

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: McGRAW-EDISON

Report Number: P299995

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299995
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-SL3-7050-800-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15053.8 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 171
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: 25 FT

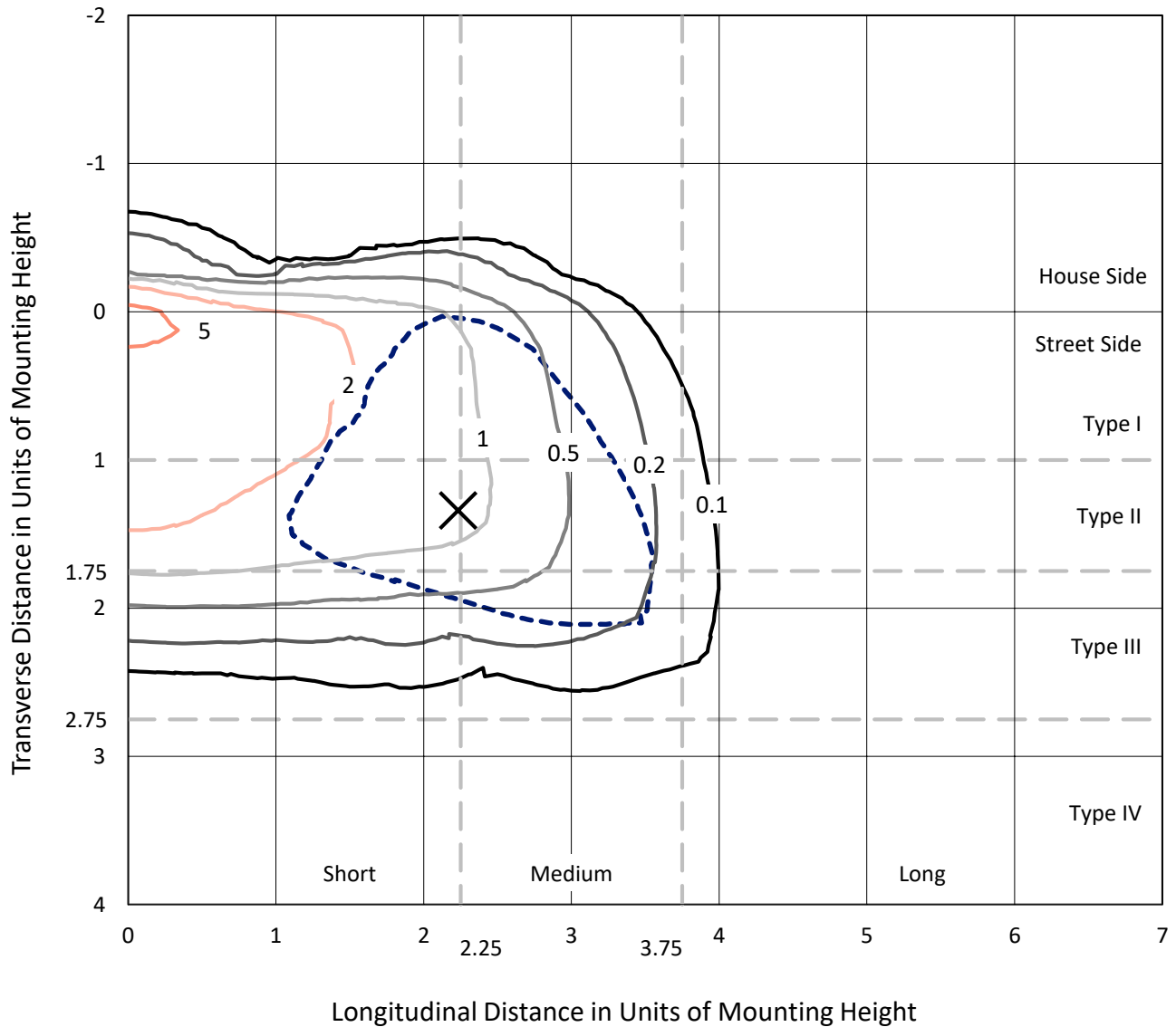


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

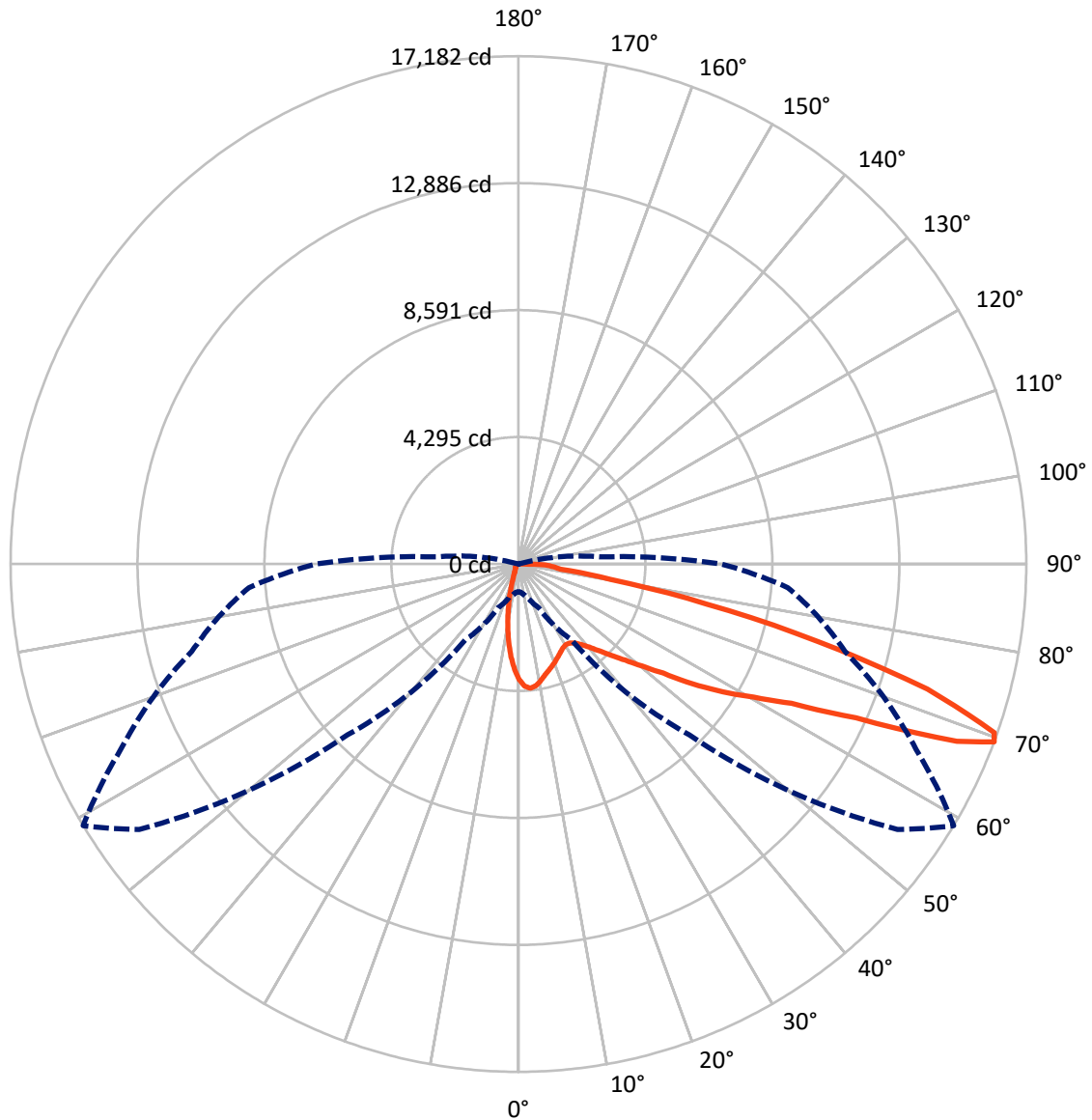


Based on 25 foot mounting height. Maximum calculated value = 6.3 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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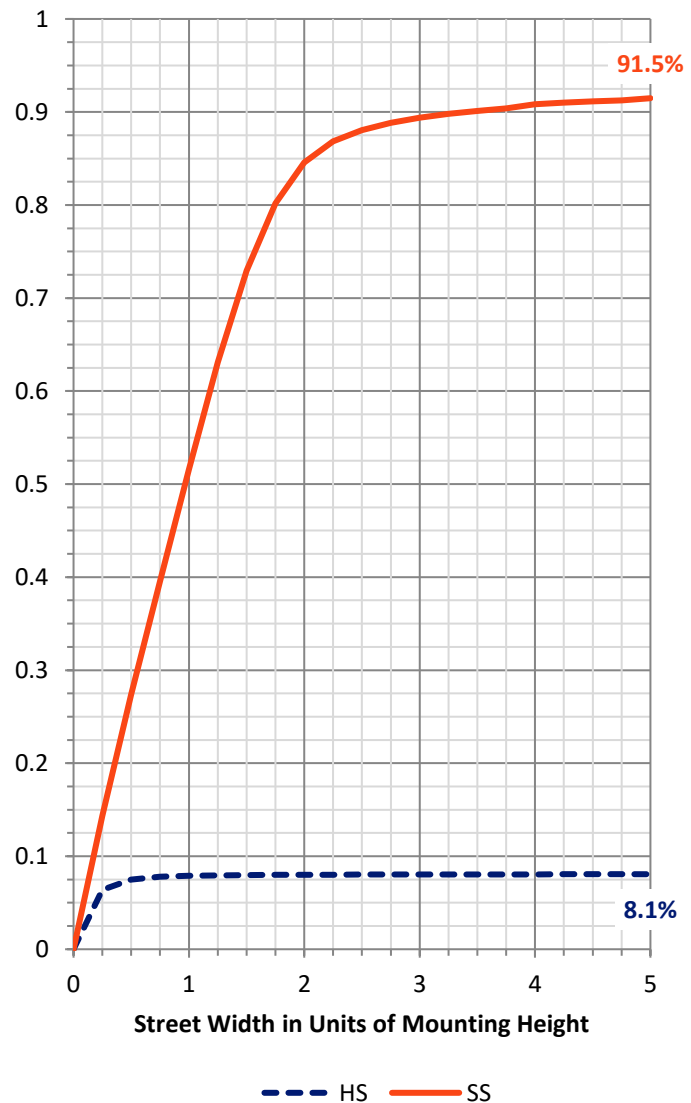
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1225.9 | 0.0 | 1225.9 |
| | % Fixture | 8.1 | 0.0 | 8.1 |
| Street Side | Lumens | 13827.9 | 0.0 | 13827.9 |
| | % Fixture | 91.9 | 0.0 | 91.9 |
| Total | Lumens | 15053.8 | 0.0 | 15053.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 318.1 | 2.1 |
| 10°-20° | 657.2 | 4.4 |
| 20°-30° | 884.3 | 5.9 |
| 30°-40° | 1284.0 | 8.5 |
| 40°-50° | 2137.9 | 14.2 |
| 50°-60° | 3335.1 | 22.2 |
| 60°-70° | 4126.9 | 27.4 |
| 70°-80° | 2091.5 | 13.9 |
| 80°-90° | 218.8 | 1.5 |
| 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° | 15053.8 | 100.0 |
