

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: INVUE

Report Number: P596287

Luminaire Tested: **MSA-SA2D-722-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596287
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-722-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7233 lumens
Efficiency: N/A
Efficacy: 56.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

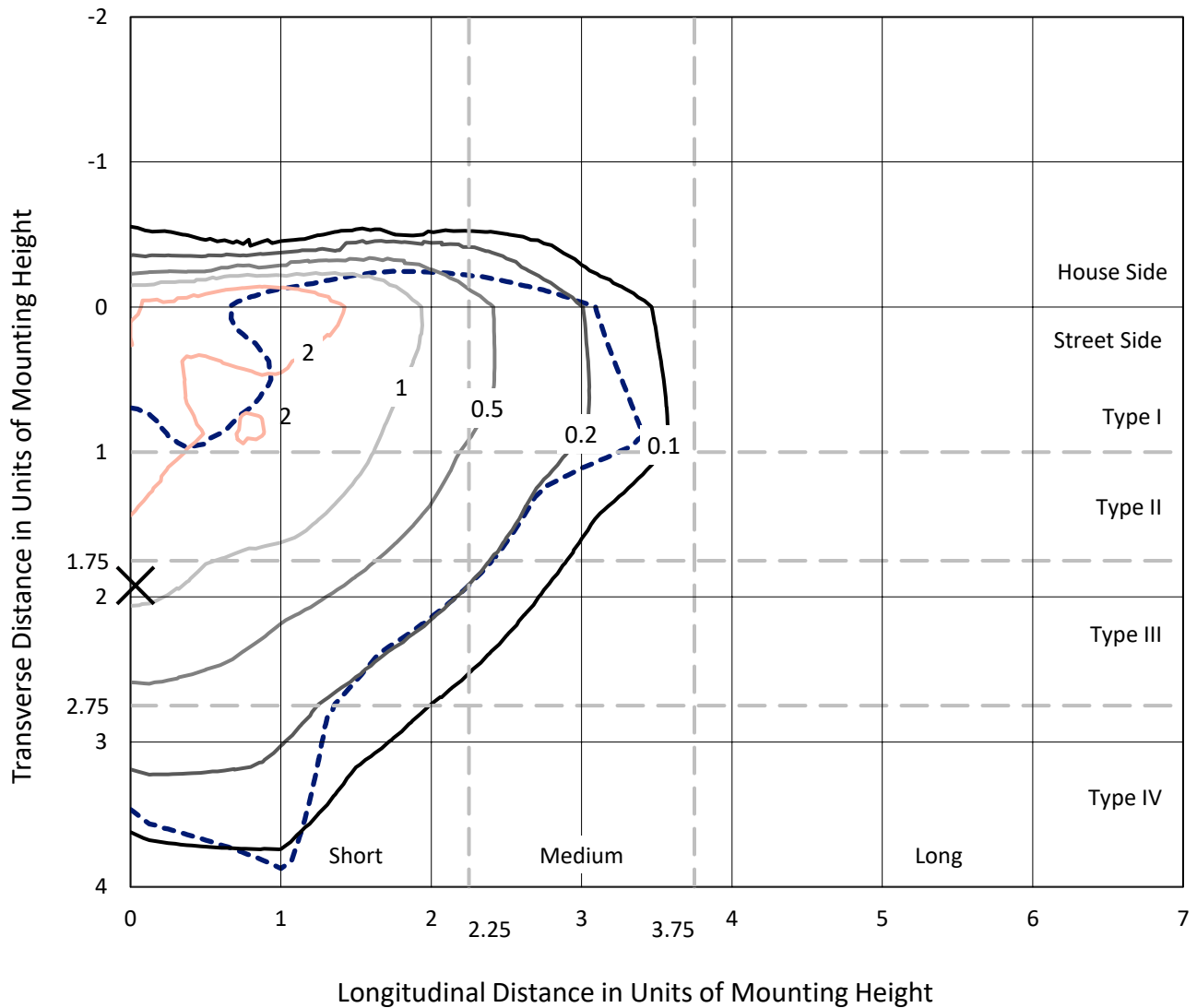
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596287
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Iso-Footcandle Lines of Horizontal Illumination

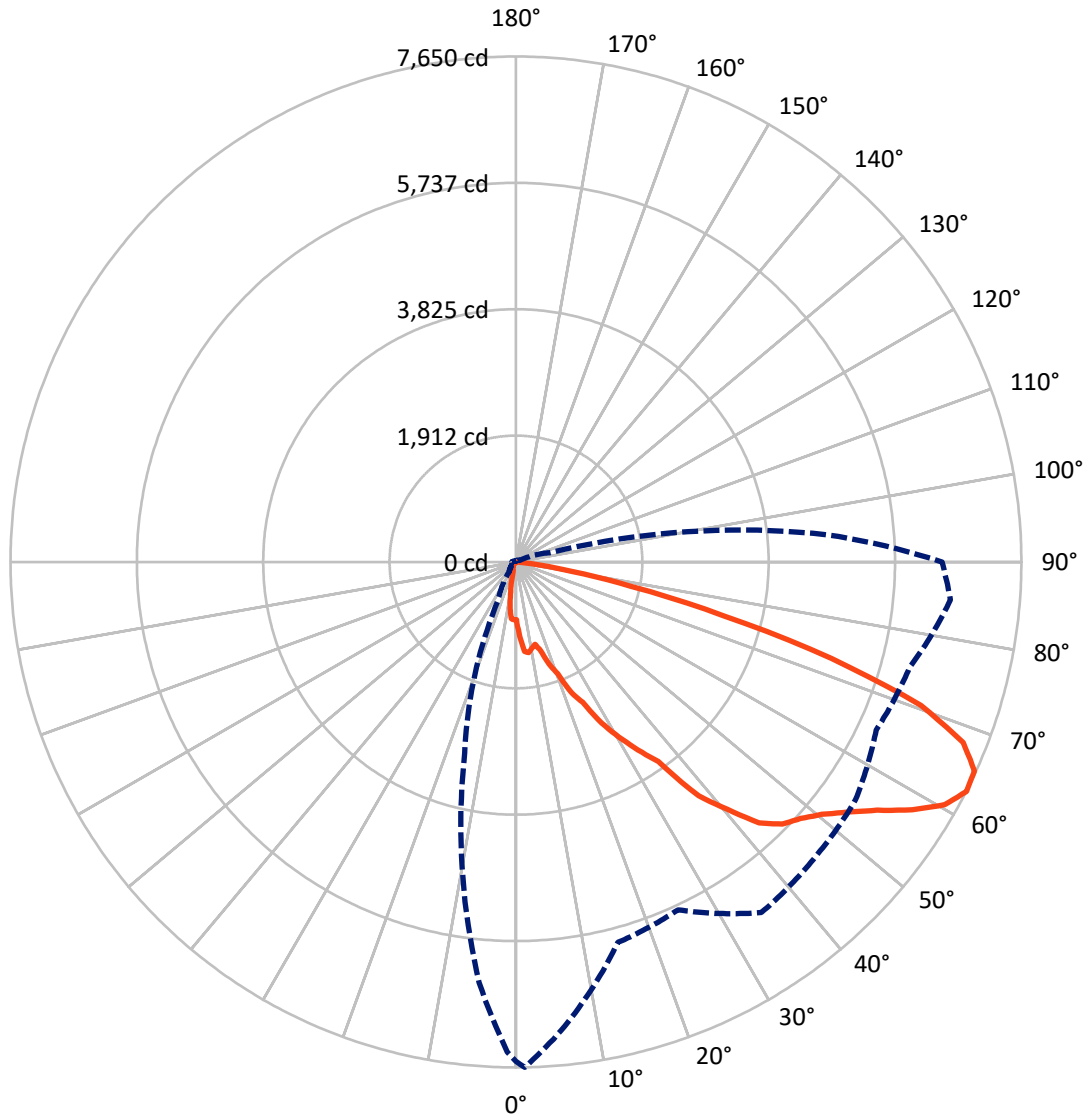
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 827.1 | 0.0 | 827.1 |
| | % Fixture | 11.4 | 0.0 | 11.4 |
| Street Side | Lumens | 6405.9 | 0.0 | 6405.9 |
| | % Fixture | 88.6 | 0.0 | 88.6 |
| Total | Lumens | 7233.0 | 0.0 | 7233.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.4 | 1.3 |
| 10°-20° | 254.3 | 3.5 |
| 20°-30° | 411.0 | 5.7 |
| 30°-40° | 688.5 | 9.5 |
| 40°-50° | 1125.8 | 15.6 |
| 50°-60° | 1666.6 | 23.0 |
| 60°-70° | 1913.3 | 26.5 |
| 70°-80° | 946.1 | 13.1 |
| 80°-90° | 129.9 | 1.8 |
| 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° | 7233.0 | 100.0 |
| 0°-180° | 7233.0 | 100.0 |

Coefficient of Utilization

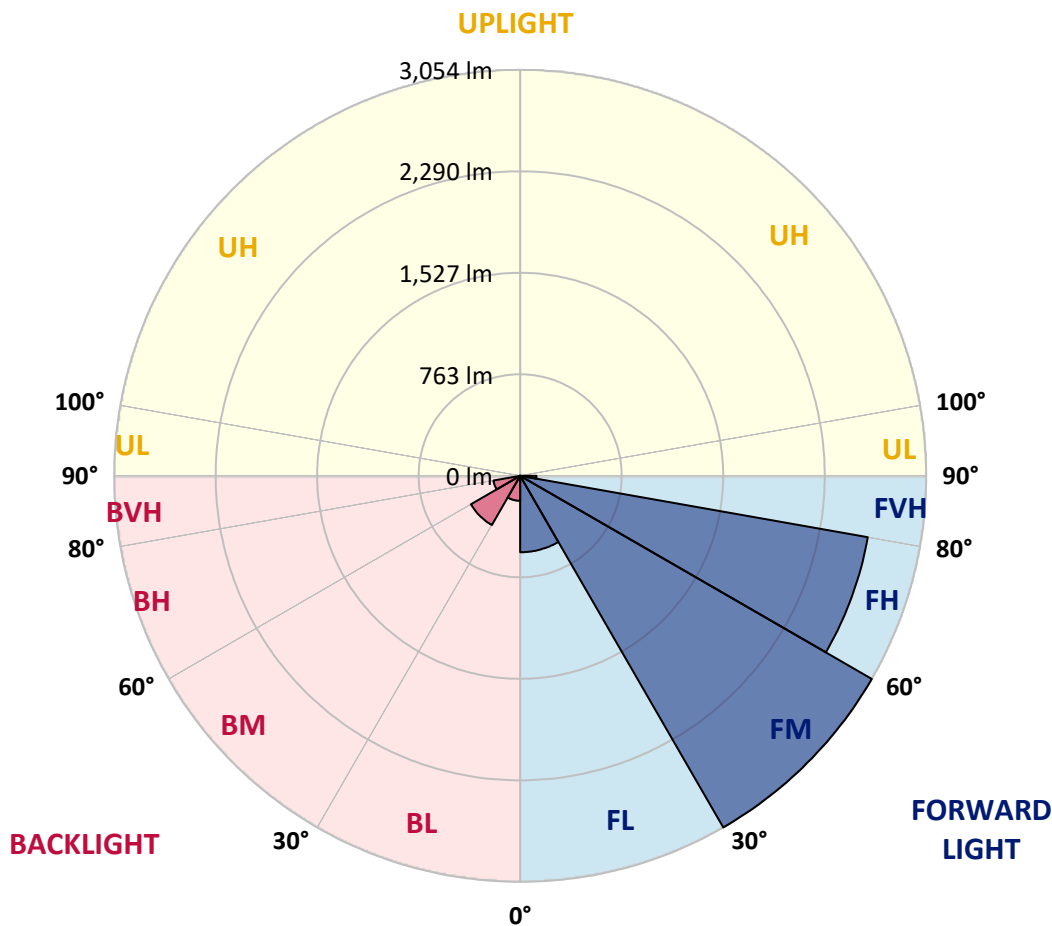


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 574.5 | 7.9 | | | |
| FM (30°-60°) | 3053.7 | 42.2 | | | |
| FH (60°-80°) | 2655.0 | 36.7 | | | G2/5000 |
| FVH (80°-90°) | 122.7 | 1.7 | | | G2/225 |
| BL (0°-30°) | 188.2 | 2.6 | B1/500 | | |
| BM (30°-60°) | 427.2 | 5.9 | B1/1000 | | |
| BH (60°-80°) | 204.5 | 2.8 | B1/500 | | G1/500 |
| BVH (80°-90°) | 7.2 | 0.1 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2
 Type IV Short





REPORT NUMBER: P596287

