5 | 11522.6 | 10835.6 | 10470.2 | 10323.3 | 10195.7 | 9900.3 |
| 45° | 12797.1 | 12882.8 | 12826.8 | 12854.8 | 12765.6 | 12374.0 | 11585.6 | 11167.7 | 11015.6 | 10860.0 | 10627.5 |
| 47.5° | 13043.6 | 13134.5 | 13223.7 | 13389.7 | 13541.8 | 13253.4 | 12391.5 | 11923.0 | 11762.1 | 11603.0 | 11374.0 |
| 50° | 13015.6 | 13108.3 | 13367.0 | 13720.2 | 14192.2 | 14096.0 | 13241.1 | 12727.2 | 12578.6 | 12396.7 | 12185.2 |
| 52.5° | 12791.8 | 12896.7 | 13228.9 | 13816.3 | 14568.1 | 14727.1 | 14106.5 | 13557.6 | 13417.7 | 13200.9 | 12989.4 |
| 55° | 12204.4 | 12267.4 | 12765.6 | 13597.8 | 14657.2 | 15167.7 | 14954.4 | 14442.2 | 14302.3 | 13999.9 | 13769.1 |
| 57.5° | 11115.3 | 11206.2 | 11931.7 | 13008.6 | 14433.4 | 15466.6 | 15699.2 | 15372.2 | 15237.6 | 14802.3 | 14561.1 |
| 60° | 9694.0 | 9839.1 | 10669.5 | 12019.1 | 13863.5 | 15464.9 | 16375.7 | 16286.6 | 16174.7 | 15592.5 | 15340.8 |
| 62.5° | 8085.6 | 8253.4 | 9052.4 | 10620.5 | 12867.0 | 15026.1 | 16798.8 | 17052.3 | 16994.6 | 16321.5 | 15999.9 |
| 65° | 6209.7 | 6325.1 | 7120.6 | 8811.1 | 11316.3 | 14083.8 | 16847.8 | 17575.0 | 17585.5 | 16875.7 | 16344.3 |
| 67.5° | 4134.6 | 4466.7 | 5157.3 | 6611.8 | 9239.4 | 12543.6 | 16417.7 | 17660.7 | 17762.1 | 17066.3 | 16171.2 |
| 70° | 2017.5 | 2454.5 | 3131.1 | 4297.2 | 6611.8 | 10181.7 | 15293.6 | 16957.9 | 17183.4 | 16510.3 | 15139.7 |
| 72.5° | 837.4 | 979.0 | 1347.9 | 2120.6 | 3795.4 | 6870.6 | 13034.8 | 15052.3 | 15470.1 | 14629.2 | 12728.9 |
| 75° | 564.7 | 611.9 | 771.0 | 1087.4 | 1729.0 | 3388.1 | 9400.3 | 11223.7 | 11896.7 | 11048.9 | 9031.4 |
| 77.5° | 435.3 | 465.0 | 561.2 | 760.5 | 1028.0 | 1281.5 | 5031.4 | 6763.9 | 7111.8 | 6583.9 | 4699.3 |
| 80° | 342.7 | 365.4 | 419.6 | 554.2 | 729.0 | 685.3 | 1715.0 | 3064.7 | 3265.7 | 2739.5 | 1510.5 |
| 82.5° | 297.2 | 305.9 | 300.7 | 375.9 | 484.3 | 400.3 | 562.9 | 1131.1 | 1248.2 | 905.6 | 493.0 |
| 85° | 215.0 | 239.5 | 250.0 | 232.5 | 257.0 | 202.8 | 230.8 | 400.3 | 440.6 | 393.4 | 278.0 |
| 87.5° | 87.4 | 129.4 | 159.1 | 150.3 | 94.4 | 57.7 | 71.7 | 117.1 | 134.6 | 146.9 | 90.9 |
| 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° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 | 3690.5 |
| 2.5° | 3694.0 | 3706.3 | 3715.0 | 3725.5 | 3732.5 | 3743.0 | 3764.0 | 3776.2 | 3777.9 | 3786.7 | 3784.9 |
| 5° | 3727.2 | 3744.7 | 3764.0 | 3791.9 | 3823.4 | 3849.6 | 3889.8 | 3917.8 | 3928.3 | 3937.0 | 3935.3 |
| 7.5° | 3798.9 | 3823.4 | 3858.4 | 3907.3 | 3952.8 | 3987.7 | 4036.7 | 4069.9 | 4103.1 | 4115.3 | 4117.1 |
| 10° | 3905.6 | 3940.5 | 3991.2 | 4057.7 | 4106.6 | 4152.1 | 4202.8 | 4230.7 | 4263.9 | 4277.9 | 4284.9 |
| 12.5° | 4038.4 | 4075.1 | 4141.6 | 4234.2 | 4279.7 | 4311.2 | 4328.6 | 4321.6 | 4328.6 | 4340.9 | 4344.4 |
| 15° | 4190.5 | 4230.7 | 4305.9 | 4405.6 | 4437.0 | 4409.1 | 4370.6 | 4335.6 | 4330.4 | 4333.9 | 4346.1 |
| 17.5° | 4370.6 | 4400.3 | 4487.7 | 4571.6 | 4548.9 | 4433.5 | 4349.6 | 4293.7 | 4265.7 | 4257.0 | 4269.2 |
