

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: P565311

Luminaire Tested: **MSA-SA3D-730-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565311
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-SA3D-730-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16389 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

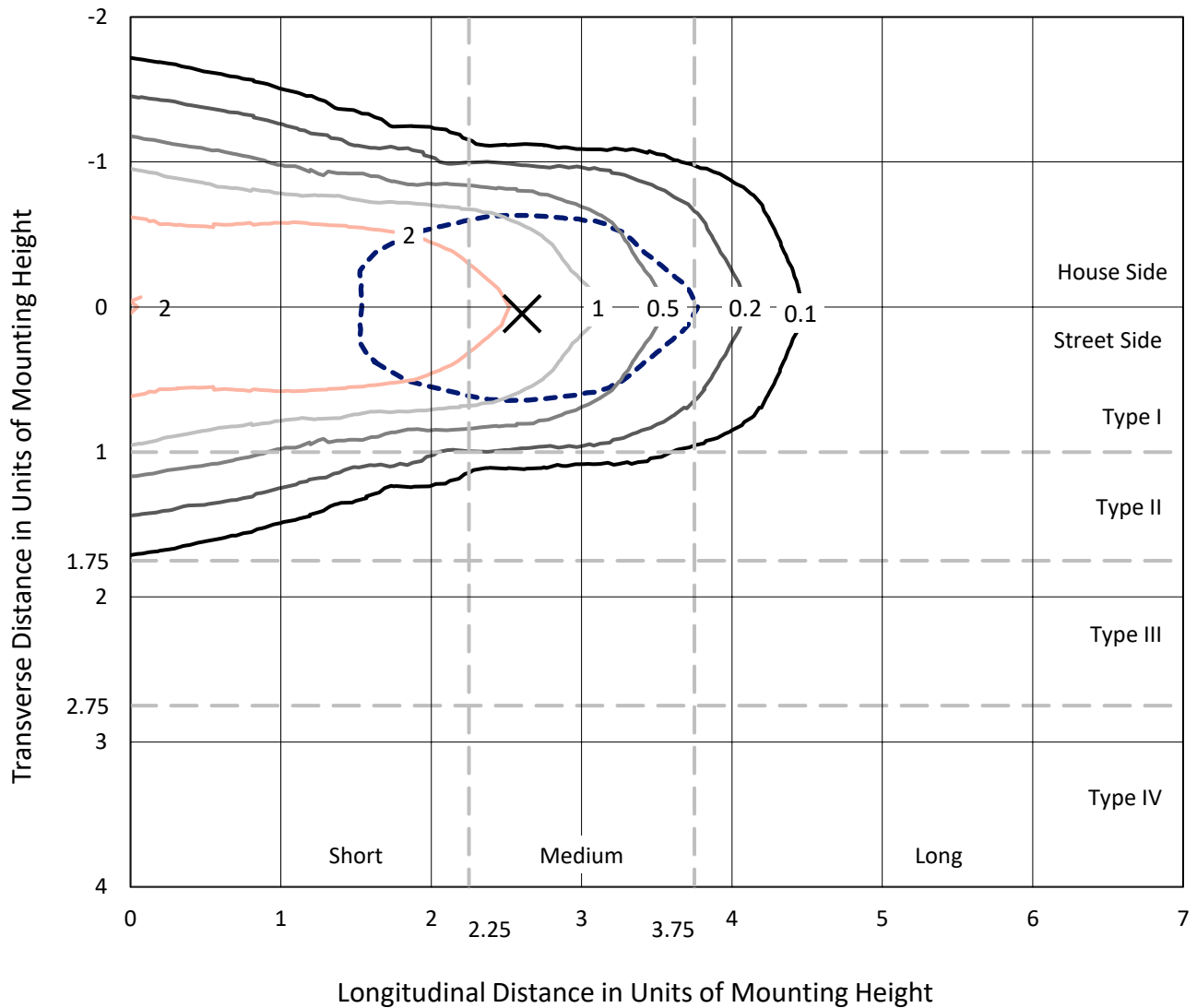
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

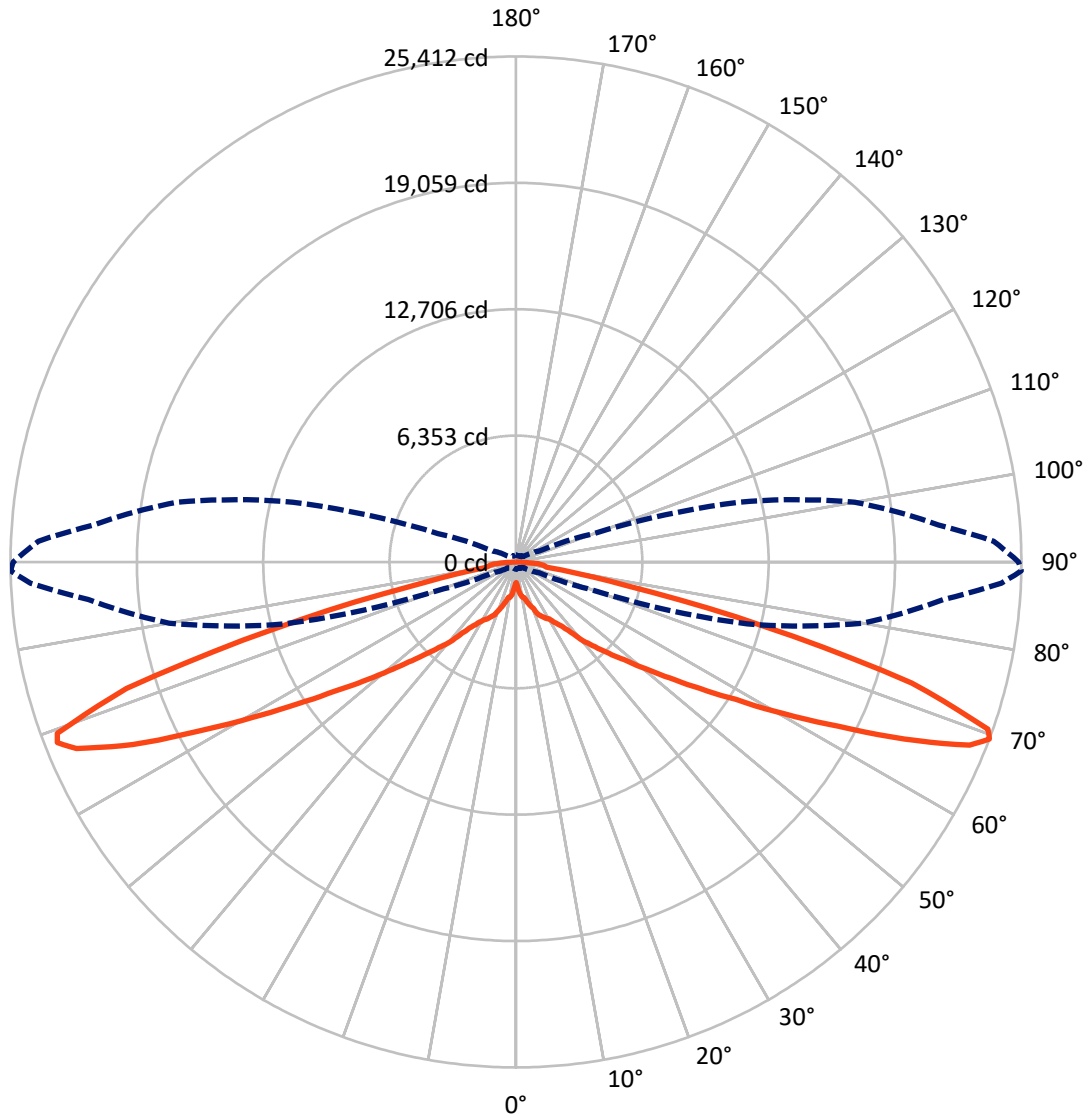
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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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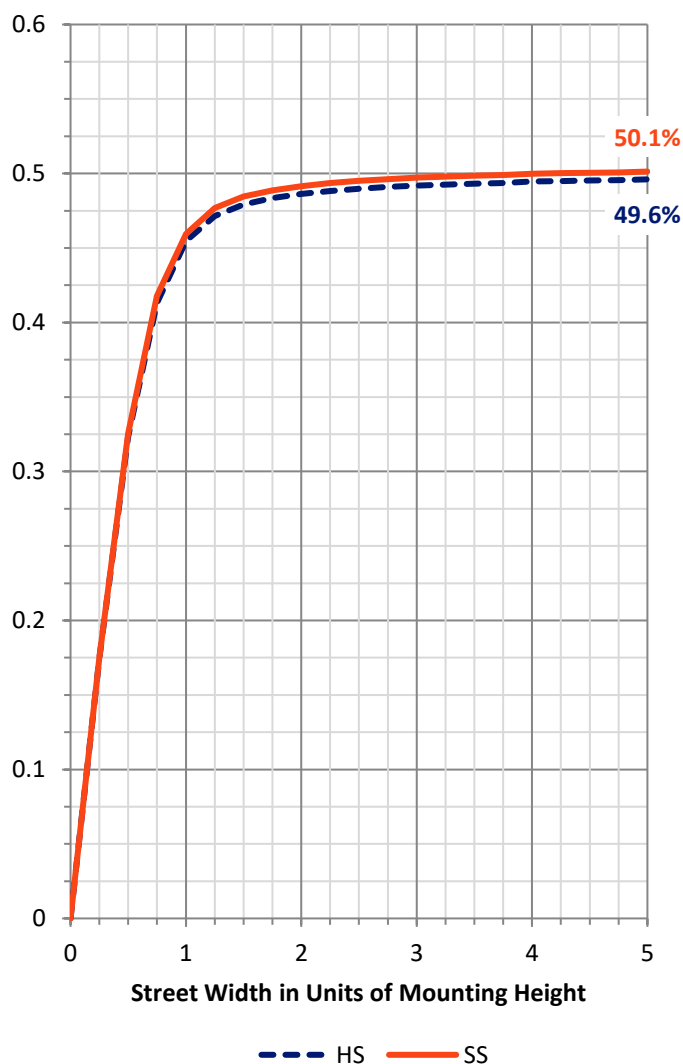
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8194.3	0.0	8194.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8194.7	0.0	8194.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	16389.0	0.0	16389.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	0.8
10°-20°	601.0	3.7
20°-30°	1199.0	7.3
30°-40°	1813.4	11.1
40°-50°	2632.2	16.1
50°-60°	3458.3	21.1
60°-70°	4218.6	25.7
70°-80°	2132.8	13.0
80°-90°	203.3	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°	16389.0	100.0
0°-180°	16389.0	100.0

Coefficient of Utilization

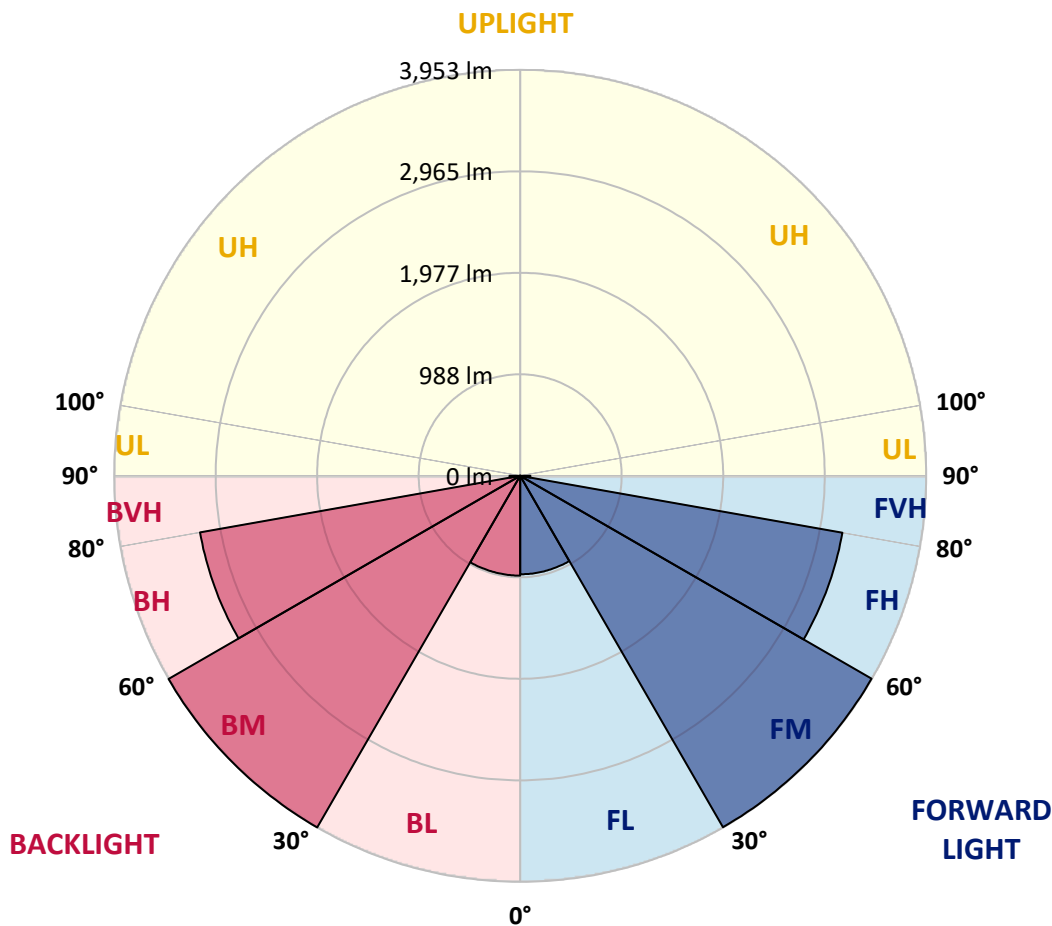


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	958.4	5.8			
