

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-SL3-7030-800-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-SL3-7030-800-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 3000K 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: 14561.2 lumens
Efficiency: N/A
Efficacy: 85.2 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

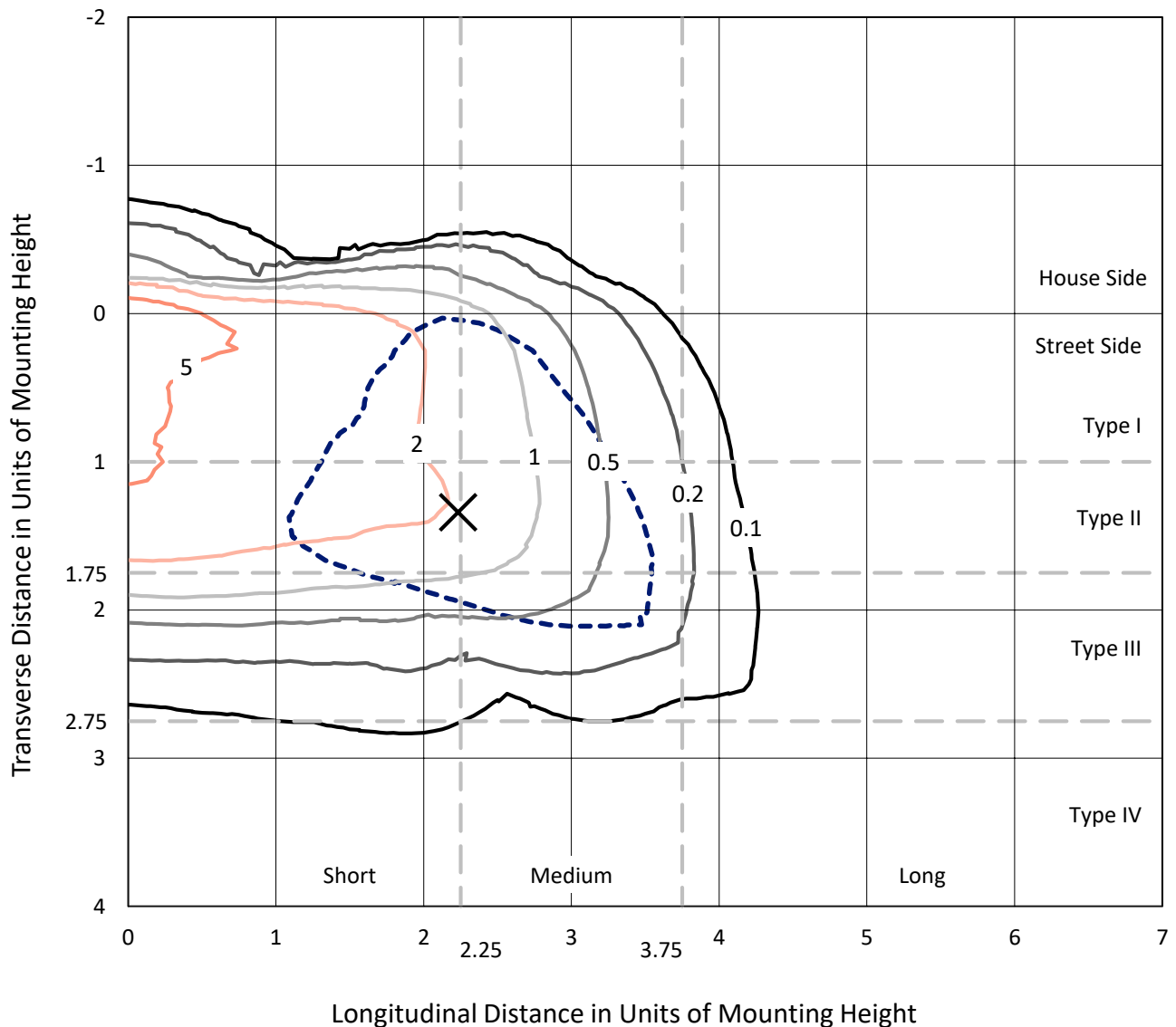


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

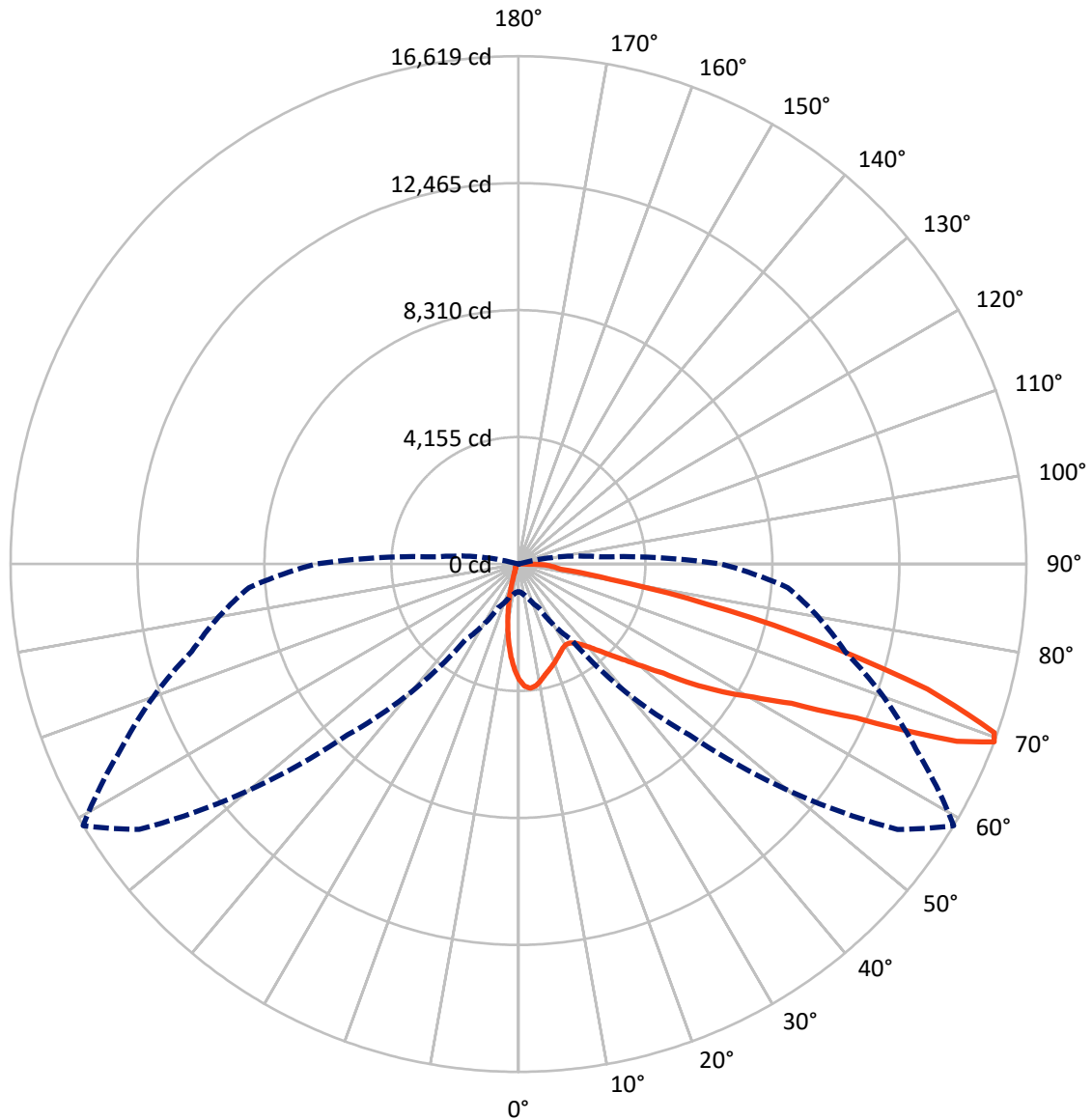


Based on 20 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Short - Non-Cutoff

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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 | 1185.8 | 0.0 | 1185.8 |
| | % Fixture | 8.1 | 0.0 | 8.1 |
| Street Side | Lumens | 13375.4 | 0.0 | 13375.4 |
| | % Fixture | 91.9 | 0.0 | 91.9 |
| Total | Lumens | 14561.2 | 0.0 | 14561.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 307.6 | 2.1 |
| 10°-20° | 635.7 | 4.4 |
| 20°-30° | 855.4 | 5.9 |
| 30°-40° | 1242.0 | 8.5 |
| 40°-50° | 2068.0 | 14.2 |
| 50°-60° | 3226.0 | 22.2 |
| 60°-70° | 3991.9 | 27.4 |
| 70°-80° | 2023.1 | 13.9 |
| 80°-90° | 211.7 | 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° | 14561.2 | 100.0 |
| 0°-180° | 14561.2 | 100.0 |



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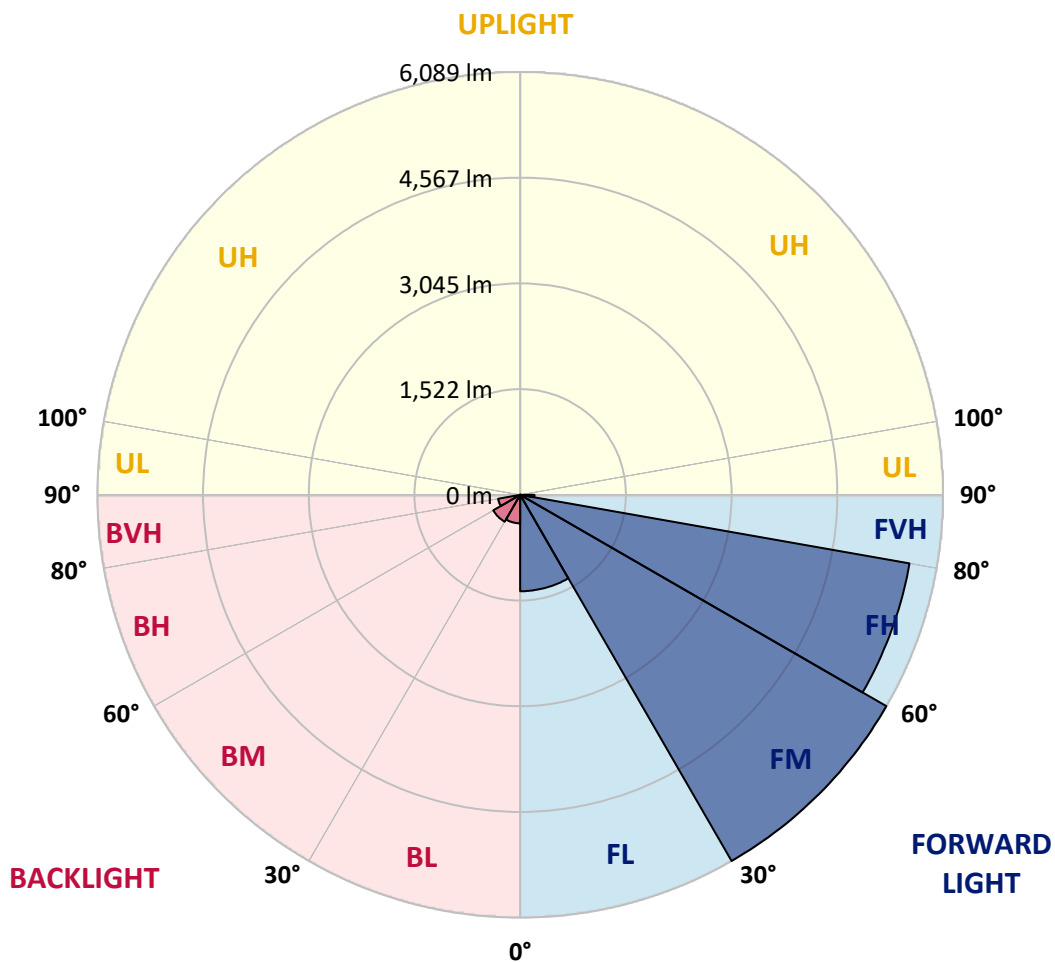
