

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: P565283

Luminaire Tested: **MSA-SA4C-727-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2108-334-1)
Test Lab: INNOVATIONS CENTER
Issue Date: 8/19/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-727-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18194 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

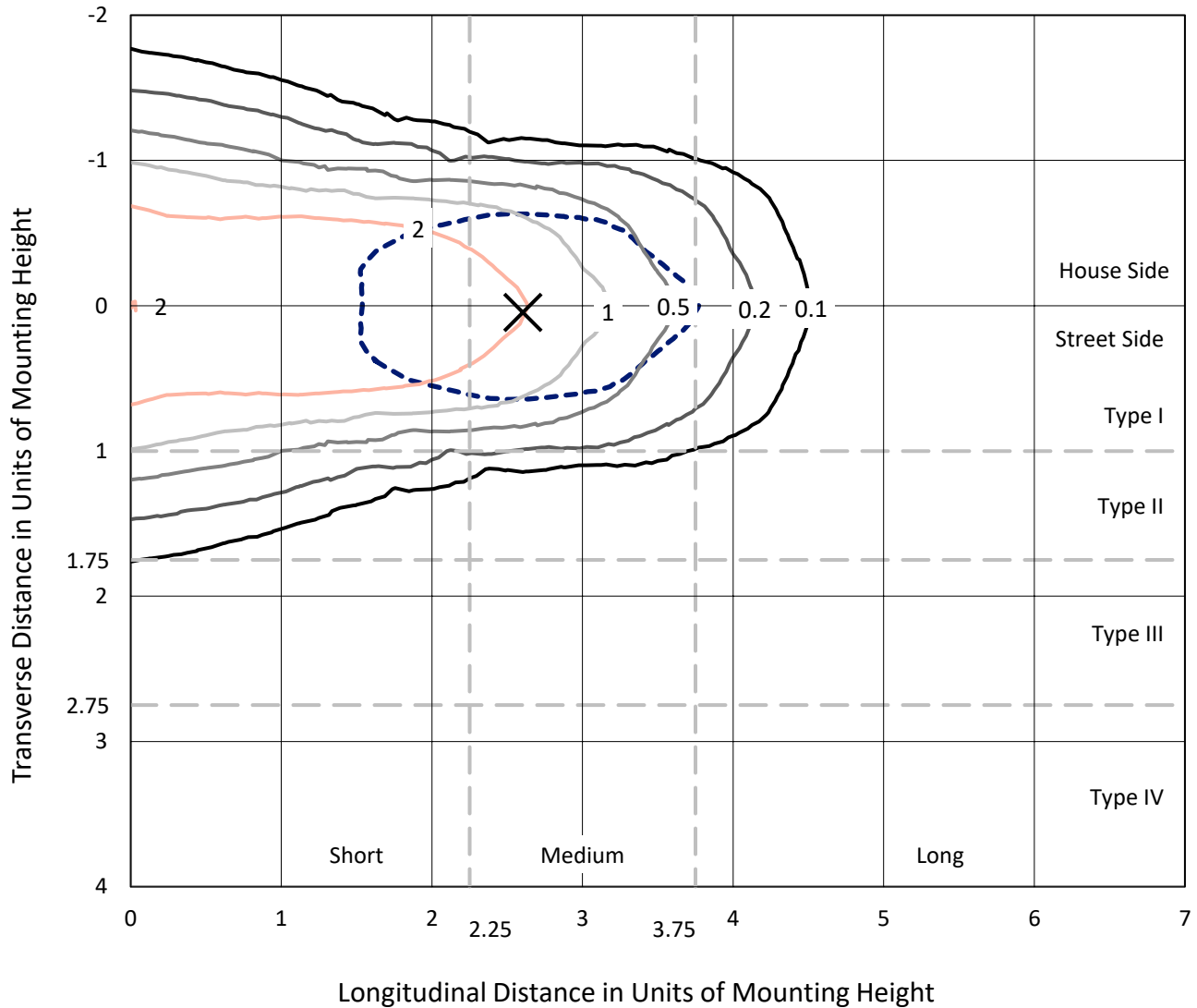
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

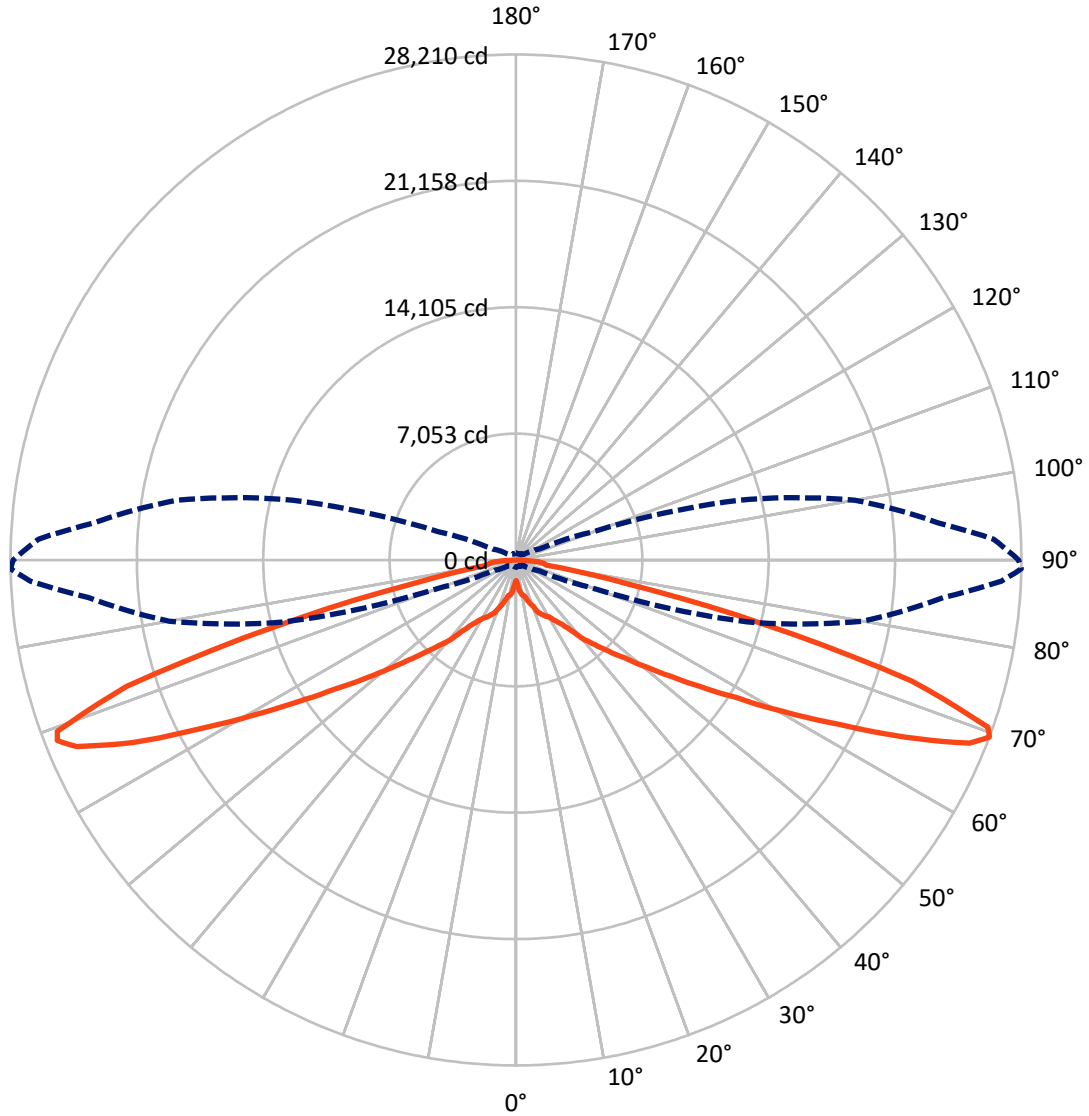
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type I - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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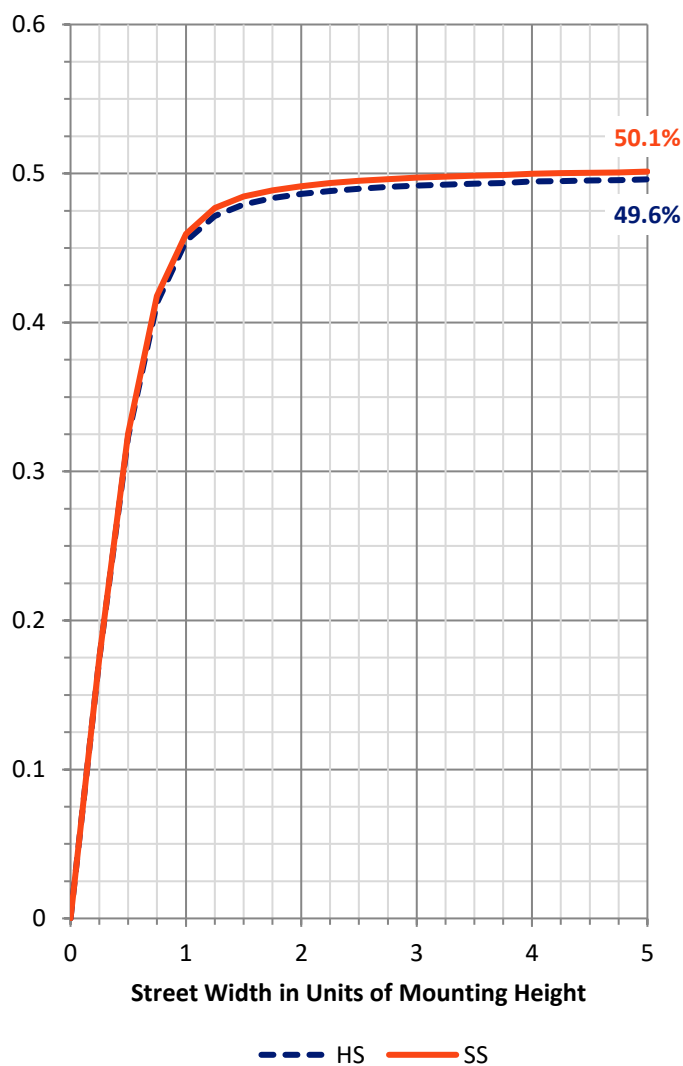
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9096.8	0.0	9096.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9097.2	0.0	9097.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	18194.0	0.0	18194.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.8	0.8
10°-20°	667.1	3.7
20°-30°	1331.0	7.3
30°-40°	2013.1	11.1
40°-50°	2922.1	16.1
50°-60°	3839.2	21.1
60°-70°	4683.2	25.7
70°-80°	2367.7	13.0
80°-90°	225.7	1.2
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°	18194.0	100.0
0°-180°	18194.0	100.0

Coefficient of Utilization

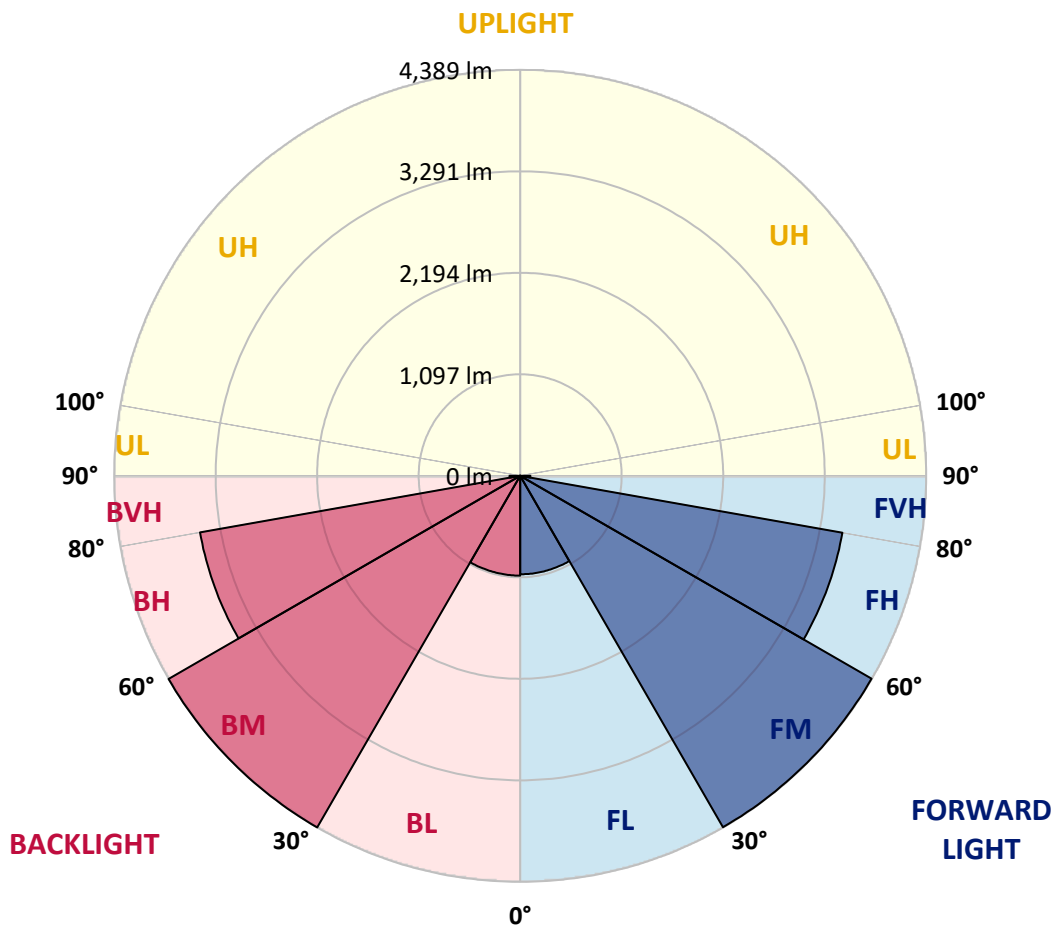