FM (30°-60°)	3950.6	24.1			
FH (60°-80°)	3185.9	19.4			G2/5000
FVH (80°-90°)	99.7	0.6			G1/100
BL (0°-30°)	971.9	5.9	B2/1000		
BM (30°-60°)	3953.3	24.1	B3/5000		
BH (60°-80°)	3165.6	19.3	B4/5000		G4/5000
BVH (80°-90°)	103.6	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°	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1
2.5°	1218.2	1077.8	1065.6	1032.0	1056.4	1065.6	1044.2	1013.7	1047.2	1065.6	1032.0
5°	1535.7	1328.1	1257.9	1199.9	1083.9	1035.0	1083.9	1209.1	1224.3	1300.7	1279.3
7.5°	1691.5	1657.9	1569.3	1377.0	1190.7	1086.9	1218.2	1398.4	1489.9	1563.2	1639.6
10°	1807.5	1789.2	1633.4	1496.1	1419.7	1425.8	1428.9	1486.9	1566.3	1688.4	1731.1
12.5°	1835.0	1828.9	1853.3	1822.7	1828.9	1862.4	1828.9	1813.6	1859.4	1899.1	1856.3
15°	2012.0	2009.0	2018.1	2024.3	2146.4	2198.3	2146.4	2100.6	2067.0	2033.4	2103.6
17.5°	2134.2	2118.9	2122.0	2180.0	2317.4	2460.9	2433.4	2372.3	2296.0	2341.8	2399.8
20°	2201.3	2173.9	2192.2	2216.6	2448.6	2607.4	2625.7	2543.3	2497.5	2555.5	2604.4
22.5°	2265.5	2222.7	2158.6	2183.0	2396.7	2625.7	2714.3	2692.9	2726.5	2744.8	2735.6
25°	2189.1	2216.6	2146.4	2216.6	2433.4	2644.0	2821.1	2946.3	2949.4	2940.2	3007.4
27.5°	2143.3	2122.0	2002.9	2183.0	2363.2	2494.4	2946.3	3157.0	3221.1	3025.7	3157.0
30°	2063.9	2097.5	1935.7	2085.3	2314.3	2534.1	3089.8	3392.1	3297.4	3273.0	3303.5