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1388.3 | 9.5 | | | |
| FM | (30°-60°) | 6089.1 | 41.8 | | | |
| FH | (60°-80°) | 5692.9 | 39.1 | | | G3/7500 |
| FVH | (80°-90°) | 205.2 | 1.4 | | | G2/225 |
| BL | (0°-30°) | 410.4 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 446.8 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 322.0 | 2.2 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.5 | 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° | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 |
| 2.5° | 4154.0 | 4152.5 | 4134.3 | 4126.1 | 4111.1 | 4079.9 | 4031.3 | 4005.9 | 3964.8 | 3893.0 | 3796.7 |
| 5° | 4116.1 | 4136.0 | 4146.5 | 4147.5 | 4158.2 | 4146.5 | 4102.9 | 4081.7 | 4024.8 | 3909.4 | 3736.7 |
| 7.5° | 3859.3 | 3866.5 | 3897.2 | 3923.4 | 3974.5 | 4023.1 | 4038.8 | 4029.6 | 3995.9 | 3872.5 | 3642.7 |
| 10° | 3584.3 | 3591.6 | 3628.0 | 3662.4 | 3731.7 | 3806.5 | 3885.5 | 3902.2 | 3916.1 | 3819.7 | 3552.2 |
| 12.5° | 3347.0 | 3354.5 | 3391.6 | 3436.8 | 3517.5 | 3609.8 | 3732.4 | 3759.6 | 3821.4 | 3769.6 | 3479.6 |
| 15° | 3142.8 | 3146.1 | 3182.5 | 3238.3 | 3334.8 | 3453.2 | 3592.6 | 3636.2 | 3730.9 | 3734.2 | 3416.3 |
| 17.5° | 2969.1 | 2977.3 | 2999.7 | 3053.1 | 3158.5 | 3305.1 | 3467.4 | 3530.0 | 3640.9 | 3704.5 | 3354.5 |