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1064.0	5.8			
FM (30°-60°)	4385.7	24.1			
FH (60°-80°)	3536.8	19.4			G2/5000
FVH (80°-90°)	110.7	0.6			G2/225
BL (0°-30°)	1079.0	5.9	B3/2500		
BM (30°-60°)	4388.7	24.1	B3/5000		
BH (60°-80°)	3514.2	19.3	B4/5000		G4/5000
BVH (80°-90°)	115.0	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4
2.5°	1352.4	1196.5	1182.9	1145.6	1172.7	1182.9	1159.2	1125.3	1162.6	1182.9	1145.6
5°	1704.9	1474.4	1396.4	1332.0	1203.2	1149.0	1203.2	1342.2	1359.2	1443.9	1420.2
7.5°	1877.7	1840.5	1742.2	1528.6	1321.9	1206.6	1352.4	1552.4	1654.0	1735.4	1820.1
10°	2006.5	1986.2	1813.3	1660.8	1576.1	1582.9	1586.3	1650.7	1738.8	1874.4	1921.8
12.5°	2037.0	2030.3	2057.4	2023.5	2030.3	2067.6	2030.3	2013.3	2064.2	2108.2	2060.8
15°	2233.6	2230.2	2240.4	2247.2	2382.8	2440.4	2382.8	2331.9	2294.6	2257.4	2335.3
17.5°	2369.2	2352.3	2355.7	2420.1	2572.6	2731.9	2701.4	2633.6	2548.9	2599.7	2664.1
20°	2443.8	2413.3	2433.6	2460.7	2718.3	2894.6	2914.9	2823.4	2772.6	2837.0	2891.2
22.5°	2515.0	2467.5	2396.3	2423.4	2660.7	2914.9	3013.2	2989.5	3026.8	3047.1	3036.9
25°	2430.2	2460.7	2382.8	2460.7	2701.4	2935.2	3131.8	3270.8	3274.2	3264.0	3338.6
27.5°	2379.4	2355.7	2223.5	2423.4	2623.4	2769.2	3270.8	3504.7	3575.9	3358.9	3504.7
30°	2291.3	2328.5	2148.9	2315.0	2569.2	2813.2	3430.1	3765.7	3660.6	3633.5	3667.4
