

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: P299122

Luminaire Tested: **GLNA-AF-05-LED-E1-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299122
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-T3
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29654.2 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

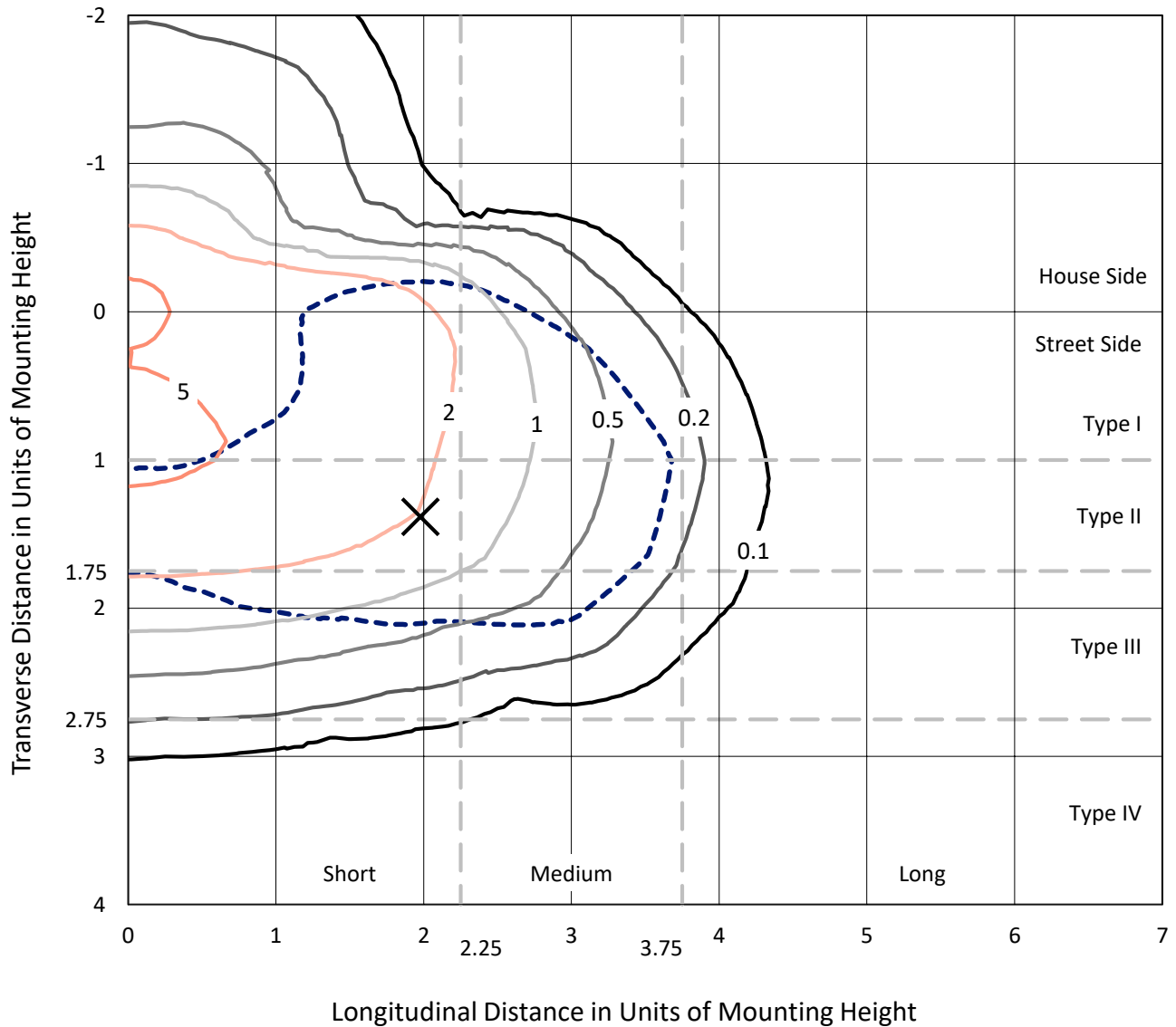
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

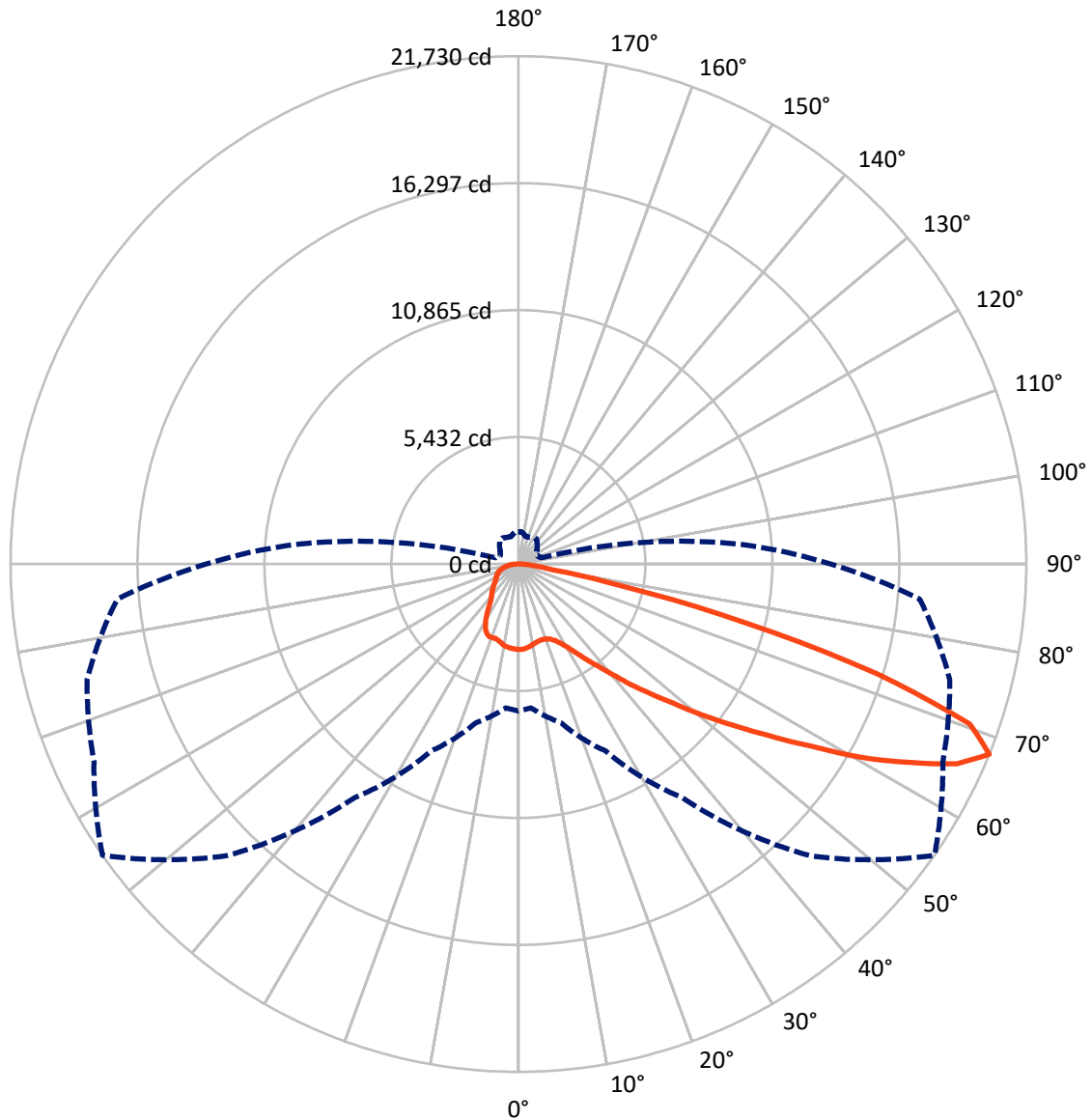
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6405.9 | 0.0 | 6405.9 |
| | % Fixture | 21.6 | 0.0 | 21.6 |
| Street Side | Lumens | 23248.3 | 0.0 | 23248.3 |
| | % Fixture | 78.4 | 0.0 | 78.4 |
| Total | Lumens | 29654.2 | 0.0 | 29654.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 341.3 | 1.2 |
| 10°-20° | 966.6 | 3.3 |
| 20°-30° | 1619.3 | 5.5 |
| 30°-40° | 2662.8 | 9.0 |
| 40°-50° | 4482.2 | 15.1 |
| 50°-60° | 7054.7 | 23.8 |
| 60°-70° | 8419.1 | 28.4 |
| 70°-80° | 3615.3 | 12.2 |
| 80°-90° | 492.9 | 1.7 |
| 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° | 29654.2 | 100.0 |
| 0°-180° | 29654.2 | 100.0 |



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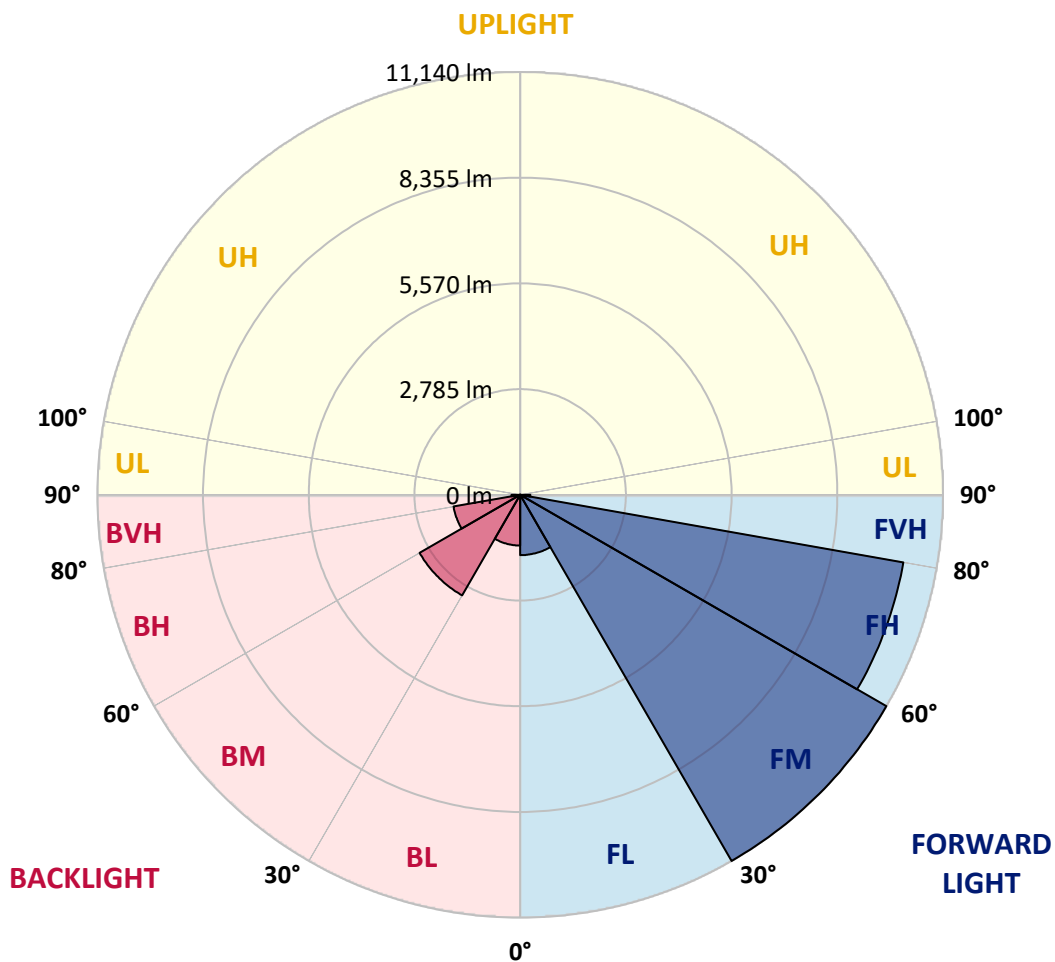
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1589.5 | 5.4 | | | |
| FM | (30°-60°) | 11140.3 | 37.6 | | | |
| FH | (60°-80°) | 10251.6 | 34.6 | | | G4/12000 |
| FVH | (80°-90°) | 266.8 | 0.9 | | | G3/500 |
| BL | (0°-30°) | 1337.7 | 4.5 | B3/2500 | | |
| BM | (30°-60°) | 3059.4 | 10.3 | B3/5000 | | |