| 0°-180° | 15053.8 | 100.0 |



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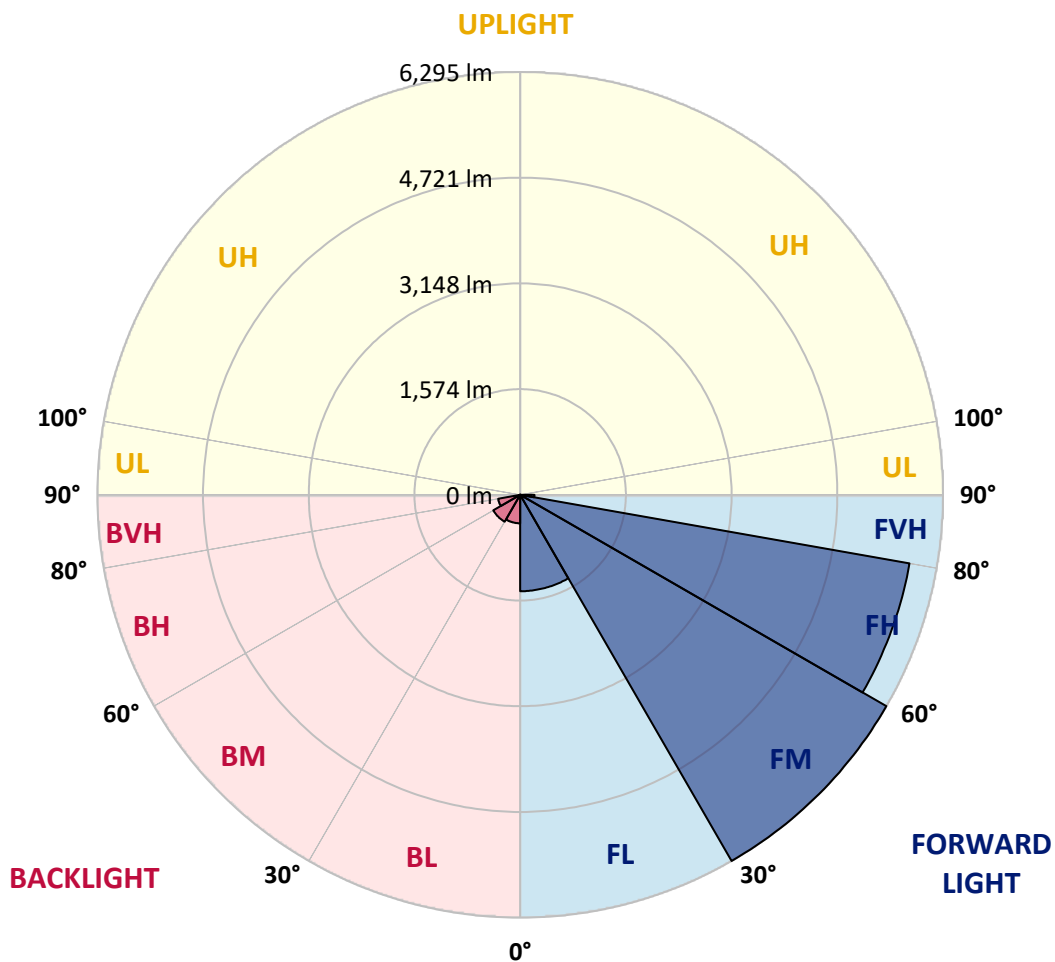
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1435.2 | 9.5 | | | |
| FM | (30°-60°) | 6295.1 | 41.8 | | | |
| FH | (60°-80°) | 5885.5 | 39.1 | | | G3/7500 |
| FVH | (80°-90°) | 212.1 | 1.4 | | | G2/225 |
| BL | (0°-30°) | 424.3 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 461.9 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 332.9 | 2.2 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.7 | 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-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 0° | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 |
| 2.5° | 4294.5 | 4292.9 | 4274.1 | 4265.6 | 4250.2 | 4217.9 | 4167.7 | 4141.4 | 4098.9 | 4024.7 | 3925.2 |
| 5° | 4255.3 | 4275.9 | 4286.8 | 4287.8 | 4298.9 | 4286.8 | 4241.7 | 4219.8 | 4161.0 | 4041.7 | 3863.1 |
| 7.5° | 3989.9 | 3997.3 | 4029.0 | 4056.1 | 4108.9 | 4159.2 | 4175.4 | 4165.9 | 4131.1 | 4003.5 | 3765.9 |
| 10° | 3705.6 | 3713.1 | 3750.7 | 3786.3 | 3857.9 | 3935.2 | 4016.9 | 4034.2 | 4048.6 | 3948.9 | 3672.3 |
| 12.5° | 3460.2 | 3468.0 | 3506.4 | 3553.0 | 3636.5 | 3731.9 | 3858.7 | 3886.8 | 3950.7 | 3897.1 | 3597.3 |
| 15° | 3249.2 | 3252.5 | 3290.1 | 3347.9 | 3447.6 | 3570.0 | 3714.1 | 3759.2 | 3857.1 | 3860.5 | 3531.9 |
