

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: P969498

Luminaire Tested: **NAV-SB5D-835-U-T2R**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P969498  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5D-835-U-T2R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 49777.1 lumens  
Efficiency: N/A  
Efficacy: 136.4 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B4 - 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

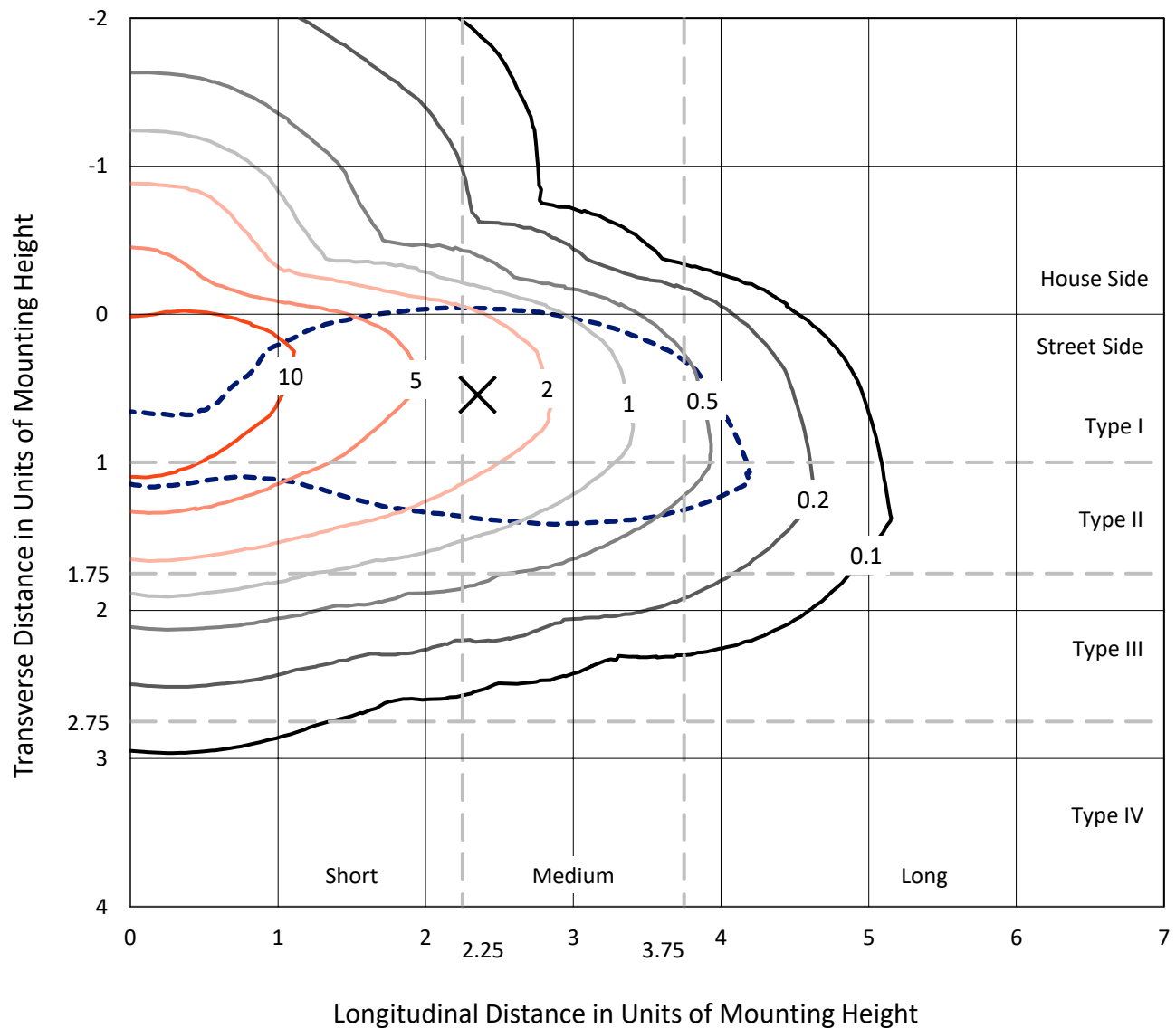


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

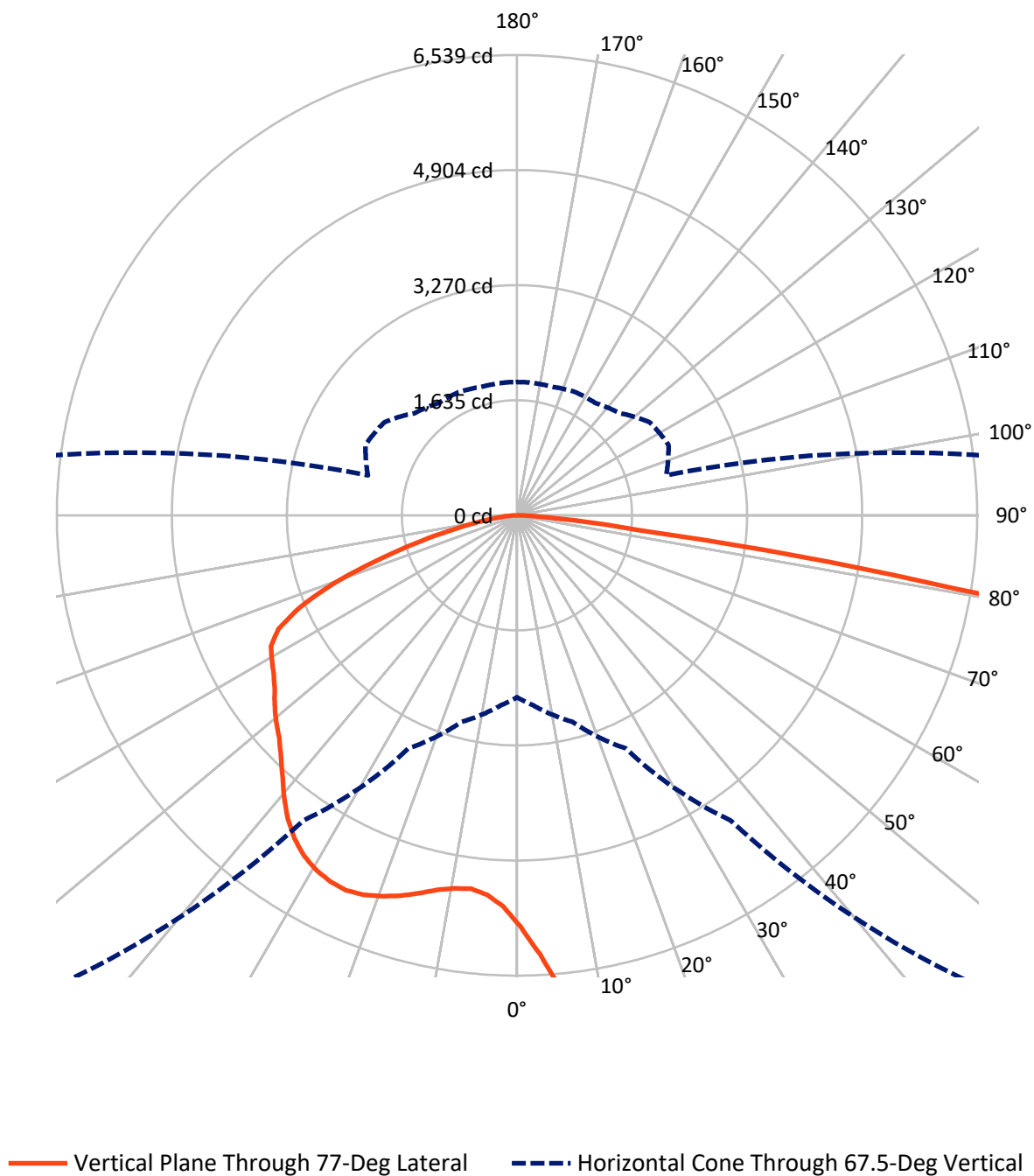


Based on 25 foot mounting height. Maximum calculated value = 18.2 fc  
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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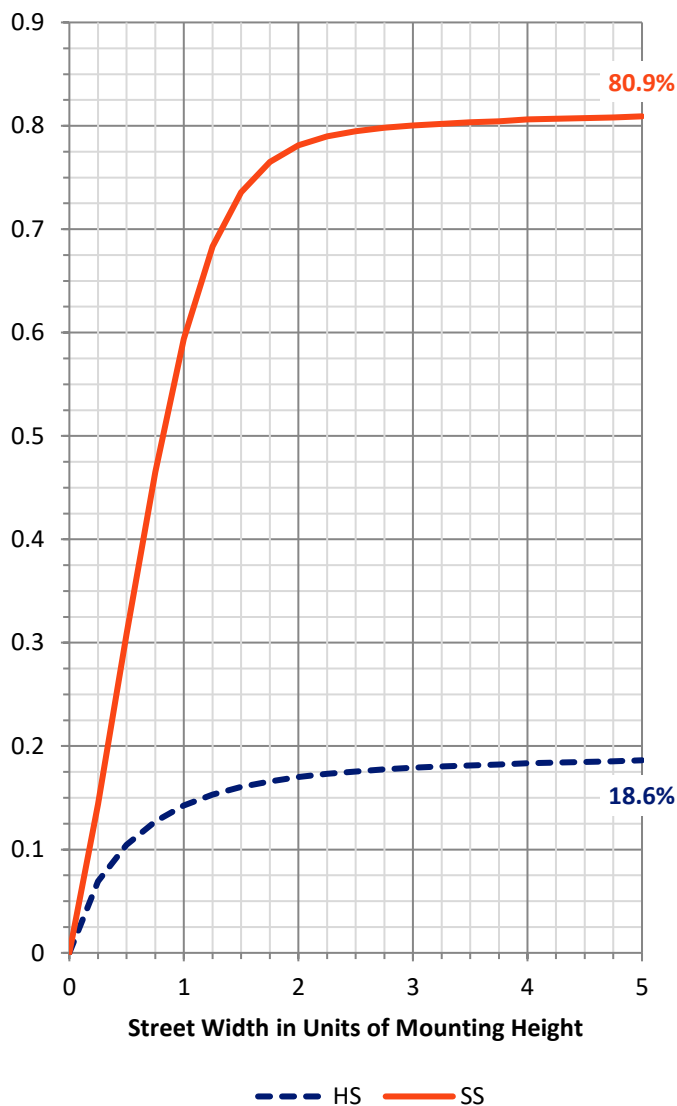
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 9415.8   | 0.0    | 9415.8  |
|                    | % Fixture | 18.9     | 0.0    | 18.9    |
| <b>Street Side</b> | Lumens    | 40361.3  | 0.0    | 40361.3 |
|                    | % Fixture | 81.1     | 0.0    | 81.1    |
| <b>Total</b>       | Lumens    | 49777.1  | 0.0    | 49777.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 626.0   | 1.3       |
| 10°-20°   | 2249.0  | 4.5       |
| 20°-30°   | 4246.3  | 8.5       |
| 30°-40°   | 6840.8  | 13.7      |
| 40°-50°   | 9357.0  | 18.8      |
| 50°-60°   | 10554.7 | 21.2      |
| 60°-70°   | 9851.5  | 19.8      |
| 70°-80°   | 5400.3  | 10.8      |
| 80°-90°   | 651.4   | 1.3       |
