

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: STREETWORKS

Report Number: P196953

Luminaire Tested: **NVN-AF-03-LED-U-AFL-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196953
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-03-LED-U-AFL-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10024 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 124
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

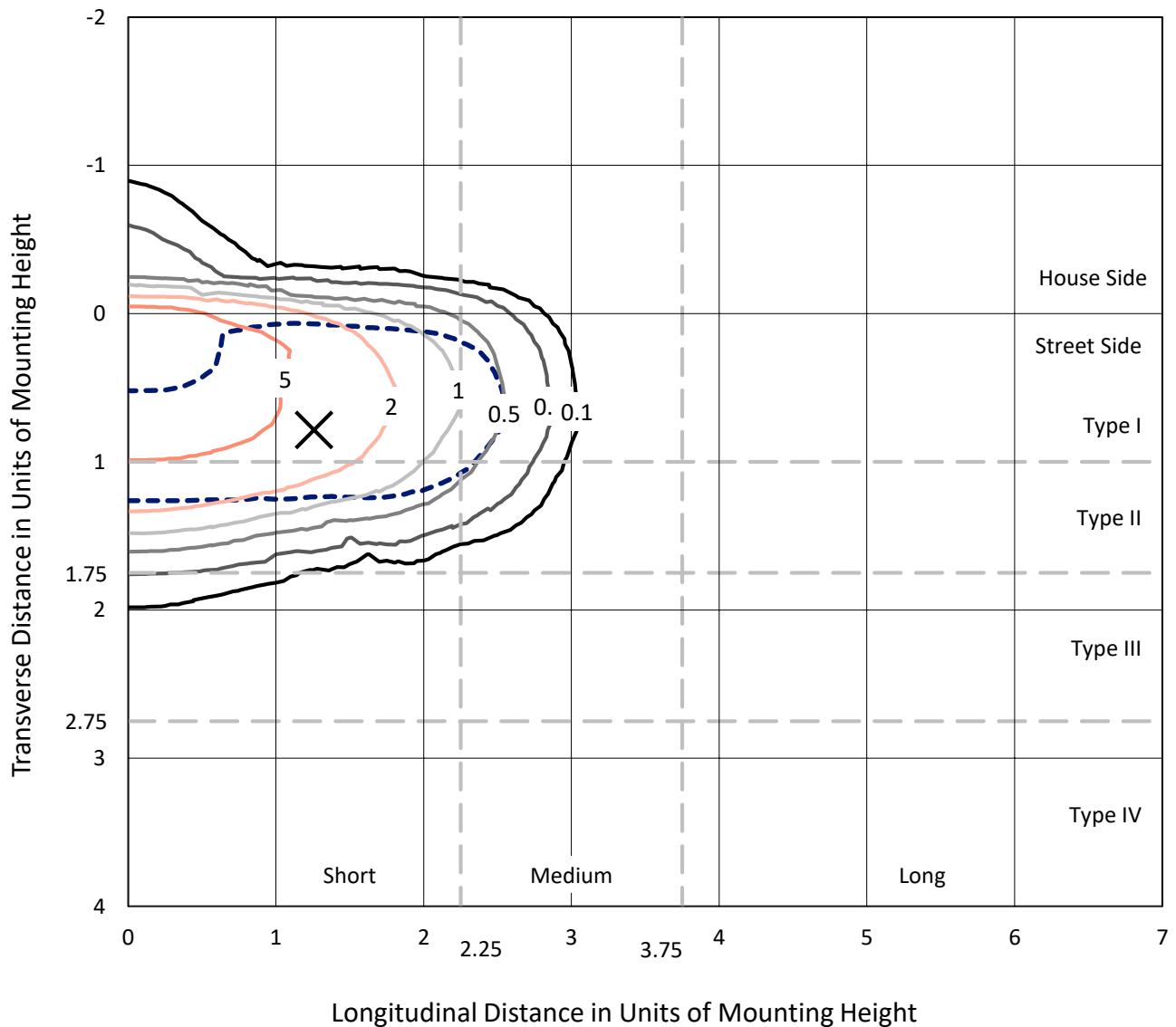


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

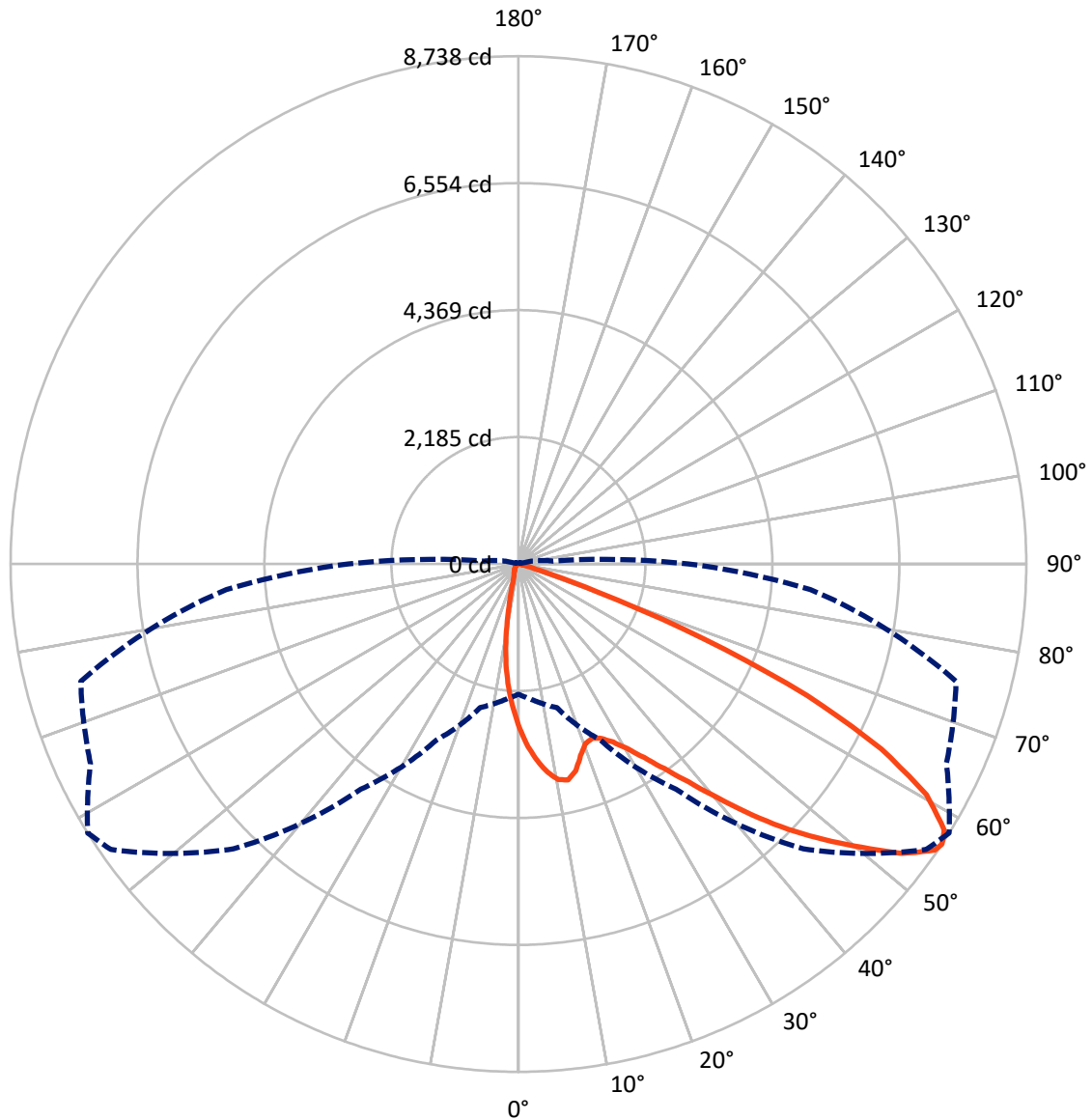


Based on 20 foot mounting height. Maximum calculated value = 8.8 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 625.7 | 0.0 | 625.7 |
| | % Fixture | 6.2 | 0.0 | 6.2 |
| Street Side | Lumens | 9398.3 | 0.0 | 9398.3 |
| | % Fixture | 93.8 | 0.0 | 93.8 |
| Total | Lumens | 10024.0 | 0.0 | 10024.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 242.1 | 2.4 |
| 10°-20° | 563.3 | 5.6 |
| 20°-30° | 947.9 | 9.5 |
| 30°-40° | 1623.2 | 16.2 |
| 40°-50° | 2449.5 | 24.4 |
| 50°-60° | 2546.1 | 25.4 |
| 60°-70° | 1429.4 | 14.3 |
| 70°-80° | 195.9 | 2.0 |
| 80°-90° | 26.5 | 0.3 |
| 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° | 10024.0 | 100.0 |
| 0°-180° | 10024.0 | 100.0 |



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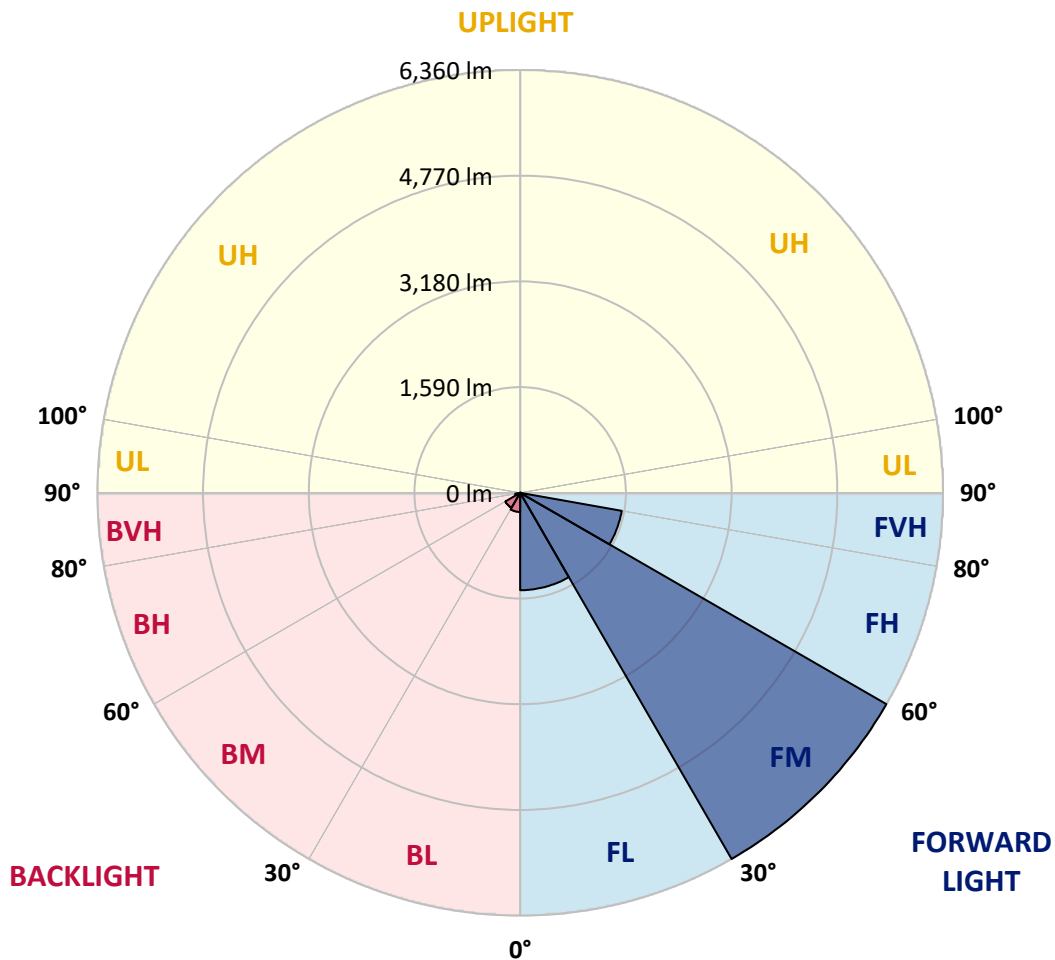
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1464.7 | 14.6 | | | |
| FM | (30°-60°) | 6359.6 | 63.4 | | | |
| FH | (60°-80°) | 1551.0 | 15.5 | | | G1/1800 |