CATALOG NUMBER: MSA-SA2D-722-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 |
| 2.5° | 1123.6 | 1128.9 | 1103.8 | 1100.5 | 1042.0 | 1114.9 | 1117.0 | 1125.6 | 1072.1 | 968.2 | 1113.3 |
| 5° | 1344.5 | 1359.3 | 1340.0 | 1426.1 | 1450.8 | 1504.0 | 1406.3 | 1493.7 | 1456.6 | 1466.9 | 1487.9 |
| 7.5° | 1370.9 | 1386.1 | 1426.9 | 1571.2 | 1704.3 | 1670.9 | 1660.2 | 1693.2 | 1690.3 | 1614.1 | 1652.0 |
| 10° | 1316.1 | 1328.8 | 1396.8 | 1659.4 | 1717.5 | 1867.5 | 1904.2 | 1828.4 | 1797.5 | 1630.6 | 1557.6 |
| 12.5° | 1256.3 | 1277.7 | 1364.3 | 1679.2 | 1853.5 | 2005.2 | 2126.0 | 2018.0 | 1915.4 | 1737.7 | 1670.9 |
| 15° | 1370.9 | 1382.8 | 1518.9 | 1720.4 | 1872.9 | 1977.6 | 2076.5 | 2040.7 | 2025.0 | 1897.2 | 1670.9 |
| 17.5° | 1595.5 | 1623.5 | 1722.1 | 1821.4 | 1941.7 | 2004.8 | 1981.3 | 1970.2 | 1930.2 | 2130.9 | 1896.8 |
| 20° | 1755.4 | 1807.8 | 1936.8 | 1979.7 | 1884.0 | 1943.0 | 1928.6 | 1918.7 | 1887.3 | 2260.8 | 2156.5 |
| 22.5° | 2101.7 | 2149.9 | 2152.4 | 2167.6 | 1945.0 | 1851.1 | 1827.2 | 1830.0 | 1972.2 | 2299.5 | 2479.6 |
| 25° | 2337.4 | 2353.9 | 2484.2 | 2375.3 | 2111.6 | 1879.1 | 1788.0 | 1828.8 | 2033.7 | 2578.1 | 2783.4 |
| 27.5° | 2723.2 | 2762.4 | 2843.6 | 2475.1 | 2211.3 | 1861.4 | 1716.3 | 1864.7 | 2195.2 | 2670.5 | 3121.0 |
| 30° | 3037.7 | 3075.2 | 3205.9 | 2611.5 | 2297.9 | 1949.2 | 1747.2 | 1936.8 | 2295.8 | 2860.5 | 3424.3 |
| 32.5° | 3292.8 | 3389.7 | 3538.1 | 2822.1 | 2294.6 | 2050.1 | 1905.1 | 1912.9 | 2419.4 | 3106.5 | 3724.4 |
| 35° | 3618.9 | 3709.1 | 3813.4 | 2967.2 | 2444.6 | 2082.7 | 1951.6 | 2147.8 | 2603.3 | 3363.7 | 4128.3 |
| 37.5° | 4353.8 | 4490.2 | 4284.1 | 3332.8 | 2619.4 | 2377.0 | 2135.5 | 2292.5 | 2795.8 | 3626.3 | 4683.5 |
| 40° | 4802.2 | 4917.2 | 4718.1 | 3519.5 | 2921.9 | 2525.4 | 2463.5 | 2543.9 | 2984.1 | 3761.9 | 5101.9 |