| 17.5° | 3069.5 | 3078.0 | 3101.2 | 3156.4 | 3265.4 | 3416.9 | 3584.7 | 3649.4 | 3764.1 | 3829.8 | 3468.0 |
| 20° | 2959.7 | 2968.2 | 2967.5 | 2998.1 | 3096.1 | 3257.7 | 3455.3 | 3532.7 | 3672.3 | 3798.4 | 3411.0 |
| 22.5° | 2938.6 | 2938.6 | 2916.4 | 2912.1 | 2970.0 | 3105.3 | 3320.8 | 3415.1 | 3589.6 | 3784.7 | 3371.1 |
| 25° | 3014.4 | 3010.8 | 2955.6 | 2910.5 | 2913.1 | 2993.7 | 3190.4 | 3302.8 | 3520.0 | 3794.0 | 3349.7 |
| 27.5° | 3174.4 | 3170.0 | 3100.2 | 3014.4 | 2945.3 | 2944.5 | 3091.7 | 3212.6 | 3464.6 | 3838.3 | 3358.2 |
| 30° | 3395.5 | 3394.0 | 3318.2 | 3210.0 | 3085.0 | 2970.0 | 3057.7 | 3167.5 | 3428.8 | 3918.2 | 3377.8 |
| 32.5° | 3637.3 | 3634.7 | 3577.8 | 3463.8 | 3305.3 | 3085.0 | 3093.5 | 3185.5 | 3439.1 | 4024.7 | 3425.4 |
| 35° | 3893.7 | 3889.3 | 3864.6 | 3765.1 | 3590.6 | 3296.8 | 3211.0 | 3282.4 | 3503.8 | 4183.9 | 3519.0 |
| 37.5° | 4171.0 | 4175.4 | 4193.2 | 4097.8 | 3914.9 | 3594.0 | 3407.7 | 3456.1 | 3633.9 | 4400.2 | 3671.3 |
| 40° | 4580.6 | 4579.8 | 4585.7 | 4460.5 | 4284.4 | 3957.4 | 3682.4 | 3697.9 | 3852.0 | 4687.0 | 3903.0 |
| 42.5° | 5323.6 | 5271.8 | 5114.3 | 4858.9 | 4681.9 | 4372.8 | 4029.0 | 4012.8 | 4118.5 | 5041.9 | 4227.2 |
| 45° | 6322.3 | 6211.5 | 5803.0 | 5313.5 | 5087.0 | 4841.1 | 4455.3 | 4403.5 | 4470.8 | 5468.4 | 4627.5 |