| 20° | 2862.9 | 2871.1 | 2870.4 | 2900.0 | 2994.8 | 3151.1 | 3342.3 | 3417.1 | 3552.2 | 3674.1 | 3299.4 |
| 22.5° | 2842.4 | 2842.4 | 2821.0 | 2816.8 | 2872.9 | 3003.7 | 3212.1 | 3303.4 | 3472.2 | 3660.9 | 3260.8 |
| 25° | 2915.7 | 2912.2 | 2858.9 | 2815.3 | 2817.8 | 2895.8 | 3086.0 | 3194.7 | 3404.8 | 3669.8 | 3240.1 |
| 27.5° | 3070.5 | 3066.3 | 2998.8 | 2915.7 | 2848.9 | 2848.2 | 2990.5 | 3107.4 | 3351.3 | 3712.7 | 3248.3 |
| 30° | 3284.4 | 3282.9 | 3209.7 | 3104.9 | 2984.0 | 2872.9 | 2957.6 | 3063.8 | 3316.6 | 3790.0 | 3267.2 |
| 32.5° | 3518.3 | 3515.8 | 3460.7 | 3350.5 | 3197.2 | 2984.0 | 2992.3 | 3081.3 | 3326.6 | 3893.0 | 3313.4 |
| 35° | 3766.3 | 3762.1 | 3738.2 | 3641.9 | 3473.2 | 3189.0 | 3105.9 | 3175.0 | 3389.1 | 4047.0 | 3403.9 |
| 37.5° | 4034.6 | 4038.8 | 4056.0 | 3963.8 | 3786.8 | 3476.4 | 3296.2 | 3343.0 | 3515.0 | 4256.2 | 3551.2 |
| 40° | 4430.7 | 4429.9 | 4435.7 | 4314.5 | 4144.3 | 3827.9 | 3561.9 | 3576.9 | 3725.9 | 4533.6 | 3775.3 |
| 42.5° | 5149.4 | 5099.3 | 4947.0 | 4699.9 | 4528.7 | 4229.8 | 3897.2 | 3881.5 | 3983.7 | 4876.9 | 4088.9 |
| 45° | 6115.4 | 6008.2 | 5613.1 | 5139.7 | 4920.6 | 4682.7 | 4309.5 | 4259.4 | 4324.5 | 5289.5 | 4476.1 |
| 47.5° | 6946.1 | 6834.9 | 6276.0 | 5597.4 | 5336.4 | 5112.5 | 4792.9 | 4702.4 | 4723.9 | 5751.4 | 4966.7 |
