

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: P201050

Luminaire Tested: **NFFLD-S-C15-D-UNV-66**

Test Date: 05/17/16

Test Information

Test Method: LM-79-08
Report Number: P201050
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-16-1017-2)
Test Lab: INNOVATION CENTER(G2)
Test Date: 05/17/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NFFLD-S-C15-D-UNV-66
Description: LOW WATTAGE LED FLOODLIGHT
Light Source: (1) CITIZEN 5700 70
CLU038-1208C4-57AL7K3
Ballast/Driver: (1) XENERQI ELECTRONIC DRIVER
XEL-A050A-042-C1X20

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5806.8 lumens
Efficiency: N/A
Efficacy: 113.4 lumens/watt
Luminous Opening: (L: 0 ' x W: 0.46 ' x H: 0 '
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G1

Input Watts (W): 51.2
Input Voltage (V): 120.0
Input Current (Ain): 0.427
Voltage Rise (V): NR
Power Factor: 0.9995
Total Harmonic Distortion (THDi): 4.69%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.3
Test Distance: 25 FT

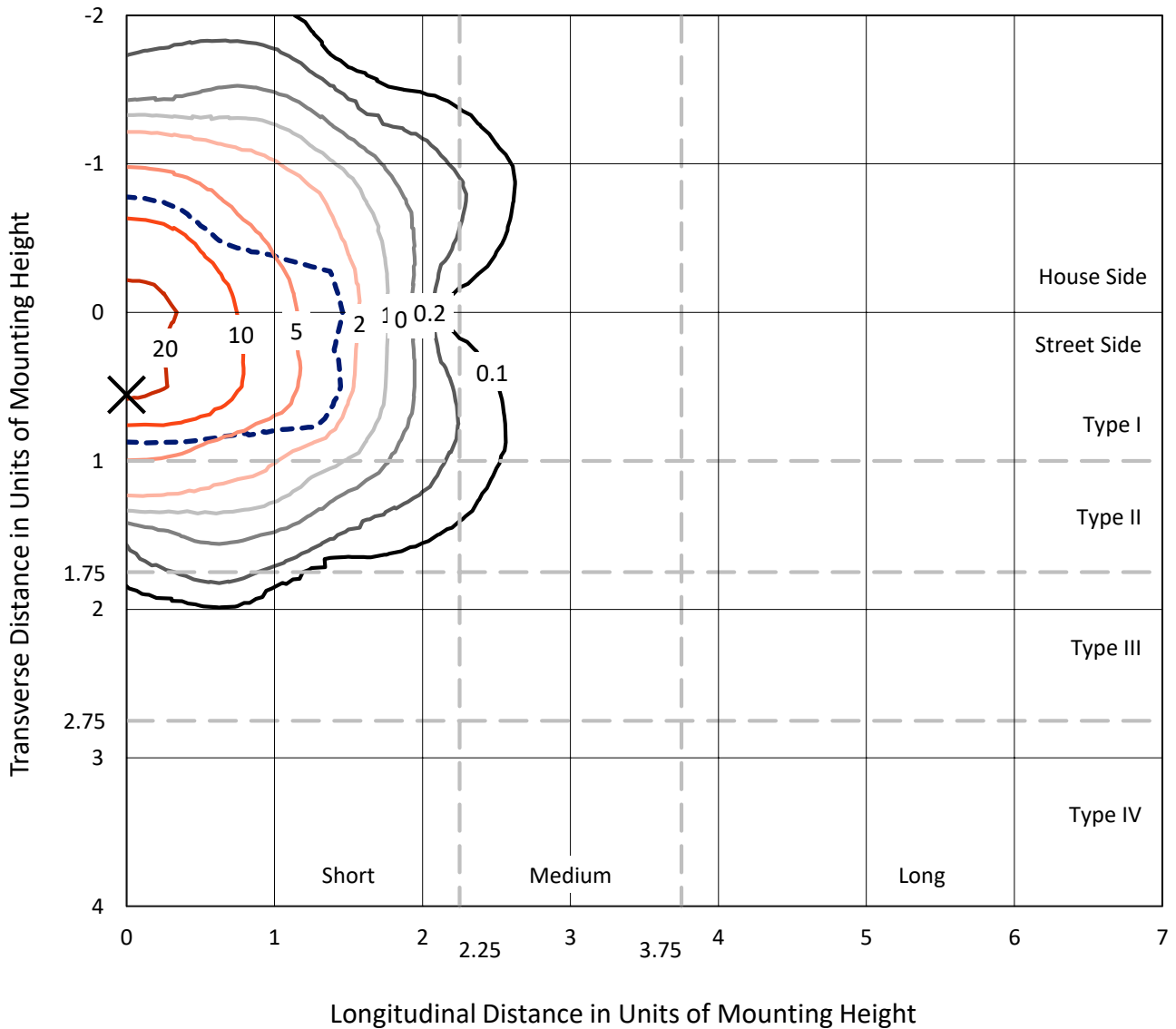


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Iso-Footcandle Lines of Horizontal Illumination

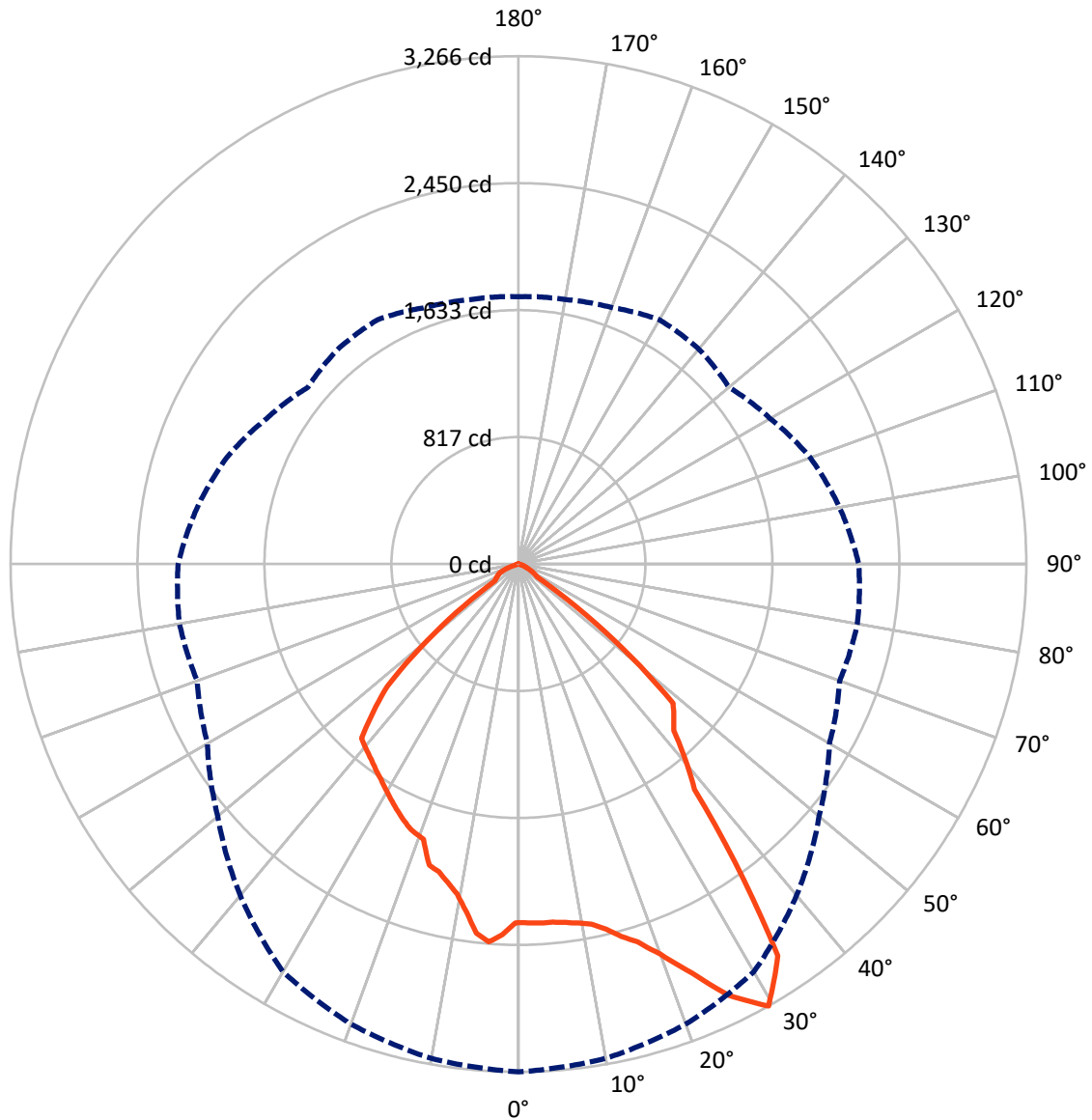
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.3 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 29-Deg Vertical