32.5°	2015.1	1993.7	1917.4	1999.8	2173.9	2653.2	3181.4	3529.5	3648.5	3590.5	3584.4
35°	1935.7	1951.0	1831.9	1920.4	2164.7	2552.5	3242.5	3874.5	4057.7	4011.9	3975.2
37.5°	1947.9	1896.0	1810.5	1874.6	2106.7	2607.4	3395.1	4207.3	4497.3	4521.7	4353.8
40°	1856.3	1825.8	1697.6	1804.4	1996.8	2573.8	3431.8	4585.9	5077.4	5187.3	4946.1
42.5°	1725.0	1685.4	1612.1	1731.1	1932.7	2409.0	3483.7	5040.8	5666.7	5895.7	5675.8
45°	1535.7	1483.8	1447.2	1606.0	1792.2	2366.2	3428.7	5419.4	6231.5	6546.0	6539.9
47.5°	1306.8	1273.2	1254.9	1422.8	1676.2	2259.3	3315.7	5657.5	6625.4	7431.4	7309.3
50°	1047.2	1022.8	1019.8	1196.8	1480.8	2039.5	3187.5	5776.6	7223.8	8243.6	8350.4
52.5°	839.6	821.3	818.3	961.7	1239.6	1743.4	2918.8	5868.2	7794.8	9165.6	9715.2
55°	656.4	638.1	641.2	760.2	986.2	1425.8	2509.7	5764.4	8295.5	10109.1	11150.2
57.5°	537.4	519.0	522.1	589.3	754.1	1090.0	1999.8	5538.5	8521.4	11275.4	12823.3
60°	473.2	454.9	445.8	476.3	580.1	821.3	1486.9	4659.1	8558.0	12243.2	14640.0
62.5°	439.7	421.3	412.2	421.3	479.3	629.0	1071.7	3691.3	8347.4	13070.6	16303.9
65°	409.1	393.9	381.6	390.8	421.3	500.7	781.6	2528.0	7245.2	13449.2	17513.0
67.5°	375.5	363.3	351.1	363.3	384.7	421.3	607.6	1599.9	5431.6	12957.7	18016.8
69°	357.2	338.9	332.8	342.0	363.3	387.8	525.1	1276.2	4130.9	12023.4	17711.5
70°	338.9	326.7	317.5	332.8	351.1	369.4	473.2	1083.9	3239.4	10823.5	16954.3