| 50° | 7228.5 | 7174.2 | 6686.0 | 5996.0 | 5739.0 | 5653.5 | 5353.8 | 5243.4 | 5213.0 | 6285.7 | 5535.6 |
| 52.5° | 7130.5 | 7126.6 | 6801.2 | 6254.5 | 6107.9 | 6213.4 | 6059.3 | 5931.7 | 5819.8 | 6849.1 | 6114.4 |
| 55° | 6973.2 | 6993.9 | 6848.1 | 6480.9 | 6475.9 | 6724.7 | 7024.3 | 6918.1 | 6593.8 | 7460.9 | 6613.5 |
| 57.5° | 6539.5 | 6627.5 | 6821.9 | 6909.2 | 7111.6 | 7366.1 | 7828.1 | 7890.6 | 7507.0 | 7929.3 | 7027.6 |
| 60° | 5306.0 | 5499.4 | 6135.1 | 6970.7 | 7931.0 | 8565.0 | 8798.1 | 8851.4 | 8256.1 | 8318.7 | 7586.7 |
| 62.5° | 3766.3 | 3963.8 | 4770.0 | 6183.7 | 7943.2 | 10140.0 | 10243.0 | 10033.1 | 9081.3 | 8896.0 | 8551.0 |
| 65° | 1999.1 | 2151.7 | 2810.3 | 4463.6 | 6887.0 | 10505.7 | 12770.1 | 12144.3 | 10536.9 | 10031.3 | 9796.7 |
| 67.5° | 1022.6 | 1068.7 | 1330.7 | 2184.6 | 4734.6 | 9331.6 | 15035.1 | 15475.6 | 13045.8 | 11157.9 | 9736.7 |
| 69° | 904.9 | 932.1 | 1105.9 | 1579.3 | 3031.7 | 7903.8 | 15145.6 | 16619.4 | 14359.3 | 11063.9 | 8848.2 |
| 70° | 876.0 | 899.9 | 1058.0 | 1429.4 | 2369.8 | 6628.2 | 14723.0 | 16518.9 | 14695.1 | 10706.7 | 8184.6 |
| 72.5° | 743.6 | 764.1 | 942.1 | 1263.2 | 1926.0 | 3290.2 | 11959.9 | 13997.8 | 13186.6 | 8919.0 | 5924.2 |
| 75° | 497.3 | 564.9 | 904.2 | 1184.1 | 1791.7 | 1869.2 | 7884.9 | 10115.3 | 9396.6 | 6015.7 | 3086.0 |
| 77.5° | 119.4 | 128.4 | 255.3 | 942.1 | 1638.6 | 1645.1 | 4055.3 | 6288.2 | 5129.0 | 2144.2 | 729.4 |