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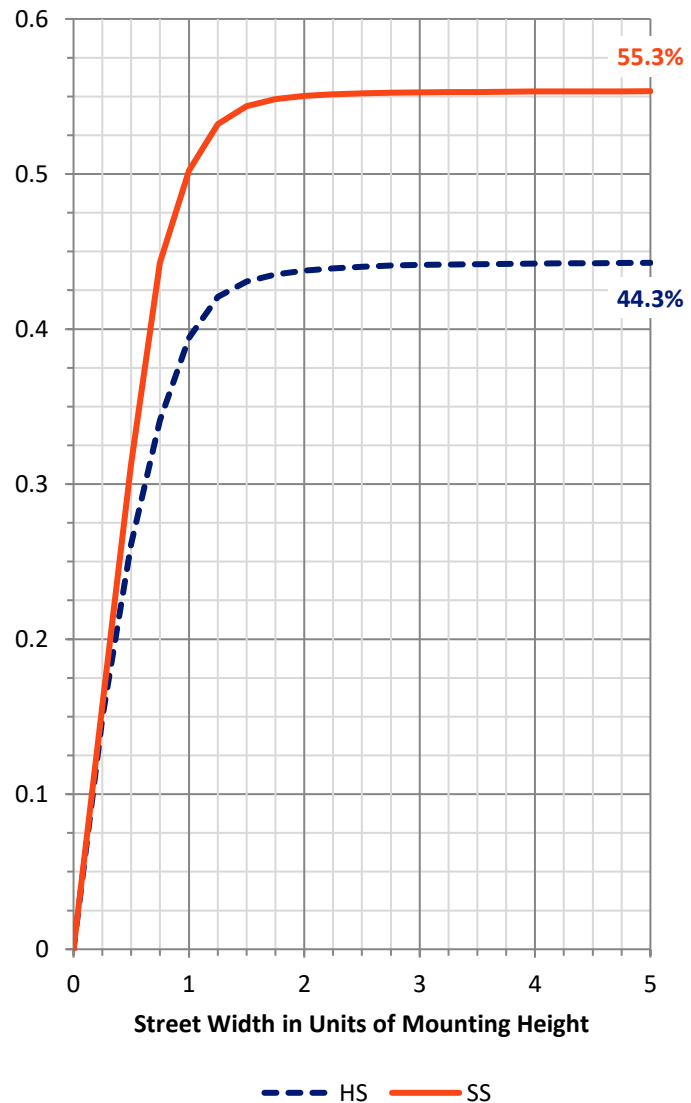
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2594.1 | 0.0 | 2594.1 |
| | % Fixture | 44.7 | 0.0 | 44.7 |
| Street Side | Lumens | 3212.7 | 0.0 | 3212.7 |
| | % Fixture | 55.3 | 0.0 | 55.3 |
| Total | Lumens | 5806.8 | 0.0 | 5806.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 224.0 | 3.9 |
| 10°-20° | 647.6 | 11.2 |
| 20°-30° | 1051.2 | 18.1 |
| 30°-40° | 1305.3 | 22.5 |
| 40°-50° | 1291.3 | 22.2 |
| 50°-60° | 907.0 | 15.6 |
| 60°-70° | 372.6 | 6.4 |
| 70°-80° | 77.2 | 1.3 |
| 80°-90° | 11.7 | 0.2 |
| 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° | 5806.8 | 100.0 |
| 0°-180° | 5806.8 | 100.0 |