| 42.5° | 5244.1 | 5395.7 | 5063.1 | 3800.6 | 3209.2 | 2944.1 | 2775.2 | 2839.9 | 3256.6 | 4089.2 | 5572.6 |
| 45° | 5563.9 | 5657.9 | 5137.7 | 3947.8 | 3604.0 | 3421.4 | 3308.9 | 3212.5 | 3636.6 | 4299.4 | 5876.3 |
| 47.5° | 5724.7 | 5799.7 | 5284.9 | 3994.4 | 3839.0 | 3926.3 | 4172.8 | 3971.3 | 3972.9 | 4451.5 | 6040.0 |
| 50° | 5947.2 | 5999.6 | 5367.3 | 4050.0 | 4094.1 | 4713.2 | 4837.7 | 4408.6 | 4357.1 | 4604.0 | 6066.8 |
| 52.5° | 6260.1 | 6285.6 | 5527.2 | 4196.7 | 4476.2 | 5329.4 | 5374.3 | 5200.8 | 4741.6 | 4887.5 | 6126.1 |
| 55° | 6675.9 | 6631.0 | 5812.9 | 4505.0 | 4874.8 | 5780.7 | 5840.9 | 5689.6 | 5225.1 | 5170.7 | 6309.9 |
| 57.5° | 7124.4 | 7072.9 | 6236.2 | 4939.5 | 5307.1 | 6125.7 | 6161.6 | 6173.5 | 5546.2 | 5421.3 | 6622.4 |
| 60° | 7445.9 | 7455.4 | 6769.1 | 5437.8 | 5575.9 | 6455.8 | 6384.1 | 6275.3 | 5870.1 | 5788.5 | 6774.5 |
| 62.5° | 7558.4 | 7649.5 | 7184.2 | 5960.0 | 5807.5 | 6476.5 | 6365.2 | 6273.3 | 6015.2 | 6167.3 | 6600.1 |
| 65° | 7466.5 | 7625.6 | 7280.6 | 6418.7 | 5947.6 | 6218.0 | 6102.2 | 6043.3 | 6010.7 | 6321.9 | 6214.3 |
| 67.5° | 7101.3 | 7300.4 | 7004.4 | 6422.9 | 5438.2 | 5294.3 | 5431.2 | 5617.9 | 5509.9 | 6193.7 | 5674.0 |
| 70° | 6283.1 | 6501.2 | 6363.5 | 6046.1 | 4530.2 | 4165.4 | 4316.3 | 4598.6 | 4522.3 | 5508.7 | 4878.9 |
| 72.5° | 4714.0 | 4994.3 | 5021.5 | 5219.7 | 3596.2 | 3135.0 | 3156.8 | 3149.0 | 3280.5 | 4442.0 | 3807.2 |
| 75° | 3028.2 | 3246.3 | 3541.0 | 4212.0 | 2731.9 | 2288.8 | 2079.4 | 2028.3 | 2273.5 | 3470.9 | 2725.7 |
| 77.5° | 1757.9 | 1783.9 | 1919.9 | 3177.8 | 1956.6 | 1649.1 | 1506.5 | 1579.4 | 1665.2 | 2422.3 | 1806.5 |
| 80° | 840.8 | 854.0 | 910.1 | 1635.1 | 1359.3 | 1427.4 | 1317.3 | 1399.3 | 1143.4 | 1392.3 | 1025.1 |
| 82.5° | 266.7 | 269.6 | 279.0 | 803.3 | 844.1 | 945.5 | 605.9 | 812.4 | 706.9 | 841.7 | 682.6 |