| 47.5° | 7181.0 | 7066.1 | 6488.3 | 5786.7 | 5516.9 | 5285.5 | 4955.0 | 4861.5 | 4883.7 | 5946.0 | 5134.7 |
| 50° | 7473.0 | 7416.8 | 6912.2 | 6198.8 | 5933.1 | 5844.7 | 5534.9 | 5420.8 | 5389.3 | 6498.3 | 5722.8 |
| 52.5° | 7371.7 | 7367.6 | 7031.3 | 6466.1 | 6314.6 | 6423.6 | 6264.3 | 6132.3 | 6016.6 | 7080.8 | 6321.3 |
| 55° | 7209.1 | 7230.5 | 7079.7 | 6700.1 | 6695.0 | 6952.2 | 7262.0 | 7152.2 | 6816.9 | 7713.2 | 6837.2 |
| 57.5° | 6760.7 | 6851.7 | 7052.7 | 7142.9 | 7352.2 | 7615.3 | 8092.9 | 8157.6 | 7760.9 | 8197.5 | 7265.3 |
| 60° | 5485.4 | 5685.4 | 6342.6 | 7206.5 | 8199.3 | 8854.7 | 9095.7 | 9150.8 | 8535.4 | 8600.1 | 7843.4 |
| 62.5° | 3893.7 | 4097.8 | 4931.3 | 6392.9 | 8211.9 | 10483.0 | 10589.5 | 10372.5 | 9388.5 | 9197.0 | 8840.3 |
| 65° | 2066.7 | 2224.4 | 2905.3 | 4614.6 | 7119.9 | 10861.1 | 13202.0 | 12555.1 | 10893.3 | 10370.7 | 10128.1 |
| 67.5° | 1057.2 | 1104.9 | 1375.7 | 2258.5 | 4894.7 | 9647.2 | 15543.7 | 15999.1 | 13487.1 | 11535.3 | 10066.0 |
| 69° | 935.5 | 963.6 | 1143.3 | 1632.7 | 3134.2 | 8171.2 | 15657.9 | 17181.6 | 14845.0 | 11438.2 | 9147.5 |
| 70° | 905.7 | 930.4 | 1093.8 | 1477.8 | 2449.9 | 6852.4 | 15221.1 | 17077.7 | 15192.2 | 11068.8 | 8461.4 |
| 72.5° | 768.8 | 789.9 | 973.9 | 1305.9 | 1991.2 | 3401.5 | 12364.4 | 14471.3 | 13632.7 | 9220.7 | 6124.6 |
| 75° | 514.2 | 584.0 | 934.8 | 1224.2 | 1852.3 | 1932.4 | 8151.6 | 10457.5 | 9714.5 | 6219.2 | 3190.4 |