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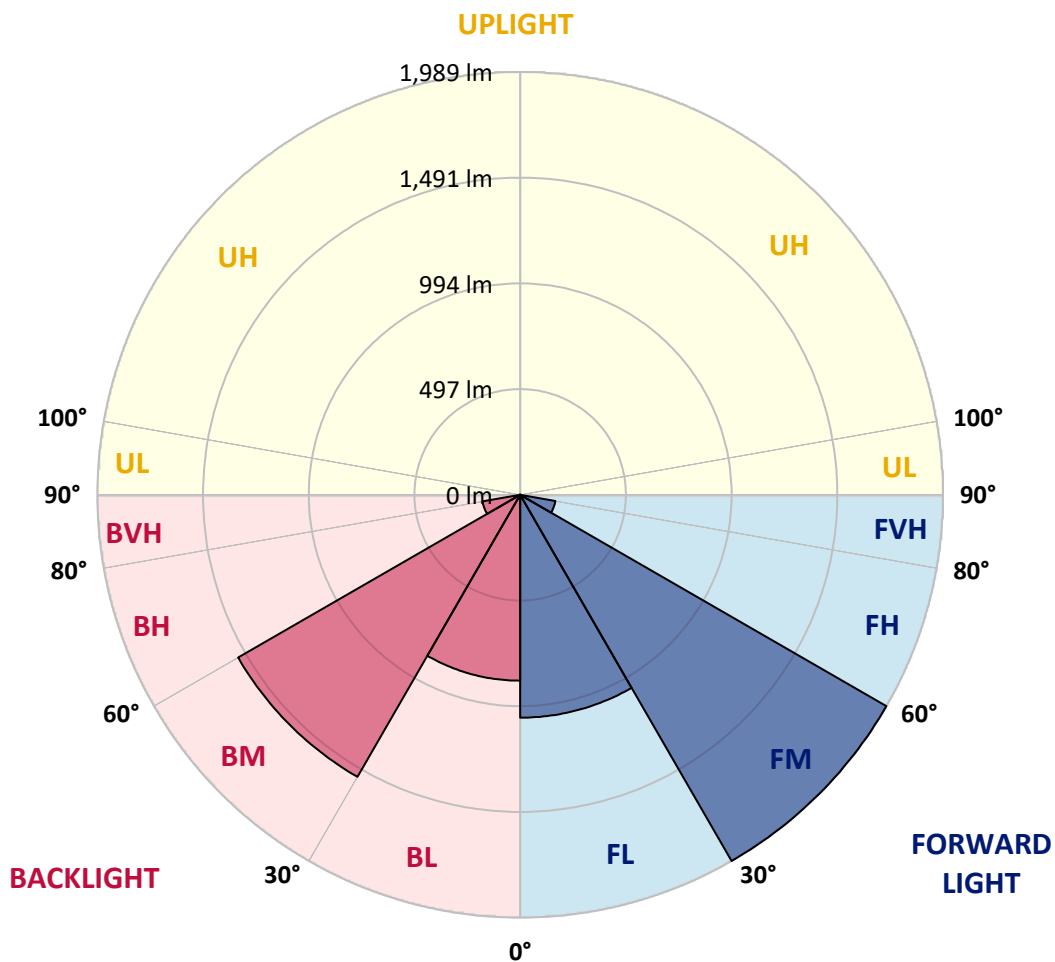
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 1048.2 | 18.1 | | | |
| FM | (30°-60°) | 1988.6 | 34.2 | | | |
| FH | (60°-80°) | 167.9 | 2.9 | | | G0/660 |
| FVH | (80°-90°) | 5.3 | 0.1 | | | G0/10 |
| BL | (0°-30°) | 874.0 | 15.1 | B2/1000 | | |
| BM | (30°-60°) | 1531.2 | 26.4 | B2/2500 | | |
| BH | (60°-80°) | 179.6 | 3.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.9 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G1