72.5°	299.2	290.1	283.9	299.2	314.5	326.7	387.8	772.5	1877.7	7370.4	13446.2
75°	262.6	253.4	250.4	262.6	274.8	280.9	326.7	531.3	1108.3	3856.2	8066.5
77.5°	219.8	207.6	210.7	225.9	235.1	238.1	274.8	381.6	653.4	1746.4	3737.1
80°	161.8	161.8	174.0	186.2	186.2	186.2	219.8	277.8	396.9	803.0	1551.0
82.5°	113.0	116.0	119.1	137.4	140.4	128.2	167.9	201.5	247.3	351.1	537.4
85°	64.1	67.2	70.2	82.4	85.5	76.3	109.9	128.2	143.5	174.0	280.9
87.5°	24.4	27.5	36.6	42.7	45.8	33.6	51.9	61.1	61.1	73.3	125.2
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°	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1
2.5°	1102.2	1123.6	1163.3	1172.4	1138.8	1102.2	1019.8	1071.7	1093.0	1053.3	1065.6
5°	1364.8	1410.6	1459.4	1401.4	1364.8	1340.3	1300.7	1303.7	1282.3	1212.1	1096.1
7.5°	1660.9	1609.0	1645.7	1685.4	1627.3	1630.4	1667.0	1590.7	1532.7	1413.6	1196.8
10°	1798.3	1798.3	1807.5	1807.5	1783.1	1783.1	1780.0	1657.9	1587.7	1535.7	1474.7
12.5°	1807.5	1804.4	1841.1	1813.6	1819.7	1825.8	1841.1	1896.0	1877.7	1810.5	1865.5
15°	2060.9	2048.7	2060.9	2057.8	2067.0	2094.5	2082.3	2070.1	2073.1	2122.0	2204.4
17.5°	2299.0	2305.1	2292.9	2314.3	2314.3	2332.6	2375.4	2332.6	2296.0	2387.6	2451.7
20°	2573.8	2552.5	2503.6	2540.2	2549.4	2552.5	2622.7	2570.8	2518.9	2552.5	2628.8
22.5°	2851.7	2848.6	2854.7	2857.8	2870.0	2824.2	2729.5	2714.3	2747.9	2702.1	2711.2