| BH | (60°-80°) | 1782.8 | 6.0 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 226.1 | 0.8 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 |
| 2.5° | 3625.2 | 3626.6 | 3629.5 | 3640.9 | 3651.0 | 3648.1 | 3649.5 | 3643.8 | 3642.4 | 3633.8 | 3642.4 |
| 5° | 3579.3 | 3583.6 | 3585.1 | 3603.7 | 3615.2 | 3618.0 | 3613.7 | 3606.6 | 3598.0 | 3589.4 | 3593.7 |
| 7.5° | 3474.8 | 3486.2 | 3487.7 | 3513.5 | 3532.1 | 3556.4 | 3557.9 | 3559.3 | 3555.0 | 3549.3 | 3557.9 |
| 10° | 3408.9 | 3411.8 | 3410.3 | 3429.0 | 3443.3 | 3470.5 | 3486.2 | 3513.5 | 3524.9 | 3527.8 | 3533.5 |
| 12.5° | 3404.6 | 3401.7 | 3397.4 | 3397.4 | 3393.1 | 3404.6 | 3433.2 | 3471.9 | 3499.1 | 3507.7 | 3514.9 |
| 15° | 3450.4 | 3449.0 | 3434.7 | 3413.2 | 3386.0 | 3377.4 | 3401.7 | 3444.7 | 3480.5 | 3499.1 | 3506.3 |
| 17.5° | 3553.6 | 3545.0 | 3522.1 | 3473.4 | 3414.6 | 3391.7 | 3394.6 | 3430.4 | 3471.9 | 3496.3 | 3503.4 |
| 20° | 3742.6 | 3742.6 | 3693.9 | 3602.3 | 3497.7 | 3443.3 | 3417.5 | 3439.0 | 3479.1 | 3512.0 | 3522.1 |
| 22.5° | 4069.2 | 4072.1 | 3990.4 | 3840.0 | 3663.9 | 3547.8 | 3483.4 | 3479.1 | 3526.3 | 3563.6 | 3575.0 |
| 25° | 4531.8 | 4520.4 | 4405.8 | 4190.9 | 3923.1 | 3731.2 | 3619.4 | 3593.7 | 3633.8 | 3675.3 | 3689.6 |
| 27.5° | 5070.4 | 5028.8 | 4892.8 | 4633.5 | 4286.9 | 4006.2 | 3834.3 | 3792.8 | 3831.4 | 3878.7 | 3893.0 |
| 30° | 5603.2 | 5560.2 | 5398.4 | 5114.8 | 4729.5 | 4374.3 | 4127.9 | 4060.6 | 4115.0 | 4182.3 | 4190.9 |