| 80° | 64.3 | 61.8 | 71.5 | 187.0 | 1525.7 | 1543.9 | 1825.6 | 3052.3 | 1831.3 | 355.7 | 240.3 |
| 82.5° | 45.4 | 42.9 | 46.1 | 78.3 | 480.1 | 1406.3 | 1320.8 | 1381.6 | 759.1 | 136.6 | 107.9 |
| 85° | 16.5 | 15.7 | 25.4 | 70.8 | 150.6 | 808.5 | 1356.9 | 1139.5 | 615.0 | 62.6 | 79.0 |
| 87.5° | 5.7 | 5.0 | 10.0 | 38.6 | 46.1 | 344.3 | 837.4 | 861.3 | 242.1 | 37.9 | 37.1 |
| 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° | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 | 3790.0 |
| 2.5° | 3756.4 | 3705.2 | 3611.5 | 3515.0 | 3426.0 | 3319.1 | 3265.5 | 3212.9 | 3190.7 | 3182.5 | 3143.8 |
| 5° | 3647.7 | 3561.2 | 3362.0 | 3161.8 | 2977.3 | 2781.4 | 2652.2 | 2548.5 | 2487.4 | 2457.8 | 2410.9 |
| 7.5° | 3508.6 | 3367.0 | 3064.6 | 2755.9 | 2468.5 | 2185.3 | 1975.4 | 1813.9 | 1702.7 | 1649.3 | 1600.7 |
| 10° | 3373.4 | 3185.0 | 2755.2 | 2334.4 | 1944.0 | 1568.6 | 1278.6 | 1068.7 | 934.6 | 872.8 | 833.4 |
| 12.5° | 3252.5 | 3008.0 | 2456.3 | 1923.5 | 1433.4 | 993.9 | 699.0 | 532.0 | 448.7 | 419.8 | 405.8 |
| 15° | 3144.6 | 2844.9 | 2173.8 | 1533.2 | 970.7 | 568.1 | 382.2 | 325.3 | 312.1 | 312.1 | 310.4 |
| 17.5° | 3042.4 | 2685.1 | 1901.1 | 1166.7 | 609.3 | 347.5 | 290.7 | 283.2 | 283.2 | 286.4 | 286.4 |
| 20° | 2944.4 | 2532.8 | 1637.6 | 837.4 | 383.7 | 275.7 | 262.8 | 261.0 | 262.8 | 266.7 | 266.7 |