| 77.5° | 123.5 | 132.7 | 263.9 | 973.9 | 1694.0 | 1700.7 | 4192.4 | 6500.9 | 5302.5 | 2216.7 | 754.1 |
| 80° | 66.5 | 63.9 | 74.0 | 193.3 | 1577.3 | 1596.1 | 1887.3 | 3155.6 | 1893.3 | 367.8 | 248.4 |
| 82.5° | 46.9 | 44.3 | 47.7 | 80.9 | 496.4 | 1453.8 | 1365.4 | 1428.3 | 784.8 | 141.2 | 111.6 |
| 85° | 17.0 | 16.2 | 26.3 | 73.2 | 155.7 | 835.8 | 1402.8 | 1178.1 | 635.8 | 64.7 | 81.7 |
| 87.5° | 5.9 | 5.2 | 10.3 | 39.9 | 47.7 | 355.9 | 865.7 | 890.4 | 250.3 | 39.2 | 38.4 |
| 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° | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 | 3918.2 |
| 2.5° | 3883.4 | 3830.6 | 3733.7 | 3633.9 | 3541.9 | 3431.4 | 3376.0 | 3321.6 | 3298.6 | 3290.1 | 3250.2 |
| 5° | 3771.1 | 3681.6 | 3475.7 | 3268.7 | 3078.0 | 2875.5 | 2742.0 | 2634.7 | 2571.6 | 2540.9 | 2492.5 |
| 7.5° | 3627.2 | 3480.9 | 3168.2 | 2849.2 | 2552.0 | 2259.2 | 2042.2 | 1875.2 | 1760.3 | 1705.1 | 1654.9 |
| 10° | 3487.6 | 3292.7 | 2848.4 | 2413.3 | 2009.8 | 1621.6 | 1321.9 | 1104.9 | 966.2 | 902.3 | 861.6 |
| 12.5° | 3362.6 | 3109.7 | 2539.4 | 1988.6 | 1481.9 | 1027.6 | 722.7 | 550.0 | 463.9 | 434.0 | 419.6 |
| 15° | 3251.0 | 2941.2 | 2247.4 | 1585.0 | 1003.6 | 587.4 | 395.1 | 336.3 | 322.7 | 322.7 | 320.9 |
| 17.5° | 3145.3 | 2776.0 | 1965.4 | 1206.2 | 629.9 | 359.3 | 300.5 | 292.8 | 292.8 | 296.1 | 296.1 |