32.5°	2237.0	2213.3	2128.6	2220.1	2413.3	2945.4	3531.8	3918.2	4050.4	3986.0	3979.2
35°	2148.9	2165.8	2033.7	2132.0	2403.1	2833.6	3599.6	4301.2	4504.6	4453.7	4413.0
37.5°	2162.5	2104.8	2009.9	2081.1	2338.7	2894.6	3769.1	4670.6	4992.6	5019.8	4833.3
40°	2060.8	2026.9	1884.5	2003.2	2216.7	2857.3	3809.7	5090.9	5636.6	5758.6	5490.9
42.5°	1915.0	1871.0	1789.6	1921.8	2145.5	2674.3	3867.3	5596.0	6290.8	6545.0	6301.0
45°	1704.9	1647.3	1606.6	1782.8	1989.6	2626.8	3806.3	6016.2	6917.8	7266.9	7260.2
47.5°	1450.7	1413.4	1393.1	1579.5	1860.8	2508.2	3680.9	6280.6	7355.1	8249.9	8114.3
50°	1162.6	1135.5	1132.1	1328.7	1643.9	2264.1	3538.6	6412.8	8019.4	9151.5	9270.1
52.5°	932.1	911.8	908.4	1067.7	1376.1	1935.4	3240.3	6514.5	8653.2	10175.1	10785.2
55°	728.7	708.4	711.8	844.0	1094.8	1582.9	2786.1	6399.3	9209.1	11222.4	12378.2
57.5°	596.5	576.2	579.6	654.2	837.2	1210.0	2220.1	6148.4	9459.9	12517.2	14235.6
60°	525.4	505.0	494.9	528.8	644.0	911.8	1650.7	5172.3	9500.6	13591.6	16252.3
62.5°	488.1	467.7	457.6	467.7	532.1	698.2	1189.7	4097.8	9266.7	14510.2	18099.6
65°	454.2	437.2	423.7	433.8	467.7	555.9	867.7	2806.5	8043.1	14930.5	19441.8
67.5°	416.9	403.3	389.8	403.3	427.1	467.7	674.5	1776.1	6029.8	14384.8	20001.0
69°	396.6	376.2	369.4	379.6	403.3	430.5	583.0	1416.8	4585.9	13347.6	19662.1
70°	376.2	362.7	352.5	369.4	389.8	410.1	525.4	1203.2	3596.2	12015.5	18821.5
