

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: P884808

Luminaire Tested: **NAV-SB5D-750-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884808
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-750-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 5000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43661 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G5

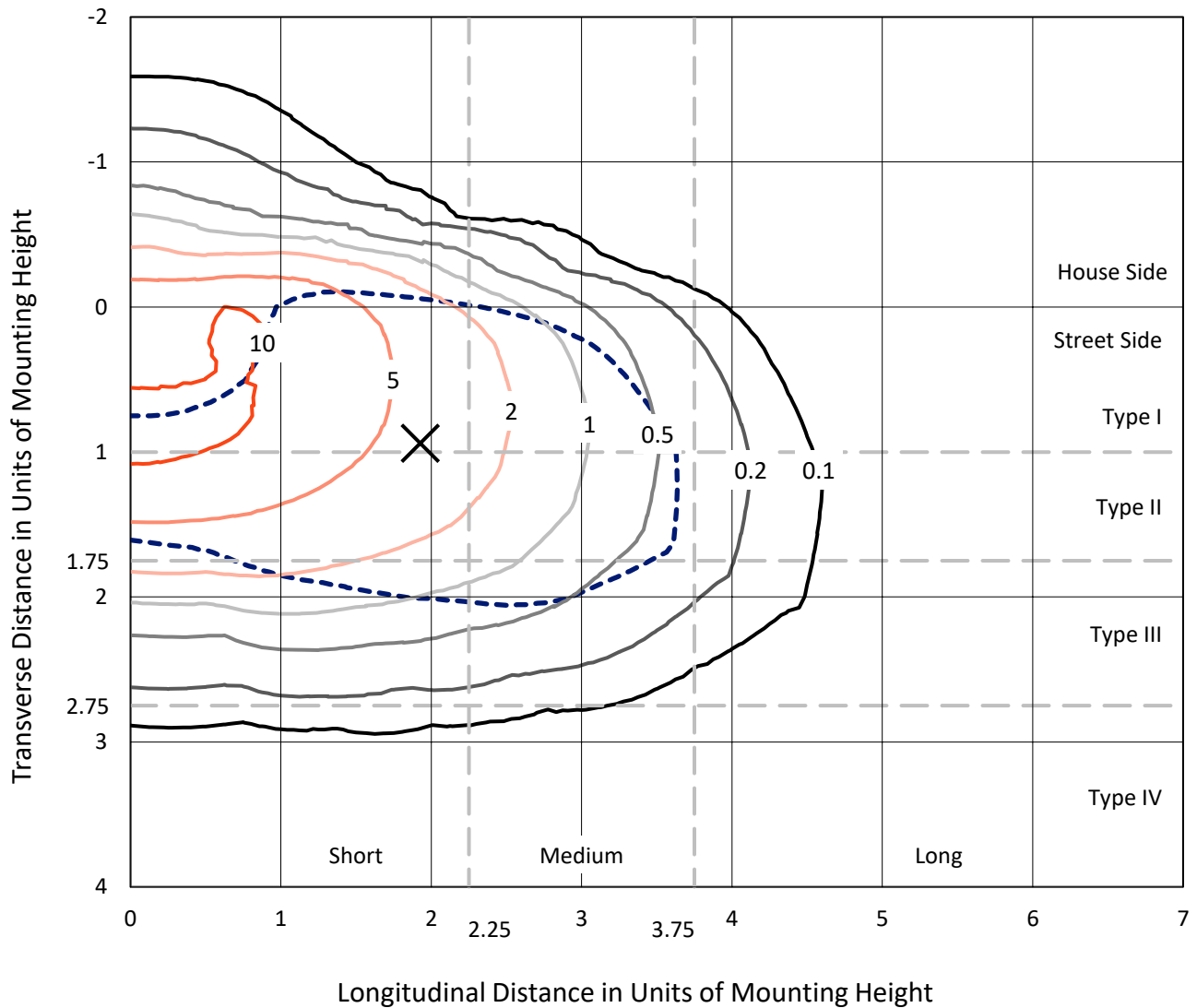
Input Watts (W): 364.9
Input Voltage (V): 120.0
Input Current (Ain): 3.094
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 3.28
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

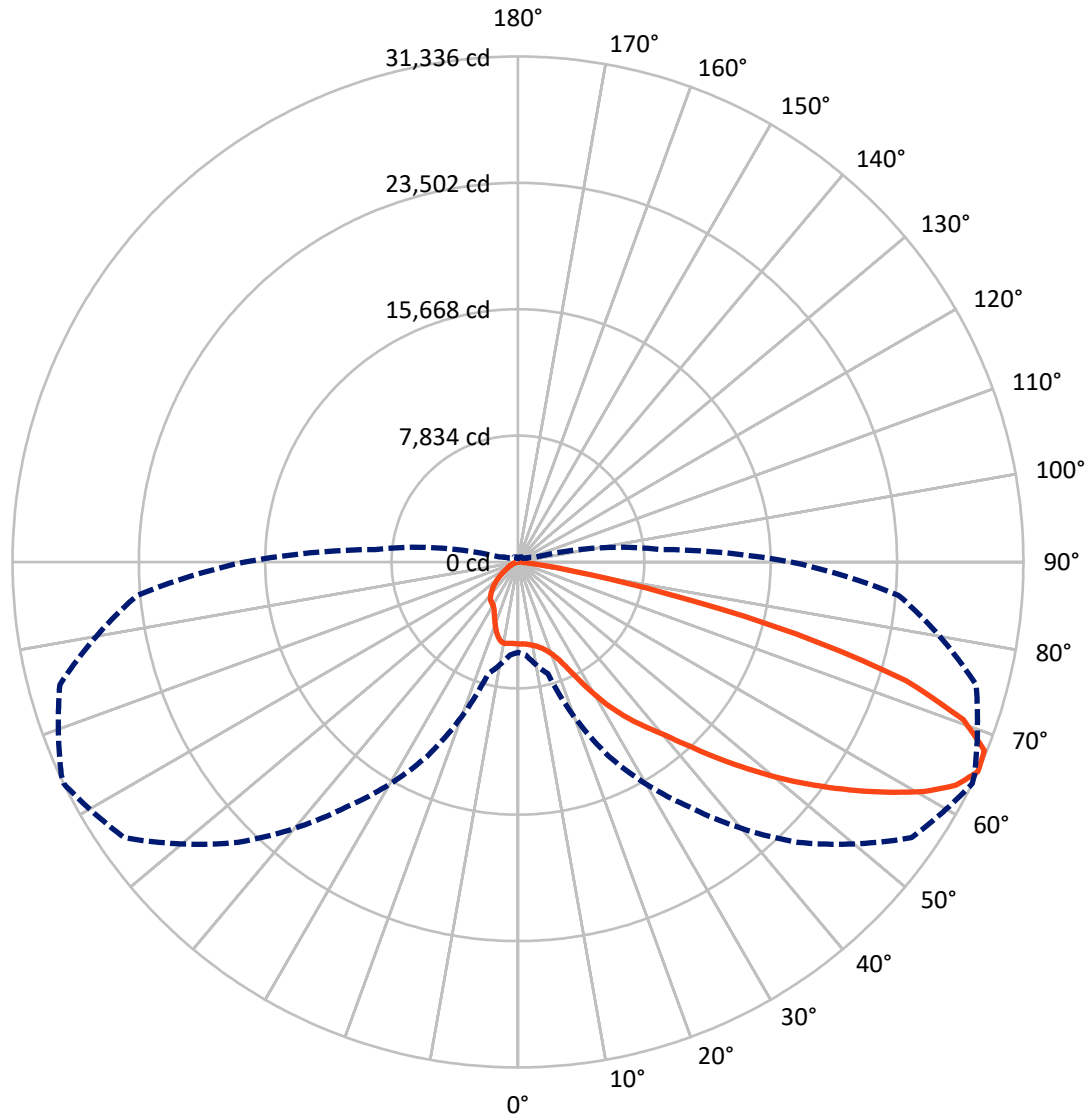
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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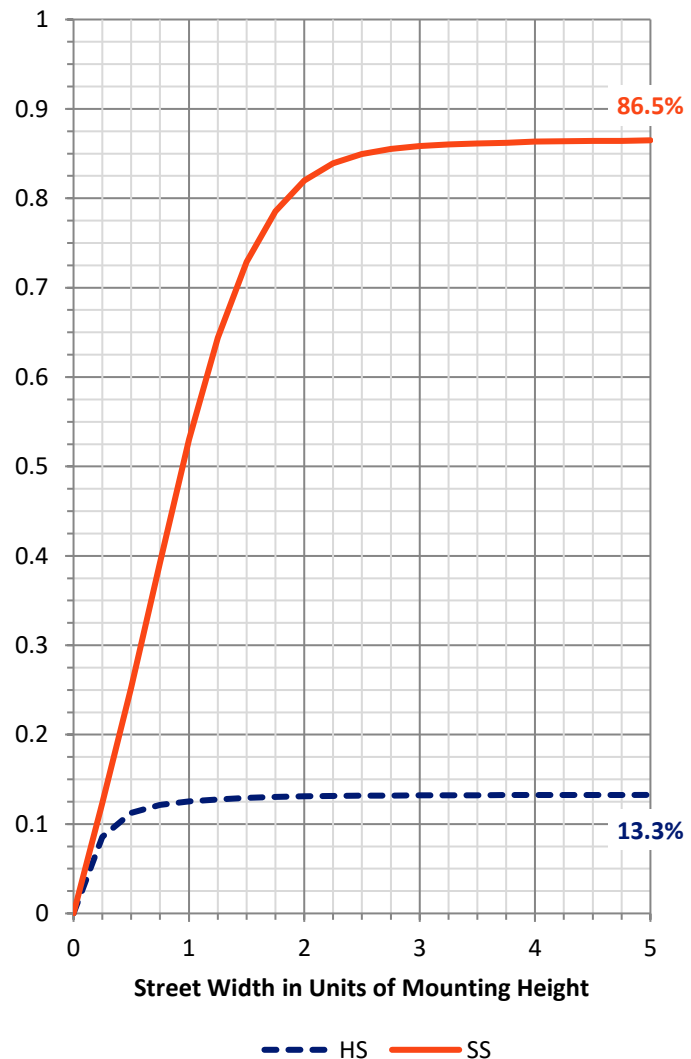
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5838.8 | 0.0 | 5838.8 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 37822.2 | 0.0 | 37822.2 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 43661.0 | 0.0 | 43661.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 468.5 | 1.1 |
| 10°-20° | 1270.8 | 2.9 |
| 20°-30° | 2408.0 | 5.5 |
| 30°-40° | 4872.6 | 11.2 |
| 40°-50° | 8300.5 | 19.0 |
| 50°-60° | 11288.0 | 25.9 |
| 60°-70° | 10600.0 | 24.3 |
| 70°-80° | 4246.8 | 9.7 |
| 80°-90° | 205.7 | 0.5 |
| 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° | 43661.0 | 100.0 |