| 85° | 44.5 | 75.8 | 93.6 | 232.1 | 476.5 | 319.0 | 131.5 | 289.8 | 394.4 | 530.9 | 310.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 4.1 | 38.7 | 18.1 | 2.9 | 16.5 | 60.6 | 118.3 | 14.0 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 0° | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 |
| 2.5° | 1155.3 | 1183.8 | 1076.6 | 980.6 | 1004.9 | 985.5 | 956.2 | 906.4 | 791.0 | 875.9 | 870.1 |
| 5° | 1486.7 | 1433.9 | 1288.9 | 1221.3 | 1138.8 | 1013.1 | 997.9 | 901.4 | 859.0 | 866.0 | 859.8 |
| 7.5° | 1602.1 | 1507.7 | 1379.5 | 1175.9 | 982.6 | 801.3 | 745.6 | 682.6 | 669.8 | 697.0 | 714.7 |
| 10° | 1511.4 | 1411.3 | 1299.2 | 1046.1 | 897.3 | 766.2 | 629.0 | 540.8 | 493.0 | 487.2 | 492.1 |
| 12.5° | 1553.1 | 1445.1 | 1214.3 | 1020.5 | 865.1 | 746.4 | 593.1 | 460.0 | 356.1 | 363.9 | 343.3 |
| 15° | 1581.9 | 1457.9 | 1194.1 | 967.0 | 798.8 | 640.1 | 455.4 | 322.3 | 237.4 | 212.7 | 197.8 |
| 17.5° | 1751.3 | 1574.1 | 1168.5 | 905.1 | 706.0 | 498.3 | 286.0 | 186.7 | 159.1 | 150.4 | 143.4 |
| 20° | 1968.9 | 1717.1 | 1168.1 | 840.0 | 569.2 | 311.6 | 178.5 | 135.2 | 128.6 | 133.5 | 128.2 |
| 22.5° | 2222.0 | 1907.5 | 1230.3 | 758.8 | 408.5 | 196.6 | 138.9 | 119.9 | 113.3 | 117.5 | 117.9 |
| 25° | 2476.7 | 2193.2 | 1281.0 | 681.7 | 284.4 | 150.9 | 123.7 | 110.5 | 103.0 | 106.8 | 104.7 |
| 27.5° | 2936.7 | 2429.8 | 1269.5 | 583.2 | 209.4 | 132.7 | 115.0 | 103.5 | 92.3 | 98.1 | 97.7 |
| 30° | 3237.6 | 2847.3 | 1314.4 | 445.1 | 166.1 | 116.2 | 107.2 | 94.4 | 82.4 | 89.0 | 88.6 |
| 32.5° | 3597.4 | 3026.6 | 1363.1 | 341.7 | 138.1 | 110.0 | 96.4 | 84.1 | 77.1 | 81.2 | 80.4 |
| 35° | 4001.8 | 3381.0 | 1273.6 | 284.4 | 119.9 | 99.3 | 85.3 | 75.8 | 69.7 | 71.7 | 71.7 |
| 37.5° | 4716.1 | 3677.4 | 1220.0 | 231.6 | 111.7 | 89.9 | 80.0 | 68.4 | 64.7 | 64.7 | 66.8 |
| 40° | 5121.6 | 4130.0 | 1060.1 | 183.4 | 114.2 | 82.8 | 74.6 | 62.7 | 57.7 | 57.3 | 59.4 |