Type I Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 90° | 100° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 |
| 1° | 2309.6 | 2309.7 | 2309.7 | 2309.6 | 2309.3 | 2309.0 | 2308.5 | 2308.0 | 2307.4 | 2306.7 | 2306.9 |
| 3° | 2313.5 | 2313.9 | 2314.2 | 2314.9 | 2315.2 | 2315.2 | 2314.9 | 2314.2 | 2313.0 | 2311.6 | 2314.5 |
| 5° | 2313.5 | 2315.2 | 2316.2 | 2317.3 | 2318.7 | 2319.6 | 2319.2 | 2318.1 | 2317.3 | 2317.4 | 2327.3 |
| 7° | 2325.3 | 2325.5 | 2323.2 | 2321.5 | 2319.6 | 2318.7 | 2319.0 | 2319.3 | 2320.9 | 2327.2 | 2351.8 |
| 9° | 2340.9 | 2339.9 | 2336.4 | 2331.3 | 2324.1 | 2319.2 | 2318.3 | 2321.1 | 2328.0 | 2344.8 | 2380.4 |
| 11° | 2363.4 | 2363.3 | 2356.2 | 2343.4 | 2329.1 | 2318.5 | 2317.6 | 2323.7 | 2336.6 | 2364.3 | 2394.8 |
| 13° | 2414.2 | 2409.8 | 2393.3 | 2362.7 | 2337.2 | 2318.4 | 2311.4 | 2319.4 | 2339.8 | 2378.0 | 2391.6 |
| 15° | 2485.5 | 2477.6 | 2451.8 | 2403.4 | 2356.6 | 2321.7 | 2302.3 | 2306.2 | 2332.6 | 2383.9 | 2371.2 |
| 17° | 2548.0 | 2539.6 | 2511.1 | 2460.5 | 2393.0 | 2332.5 | 2295.1 | 2293.4 | 2325.5 | 2363.4 | 2320.9 |
| 19.5° | 2670.1 | 2652.3 | 2600.6 | 2516.6 | 2447.8 | 2366.6 | 2297.3 | 2284.2 | 2333.2 | 2380.0 | 2271.3 |
| 22.5° | 2856.7 | 2826.3 | 2750.0 | 2634.5 | 2508.3 | 2416.0 | 2307.5 | 2276.0 | 2327.2 | 2300.8 | 2216.5 |
| 25.5° | 3086.3 | 3039.1 | 2938.7 | 2796.6 | 2624.7 | 2466.8 | 2318.0 | 2236.1 | 2284.1 | 2234.4 | 2153.6 |
| 29° | 3266.1 | 3228.5 | 3148.6 | 3027.8 | 2782.9 | 2524.2 | 2309.4 | 2198.4 | 2213.2 | 2188.5 | 2096.9 |
| 33° | 3021.9 | 3038.8 | 3103.4 | 3194.8 | 2970.1 | 2587.6 | 2318.1 | 2210.8 | 2091.3 | 2026.3 | 1941.4 |
| 37.5° | 1839.7 | 1967.2 | 2300.5 | 2738.3 | 2960.5 | 2725.2 | 2364.8 | 2208.3 | 2053.5 | 1921.8 | 1820.5 |
| 42.5° | 1464.5 | 1485.7 | 1586.8 | 1708.1 | 2198.9 | 2644.5 | 2472.7 | 2232.2 | 1998.5 | 1912.0 | 1768.2 |
| 47.5° | 1338.5 | 1344.7 | 1343.2 | 1342.3 | 1441.6 | 1990.6 | 2559.5 | 2249.8 | 1832.1 | 1788.9 | 1730.5 |
| 55° | 147.5 | 296.8 | 512.4 | 734.7 | 1025.3 | 1081.9 | 1786.1 | 1841.7 | 1596.4 | 1715.6 | 1587.7 |
| 65° | 61.6 | 55.5 | 115.1 | 92.7 | 122.2 | 264.1 | 413.7 | 440.8 | 291.3 | 62.5 | 299.5 |
| 75° | 7.8 | 10.0 | 17.9 | 16.0 | 19.7 | 17.4 | 25.1 | 31.0 | 32.8 | 53.7 | 55.7 |
| 85° | 0.0 | 7.8 | 10.7 | 10.7 | 11.5 | 11.7 | 12.9 | 13.7 | 13.4 | 15.6 | 15.0 |
| 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):