| 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°    | 49777.1 | 100.0     |
| 0°-180°   | 49777.1 | 100.0     |

**Coefficient of Utilization**



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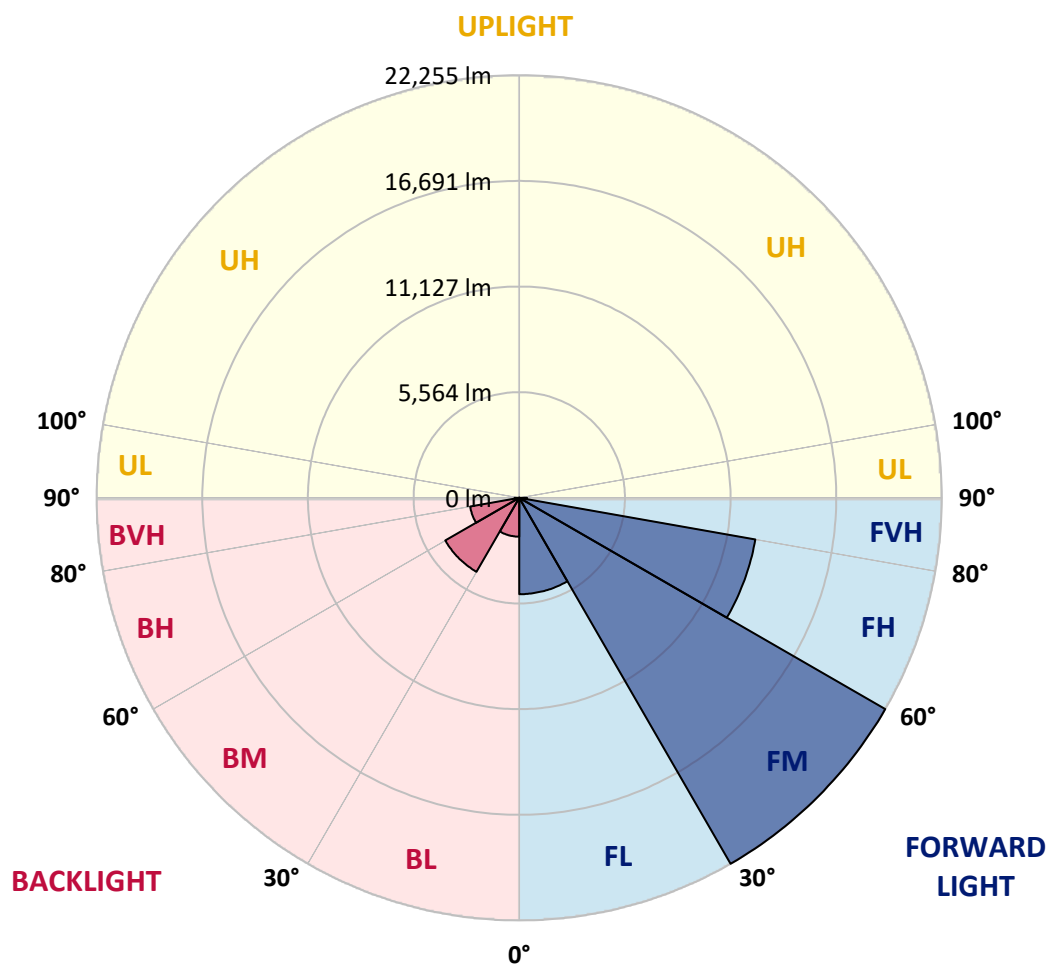
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 5074.1  | 10.2      |                         |      |         |
| FM   | (30°-60°)   | 22254.8 | 44.7      |                         |      |         |
| FH   | (60°-80°)   | 12624.9 | 25.4      |                         |      | G5      |
| FVH  | (80°-90°)   | 407.4   | 0.8       |                         |      | G3/500  |
| BL   | (0°-30°)    | 2047.2  | 4.1       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 4497.7  | 9.0       | B3/5000                 |      |         |
| BH   | (60°-80°)   | 2626.9  | 5.3       | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 244.0   | 0.5       |                         |      | G3/500  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G5**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  | 5840.3  |
| 2.5°  | 7312.7  | 7364.1  | 7299.8  | 7299.8  | 7084.0  | 6970.9  | 6755.2  | 6590.6  | 6295.2  | 6243.8  | 6048.5  |
| 5°    | 8643.7  | 8707.9  | 8618.0  | 8579.5  | 8325.0  | 8091.2  | 7728.9  | 7371.8  | 6845.1  | 6791.1  | 6331.1  |
| 7.5°  | 9674.1  | 9756.3  | 9676.6  | 9635.5  | 9409.4  | 9147.3  | 8723.4  | 8224.9  | 7482.3  | 7376.9  | 6711.5  |
| 10°   | 10514.2 | 10527.1 | 10501.4 | 10516.8 | 10339.5 | 10123.7 | 9689.4  | 9108.8  | 8181.1  | 8037.3  | 7171.4  |