| 32.5° | 6136.0 | 6136.0 | 5955.5 | 5624.7 | 5205.0 | 4814.0 | 4518.9 | 4438.7 | 4529.0 | 4610.6 | 4629.2 |
| 35° | 6773.4 | 6776.3 | 6601.5 | 6203.3 | 5752.2 | 5338.2 | 5013.1 | 4954.4 | 5090.4 | 5147.7 | 5192.1 |
| 37.5° | 7556.9 | 7572.6 | 7347.8 | 6866.5 | 6372.4 | 5936.9 | 5550.2 | 5470.0 | 5606.1 | 5762.2 | 5905.4 |
| 40° | 8403.4 | 8423.4 | 8175.6 | 7582.7 | 7088.5 | 6633.0 | 6214.8 | 6070.1 | 6296.4 | 6594.4 | 6779.1 |
| 42.5° | 9211.2 | 9314.3 | 9075.1 | 8465.0 | 7933.6 | 7462.3 | 7038.4 | 6827.8 | 7111.4 | 7561.2 | 7721.6 |
| 45° | 10378.5 | 10453.0 | 10036.2 | 9483.3 | 8983.5 | 8456.4 | 7894.9 | 7672.9 | 8069.6 | 8636.8 | 8669.8 |
| 47.5° | 11156.3 | 11100.4 | 10888.4 | 10544.7 | 10228.1 | 9735.4 | 8890.4 | 8646.9 | 9174.0 | 9841.4 | 9656.6 |
| 50° | 11570.2 | 11587.4 | 11558.7 | 11578.8 | 11590.3 | 11280.9 | 10110.7 | 9777.0 | 10405.7 | 11212.1 | 10786.7 |
| 52.5° | 11956.9 | 11842.3 | 11936.9 | 12406.7 | 12973.9 | 12859.3 | 11438.4 | 11090.4 | 11726.3 | 12733.2 | 11981.3 |
| 55° | 11948.3 | 11773.6 | 12081.5 | 12910.8 | 14141.2 | 14273.0 | 12929.5 | 12528.4 | 13122.8 | 14364.6 | 13247.4 |
| 57.5° | 11525.8 | 11534.4 | 12008.5 | 13094.2 | 14954.8 | 15602.2 | 14659.7 | 14058.1 | 14603.8 | 16017.5 | 14403.3 |
| 60° | 10944.3 | 11023.1 | 11706.3 | 13064.1 | 15606.5 | 16692.2 | 16782.4 | 15706.7 | 16054.8 | 17520.0 | 15360.1 |
| 62.5° | 10006.1 | 10089.2 | 11031.7 | 12751.9 | 15507.6 | 17742.0 | 18701.7 | 17577.3 | 17571.6 | 18431.0 | 15640.8 |
| 65° | 8526.5 | 8502.2 | 9491.9 | 11584.5 | 14678.3 | 18518.3 | 20608.1 | 19194.4 | 18714.6 | 18445.3 | 15076.5 |