| | 110° | 120° | 130° | 140° | 150° | 160° | 170° | 180° | 190° | 200° | 210° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 |
| 1° | 2307.0 | 2307.1 | 2307.3 | 2307.4 | 2307.5 | 2307.6 | 2307.7 | 2307.7 | 2307.7 | 2307.6 | 2307.5 |
| 3° | 2317.5 | 2334.2 | 2349.0 | 2361.5 | 2371.3 | 2378.0 | 2383.6 | 2385.8 | 2383.6 | 2378.0 | 2371.3 |
| 5° | 2353.6 | 2380.6 | 2400.7 | 2412.2 | 2422.4 | 2429.6 | 2434.0 | 2437.6 | 2434.0 | 2429.6 | 2422.4 |
| 7° | 2387.2 | 2413.1 | 2428.5 | 2427.2 | 2414.6 | 2405.9 | 2397.2 | 2388.8 | 2397.2 | 2405.9 | 2414.6 |
| 9° | 2413.5 | 2425.4 | 2409.8 | 2377.5 | 2333.6 | 2302.9 | 2277.8 | 2261.8 | 2277.8 | 2302.9 | 2333.6 |
| 11° | 2406.3 | 2387.6 | 2338.5 | 2284.2 | 2230.5 | 2195.8 | 2170.7 | 2158.2 | 2170.7 | 2195.8 | 2230.5 |
| 13° | 2374.3 | 2306.5 | 2249.2 | 2199.6 | 2152.4 | 2125.0 | 2108.1 | 2097.6 | 2108.1 | 2125.0 | 2152.4 |
| 15° | 2315.4 | 2234.0 | 2185.0 | 2141.3 | 2101.7 | 2070.6 | 2053.8 | 2043.9 | 2053.8 | 2070.6 | 2101.7 |
| 17° | 2247.8 | 2184.2 | 2142.3 | 2098.8 | 2053.8 | 2034.6 | 2029.0 | 2019.5 | 2029.0 | 2034.6 | 2053.8 |
| 19.5° | 2200.1 | 2146.2 | 2098.3 | 2048.5 | 2017.1 | 1940.4 | 1893.3 | 1872.9 | 1893.3 | 1940.4 | 2017.1 |
| 22.5° | 2167.8 | 2108.3 | 2025.7 | 1971.5 | 1881.0 | 1859.6 | 1846.9 | 1842.6 | 1846.9 | 1859.6 | 1881.0 |
| 25.5° | 2108.0 | 2026.7 | 1932.1 | 1853.3 | 1865.1 | 1820.4 | 1796.8 | 1788.9 | 1796.8 | 1820.4 | 1865.1 |
| 29° | 1997.4 | 1870.4 | 1767.9 | 1804.5 | 1813.8 | 1755.0 | 1727.0 | 1719.5 | 1727.0 | 1755.0 | 1813.8 |
| 33° | 1845.6 | 1714.6 | 1676.8 | 1710.4 | 1694.1 | 1663.0 | 1649.9 | 1644.3 | 1649.9 | 1663.0 | 1694.1 |
| 37.5° | 1711.0 | 1614.1 | 1579.8 | 1565.8 | 1572.8 | 1578.4 | 1574.0 | 1573.0 | 1574.0 | 1578.4 | 1572.8 |
| 42.5° | 1623.9 | 1543.9 | 1468.0 | 1446.1 | 1473.2 | 1498.7 | 1506.8 | 1507.5 | 1506.8 | 1498.7 | 1473.2 |
| 47.5° | 1571.1 | 1492.8 | 1351.1 | 1356.7 | 1341.7 | 1236.5 | 1163.9 | 1153.8 | 1163.9 | 1236.5 | 1341.7 |
| 55° | 1387.6 | 1421.2 | 1184.7 | 986.3 | 651.4 | 396.2 | 240.7 | 183.7 | 240.7 | 396.2 | 651.4 |
| 65° | 485.5 | 384.5 | 191.2 | 145.2 | 180.7 | 151.1 | 134.6 | 133.8 | 134.6 | 151.1 | 180.7 |
| 75° | 66.0 | 40.3 | 44.1 | 33.7 | 41.4 | 28.5 | 15.7 | 10.7 | 15.7 | 28.5 | 41.4 |
| 85° | 14.6 | 13.4 | 13.1 | 11.9 | 11.8 | 12.7 | 10.7 | 1.0 | 10.7 | 12.7 | 11.8 |
| 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):