| 42.5° | 5649.2 | 4390.9 | 959.9 | 148.4 | 103.5 | 80.8 | 68.4 | 56.9 | 51.1 | 50.7 | 52.8 |
| 45° | 5962.1 | 4536.8 | 819.0 | 116.6 | 92.7 | 94.0 | 63.5 | 52.3 | 43.7 | 42.0 | 45.8 |
| 47.5° | 6159.5 | 4730.1 | 739.0 | 92.7 | 80.8 | 93.6 | 61.8 | 45.3 | 36.7 | 34.6 | 37.9 |
| 50° | 6259.7 | 4825.7 | 723.4 | 79.5 | 70.1 | 83.7 | 70.9 | 37.9 | 31.3 | 28.4 | 31.3 |
| 52.5° | 6363.9 | 4981.1 | 729.1 | 73.4 | 61.8 | 67.2 | 67.2 | 32.6 | 27.6 | 24.3 | 26.4 |
| 55° | 6574.5 | 5210.7 | 716.4 | 69.7 | 56.9 | 51.1 | 43.3 | 28.9 | 25.1 | 21.4 | 23.5 |
| 57.5° | 6833.4 | 5375.5 | 716.4 | 66.4 | 52.8 | 43.7 | 34.6 | 26.8 | 23.1 | 18.5 | 20.2 |
| 60° | 6784.3 | 5202.0 | 680.9 | 63.1 | 49.5 | 40.8 | 31.3 | 24.7 | 21.4 | 16.9 | 18.1 |
| 62.5° | 6447.6 | 4730.1 | 551.5 | 58.1 | 46.6 | 38.7 | 28.4 | 23.5 | 20.2 | 14.8 | 16.1 |
| 65° | 6051.9 | 4228.9 | 383.3 | 52.8 | 43.3 | 35.0 | 25.6 | 22.3 | 18.5 | 13.2 | 14.0 |
| 67.5° | 5575.4 | 3631.6 | 212.7 | 47.4 | 40.0 | 30.5 | 23.5 | 21.8 | 17.7 | 12.0 | 12.8 |
| 70° | 4748.6 | 2741.8 | 114.2 | 43.3 | 37.5 | 28.0 | 22.3 | 21.8 | 17.7 | 11.5 | 12.0 |
| 72.5° | 3564.9 | 1726.6 | 66.8 | 39.6 | 34.2 | 26.0 | 21.0 | 22.3 | 17.3 | 11.1 | 11.1 |
| 75° | 2425.6 | 1048.2 | 47.8 | 33.8 | 30.5 | 21.8 | 20.2 | 21.4 | 17.7 | 11.1 | 10.3 |
| 77.5° | 1649.1 | 736.6 | 39.2 | 30.5 | 27.6 | 19.4 | 20.6 | 21.4 | 17.7 | 9.1 | 7.0 |
| 80° | 1029.6 | 380.0 | 29.7 | 24.3 | 23.9 | 16.9 | 20.6 | 18.5 | 11.5 | 2.1 | 0.0 |
| 82.5° | 720.1 | 141.4 | 17.3 | 18.5 | 18.5 | 12.0 | 16.1 | 13.2 | 6.6 | 0.0 | 0.0 |
| 85° | 302.1 | 24.3 | 9.5 | 13.2 | 11.5 | 7.0 | 12.8 | 9.9 | 4.1 | 0.0 | 0.0 |
| 87.5° | 5.4 | 0.0 | 3.7 | 7.8 | 8.2 | 4.1 | 6.6 | 4.1 | 0.0 | 0.0 | 0.0 |
| 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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 CATALOG NUMBER: MSA-SA2D-722-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 | 871.3 |