| 0°-180° | 43661.0 | 100.0 |

Coefficient of Utilization



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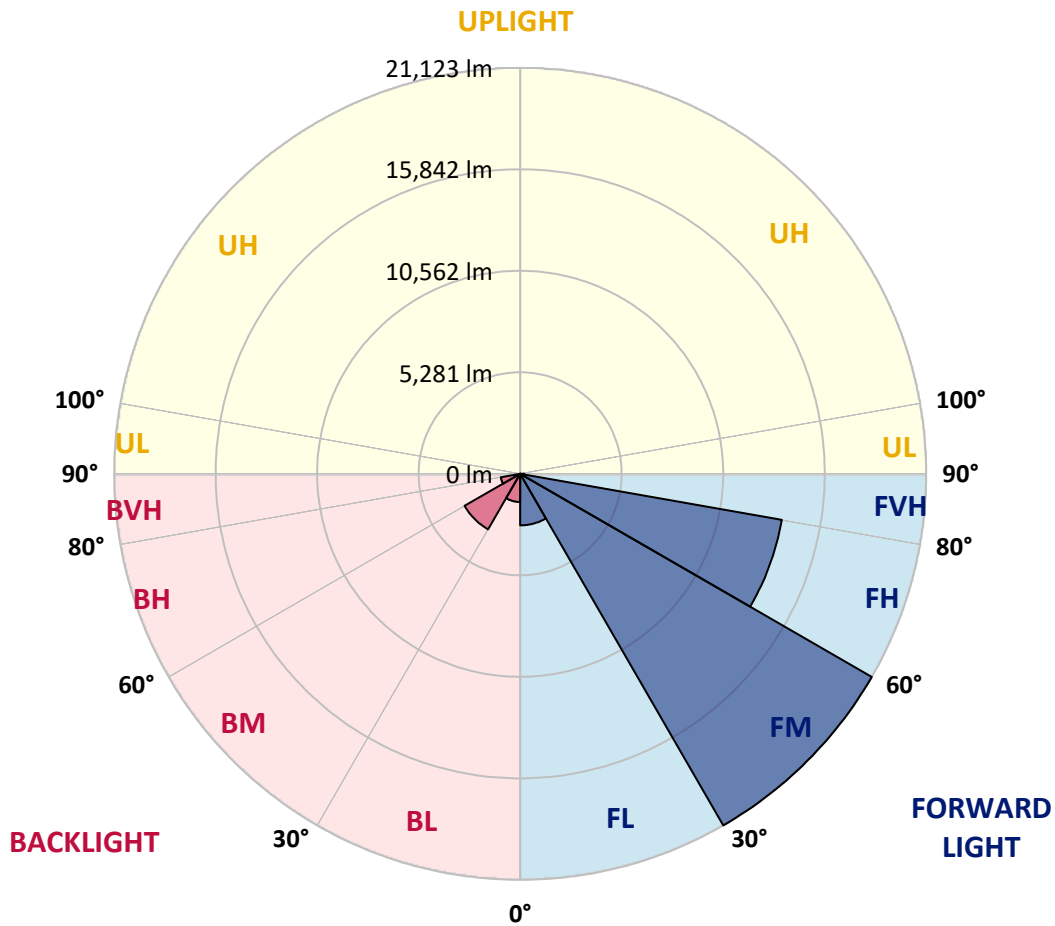
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2681.3 | 6.1 | | | |
| FM (30°-60°) | 21123.1 | 48.4 | | | |
| FH (60°-80°) | 13822.1 | 31.7 | | | G5 |
| FVH (80°-90°) | 195.7 | 0.4 | | | G2/225 |
| BL (0°-30°) | 1466.0 | 3.4 | B3/2500 | | |
| BM (30°-60°) | 3338.0 | 7.6 | B3/5000 | | |
| BH (60°-80°) | 1024.8 | 2.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 10.1 | 0.0 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 |
| 2.5° | 5060.7 | 5095.8 | 5087.0 | 5078.2 | 5075.3 | 5081.2 | 5084.1 | 5081.2 | 5081.2 | 5081.2 | 5084.1 |
| 5° | 4964.1 | 4993.3 | 4993.3 | 5013.8 | 5043.1 | 5078.2 | 5104.6 | 5110.4 | 5116.3 | 5125.1 | 5122.1 |
| 7.5° | 4779.7 | 4803.1 | 4820.7 | 4888.0 | 4961.2 | 5054.8 | 5133.8 | 5174.8 | 5180.7 | 5212.9 | 5224.6 |
| 10° | 4653.8 | 4683.1 | 4712.4 | 4782.6 | 4888.0 | 5028.5 | 5163.1 | 5262.6 | 5277.3 | 5353.4 | 5388.5 |
| 12.5° | 4648.0 | 4677.2 | 4715.3 | 4791.4 | 4914.3 | 5063.6 | 5227.5 | 5370.9 | 5397.3 | 5508.5 | 5581.7 |
| 15° | 4709.4 | 4744.6 | 4779.7 | 4873.3 | 5005.1 | 5186.5 | 5362.1 | 5540.7 | 5567.0 | 5725.1 | 5804.1 |
| 17.5° | 4835.3 | 4882.1 | 4908.5 | 5002.1 | 5142.6 | 5344.6 | 5575.8 | 5780.7 | 5804.1 | 5988.5 | 6088.0 |