| 67.5° | 6287.8 | 6179.0 | 7028.3 | 8823.0 | 12200.4 | 17648.9 | 21729.6 | 20036.6 | 19104.2 | 17232.1 | 13352.0 |
| 70° | 3262.8 | 3153.9 | 3841.5 | 5152.0 | 8023.8 | 13774.5 | 20487.8 | 19601.2 | 18243.3 | 14444.9 | 10460.2 |
| 72.5° | 1395.1 | 1376.5 | 1655.8 | 2260.2 | 3881.6 | 7945.0 | 16064.8 | 16965.7 | 15653.7 | 10762.4 | 7191.6 |
| 75° | 938.2 | 932.4 | 1037.0 | 1231.8 | 1746.0 | 3224.1 | 10053.4 | 12042.9 | 11452.8 | 6673.1 | 4044.8 |
| 77.5° | 736.2 | 729.0 | 790.6 | 885.2 | 1131.5 | 1271.9 | 4461.6 | 6465.5 | 5984.2 | 2904.7 | 1770.3 |
| 80° | 575.8 | 570.1 | 608.7 | 660.3 | 813.6 | 802.1 | 1468.1 | 2572.4 | 1990.9 | 1112.9 | 860.8 |
| 82.5° | 454.0 | 454.0 | 485.6 | 487.0 | 577.2 | 547.1 | 766.3 | 1133.0 | 994.0 | 648.8 | 527.1 |
| 85° | 415.4 | 415.4 | 448.3 | 363.8 | 376.7 | 345.2 | 475.5 | 671.8 | 630.2 | 266.4 | 229.2 |
| 87.5° | 209.1 | 203.4 | 376.7 | 322.3 | 204.8 | 183.3 | 232.0 | 325.1 | 349.5 | 147.5 | 114.6 |
| 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 | 3656.7 |
| 2.5° | 3639.5 | 3638.1 | 3640.9 | 3642.4 | 3653.8 | 3669.6 | 3676.7 | 3686.8 | 3692.5 | 3689.6 |
| 5° | 3596.5 | 3599.4 | 3610.9 | 3619.4 | 3639.5 | 3665.3 | 3679.6 | 3691.1 | 3701.1 | 3696.8 |
| 7.5° | 3560.7 | 3567.9 | 3585.1 | 3592.2 | 3603.7 | 3610.9 | 3609.4 | 3613.7 | 3622.3 | 3612.3 |
| 10° | 3540.7 | 3549.3 | 3562.2 | 3552.1 | 3524.9 | 3486.2 | 3450.4 | 3431.8 | 3437.5 | 3430.4 |
| 12.5° | 3520.6 | 3532.1 | 3522.1 | 3474.8 | 3398.9 | 3348.7 | 3321.5 | 3324.4 | 3337.3 | 3340.1 |