| 20° | 4622.3 | 4622.3 | 4694.0 | 4746.5 | 4594.4 | 4398.6 | 4267.4 | 4176.5 | 4118.8 | 4094.4 | 4089.1 |
| 22.5° | 4928.3 | 4900.3 | 4945.8 | 4909.0 | 4585.6 | 4300.7 | 4118.8 | 3961.5 | 3874.1 | 3839.1 | 3833.9 |
| 25° | 5316.4 | 5283.2 | 5270.9 | 5043.7 | 4522.7 | 4145.1 | 3849.6 | 3659.1 | 3582.1 | 3562.9 | 3566.4 |
| 27.5° | 5902.0 | 5818.1 | 5659.0 | 5117.1 | 4407.3 | 3900.3 | 3534.9 | 3358.4 | 3314.7 | 3316.4 | 3321.6 |
| 30° | 6681.8 | 6513.9 | 6124.1 | 5129.3 | 4218.5 | 3554.2 | 3213.3 | 3087.4 | 3066.4 | 3075.1 | 3104.9 |
| 32.5° | 7403.8 | 7244.7 | 6599.6 | 5073.4 | 3928.3 | 3215.0 | 2924.8 | 2840.9 | 2809.4 | 2819.9 | 2833.9 |
| 35° | 7970.2 | 7926.5 | 7040.1 | 4994.7 | 3571.6 | 2896.8 | 2666.1 | 2594.4 | 2533.2 | 2519.2 | 2529.7 |
| 37.5° | 8505.2 | 8487.7 | 7370.6 | 4884.6 | 3218.5 | 2671.3 | 2458.0 | 2363.6 | 2274.5 | 2225.5 | 2227.3 |
| 40° | 9092.6 | 9075.1 | 7587.3 | 4715.0 | 2905.6 | 2475.5 | 2271.0 | 2146.8 | 2036.7 | 1947.5 | 1956.3 |
| 42.5° | 9753.4 | 9650.3 | 7690.5 | 4472.0 | 2639.8 | 2309.4 | 2118.9 | 1951.0 | 1805.9 | 1723.8 | 1729.0 |
| 45° | 10475.4 | 10242.9 | 7688.7 | 4162.6 | 2416.1 | 2157.3 | 1956.3 | 1718.5 | 1583.9 | 1507.0 | 1503.5 |
| 47.5° | 11241.2 | 10809.3 | 7594.3 | 3819.9 | 2199.3 | 1989.5 | 1704.5 | 1522.7 | 1433.6 | 1386.4 | 1375.9 |
| 50° | 12031.4 | 11339.1 | 7433.5 | 3426.5 | 1977.3 | 1798.9 | 1547.2 | 1423.1 | 1354.9 | 1311.2 | 1295.4 |
| 52.5° | 12774.4 | 11819.8 | 7239.4 | 2980.7 | 1751.7 | 1613.6 | 1477.3 | 1381.1 | 1309.4 | 1260.5 | 1239.5 |
| 55° | 13464.9 | 12234.2 | 6965.0 | 2524.5 | 1568.2 | 1489.5 | 1444.0 | 1363.6 | 1281.5 | 1223.8 | 1201.0 |
| 57.5° | 14078.5 | 12503.4 | 6491.2 | 2096.1 | 1437.1 | 1403.8 | 1409.1 | 1333.9 | 1239.5 | 1190.5 | 1159.1 |
| 60° | 14589.0 | 12700.9 | 5790.2 | 1699.3 | 1330.4 | 1319.9 | 1354.9 | 1278.0 | 1167.8 | 1111.9 | 1087.4 |
| 62.5° | 14895.0 | 12697.4 | 4930.0 | 1391.6 | 1239.5 | 1243.0 | 1283.2 | 1208.0 | 1096.1 | 1043.7 | 1028.0 |
| 65° | 14868.7 | 12386.3 | 3986.0 | 1190.5 | 1152.1 | 1155.6 | 1208.0 | 1131.1 | 1036.7 | 1005.2 | 1003.5 |
| 67.5° | 14342.5 | 11627.5 | 3057.7 | 1059.4 | 1055.9 | 1071.7 | 1132.9 | 1078.7 | 1000.0 | 996.5 | 1001.7 |
| 70° | 12917.7 | 10052.4 | 2202.8 | 954.5 | 956.3 | 979.0 | 1059.4 | 1045.4 | 980.8 | 987.8 | 986.0 |
| 72.5° | 10358.3 | 7664.3 | 1479.0 | 844.4 | 846.1 | 882.9 | 989.5 | 1019.2 | 961.5 | 1054.2 | 1068.2 |
| 75° | 6898.5 | 4779.7 | 951.0 | 727.3 | 729.0 | 776.2 | 928.3 | 968.5 | 909.1 | 1050.7 | 1059.4 |
| 77.5° | 3314.7 | 2148.6 | 688.8 | 611.9 | 611.9 | 655.6 | 802.4 | 867.1 | 774.5 | 816.4 | 748.2 |
| 80° | 1145.1 | 807.7 | 542.0 | 493.0 | 482.5 | 512.2 | 676.6 | 751.7 | 667.8 | 615.4 | 576.9 |
| 82.5° | 451.0 | 419.6 | 435.3 | 382.9 | 347.9 | 367.1 | 526.2 | 620.6 | 491.3 | 444.1 | 442.3 |
| 85° | 258.7 | 272.7 | 307.7 | 253.5 | 201.0 | 225.5 | 386.4 | 445.8 | 370.6 | 326.9 | 333.9 |
| 87.5° | 69.9 | 96.2 | 141.6 | 131.1 | 90.9 | 96.2 | 183.6 | 246.5 | 213.3 | 164.3 | 169.6 |
| 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)