| FVH | (80°-90°) | 22.9 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 288.6 | 2.9 | B1/500 | | |
| BM | (30°-60°) | 259.2 | 2.6 | B1/1000 | | |
| BH | (60°-80°) | 74.2 | 0.7 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 3.7 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 |
| 2.5° | 3414.7 | 3394.1 | 3372.7 | 3332.9 | 3296.2 | 3239.6 | 3161.6 | 3142.5 | 3081.3 | 2980.3 | 2886.3 |
| 5° | 3709.2 | 3705.4 | 3690.8 | 3658.7 | 3618.9 | 3550.1 | 3462.2 | 3403.3 | 3308.4 | 3149.4 | 2968.1 |
| 7.5° | 3534.8 | 3566.9 | 3619.7 | 3694.7 | 3745.1 | 3738.2 | 3670.9 | 3619.7 | 3525.6 | 3308.4 | 3048.4 |
| 10° | 2979.6 | 2985.7 | 3058.4 | 3215.9 | 3465.2 | 3697.7 | 3785.7 | 3771.9 | 3685.5 | 3447.6 | 3118.8 |
| 12.5° | 2783.8 | 2787.6 | 2804.4 | 2854.9 | 3017.1 | 3341.3 | 3739.8 | 3811.7 | 3804.8 | 3580.7 | 3193.7 |
| 15° | 2799.1 | 2801.4 | 2806.0 | 2822.0 | 2867.9 | 3030.8 | 3507.3 | 3690.1 | 3881.3 | 3706.9 | 3267.1 |
| 17.5° | 2919.9 | 2918.4 | 2903.9 | 2888.6 | 2903.1 | 2956.6 | 3270.2 | 3462.9 | 3865.2 | 3813.2 | 3327.6 |
| 20° | 3155.5 | 3163.1 | 3114.2 | 3046.1 | 3010.9 | 3013.2 | 3153.2 | 3297.7 | 3775.0 | 3895.8 | 3372.7 |
| 22.5° | 3486.6 | 3492.0 | 3411.7 | 3293.9 | 3190.7 | 3138.7 | 3177.7 | 3254.1 | 3670.9 | 3972.3 | 3409.4 |
| 25° | 3882.0 | 3882.0 | 3769.6 | 3602.1 | 3442.3 | 3328.3 | 3294.7 | 3323.7 | 3631.2 | 4058.7 | 3446.1 |
| 27.5° | 4308.8 | 4324.1 | 4177.2 | 3957.7 | 3746.7 | 3579.9 | 3474.4 | 3469.0 | 3661.8 | 4167.3 | 3487.4 |