72.5°	332.2	322.0	315.2	332.2	349.1	362.7	430.5	857.5	2084.5	8182.1	14927.1
75°	291.5	281.3	277.9	291.5	305.0	311.8	362.7	589.8	1230.4	4280.9	8954.9
77.5°	244.0	230.5	233.9	250.8	261.0	264.4	305.0	423.7	725.3	1938.8	4148.7
80°	179.6	179.6	193.2	206.8	206.8	206.8	244.0	308.4	440.6	891.4	1721.8
82.5°	125.4	128.8	132.2	152.5	155.9	142.4	186.4	223.7	274.5	389.8	596.5
85°	71.2	74.6	78.0	91.5	94.9	84.7	122.0	142.4	159.3	193.2	311.8
87.5°	27.1	30.5	40.7	47.5	50.8	37.3	57.6	67.8	67.8	81.3	139.0
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4
2.5°	1223.6	1247.3	1291.4	1301.5	1264.3	1223.6	1132.1	1189.7	1213.4	1169.4	1182.9
5°	1515.1	1565.9	1620.1	1555.8	1515.1	1488.0	1443.9	1447.3	1423.6	1345.6	1216.8
7.5°	1843.9	1786.2	1826.9	1871.0	1806.6	1810.0	1850.6	1765.9	1701.5	1569.3	1328.7
10°	1996.4	1996.4	2006.5	2006.5	1979.4	1979.4	1976.0	1840.5	1762.5	1704.9	1637.1
12.5°	2006.5	2003.2	2043.8	2013.3	2020.1	2026.9	2043.8	2104.8	2084.5	2009.9	2070.9
15°	2287.9	2274.3	2287.9	2284.5	2294.6	2325.2	2311.6	2298.0	2301.4	2355.7	2447.2
17.5°	2552.2	2559.0	2545.5	2569.2	2569.2	2589.5	2637.0	2589.5	2548.9	2650.5	2721.7
20°	2857.3	2833.6	2779.3	2820.0	2830.2	2833.6	2911.5	2853.9	2796.3	2833.6	2918.3
22.5°	3165.7	3162.3	3169.1	3172.5	3186.1	3135.2	3030.2	3013.2	3050.5	2999.6	3009.8