| 2.5° | 897.3 | 858.1 | 775.7 | 815.3 | 811.2 | 829.3 | 830.9 | 788.9 | 879.6 | 935.6 | 943.9 |
| 5° | 860.6 | 834.2 | 829.7 | 807.0 | 801.3 | 834.6 | 816.5 | 815.3 | 859.0 | 922.9 | 923.3 |
| 7.5° | 715.1 | 694.9 | 704.4 | 678.0 | 610.0 | 614.1 | 620.3 | 646.3 | 683.8 | 725.8 | 741.1 |
| 10° | 490.9 | 543.2 | 504.9 | 501.6 | 494.6 | 472.8 | 455.4 | 469.1 | 517.7 | 556.4 | 570.9 |
| 12.5° | 350.3 | 358.6 | 382.1 | 373.4 | 385.4 | 366.8 | 359.8 | 402.3 | 449.7 | 489.2 | 517.7 |
| 15° | 204.8 | 218.9 | 232.9 | 262.6 | 274.5 | 270.8 | 292.2 | 327.7 | 366.0 | 384.1 | 419.2 |
| 17.5° | 144.3 | 145.5 | 148.4 | 180.5 | 201.6 | 209.8 | 222.6 | 249.4 | 265.0 | 273.3 | 287.7 |
| 20° | 126.1 | 122.4 | 117.5 | 135.6 | 155.4 | 165.7 | 162.0 | 183.0 | 195.8 | 204.0 | 214.3 |
| 22.5° | 114.2 | 108.0 | 105.1 | 111.3 | 126.5 | 135.6 | 137.3 | 149.6 | 169.0 | 174.8 | 178.1 |
| 25° | 103.0 | 98.9 | 96.9 | 100.2 | 108.4 | 117.1 | 118.7 | 134.8 | 152.1 | 154.6 | 161.2 |
| 27.5° | 95.6 | 87.8 | 88.6 | 91.1 | 94.8 | 105.5 | 108.8 | 117.9 | 143.0 | 145.9 | 148.0 |
| 30° | 87.8 | 79.5 | 82.0 | 84.5 | 82.8 | 96.0 | 101.0 | 111.3 | 135.6 | 140.1 | 142.6 |
| 32.5° | 80.0 | 73.8 | 73.4 | 75.8 | 78.7 | 85.7 | 96.4 | 108.4 | 130.7 | 136.8 | 143.0 |
| 35° | 71.3 | 66.4 | 67.2 | 67.6 | 71.3 | 80.4 | 88.2 | 94.4 | 109.6 | 112.9 | 115.0 |
| 37.5° | 65.1 | 61.0 | 60.2 | 64.3 | 68.0 | 75.0 | 77.9 | 80.8 | 101.0 | 108.4 | 108.8 |
| 40° | 57.7 | 55.2 | 55.2 | 58.1 | 66.4 | 65.5 | 69.2 | 78.3 | 97.7 | 105.5 | 106.3 |
| 42.5° | 52.3 | 49.0 | 49.9 | 52.8 | 58.5 | 54.4 | 61.8 | 75.0 | 96.4 | 104.3 | 103.9 |
| 45° | 44.1 | 43.3 | 44.9 | 47.4 | 49.9 | 46.2 | 57.7 | 71.7 | 92.3 | 102.6 | 99.7 |
| 47.5° | 36.7 | 36.7 | 38.7 | 41.2 | 40.0 | 41.2 | 52.3 | 67.2 | 89.9 | 99.3 | 97.3 |