| 30° | 4773.0 | 4786.8 | 4612.4 | 4343.9 | 4093.9 | 3880.5 | 3718.4 | 3683.2 | 3778.8 | 4313.4 | 3547.8 |
| 32.5° | 5234.9 | 5246.4 | 5053.7 | 4779.9 | 4488.5 | 4237.6 | 4024.3 | 3968.4 | 3989.1 | 4526.7 | 3636.5 |
| 35° | 5822.3 | 5824.6 | 5580.6 | 5254.8 | 4943.5 | 4649.1 | 4379.1 | 4324.1 | 4301.1 | 4795.9 | 3764.2 |
| 37.5° | 6289.5 | 6271.2 | 6116.7 | 5808.5 | 5451.3 | 5143.9 | 4826.5 | 4754.6 | 4699.6 | 5174.5 | 3962.3 |
| 40° | 6399.7 | 6399.7 | 6376.7 | 6284.2 | 6000.5 | 5704.5 | 5397.1 | 5290.0 | 5168.4 | 5620.4 | 4228.5 |
| 42.5° | 6112.9 | 6131.2 | 6282.7 | 6483.8 | 6486.1 | 6296.4 | 5995.9 | 5905.6 | 5691.5 | 6128.2 | 4519.1 |
| 45° | 5471.2 | 5476.6 | 5839.9 | 6382.9 | 6751.5 | 6860.1 | 6638.3 | 6513.6 | 6216.9 | 6655.9 | 4785.2 |
| 47.5° | 5240.3 | 5257.1 | 5411.6 | 6075.4 | 6771.4 | 7316.6 | 7254.7 | 7083.4 | 6703.3 | 7137.7 | 5033.8 |
| 50° | 4885.4 | 4906.1 | 5095.0 | 5622.7 | 6592.4 | 7609.6 | 7844.3 | 7660.8 | 7146.1 | 7539.2 | 5156.9 |
| 52.5° | 4036.5 | 4068.6 | 4335.5 | 5023.8 | 6145.0 | 7621.8 | 8384.3 | 8274.2 | 7599.6 | 7754.1 | 5142.4 |
| 55° | 2777.7 | 2801.4 | 3112.7 | 3921.8 | 5242.6 | 7247.8 | 8616.8 | 8692.5 | 8004.2 | 7802.3 | 5072.0 |
| 56° | 2240.8 | 2329.5 | 2557.4 | 3341.3 | 4728.6 | 6929.7 | 8563.2 | 8738.4 | 8124.3 | 7794.6 | 5041.4 |
| 57.5° | 1481.4 | 1498.2 | 1746.8 | 2421.3 | 3797.1 | 6239.1 | 8321.6 | 8640.5 | 8278.7 | 7755.6 | 5019.2 |
| 60° | 696.7 | 704.4 | 793.8 | 1117.3 | 2055.0 | 4546.6 | 7536.1 | 8065.4 | 8335.3 | 7673.8 | 5018.5 |