| 20° | 5084.1 | 5139.7 | 5148.5 | 5224.6 | 5362.1 | 5578.7 | 5853.9 | 6108.5 | 6137.8 | 6348.5 | 6459.7 |
| 22.5° | 5599.2 | 5678.2 | 5608.0 | 5646.1 | 5769.0 | 5985.6 | 6284.1 | 6606.1 | 6647.1 | 6887.1 | 6986.6 |
| 25° | 6506.6 | 6617.8 | 6436.3 | 6371.9 | 6424.6 | 6650.0 | 7024.6 | 7431.5 | 7478.3 | 7671.5 | 7721.2 |
| 27.5° | 8289.1 | 8145.7 | 7870.5 | 7601.2 | 7443.2 | 7572.0 | 7993.5 | 8496.9 | 8555.4 | 8742.7 | 8684.2 |
| 30° | 10247.2 | 10121.3 | 9749.6 | 9152.5 | 8777.9 | 8757.4 | 9146.7 | 9708.6 | 9776.0 | 9954.5 | 9776.0 |
| 32.5° | 12208.2 | 12088.2 | 11684.3 | 10949.7 | 10299.9 | 9977.9 | 10247.2 | 10870.6 | 10905.8 | 11019.9 | 10756.5 |
| 35° | 14137.1 | 14014.2 | 13610.2 | 12858.0 | 12059.0 | 11327.2 | 11274.5 | 11977.0 | 11988.7 | 12108.7 | 11716.5 |
| 37.5° | 16077.6 | 15975.2 | 15544.9 | 14807.4 | 14020.0 | 13010.2 | 12521.4 | 13024.8 | 13039.5 | 13156.6 | 12749.7 |
| 40° | 17462.1 | 17506.0 | 17210.4 | 16639.6 | 15963.5 | 14860.0 | 13920.5 | 14140.0 | 14052.2 | 14248.3 | 14005.4 |
| 42.5° | 18650.4 | 18738.2 | 18480.7 | 18193.8 | 17801.6 | 16829.9 | 15653.2 | 15615.2 | 15474.7 | 15580.1 | 15328.3 |
| 45° | 19677.8 | 19750.9 | 19519.7 | 19452.4 | 19443.6 | 18761.6 | 17547.0 | 17318.7 | 17122.6 | 17102.1 | 16800.6 |
| 47.5° | 20055.3 | 20195.8 | 20295.3 | 20520.7 | 20959.8 | 20672.9 | 19505.1 | 19150.9 | 18931.4 | 18770.4 | 18293.3 |