| 22.5° | 2860.4 | 2394.5 | 1391.6 | 574.6 | 284.9 | 248.5 | 242.1 | 239.6 | 240.3 | 242.8 | 244.6 |
| 25° | 2797.8 | 2277.5 | 1159.5 | 389.4 | 245.3 | 226.4 | 219.1 | 214.9 | 211.7 | 211.7 | 213.1 |
| 27.5° | 2758.4 | 2178.8 | 934.6 | 283.2 | 220.6 | 205.9 | 194.2 | 187.7 | 180.2 | 176.3 | 177.7 |
| 30° | 2729.5 | 2084.8 | 723.7 | 231.3 | 197.7 | 182.7 | 168.0 | 157.3 | 146.6 | 141.6 | 143.3 |
| 32.5° | 2718.8 | 2009.1 | 541.0 | 204.2 | 177.0 | 160.5 | 142.3 | 128.4 | 116.9 | 112.7 | 113.7 |
| 35° | 2747.7 | 1949.0 | 396.1 | 184.5 | 160.5 | 139.9 | 119.4 | 103.7 | 94.7 | 92.2 | 93.0 |
| 37.5° | 2823.5 | 1916.8 | 296.4 | 168.0 | 145.8 | 122.7 | 99.7 | 84.8 | 79.0 | 79.0 | 79.8 |
| 40° | 2966.6 | 1916.1 | 238.1 | 156.6 | 132.6 | 106.2 | 82.3 | 71.5 | 68.3 | 70.1 | 70.8 |
| 42.5° | 3175.7 | 1959.7 | 207.4 | 145.8 | 121.2 | 90.5 | 68.3 | 60.8 | 60.1 | 61.8 | 62.6 |
| 45° | 3461.4 | 2039.5 | 191.0 | 136.6 | 108.7 | 75.8 | 57.6 | 52.6 | 52.6 | 55.1 | 56.1 |
| 47.5° | 3811.4 | 2156.4 | 177.0 | 127.6 | 96.2 | 63.3 | 49.4 | 46.1 | 46.9 | 49.4 | 50.1 |
| 50° | 4233.0 | 2304.0 | 163.0 | 117.7 | 87.3 | 52.6 | 42.9 | 40.4 | 41.1 | 44.4 | 45.4 |
| 52.5° | 4713.1 | 2502.4 | 151.6 | 108.7 | 75.8 | 43.6 | 36.1 | 34.7 | 36.1 | 39.6 | 40.4 |