| 62.5° | 454.3 | 455.8 | 466.5 | 533.1 | 840.5 | 2476.4 | 6247.5 | 7009.2 | 7866.5 | 7664.6 | 5004.0 |
| 65° | 374.0 | 377.8 | 364.8 | 373.2 | 439.7 | 933.8 | 4406.7 | 5464.4 | 6766.0 | 7449.0 | 4840.3 |
| 67.5° | 329.6 | 330.4 | 312.8 | 302.9 | 322.0 | 409.9 | 2220.2 | 3446.9 | 5060.5 | 6329.3 | 3986.8 |
| 70° | 300.6 | 299.8 | 279.9 | 257.0 | 257.7 | 272.3 | 723.5 | 1431.7 | 2799.9 | 3758.1 | 2289.0 |
| 72.5° | 266.9 | 268.4 | 257.0 | 224.8 | 214.1 | 192.7 | 272.3 | 386.2 | 952.9 | 1206.8 | 603.4 |
| 75° | 234.0 | 231.0 | 219.5 | 198.8 | 179.0 | 129.2 | 136.9 | 164.4 | 248.6 | 246.3 | 130.0 |
| 77.5° | 177.4 | 174.4 | 179.7 | 169.8 | 140.0 | 90.2 | 74.9 | 85.7 | 112.4 | 104.8 | 52.8 |
| 80° | 135.4 | 133.8 | 122.4 | 145.3 | 127.7 | 68.1 | 51.2 | 52.8 | 61.2 | 55.8 | 26.0 |
| 82.5° | 97.9 | 97.1 | 92.5 | 89.5 | 81.1 | 49.7 | 39.0 | 41.3 | 45.9 | 39.0 | 19.1 |
| 85° | 37.5 | 37.5 | 72.7 | 61.2 | 55.8 | 33.7 | 27.5 | 29.8 | 35.2 | 28.3 | 13.0 |
| 87.5° | 6.1 | 6.1 | 48.9 | 40.5 | 25.2 | 16.8 | 17.6 | 19.1 | 20.6 | 16.8 | 9.9 |
| 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° | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 | 2838.1 |
| 2.5° | 2830.4 | 2779.2 | 2666.8 | 2558.2 | 2463.4 | 2359.3 | 2306.6 | 2245.4 | 2222.4 | 2176.6 | 2181.2 |
| 5° | 2859.5 | 2752.4 | 2526.8 | 2289.0 | 2071.0 | 1849.2 | 1691.7 | 1543.3 | 1460.7 | 1378.9 | 1378.9 |
| 7.5° | 2889.3 | 2725.7 | 2376.9 | 1996.8 | 1629.7 | 1249.7 | 980.4 | 764.8 | 644.7 | 564.4 | 562.1 |