| 50° | 20198.8 | 20348.0 | 20687.6 | 21343.2 | 22382.3 | 22505.2 | 21454.4 | 21056.4 | 20787.1 | 20494.4 | 19791.9 |
| 52.5° | 20005.6 | 20271.9 | 20728.5 | 21832.0 | 23339.4 | 23974.5 | 23324.7 | 22976.4 | 22669.1 | 22192.0 | 21150.0 |
| 55° | 18867.0 | 19133.4 | 20067.0 | 21826.1 | 23816.4 | 25004.8 | 25092.6 | 24937.5 | 24592.1 | 23839.9 | 22247.6 |
| 57.5° | 16466.9 | 16862.1 | 18340.2 | 21082.7 | 23807.7 | 25891.6 | 26825.3 | 26936.6 | 26550.2 | 25473.1 | 23111.1 |
| 60° | 13141.9 | 13677.6 | 15480.5 | 19434.8 | 23073.0 | 26371.7 | 28344.4 | 28900.5 | 28490.8 | 27082.9 | 23810.6 |
| 62.5° | 9170.1 | 9790.6 | 11497.0 | 16853.3 | 21392.9 | 26026.3 | 29453.7 | 30481.1 | 30170.8 | 28523.0 | 24079.9 |
| 65° | 5593.4 | 5792.4 | 7168.1 | 13261.9 | 18536.3 | 24580.4 | 29796.2 | 31335.7 | 31233.3 | 29404.0 | 23681.8 |
| 67.5° | 3726.0 | 3892.8 | 4288.0 | 9094.0 | 14388.8 | 21691.5 | 28976.6 | 31186.5 | 31215.7 | 29260.5 | 22224.2 |
| 70° | 2245.0 | 2388.4 | 2645.9 | 5289.0 | 9325.2 | 17169.4 | 26439.0 | 29284.0 | 29453.7 | 27343.4 | 19461.2 |
| 72.5° | 924.9 | 1021.5 | 1255.7 | 2397.2 | 4829.4 | 10897.0 | 21053.4 | 25142.3 | 25537.5 | 22991.1 | 14936.1 |
| 75° | 523.9 | 573.7 | 737.6 | 1203.0 | 2095.7 | 5078.2 | 12752.6 | 17848.4 | 18430.9 | 15846.4 | 8985.7 |
| 77.5° | 348.3 | 371.7 | 477.1 | 778.6 | 1179.6 | 1732.7 | 5449.9 | 9298.9 | 10411.1 | 8654.9 | 3889.9 |