| 20° | 3044.0 | 2618.5 | 1693.0 | 865.7 | 396.6 | 285.0 | 271.6 | 269.8 | 271.6 | 275.8 | 275.8 |
| 22.5° | 2957.2 | 2475.5 | 1438.6 | 594.1 | 294.6 | 257.0 | 250.3 | 247.7 | 248.4 | 251.0 | 252.8 |
| 25° | 2892.5 | 2354.6 | 1198.7 | 402.6 | 253.6 | 234.0 | 226.5 | 222.2 | 218.8 | 218.8 | 220.4 |
| 27.5° | 2851.7 | 2252.5 | 966.2 | 292.8 | 228.1 | 212.9 | 200.8 | 194.1 | 186.3 | 182.2 | 183.8 |
| 30° | 2821.8 | 2155.4 | 748.2 | 239.2 | 204.4 | 188.9 | 173.7 | 162.6 | 151.5 | 146.4 | 148.2 |
| 32.5° | 2810.8 | 2077.0 | 559.3 | 211.1 | 183.0 | 166.0 | 147.2 | 132.7 | 120.9 | 116.5 | 117.5 |
| 35° | 2840.7 | 2014.9 | 409.5 | 190.7 | 166.0 | 144.6 | 123.5 | 107.2 | 97.9 | 95.4 | 96.1 |
| 37.5° | 2919.0 | 1981.7 | 306.4 | 173.7 | 150.8 | 126.8 | 103.1 | 87.6 | 81.7 | 81.7 | 82.5 |
| 40° | 3066.9 | 1980.9 | 246.1 | 161.9 | 137.1 | 109.8 | 85.0 | 74.0 | 70.6 | 72.4 | 73.2 |
| 42.5° | 3283.2 | 2026.0 | 214.4 | 150.8 | 125.3 | 93.6 | 70.6 | 62.9 | 62.1 | 63.9 | 64.7 |
| 45° | 3578.5 | 2108.5 | 197.4 | 141.2 | 112.4 | 78.3 | 59.5 | 54.4 | 54.4 | 57.0 | 58.0 |
| 47.5° | 3940.4 | 2229.3 | 183.0 | 132.0 | 99.5 | 65.5 | 51.0 | 47.7 | 48.5 | 51.0 | 51.8 |
| 50° | 4376.2 | 2381.9 | 168.6 | 121.6 | 90.2 | 54.4 | 44.3 | 41.8 | 42.5 | 45.9 | 46.9 |
| 52.5° | 4872.6 | 2587.1 | 156.7 | 112.4 | 78.3 | 45.1 | 37.4 | 35.8 | 37.4 | 41.0 | 41.8 |