| 55° | 5124.7 | 2680.2 | 137.6 | 101.2 | 60.8 | 36.1 | 29.7 | 29.7 | 31.4 | 35.4 | 36.1 |
| 57.5° | 5520.9 | 2866.1 | 125.1 | 87.3 | 47.9 | 28.9 | 24.7 | 25.4 | 27.9 | 32.2 | 32.9 |
| 60° | 6102.2 | 3181.5 | 110.4 | 73.3 | 36.1 | 22.9 | 20.7 | 21.4 | 24.7 | 28.9 | 29.7 |
| 62.5° | 7089.4 | 3661.6 | 95.5 | 60.8 | 27.9 | 18.2 | 16.5 | 18.2 | 22.2 | 27.2 | 27.9 |
| 65° | 7980.4 | 3856.8 | 78.3 | 51.1 | 21.4 | 14.0 | 14.0 | 16.5 | 21.4 | 26.4 | 27.2 |
| 67.5° | 7483.8 | 3246.5 | 60.8 | 40.4 | 16.5 | 10.7 | 11.5 | 15.7 | 20.7 | 26.4 | 27.2 |
| 69° | 6618.5 | 2654.7 | 51.9 | 32.2 | 14.0 | 10.0 | 10.7 | 15.7 | 20.7 | 25.4 | 26.4 |
| 70° | 5944.2 | 2241.4 | 46.1 | 27.2 | 12.5 | 10.0 | 10.7 | 14.7 | 20.7 | 25.4 | 26.4 |
| 72.5° | 3981.2 | 1210.3 | 37.1 | 19.7 | 11.5 | 9.0 | 9.0 | 14.7 | 19.7 | 24.7 | 25.4 |
| 75° | 1710.9 | 334.3 | 29.7 | 14.0 | 10.0 | 8.2 | 8.2 | 14.0 | 18.9 | 23.9 | 25.4 |
| 77.5° | 312.9 | 84.8 | 23.9 | 12.5 | 10.0 | 8.2 | 7.5 | 13.2 | 18.2 | 22.9 | 23.9 |
| 80° | 124.4 | 41.9 | 18.9 | 10.7 | 9.0 | 7.5 | 6.5 | 12.5 | 17.2 | 22.2 | 22.9 |
| 82.5° | 75.0 | 23.9 | 15.7 | 10.0 | 9.0 | 6.5 | 5.7 | 10.7 | 16.5 | 21.4 | 22.2 |
| 85° | 60.8 | 16.5 | 12.5 | 10.0 | 8.2 | 6.5 | 5.0 | 10.0 | 14.7 | 20.7 | 21.4 |
| 87.5° | 29.7 | 11.5 | 11.5 | 9.0 | 8.2 | 6.5 | 5.0 | 9.0 | 14.0 | 19.7 | 20.7 |
| 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)