| 80° | 234.2 | 254.6 | 327.8 | 521.0 | 766.9 | 743.4 | 1735.7 | 3445.0 | 4238.2 | 2973.8 | 948.3 |
| 82.5° | 158.1 | 161.0 | 234.2 | 342.5 | 485.9 | 360.0 | 512.2 | 1071.3 | 1346.4 | 860.5 | 360.0 |
| 85° | 90.7 | 87.8 | 172.7 | 199.0 | 216.6 | 149.3 | 155.1 | 322.0 | 421.5 | 362.9 | 204.9 |
| 87.5° | 11.7 | 17.6 | 67.3 | 52.7 | 29.3 | 32.2 | 32.2 | 55.6 | 82.0 | 87.8 | 43.9 |
| 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° | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 | 5078.2 |
| 2.5° | 5084.1 | 5081.2 | 5072.4 | 5063.6 | 5043.1 | 5031.4 | 5037.3 | 5031.4 | 5028.5 | 5031.4 | 5043.1 |
| 5° | 5122.1 | 5113.4 | 5089.9 | 5060.7 | 5019.7 | 4969.9 | 4937.7 | 4890.9 | 4847.0 | 4820.7 | 4826.5 |
| 7.5° | 5224.6 | 5215.8 | 5183.6 | 5101.6 | 4969.9 | 4762.1 | 4571.9 | 4405.0 | 4279.2 | 4206.0 | 4208.9 |
| 10° | 5388.5 | 5373.8 | 5324.1 | 5142.6 | 4797.2 | 4343.6 | 3966.0 | 3652.8 | 3447.9 | 3351.3 | 3342.6 |
| 12.5° | 5581.7 | 5564.1 | 5476.3 | 5104.6 | 4469.4 | 3761.1 | 3240.1 | 2891.8 | 2701.6 | 2616.7 | 2607.9 |
| 15° | 5810.0 | 5786.5 | 5613.9 | 4923.1 | 3992.3 | 3117.2 | 2640.1 | 2379.6 | 2256.7 | 2180.6 | 2183.5 |
| 17.5° | 6093.9 | 6052.9 | 5716.3 | 4650.9 | 3474.3 | 2625.5 | 2271.3 | 2075.2 | 1966.9 | 1893.7 | 1887.9 |
| 20° | 6462.7 | 6395.3 | 5798.3 | 4326.0 | 2997.2 | 2315.2 | 2022.5 | 1858.6 | 1776.6 | 1712.3 | 1700.5 |