25°	3355.5	3358.9	3375.9	3379.3	3321.6	3375.9	3413.2	3301.3	3301.3	3291.1	3223.4
27.5°	3586.0	3535.2	3555.5	3582.6	3558.9	3572.5	3528.4	3365.7	3538.6	3562.3	3291.1
30°	3741.9	3718.2	3694.5	3721.6	3745.3	3806.3	3680.9	3664.0	3677.5	3802.9	3447.1
32.5°	4070.7	4104.6	4060.5	4016.5	4060.5	4047.0	3992.8	3969.0	4138.5	3972.4	3555.5
35°	4375.8	4389.3	4392.7	4385.9	4413.0	4365.6	4365.6	4453.7	4504.6	4324.9	3589.4
37.5°	5111.3	5063.8	4965.5	4918.1	5002.8	5074.0	4863.8	4968.9	4948.6	4643.5	3843.6
40°	5640.0	5748.5	5779.0	5765.4	5779.0	5575.6	5619.7	5697.6	5606.1	5101.1	3755.5
42.5°	6412.8	6480.6	6456.9	6426.4	6439.9	6402.6	6270.5	6558.6	6229.8	5612.9	3891.1
45°	7117.8	7270.3	7280.5	7175.4	7260.2	7128.0	7182.2	7283.9	6951.7	5995.9	3853.8
47.5°	7958.4	8273.6	8155.0	8155.0	8239.7	7955.0	8083.8	8219.4	7338.1	6253.5	3650.4
50°	9202.3	9371.8	9365.0	9334.5	9371.8	9219.3	9198.9	9182.0	7931.3	6497.5	3525.0
52.5°	10608.9	10839.4	10751.3	10785.2	10836.0	10547.9	10775.0	10154.7	8673.6	6589.1	3240.3
55°	12405.3	12564.6	12476.5	12303.6	12534.1	12351.1	12425.7	11215.6	9188.8	6328.1	2765.8
57.5°	14544.1	14625.4	14479.7	14462.7	14615.2	14418.7	14293.2	12408.7	9456.5	6131.5	2209.9
60°	17042.1	17296.3	17204.8	17059.0	17198.0	17025.1	16076.1	13422.2	9402.3	5212.9	1711.7
62.5°	20038.3	20295.9	20194.2	20096.0	20184.1	19733.3	17750.5	14222.1	9158.3	4131.7	1250.7