| 50° | 30.1 | 30.5 | 32.6 | 36.7 | 33.0 | 36.3 | 47.0 | 62.7 | 85.7 | 96.0 | 94.4 |
| 52.5° | 25.6 | 26.0 | 27.2 | 30.1 | 28.4 | 33.0 | 43.3 | 58.1 | 81.6 | 90.3 | 89.4 |
| 55° | 22.3 | 23.1 | 23.1 | 24.7 | 25.6 | 30.9 | 39.2 | 53.6 | 75.4 | 84.9 | 83.3 |
| 57.5° | 19.8 | 20.6 | 20.2 | 21.4 | 22.3 | 27.2 | 35.0 | 48.6 | 69.2 | 77.1 | 74.6 |
| 60° | 17.7 | 18.5 | 18.1 | 19.8 | 19.4 | 23.5 | 30.5 | 43.3 | 62.7 | 68.8 | 66.8 |
| 62.5° | 15.7 | 16.5 | 16.5 | 17.3 | 17.7 | 19.8 | 26.4 | 38.3 | 56.1 | 61.0 | 59.4 |
| 65° | 14.0 | 14.8 | 15.3 | 14.8 | 15.7 | 16.9 | 22.3 | 34.6 | 48.6 | 53.6 | 51.1 |
| 67.5° | 12.8 | 13.6 | 14.4 | 12.8 | 13.6 | 14.0 | 19.0 | 30.9 | 42.9 | 47.0 | 44.9 |
| 70° | 12.4 | 12.8 | 12.8 | 11.1 | 10.7 | 11.1 | 16.5 | 26.4 | 37.5 | 41.6 | 38.7 |
| 72.5° | 11.5 | 12.0 | 11.5 | 9.1 | 7.8 | 8.7 | 14.0 | 22.3 | 31.7 | 35.0 | 32.6 |
| 75° | 10.7 | 11.1 | 10.7 | 7.4 | 4.9 | 6.2 | 11.5 | 19.4 | 27.2 | 28.9 | 27.6 |
| 77.5° | 9.1 | 9.9 | 9.9 | 5.4 | 1.6 | 3.7 | 8.7 | 15.7 | 22.7 | 22.7 | 23.1 |
| 80° | 0.8 | 2.5 | 4.1 | 2.9 | 0.0 | 0.4 | 2.9 | 8.2 | 14.4 | 14.0 | 15.3 |
| 82.5° | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.9 | 3.7 | 4.1 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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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| 25° | 160.7 | 170.6 | 199.9 | 281.9 | 497.5 | 812.4 | 1336.3 | 1985.8 | 2289.2 | 2337.4 |
| 27.5° | 140.6 | 155.4 | 177.2 | 232.5 | 426.6 | 800.8 | 1390.7 | 2313.9 | 2675.8 | 2723.2 |
| 30° | 134.4 | 152.5 | 173.5 | 211.9 | 377.1 | 756.3 | 1477.2 | 2609.9 | 2953.2 | 3037.7 |
| 32.5° | 145.1 | 151.3 | 161.6 | 194.1 | 338.8 | 709.3 | 1629.3 | 2963.5 | 3182.8 | 3292.8 |
| 35° | 115.0 | 126.1 | 144.3 | 178.1 | 322.7 | 706.9 | 1715.5 | 3191.0 | 3550.9 | 3618.9 |