| 22.5° | 6977.8 | 6881.2 | 5897.8 | 3974.8 | 2660.6 | 2101.5 | 1838.1 | 1718.1 | 1650.8 | 1577.6 | 1565.9 |
| 25° | 7615.9 | 7501.7 | 6020.7 | 3649.9 | 2429.4 | 1917.1 | 1703.5 | 1604.0 | 1524.9 | 1440.1 | 1431.3 |
| 27.5° | 8508.6 | 8303.7 | 6167.0 | 3383.5 | 2230.3 | 1759.1 | 1580.5 | 1469.3 | 1378.6 | 1308.3 | 1293.7 |
| 30° | 9503.7 | 9167.2 | 6295.8 | 3222.6 | 2048.9 | 1612.7 | 1419.6 | 1308.3 | 1223.5 | 1173.7 | 1164.9 |
| 32.5° | 10446.2 | 9989.6 | 6380.7 | 3152.3 | 1884.9 | 1445.9 | 1243.9 | 1123.9 | 1059.5 | 1044.9 | 1053.7 |
| 35° | 11336.0 | 10733.1 | 6371.9 | 3085.0 | 1738.6 | 1279.1 | 1071.3 | 948.3 | 898.6 | 907.3 | 907.3 |
| 37.5° | 12360.4 | 11526.3 | 6310.5 | 2979.6 | 1618.6 | 1126.9 | 922.0 | 813.7 | 769.8 | 772.7 | 784.4 |
| 40° | 13551.7 | 12442.4 | 6272.4 | 2780.6 | 1486.9 | 986.4 | 799.1 | 711.2 | 679.0 | 667.3 | 664.4 |
| 42.5° | 14822.0 | 13329.3 | 6278.3 | 2555.2 | 1323.0 | 860.5 | 714.2 | 641.0 | 611.7 | 602.9 | 600.0 |
| 45° | 16098.1 | 14175.1 | 6287.1 | 2321.1 | 1150.3 | 763.9 | 652.7 | 591.2 | 573.7 | 562.0 | 562.0 |
| 47.5° | 17298.2 | 14895.2 | 6123.1 | 2069.3 | 980.5 | 690.8 | 602.9 | 562.0 | 547.3 | 532.7 | 532.7 |
| 50° | 18416.3 | 15375.2 | 5728.0 | 1776.6 | 845.9 | 632.2 | 564.9 | 535.6 | 521.0 | 506.4 | 506.4 |
| 52.5° | 19285.6 | 15451.3 | 5075.3 | 1475.2 | 752.2 | 588.3 | 541.5 | 515.1 | 497.6 | 482.9 | 480.0 |