65°	22512.6	23675.2	23827.7	23831.1	23404.0	22360.1	19085.9	14533.9	7870.3	2884.4	915.1
67.5°	24139.5	26556.2	27308.7	27037.5	26058.0	23675.2	19624.8	13923.8	6077.3	1823.5	684.7
69°	23953.1	27122.2	28210.3	28057.7	26681.6	23654.9	19204.5	12896.8	4643.5	1450.7	579.6
70°	23092.2	26657.9	27949.3	28017.1	26285.1	22746.5	18455.5	11717.3	3755.5	1237.1	532.1
72.5°	18428.4	21966.9	23102.4	23546.4	21828.0	18214.8	15133.8	8266.8	2176.0	864.3	430.5
75°	11415.6	13320.5	14262.7	14520.3	13479.8	11344.4	9185.4	4599.5	1325.3	610.1	362.7
77.5°	5118.0	5670.5	6212.8	6212.8	5806.1	5179.1	4209.7	2223.5	752.5	433.8	305.0
80°	1715.1	1779.5	1732.0	1748.9	1681.2	1616.8	1691.3	959.2	464.4	325.4	247.4
82.5°	1166.0	1464.2	1555.8	1555.8	1460.8	1152.4	650.8	440.6	284.7	233.9	189.8
85°	949.0	1159.2	1243.9	1281.2	1206.6	972.8	342.3	213.5	169.5	149.1	128.8
87.5°	318.6	298.3	281.3	274.5	288.1	301.7	169.5	91.5	78.0	71.2	67.8
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):

	135°	145°	155°	165°	175°	180°
0°	1152.4	1152.4	1152.4	1152.4	1152.4	1152.4
2.5°	1206.6	1166.0	1182.9	1199.9	1321.9	1413.4
5°	1199.9	1257.5	1386.3	1549.0	1623.5	1806.6
7.5°	1233.8	1443.9	1684.5	1854.0	1921.8	1979.4
10°	1650.7	1687.9	1769.3	1932.0	2067.6	2091.3
12.5°	2132.0	2121.8	2064.2	2138.7	2070.9	2118.4
15°	2508.2	2396.3	2318.4	2308.2	2284.5	2284.5
17.5°	2714.9	2616.6	2508.2	2481.1	2409.9	2467.5