| | 220° | 230° | 240° | 250° | 260° | 270° | 280° | 290° | 300° | 310° | 320° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 | 2305.7 |
| 1° | 2307.4 | 2307.3 | 2307.1 | 2307.0 | 2306.9 | 2306.7 | 2307.4 | 2308.0 | 2308.5 | 2309.0 | 2309.3 |
| 3° | 2361.5 | 2349.0 | 2334.2 | 2317.5 | 2314.5 | 2311.6 | 2313.0 | 2314.2 | 2314.9 | 2315.2 | 2315.2 |
| 5° | 2412.2 | 2400.7 | 2380.6 | 2353.6 | 2327.3 | 2317.4 | 2317.3 | 2318.1 | 2319.2 | 2319.6 | 2318.7 |
| 7° | 2427.2 | 2428.5 | 2413.1 | 2387.2 | 2351.8 | 2327.2 | 2320.9 | 2319.3 | 2319.0 | 2318.7 | 2319.6 |
| 9° | 2377.5 | 2409.8 | 2425.4 | 2413.5 | 2380.4 | 2344.8 | 2328.0 | 2321.1 | 2318.3 | 2319.2 | 2324.1 |
| 11° | 2284.2 | 2338.5 | 2387.6 | 2406.3 | 2394.8 | 2364.3 | 2336.6 | 2323.7 | 2317.6 | 2318.5 | 2329.1 |
| 13° | 2199.6 | 2249.2 | 2306.5 | 2374.3 | 2391.6 | 2378.0 | 2339.8 | 2319.4 | 2311.4 | 2318.4 | 2337.2 |
| 15° | 2141.3 | 2185.0 | 2234.0 | 2315.4 | 2371.2 | 2383.9 | 2332.6 | 2306.2 | 2302.3 | 2321.7 | 2356.6 |
| 17° | 2098.8 | 2142.3 | 2184.2 | 2247.8 | 2320.9 | 2363.4 | 2325.5 | 2293.4 | 2295.1 | 2332.5 | 2393.0 |
| 19.5° | 2048.5 | 2098.3 | 2146.2 | 2200.1 | 2271.3 | 2380.0 | 2333.2 | 2284.2 | 2297.3 | 2366.6 | 2447.8 |
| 22.5° | 1971.5 | 2025.7 | 2108.3 | 2167.8 | 2216.5 | 2300.8 | 2327.2 | 2276.0 | 2307.5 | 2416.0 | 2508.3 |
| 25.5° | 1853.3 | 1932.1 | 2026.7 | 2108.0 | 2153.6 | 2234.4 | 2284.1 | 2236.1 | 2318.0 | 2466.8 | 2624.7 |
| 29° | 1804.5 | 1767.9 | 1870.4 | 1997.4 | 2096.9 | 2188.5 | 2213.2 | 2198.4 | 2309.4 | 2524.2 | 2782.9 |
| 33° | 1710.4 | 1676.8 | 1714.6 | 1845.6 | 1941.4 | 2026.3 | 2091.3 | 2210.8 | 2318.1 | 2587.6 | 2970.1 |
| 37.5° | 1565.8 | 1579.8 | 1614.1 | 1711.0 | 1820.5 | 1921.8 | 2053.5 | 2208.3 | 2364.8 | 2725.2 | 2960.5 |
| 42.5° | 1446.1 | 1468.0 | 1543.9 | 1623.9 | 1768.2 | 1912.0 | 1998.5 | 2232.2 | 2472.7 | 2644.5 | 2198.9 |
| 47.5° | 1356.7 | 1351.1 | 1492.8 | 1571.1 | 1730.5 | 1788.9 | 1832.1 | 2249.8 | 2559.5 | 1990.6 | 1441.6 |
| 55° | 986.3 | 1184.7 | 1421.2 | 1387.6 | 1587.7 | 1715.6 | 1596.4 | 1841.7 | 1786.1 | 1081.9 | 1025.3 |
| 65° | 145.2 | 191.2 | 384.5 | 485.5 | 299.5 | 62.5 | 291.3 | 440.8 | 413.7 | 264.1 | 122.2 |
| 75° | 33.7 | 44.1 | 40.3 | 66.0 | 55.7 | 53.7 | 32.8 | 31.0 | 25.1 | 17.4 | 19.7 |
| 85° | 11.9 | 13.1 | 13.4 | 14.6 | 15.0 | 15.6 | 13.4 | 13.7 | 12.9 | 11.7 | 11.5 |
| 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):