| 12.5° | 10989.6 | 11048.7 | 11100.1 | 11192.6 | 11161.7 | 11028.2 | 10637.6 | 9943.8  | 8921.2  | 8736.2  | 7672.4  |
| 15°   | 11213.2 | 11315.9 | 11431.5 | 11644.8 | 11817.0 | 11850.3 | 11552.4 | 10840.6 | 9674.1  | 9450.5  | 8178.6  |
| 17.5° | 11292.8 | 11390.4 | 11572.9 | 11881.2 | 12251.2 | 12500.5 | 12366.8 | 11711.6 | 10419.2 | 10162.3 | 8710.4  |
| 20°   | 11696.2 | 11724.5 | 11835.0 | 12127.9 | 12528.7 | 12942.4 | 13042.6 | 12549.3 | 11156.6 | 10866.2 | 9260.4  |
| 22.5° | 12559.5 | 12503.1 | 12533.9 | 12667.5 | 12955.3 | 13356.1 | 13584.7 | 13289.3 | 11914.6 | 11580.6 | 9815.4  |
| 25°   | 13985.6 | 13821.2 | 13656.7 | 13502.5 | 13649.0 | 13875.1 | 14134.6 | 14029.3 | 12708.6 | 12284.6 | 10375.5 |
| 27.5° | 15786.8 | 15586.4 | 15224.1 | 14717.9 | 14540.6 | 14620.3 | 14735.9 | 14715.3 | 13443.5 | 13014.3 | 10953.7 |
| 30°   | 17559.7 | 17325.9 | 16894.3 | 16162.0 | 15694.3 | 15483.6 | 15396.2 | 15337.2 | 14242.6 | 13785.2 | 11536.9 |
| 32.5° | 18975.5 | 18790.5 | 18366.6 | 17546.9 | 16868.5 | 16508.9 | 16218.5 | 16007.7 | 15077.6 | 14620.3 | 12153.5 |
| 35°   | 20214.0 | 20041.8 | 19556.2 | 18662.1 | 17924.6 | 17541.7 | 17161.5 | 16711.8 | 15946.1 | 15483.6 | 12816.5 |
| 37.5° | 21344.6 | 21172.4 | 20506.9 | 19576.8 | 18834.2 | 18569.5 | 18230.3 | 17467.2 | 16817.2 | 16380.3 | 13518.0 |
| 40°   | 22058.8 | 22020.3 | 21398.5 | 20345.0 | 19574.2 | 19443.1 | 19330.1 | 18343.4 | 17783.2 | 17377.3 | 14288.8 |
| 42.5° | 22241.3 | 22326.1 | 21832.8 | 20966.9 | 20232.0 | 20126.6 | 20391.2 | 19335.2 | 18867.6 | 18479.6 | 15162.4 |