| 55° | 5298.1 | 2770.8 | 142.3 | 104.6 | 62.9 | 37.4 | 30.7 | 30.7 | 32.5 | 36.6 | 37.4 |
| 57.5° | 5707.6 | 2963.1 | 129.4 | 90.2 | 49.5 | 29.9 | 25.5 | 26.3 | 28.9 | 33.2 | 34.0 |
| 60° | 6308.6 | 3289.1 | 114.2 | 75.8 | 37.4 | 23.7 | 21.4 | 22.2 | 25.5 | 29.9 | 30.7 |
| 62.5° | 7329.2 | 3785.5 | 98.7 | 62.9 | 28.9 | 18.8 | 17.0 | 18.8 | 22.9 | 28.1 | 28.9 |
| 65° | 8250.3 | 3987.3 | 80.9 | 52.8 | 22.2 | 14.4 | 14.4 | 17.0 | 22.2 | 27.3 | 28.1 |
| 67.5° | 7736.9 | 3356.4 | 62.9 | 41.8 | 17.0 | 11.1 | 11.9 | 16.2 | 21.4 | 27.3 | 28.1 |
| 69° | 6842.4 | 2744.5 | 53.6 | 33.2 | 14.4 | 10.3 | 11.1 | 16.2 | 21.4 | 26.3 | 27.3 |
| 70° | 6145.2 | 2317.2 | 47.7 | 28.1 | 12.9 | 10.3 | 11.1 | 15.2 | 21.4 | 26.3 | 27.3 |
| 72.5° | 4115.9 | 1251.3 | 38.4 | 20.4 | 11.9 | 9.3 | 9.3 | 15.2 | 20.4 | 25.5 | 26.3 |
| 75° | 1768.8 | 345.6 | 30.7 | 14.4 | 10.3 | 8.5 | 8.5 | 14.4 | 19.6 | 24.7 | 26.3 |
| 77.5° | 323.4 | 87.6 | 24.7 | 12.9 | 10.3 | 8.5 | 7.7 | 13.7 | 18.8 | 23.7 | 24.7 |
| 80° | 128.6 | 43.3 | 19.6 | 11.1 | 9.3 | 7.7 | 6.7 | 12.9 | 17.8 | 22.9 | 23.7 |
| 82.5° | 77.6 | 24.7 | 16.2 | 10.3 | 9.3 | 6.7 | 5.9 | 11.1 | 17.0 | 22.2 | 22.9 |
| 85° | 62.9 | 17.0 | 12.9 | 10.3 | 8.5 | 6.7 | 5.2 | 10.3 | 15.2 | 21.4 | 22.2 |
| 87.5° | 30.7 | 11.9 | 11.9 | 9.3 | 8.5 | 6.7 | 5.2 | 9.3 | 14.4 | 20.4 | 21.4 |
| 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)