| 10° | 2910.0 | 2691.3 | 2206.4 | 1658.0 | 1116.6 | 643.9 | 388.5 | 305.9 | 276.1 | 263.1 | 262.3 |
| 12.5° | 2936.8 | 2656.8 | 2012.1 | 1258.8 | 620.2 | 305.9 | 242.4 | 229.4 | 224.1 | 221.0 | 221.0 |
| 15° | 2959.7 | 2607.9 | 1776.6 | 846.6 | 325.8 | 229.4 | 208.8 | 204.2 | 203.4 | 202.7 | 203.4 |
| 17.5° | 2965.1 | 2538.3 | 1494.4 | 495.6 | 236.3 | 200.4 | 191.2 | 187.4 | 187.4 | 186.6 | 186.6 |
| 20° | 2952.8 | 2446.5 | 1182.3 | 305.9 | 204.2 | 184.3 | 174.4 | 169.8 | 169.0 | 169.0 | 169.0 |
| 22.5° | 2927.6 | 2329.5 | 874.1 | 231.7 | 185.8 | 169.8 | 156.8 | 152.2 | 152.2 | 153.0 | 153.7 |
| 25° | 2896.2 | 2191.1 | 600.4 | 199.6 | 172.1 | 154.5 | 141.5 | 136.9 | 138.4 | 140.0 | 140.7 |
| 27.5° | 2856.5 | 2025.9 | 393.1 | 172.8 | 153.7 | 139.2 | 127.7 | 124.7 | 127.7 | 130.8 | 132.3 |
| 30° | 2816.7 | 1844.6 | 266.1 | 149.9 | 133.1 | 122.4 | 115.5 | 114.7 | 119.3 | 126.2 | 127.0 |
| 32.5° | 2790.7 | 1658.8 | 201.1 | 134.6 | 117.0 | 107.8 | 104.8 | 106.3 | 113.2 | 120.8 | 122.4 |
| 35° | 2788.4 | 1477.6 | 171.3 | 122.4 | 106.3 | 97.9 | 96.4 | 101.0 | 108.6 | 114.7 | 116.2 |
| 37.5° | 2824.3 | 1307.8 | 155.3 | 113.2 | 97.9 | 89.5 | 87.2 | 95.6 | 102.5 | 108.6 | 110.1 |
| 40° | 2897.0 | 1155.6 | 144.5 | 104.8 | 91.0 | 81.1 | 79.5 | 86.4 | 93.3 | 100.2 | 102.5 |
| 42.5° | 2988.0 | 1013.3 | 132.3 | 96.4 | 83.4 | 71.9 | 70.4 | 75.7 | 82.6 | 92.5 | 94.1 |
| 45° | 3066.8 | 881.0 | 119.3 | 87.2 | 74.9 | 61.9 | 61.2 | 67.3 | 72.7 | 81.8 | 83.4 |
| 47.5° | 3133.3 | 770.9 | 107.1 | 77.2 | 64.2 | 55.1 | 54.3 | 57.4 | 60.4 | 68.8 | 70.4 |