| 45°   | 21802.0 | 22046.0 | 21722.3 | 21133.9 | 20699.7 | 20643.1 | 21331.7 | 20419.5 | 20067.6 | 19712.9 | 16215.9 |
| 47.5° | 20689.3 | 21103.0 | 20969.4 | 20887.1 | 20825.5 | 21069.6 | 22159.1 | 21570.7 | 21426.8 | 21118.5 | 17418.4 |
| 50°   | 18443.6 | 19227.4 | 19461.2 | 19980.2 | 20576.3 | 21401.1 | 22911.9 | 22827.2 | 23014.7 | 22703.9 | 18883.0 |
| 52.5° | 14561.2 | 15640.4 | 16997.1 | 18297.2 | 19810.6 | 21290.6 | 23739.3 | 24631.0 | 25422.3 | 25252.7 | 21210.9 |
| 55°   | 12020.0 | 12505.6 | 13548.8 | 15933.2 | 18325.5 | 20825.5 | 24111.9 | 26087.8 | 27811.9 | 27660.3 | 22976.2 |
| 57.5° | 10067.1 | 10501.4 | 11143.8 | 13135.1 | 16079.7 | 19769.5 | 24343.1 | 26976.9 | 29448.7 | 29433.3 | 24718.3 |
| 60°   | 7973.1  | 8433.0  | 9090.7  | 10501.4 | 13456.3 | 17945.2 | 24291.8 | 27989.2 | 31537.6 | 31666.1 | 26843.2 |
| 62.5° | 5609.1  | 6115.4  | 6845.1  | 8160.6  | 10776.3 | 15581.2 | 23243.4 | 28721.5 | 33996.6 | 34346.0 | 29399.9 |
| 65°   | 3687.2  | 4021.2  | 4571.1  | 5706.8  | 8029.5  | 12541.6 | 21241.8 | 28816.5 | 36627.8 | 37218.7 | 31799.7 |
| 67.5° | 2584.8  | 2713.4  | 3037.1  | 3653.8  | 5293.1  | 9617.5  | 18053.1 | 27832.4 | 38382.7 | 39048.2 | 32840.4 |
| 70°   | 2017.0  | 2081.3  | 2245.7  | 2492.4  | 3324.9  | 6467.3  | 13834.0 | 25273.3 | 38007.5 | 38701.3 | 31753.5 |
| 72.5° | 1742.1  | 1803.8  | 1865.4  | 1896.2  | 2230.3  | 3993.0  | 9370.9  | 21131.3 | 34474.5 | 34944.7 | 27608.9 |
| 75°   | 1580.2  | 1595.6  | 1647.1  | 1636.7  | 1701.0  | 2590.1  | 5408.7  | 15396.2 | 27200.3 | 27038.5 | 20381.0 |