| 37.5° | 112.5 | 122.8 | 146.3 | 173.5 | 342.1 | 725.8 | 1843.2 | 3657.2 | 4214.5 | 4353.8 |
| 40° | 109.2 | 122.4 | 144.7 | 171.5 | 342.1 | 744.4 | 1924.8 | 4030.2 | 4660.8 | 4802.2 |
| 42.5° | 108.0 | 124.9 | 144.3 | 180.1 | 331.4 | 754.7 | 2048.1 | 4402.4 | 5132.4 | 5244.1 |
| 45° | 107.2 | 127.4 | 145.5 | 190.4 | 328.9 | 788.5 | 2117.7 | 4583.3 | 5435.7 | 5563.9 |
| 47.5° | 105.1 | 127.4 | 162.4 | 184.2 | 315.3 | 785.2 | 2208.0 | 4851.7 | 5616.7 | 5724.7 |
| 50° | 103.5 | 128.2 | 183.8 | 172.7 | 317.4 | 765.0 | 2330.4 | 5103.5 | 5870.1 | 5947.2 |
| 52.5° | 99.7 | 131.1 | 180.5 | 156.6 | 311.2 | 762.9 | 2513.0 | 5461.7 | 6203.6 | 6260.1 |
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| 57.5° | 84.1 | 118.3 | 136.4 | 125.7 | 242.4 | 742.3 | 2963.5 | 6356.1 | 7078.2 | 7124.4 |
| 60° | 76.7 | 122.8 | 105.9 | 117.1 | 200.7 | 689.6 | 3064.5 | 6520.1 | 7378.3 | 7445.9 |
| 62.5° | 69.7 | 113.3 | 90.3 | 107.6 | 178.9 | 640.5 | 2994.4 | 6388.2 | 7416.6 | 7558.4 |
| 65° | 61.8 | 78.7 | 76.3 | 96.4 | 180.9 | 571.7 | 2760.3 | 6002.0 | 7271.1 | 7466.5 |
| 67.5° | 53.2 | 61.8 | 67.2 | 83.3 | 193.7 | 512.7 | 2358.9 | 5382.1 | 6880.0 | 7101.3 |
| 70° | 46.6 | 55.6 | 58.5 | 73.0 | 201.6 | 474.0 | 1861.4 | 4521.9 | 6078.7 | 6283.1 |
| 72.5° | 38.7 | 51.5 | 52.3 | 63.9 | 194.1 | 435.7 | 1326.4 | 3246.3 | 4615.9 | 4714.0 |
| 75° | 33.4 | 42.9 | 47.4 | 53.6 | 163.2 | 325.2 | 730.8 | 2009.3 | 2918.6 | 3028.2 |
| 77.5° | 30.1 | 32.6 | 35.9 | 37.1 | 69.2 | 169.4 | 251.4 | 1239.0 | 1634.3 | 1757.9 |
| 80° | 23.1 | 25.6 | 24.7 | 25.6 | 37.9 | 58.5 | 95.6 | 580.7 | 772.0 | 840.8 |
| 82.5° | 7.4 | 12.4 | 13.6 | 11.5 | 24.7 | 28.9 | 27.6 | 200.7 | 251.0 | 266.7 |
| 85° | 1.6 | 4.5 | 2.1 | 0.0 | 8.2 | 14.8 | 2.1 | 30.5 | 60.2 | 44.5 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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