20°	2959.0	2789.5	2518.3	2491.2	2467.5	2413.3
22.5°	2911.5	2742.1	2460.7	2426.8	2552.2	2545.5
25°	2969.1	2742.1	2474.3	2437.0	2494.6	2494.6
27.5°	2826.8	2640.4	2447.2	2223.5	2399.7	2440.4
30°	2789.5	2579.4	2355.7	2155.7	2335.3	2298.0
32.5°	2986.1	2426.8	2206.5	2145.5	2277.7	2250.6
35°	2833.6	2399.7	2169.2	2057.4	2213.3	2186.2
37.5°	2898.0	2365.8	2104.8	2009.9	2135.3	2176.0
40°	2884.4	2206.5	2030.3	1908.3	2033.7	2054.0
42.5°	2657.3	2084.5	1904.9	1782.8	1847.2	1915.0
45°	2589.5	2009.9	1782.8	1613.4	1616.8	1694.7
47.5°	2464.1	1840.5	1559.1	1403.2	1403.2	1467.6
50°	2254.0	1613.4	1304.9	1162.6	1159.2	1210.0
52.5°	1942.1	1393.1	1101.6	945.7	935.5	986.3
55°	1589.6	1121.9	867.7	766.0	745.7	766.0
57.5°	1237.1	874.5	684.7	603.3	599.9	616.9
60°	959.2	684.7	545.7	498.2	505.0	532.1
62.5°	725.3	545.7	464.4	447.4	457.6	484.7
65°	576.2	471.1	423.7	413.5	423.7	450.8
67.5°	467.7	427.1	393.2	379.6	386.4	413.5
69°	430.5	403.3	376.2	359.3	366.1	386.4
70°	410.1	389.8	362.7	345.7	352.5	372.8
72.5°	359.3	349.1	328.8	311.8	315.2	332.2
75°	315.2	308.4	294.9	274.5	274.5	294.9
77.5°	264.4	267.8	254.2	233.9	230.5	240.6
80°	210.1	216.9	210.1	189.8	183.0	183.0
82.5°	152.5	166.1	159.3	139.0	135.6	135.6
85°	94.9	105.1	101.7	88.1	88.1	78.0
87.5°	44.1	57.6	54.2	47.5	44.1	30.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)