| 77.5° | 1328.4  | 1349.0  | 1433.8  | 1421.0  | 1510.8  | 1770.4  | 2808.4  | 9936.1  | 17634.2 | 16534.5 | 11344.2 |
| 80°   | 1125.4  | 1135.7  | 1228.2  | 1212.8  | 1313.0  | 1282.2  | 1433.8  | 5064.4  | 7479.7  | 6336.3  | 3271.0  |
| 82.5° | 390.5   | 483.1   | 937.9   | 966.2   | 1002.1  | 776.0   | 827.4   | 2065.9  | 2284.2  | 1749.8  | 686.0   |
| 85°   | 190.1   | 203.0   | 478.0   | 678.3   | 675.8   | 390.5   | 403.4   | 737.5   | 719.4   | 565.3   | 228.7   |
| 87.5° | 30.9    | 38.5    | 56.5    | 264.7   | 210.7   | 102.8   | 138.8   | 143.9   | 149.0   | 128.4   | 51.4    |
| 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°    | 5840.3  | 5840.3 | 5840.3 | 5840.3 | 5840.3 | 5840.3 | 5840.3 | 5840.3 | 5840.3 | 5840.3 | 5840.3 |
| 2.5°  | 5904.6  | 5776.2 | 5506.4 | 5257.1 | 5061.9 | 4874.3 | 4768.9 | 4679.0 | 4627.6 | 4617.3 | 4617.3 |
| 5°    | 6063.9  | 5799.2 | 5308.5 | 4894.8 | 4625.0 | 4424.6 | 4319.2 | 4252.4 | 4219.1 | 4198.5 | 4195.9 |
| 7.5°  | 6292.6  | 5904.6 | 5205.8 | 4735.5 | 4452.9 | 4309.0 | 4255.1 | 4244.7 | 4242.2 | 4244.7 | 4252.4 |
| 10°   | 6608.7  | 6076.8 | 5195.4 | 4697.0 | 4460.6 | 4381.0 | 4378.4 | 4381.0 | 4391.2 | 4393.8 | 4396.3 |
| 12.5° | 6950.4  | 6254.0 | 5236.6 | 4730.4 | 4558.3 | 4514.5 | 4506.8 | 4504.3 | 4511.9 | 4517.1 | 4519.7 |
| 15°   | 7323.0  | 6487.9 | 5305.9 | 4802.3 | 4666.1 | 4619.9 | 4612.2 | 4596.8 | 4594.3 | 4591.6 | 4589.0 |
| 17.5° | 7705.8  | 6719.2 | 5383.0 | 4879.4 | 4735.5 | 4671.3 | 4643.0 | 4607.1 | 4578.8 | 4571.1 | 4578.8 |