| 15° | 3509.2 | 3513.5 | 3470.5 | 3381.7 | 3304.3 | 3297.2 | 3311.5 | 3308.6 | 3310.1 | 3310.1 |
| 17.5° | 3509.2 | 3497.7 | 3417.5 | 3328.7 | 3295.7 | 3282.9 | 3238.5 | 3182.6 | 3158.2 | 3149.7 |
| 20° | 3527.8 | 3497.7 | 3400.3 | 3341.6 | 3270.0 | 3159.7 | 3042.2 | 2939.1 | 2893.3 | 2880.4 |
| 22.5° | 3583.6 | 3532.1 | 3449.0 | 3347.3 | 3143.9 | 2959.2 | 2773.0 | 2649.8 | 2566.7 | 2552.4 |
| 25° | 3696.8 | 3639.5 | 3545.0 | 3271.4 | 2943.4 | 2679.9 | 2467.9 | 2330.4 | 2247.3 | 2235.8 |
| 27.5° | 3894.5 | 3857.2 | 3596.5 | 3103.8 | 2677.0 | 2394.8 | 2198.6 | 2092.6 | 2031.0 | 2026.7 |
| 30° | 4192.4 | 4173.8 | 3570.8 | 2856.0 | 2349.0 | 2118.4 | 2023.9 | 1962.3 | 1916.4 | 1915.0 |
| 32.5° | 4667.9 | 4517.5 | 3486.2 | 2553.8 | 2049.6 | 1922.2 | 1883.5 | 1846.2 | 1810.4 | 1810.4 |
| 35° | 5279.5 | 4795.4 | 3325.8 | 2230.1 | 1867.7 | 1813.3 | 1764.6 | 1705.9 | 1658.6 | 1655.8 |
| 37.5° | 5998.5 | 4967.3 | 3037.9 | 1969.4 | 1781.8 | 1740.3 | 1668.6 | 1581.3 | 1498.2 | 1483.9 |
| 40° | 6724.7 | 5018.8 | 2632.6 | 1809.0 | 1727.4 | 1667.2 | 1579.8 | 1476.7 | 1396.5 | 1392.2 |
| 42.5° | 7390.7 | 4920.0 | 2202.9 | 1698.7 | 1672.9 | 1592.7 | 1501.1 | 1409.4 | 1346.4 | 1344.9 |
| 45° | 7949.3 | 4663.6 | 1842.0 | 1594.2 | 1615.6 | 1525.4 | 1443.8 | 1369.3 | 1320.6 | 1310.6 |
| 47.5° | 8475.0 | 4301.2 | 1588.4 | 1483.9 | 1558.4 | 1488.2 | 1419.4 | 1349.2 | 1302.0 | 1294.8 |
| 50° | 9085.1 | 3910.2 | 1410.8 | 1376.5 | 1508.2 | 1475.3 | 1439.5 | 1366.4 | 1287.6 | 1279.1 |