| 50° | 3098.1 | 677.6 | 94.8 | 63.5 | 52.0 | 47.4 | 46.7 | 46.7 | 50.5 | 58.9 | 60.4 |
| 52.5° | 3011.7 | 619.5 | 83.4 | 52.8 | 42.8 | 40.5 | 38.2 | 39.0 | 42.8 | 46.7 | 47.4 |
| 55° | 2942.1 | 591.9 | 73.4 | 46.7 | 35.9 | 33.7 | 31.4 | 30.6 | 31.4 | 29.8 | 28.3 |
| 56° | 2925.3 | 588.9 | 71.1 | 45.1 | 34.4 | 31.4 | 28.3 | 26.8 | 26.0 | 22.9 | 22.2 |
| 57.5° | 2917.6 | 588.9 | 67.3 | 42.1 | 32.1 | 28.3 | 24.5 | 21.4 | 18.4 | 16.1 | 16.1 |
| 60° | 2911.5 | 592.7 | 62.7 | 36.7 | 27.5 | 22.9 | 17.6 | 13.0 | 10.7 | 10.7 | 10.7 |
| 62.5° | 2898.5 | 591.2 | 57.4 | 30.6 | 23.7 | 17.6 | 10.7 | 8.4 | 7.6 | 8.4 | 9.2 |
| 65° | 2752.4 | 549.1 | 50.5 | 24.5 | 18.4 | 12.2 | 6.1 | 6.1 | 6.9 | 8.4 | 9.2 |
| 67.5° | 2217.9 | 416.0 | 41.3 | 19.1 | 13.0 | 9.2 | 5.4 | 5.4 | 6.9 | 8.4 | 9.2 |
| 70° | 1218.3 | 219.5 | 35.2 | 13.8 | 9.9 | 7.6 | 5.4 | 4.6 | 6.9 | 8.4 | 9.2 |
| 72.5° | 297.5 | 91.8 | 32.1 | 10.7 | 9.2 | 6.9 | 4.6 | 4.6 | 6.9 | 8.4 | 9.2 |
| 75° | 73.4 | 68.8 | 26.0 | 8.4 | 7.6 | 6.1 | 4.6 | 4.6 | 6.9 | 8.4 | 9.2 |
| 77.5° | 34.4 | 91.0 | 17.6 | 7.6 | 6.9 | 5.4 | 4.6 | 4.6 | 6.9 | 8.4 | 8.4 |
| 80° | 20.6 | 68.8 | 10.7 | 6.9 | 6.1 | 5.4 | 4.6 | 4.6 | 6.9 | 8.4 | 9.2 |
| 82.5° | 12.2 | 19.9 | 7.6 | 6.9 | 6.1 | 4.6 | 4.6 | 4.6 | 6.9 | 8.4 | 9.2 |
| 85° | 10.7 | 9.9 | 7.6 | 6.9 | 6.1 | 5.4 | 4.6 | 4.6 | 7.6 | 9.2 | 9.2 |
| 87.5° | 8.4 | 7.6 | 6.9 | 6.1 | 6.1 | 5.4 | 4.6 | 4.6 | 6.9 | 8.4 | 9.2 |
| 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)