| | 330° | 340° | 350° | 360° |
|-------|--------|--------|--------|--------|
| 0° | 2305.7 | 2305.7 | 2305.7 | 2305.7 |
| 1° | 2309.6 | 2309.7 | 2309.7 | 2309.6 |
| 3° | 2314.9 | 2314.2 | 2313.9 | 2313.5 |
| 5° | 2317.3 | 2316.2 | 2315.2 | 2313.5 |
| 7° | 2321.5 | 2323.2 | 2325.5 | 2325.3 |
| 9° | 2331.3 | 2336.4 | 2339.9 | 2340.9 |
| 11° | 2343.4 | 2356.2 | 2363.3 | 2363.4 |
| 13° | 2362.7 | 2393.3 | 2409.8 | 2414.2 |
| 15° | 2403.4 | 2451.8 | 2477.6 | 2485.5 |
| 17° | 2460.5 | 2511.1 | 2539.6 | 2548.0 |
| 19.5° | 2516.6 | 2600.6 | 2652.3 | 2670.1 |
| 22.5° | 2634.5 | 2750.0 | 2826.3 | 2856.7 |
| 25.5° | 2796.6 | 2938.7 | 3039.1 | 3086.3 |
| 29° | 3027.8 | 3148.6 | 3228.5 | 3266.1 |
| 33° | 3194.8 | 3103.4 | 3038.8 | 3021.9 |
| 37.5° | 2738.3 | 2300.5 | 1967.2 | 1839.7 |
| 42.5° | 1708.1 | 1586.8 | 1485.7 | 1464.5 |
| 47.5° | 1342.3 | 1343.2 | 1344.7 | 1338.5 |
| 55° | 734.7 | 512.4 | 296.8 | 147.5 |
| 65° | 92.7 | 115.1 | 55.5 | 61.6 |
| 75° | 16.0 | 17.9 | 10.0 | 7.8 |
| 85° | 10.7 | 10.7 | 7.8 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)