| 52.5° | 9824.2 | 3572.2 | 1271.9 | 1281.9 | 1469.6 | 1492.5 | 1491.0 | 1415.1 | 1277.6 | 1266.2 |
| 55° | 10649.2 | 3196.9 | 1167.3 | 1204.6 | 1453.8 | 1524.0 | 1503.9 | 1461.0 | 1286.2 | 1269.0 |
| 57.5° | 11461.4 | 2758.6 | 1094.3 | 1145.8 | 1430.9 | 1521.1 | 1442.3 | 1380.7 | 1306.3 | 1281.9 |
| 60° | 12070.1 | 2170.0 | 1038.4 | 1094.3 | 1380.7 | 1473.8 | 1375.0 | 1293.4 | 1302.0 | 1283.4 |
| 62.5° | 12110.2 | 1677.2 | 971.1 | 1049.9 | 1304.8 | 1426.6 | 1330.6 | 1254.7 | 1320.6 | 1303.4 |
| 65° | 11398.3 | 1267.6 | 906.7 | 996.9 | 1223.2 | 1396.5 | 1287.6 | 1233.2 | 1359.3 | 1340.6 |
| 67.5° | 9596.5 | 1019.8 | 852.2 | 942.5 | 1141.6 | 1333.5 | 1249.0 | 1213.2 | 1393.6 | 1360.7 |
| 70° | 6928.1 | 869.4 | 799.2 | 876.6 | 1068.5 | 1261.9 | 1214.6 | 1177.4 | 1300.5 | 1249.0 |
| 72.5° | 4265.4 | 753.4 | 739.1 | 789.2 | 1012.6 | 1187.4 | 1163.0 | 1110.0 | 1171.6 | 1130.1 |
| 75° | 2129.8 | 653.1 | 671.8 | 703.3 | 933.9 | 1102.9 | 1077.1 | 1024.1 | 1032.7 | 1024.1 |
| 77.5° | 1019.8 | 558.6 | 593.0 | 617.3 | 832.2 | 1006.9 | 979.7 | 925.3 | 915.2 | 916.7 |
| 80° | 646.0 | 466.9 | 499.9 | 517.1 | 743.4 | 895.2 | 868.0 | 813.6 | 928.1 | 860.8 |
| 82.5° | 403.9 | 379.6 | 388.2 | 419.7 | 647.4 | 779.2 | 743.4 | 694.7 | 836.5 | 661.7 |
| 85° | 223.4 | 265.0 | 276.4 | 303.6 | 498.4 | 651.7 | 615.9 | 554.3 | 497.0 | 488.4 |
| 87.5° | 133.2 | 157.6 | 161.9 | 181.9 | 335.2 | 471.2 | 416.8 | 395.3 | 328.0 | 326.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)