| 55° | 19671.9 | 14974.2 | 4147.5 | 1194.2 | 679.0 | 550.3 | 518.1 | 491.7 | 471.2 | 456.6 | 453.7 |
| 57.5° | 19572.4 | 13970.2 | 3234.3 | 960.0 | 608.8 | 512.2 | 488.8 | 471.2 | 447.8 | 424.4 | 421.5 |
| 60° | 19083.6 | 12626.8 | 2438.1 | 799.1 | 544.4 | 471.2 | 456.6 | 442.0 | 409.8 | 374.6 | 368.8 |
| 62.5° | 18237.7 | 10937.9 | 1738.6 | 661.5 | 474.2 | 424.4 | 418.6 | 406.8 | 360.0 | 295.6 | 289.8 |
| 65° | 16944.0 | 8886.2 | 1170.8 | 550.3 | 406.8 | 371.7 | 374.6 | 354.2 | 292.7 | 219.5 | 213.7 |
| 67.5° | 15053.2 | 6497.8 | 749.3 | 450.7 | 339.5 | 310.3 | 313.2 | 301.5 | 248.8 | 187.3 | 178.5 |
| 70° | 12644.3 | 4302.6 | 488.8 | 342.5 | 272.2 | 240.0 | 257.6 | 260.5 | 210.7 | 152.2 | 146.3 |
| 72.5° | 9269.6 | 2540.6 | 342.5 | 254.6 | 199.0 | 166.8 | 210.7 | 216.6 | 169.8 | 114.2 | 108.3 |
| 75° | 5283.1 | 1205.9 | 257.6 | 184.4 | 122.9 | 117.1 | 163.9 | 163.9 | 117.1 | 76.1 | 70.2 |
| 77.5° | 2218.6 | 503.4 | 181.5 | 120.0 | 70.2 | 67.3 | 111.2 | 102.4 | 58.5 | 35.1 | 35.1 |
| 80° | 641.0 | 225.4 | 96.6 | 58.5 | 29.3 | 26.3 | 43.9 | 32.2 | 14.6 | 5.9 | 5.9 |
| 82.5° | 251.7 | 99.5 | 38.1 | 23.4 | 11.7 | 11.7 | 5.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 149.3 | 41.0 | 17.6 | 8.8 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 38.1 | 8.8 | 5.9 | 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)