25°	3022.6	3025.7	3041.0	3044.0	2992.1	3041.0	3074.5	2973.8	2973.8	2964.6	2903.6
27.5°	3230.3	3184.5	3202.8	3227.2	3205.8	3218.0	3178.4	3031.8	3187.5	3208.9	2964.6
30°	3370.7	3349.3	3328.0	3352.4	3373.8	3428.7	3315.7	3300.5	3312.7	3425.7	3105.1
32.5°	3666.9	3697.4	3657.7	3618.0	3657.7	3645.5	3596.6	3575.3	3727.9	3578.3	3202.8
35°	3941.6	3953.9	3956.9	3950.8	3975.2	3932.5	3932.5	4011.9	4057.7	3895.8	3233.3
37.5°	4604.2	4561.4	4472.9	4430.2	4506.5	4570.6	4381.3	4476.0	4457.6	4182.8	3462.3
40°	5080.5	5178.2	5205.7	5193.4	5205.7	5022.5	5062.2	5132.4	5049.9	4595.0	3382.9
42.5°	5776.6	5837.7	5816.3	5788.8	5801.0	5767.4	5648.4	5907.9	5611.7	5056.1	3505.0
45°	6411.7	6549.1	6558.2	6463.6	6539.9	6420.8	6469.7	6561.3	6262.1	5401.1	3471.5
47.5°	7168.9	7452.8	7345.9	7345.9	7422.3	7165.8	7281.8	7403.9	6610.1	5633.1	3288.3
50°	8289.4	8442.0	8435.9	8408.4	8442.0	8304.6	8286.3	8271.0	7144.4	5852.9	3175.3
52.5°	9556.4	9764.0	9684.7	9715.2	9761.0	9501.5	9706.0	9147.3	7813.1	5935.4	2918.8
55°	11174.6	11318.1	11238.7	11083.0	11290.6	11125.8	11192.9	10102.9	8277.2	5700.3	2491.4
57.5°	13101.2	13174.4	13043.2	13027.9	13165.3	12988.2	12875.2	11177.7	8518.4	5523.2	1990.7
60°	15351.4	15580.3	15497.9	15366.6	15491.8	15336.1	14481.2	12090.6	8469.5	4695.8	1541.9
62.5°	18050.4	18282.4	18190.8	18102.3	18181.6	17775.6	15989.5	12811.1	8249.7	3721.8	1126.6