| 20°   | 8093.8  | 6947.9 | 5437.0 | 4918.0 | 4740.6 | 4650.7 | 4594.3 | 4532.5 | 4483.8 | 4455.5 | 4465.7 |
| 22.5° | 8507.5  | 7186.8 | 5470.4 | 4907.7 | 4694.4 | 4571.1 | 4468.3 | 4396.3 | 4321.8 | 4273.0 | 4275.6 |
| 25°   | 8910.9  | 7395.0 | 5467.9 | 4853.7 | 4604.5 | 4447.8 | 4316.7 | 4224.2 | 4121.4 | 4070.1 | 4070.1 |
| 27.5° | 9298.9  | 7582.5 | 5403.6 | 4758.7 | 4476.0 | 4301.3 | 4144.6 | 4034.1 | 3933.8 | 3885.1 | 3882.5 |
| 30°   | 9699.8  | 7739.3 | 5303.3 | 4619.9 | 4324.4 | 4131.7 | 3959.6 | 3864.5 | 3774.6 | 3728.3 | 3725.8 |
| 32.5° | 10098.0 | 7883.2 | 5162.1 | 4447.8 | 4149.7 | 3964.7 | 3795.1 | 3707.7 | 3653.8 | 3653.8 | 3656.4 |
| 35°   | 10519.4 | 7983.3 | 4974.5 | 4247.3 | 3964.7 | 3787.4 | 3653.8 | 3602.4 | 3597.2 | 3566.4 | 3558.7 |
| 37.5° | 10963.9 | 8047.6 | 4745.9 | 4041.8 | 3782.2 | 3615.3 | 3574.2 | 3512.5 | 3461.1 | 3394.3 | 3384.0 |
| 40°   | 11431.5 | 8111.8 | 4470.8 | 3828.5 | 3589.6 | 3497.1 | 3479.1 | 3396.8 | 3250.4 | 3086.0 | 3062.8 |
| 42.5° | 11999.4 | 8155.5 | 4185.7 | 3615.3 | 3386.6 | 3355.7 | 3381.4 | 3240.1 | 3006.3 | 2882.9 | 2885.5 |
| 45°   | 12657.2 | 8227.5 | 3923.6 | 3404.5 | 3178.4 | 3178.4 | 3286.4 | 3101.3 | 2908.6 | 2831.6 | 2844.4 |
| 47.5° | 13510.2 | 8394.4 | 3679.4 | 3173.3 | 2985.7 | 3037.1 | 3075.6 | 2934.4 | 2826.4 | 2731.3 | 2728.8 |
| 50°   | 14743.6 | 8795.3 | 3427.7 | 2939.5 | 2839.2 | 2942.1 | 2888.0 | 2805.8 | 2680.0 | 2602.9 | 2595.2 |
| 52.5° | 16275.0 | 9031.7 | 3204.1 | 2728.8 | 2713.4 | 2816.1 | 2739.0 | 2661.9 | 2566.9 | 2464.1 | 2443.6 |