65°	20279.2	21326.4	21463.8	21466.9	21082.2	20141.8	17192.4	13092.0	7089.5	2598.3	824.4
67.5°	21744.7	23921.6	24599.4	24355.2	23472.8	21326.4	17677.9	12542.4	5474.3	1642.6	616.7
69°	21576.8	24431.5	25411.6	25274.2	24034.6	21308.1	17299.3	11617.3	4182.8	1306.8	522.1
70°	20801.3	24013.2	25176.5	25237.5	23677.4	20489.8	16624.5	10554.8	3382.9	1114.4	479.3
72.5°	16600.1	19787.6	20810.4	21210.4	19662.4	16407.8	13632.4	7446.7	1960.1	778.6	387.8
75°	10283.1	11999.0	12847.8	13079.8	12142.5	10219.0	8274.1	4143.2	1193.8	549.6	326.7
77.5°	4610.3	5108.0	5596.5	5596.5	5230.1	4665.2	3792.0	2002.9	677.8	390.8	274.8
80°	1544.9	1602.9	1560.2	1575.4	1514.4	1456.4	1523.5	864.0	418.3	293.1	222.9
82.5°	1050.3	1319.0	1401.4	1401.4	1315.9	1038.1	586.2	396.9	256.5	210.7	171.0
85°	854.9	1044.2	1120.5	1154.1	1086.9	876.3	308.4	192.3	152.7	134.3	116.0
87.5°	287.0	268.7	253.4	247.3	259.5	271.7	152.7	82.4	70.2	64.1	61.1
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):

	135°	145°	155°	165°	175°	180°
0°	1038.1	1038.1	1038.1	1038.1	1038.1	1038.1
2.5°	1086.9	1050.3	1065.6	1080.8	1190.7	1273.2
5°	1080.8	1132.7	1248.7	1395.3	1462.5	1627.3
7.5°	1111.4	1300.7	1517.4	1670.1	1731.1	1783.1
10°	1486.9	1520.5	1593.8	1740.3	1862.4	1883.8
12.5°	1920.4	1911.3	1859.4	1926.6	1865.5	1908.2
15°	2259.3	2158.6	2088.4	2079.2	2057.8	2057.8
17.5°	2445.6	2357.0	2259.3	2234.9	2170.8	2222.7
20°	2665.4	2512.8	2268.5	2244.1	2222.7	2173.9
22.5°	2622.7	2470.0	2216.6	2186.1	2299.0	2292.9
25°	2674.6	2470.0	2228.8	2195.2	2247.1	2247.1
27.5°	2546.3	2378.4	2204.4	2002.9	2161.6	2198.3
30°	2512.8	2323.5	2122.0	1941.8	2103.6	2070.1
32.5°	2689.8	2186.1	1987.6	1932.7	2051.7	2027.3
35°	2552.5	2161.6	1954.0	1853.3	1993.7	1969.3
37.5°	2610.5	2131.1	1896.0	1810.5	1923.5	1960.1
40°	2598.3	1987.6	1828.9	1718.9	1831.9	1850.2
42.5°	2393.7	1877.7	1715.9	1606.0	1664.0	1725.0
45°	2332.6	1810.5	1606.0	1453.3	1456.4	1526.6
47.5°	2219.7	1657.9	1404.5	1264.0	1264.0	1322.0
50°	2030.4	1453.3	1175.5	1047.2	1044.2	1090.0
52.5°	1749.5	1254.9	992.3	851.8	842.7	888.5
55°	1431.9	1010.6	781.6	690.0	671.7	690.0
57.5°	1114.4	787.7	616.7	543.5	540.4	555.7
60°	864.0	616.7	491.6	448.8	454.9	479.3
62.5°	653.4	491.6	418.3	403.0	412.2	436.6
65°	519.0	424.4	381.6	372.5	381.6	406.1
67.5°	421.3	384.7	354.2	342.0	348.1	372.5
69°	387.8	363.3	338.9	323.6	329.7	348.1
70°	369.4	351.1	326.7	311.4	317.5	335.8
72.5°	323.6	314.5	296.2	280.9	283.9	299.2
75°	283.9	277.8	265.6	247.3	247.3	265.6
77.5°	238.1	241.2	229.0	210.7	207.6	216.8
80°	189.3	195.4	189.3	171.0	164.9	164.9
82.5°	137.4	149.6	143.5	125.2	122.1	122.1
85°	85.5	94.6	91.6	79.4	79.4	70.2
87.5°	39.7	51.9	48.9	42.7	39.7	27.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)