| 55°   | 17318.2 | 9075.3 | 3016.6 | 2574.6 | 2628.6 | 2618.3 | 2590.1 | 2520.7 | 2469.2 | 2333.1 | 2335.7 |
| 57.5° | 18484.7 | 9162.7 | 2862.4 | 2482.1 | 2574.6 | 2461.5 | 2451.3 | 2392.1 | 2325.4 | 2232.9 | 2202.0 |
| 60°   | 19880.0 | 9298.9 | 2728.8 | 2446.2 | 2528.4 | 2358.7 | 2307.4 | 2284.2 | 2217.5 | 2171.2 | 2184.1 |
| 62.5° | 21401.1 | 9422.2 | 2592.6 | 2451.3 | 2474.4 | 2258.6 | 2181.5 | 2173.7 | 2132.6 | 2117.2 | 2117.2 |
| 65°   | 22439.2 | 9085.6 | 2423.0 | 2446.2 | 2389.6 | 2155.8 | 2058.1 | 2055.5 | 2022.1 | 2017.0 | 2014.4 |
| 67.5° | 22076.9 | 8019.3 | 2194.3 | 2374.2 | 2302.3 | 2053.0 | 1945.0 | 1934.8 | 1891.1 | 1893.7 | 1893.7 |
| 70°   | 20262.8 | 6498.2 | 1878.3 | 2196.9 | 2194.3 | 1960.5 | 1826.9 | 1793.4 | 1734.4 | 1744.7 | 1754.9 |
| 72.5° | 16860.8 | 4815.1 | 1454.3 | 1901.4 | 2022.1 | 1875.7 | 1690.7 | 1636.7 | 1562.2 | 1572.6 | 1570.0 |
| 75°   | 12176.7 | 3273.5 | 1058.6 | 1446.6 | 1760.1 | 1775.5 | 1557.1 | 1464.6 | 1374.6 | 1390.1 | 1395.2 |
| 77.5° | 6231.0  | 1855.1 | 778.6  | 996.9  | 1382.4 | 1613.7 | 1436.3 | 1313.0 | 1292.4 | 1436.3 | 1415.7 |
| 80°   | 2032.5  | 930.2  | 539.6  | 698.8  | 907.0  | 1320.7 | 1259.0 | 1117.8 | 1112.5 | 1145.9 | 984.1  |
| 82.5° | 606.4   | 393.1  | 346.9  | 459.9  | 501.0  | 1012.4 | 1086.9 | 845.3  | 727.1  | 765.7  | 791.4  |
| 85°   | 208.2   | 190.1  | 197.8  | 228.7  | 238.9  | 593.6  | 760.6  | 560.2  | 529.3  | 583.2  | 575.5  |
| 87.5° | 48.8    | 66.8   | 56.5   | 51.4   | 51.4   | 143.9  | 295.5  | 233.8  | 323.8  | 215.9  | 208.2  |
| 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)