

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: P95378

Luminaire Tested: **VFS-K-B20-7-LED-E1-MST**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P95378
REPORT SCALED FROM IESNA LM79-08 TEST DATA (P22791)
Test Lab: INNOVATION CENTER
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: VFS-K-B20-7-LED-E1-MST
Description: ARCHITECTURAL FLOOD LUMINAIRE
MEDIUM SYMMETRIC RECTANGULAR DISTRIBUTION
WITH 20 LED'S, 700mA DRIVE CURRENT
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp:	N/A	NEMA Type:	6H x 5V
Luminaire Lumens:	3691.5 lumens	Max Intensity:	3280.7 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 0°V
Efficacy:	76.0 lumens/watt		
Luminous Opening:	(L: 0.83 ' x W: 0 ' x H: 0.5 ')		
Beam Angle (50%):	85.3°H x 47.1°V	Field Angle (10%):	109°H x 79.9°V
Beam Lumens:	2453.3 lumens	Field Lumens:	3524.8 lumens
Beam Efficiency:	66.5%	Field Efficiency:	95.5%

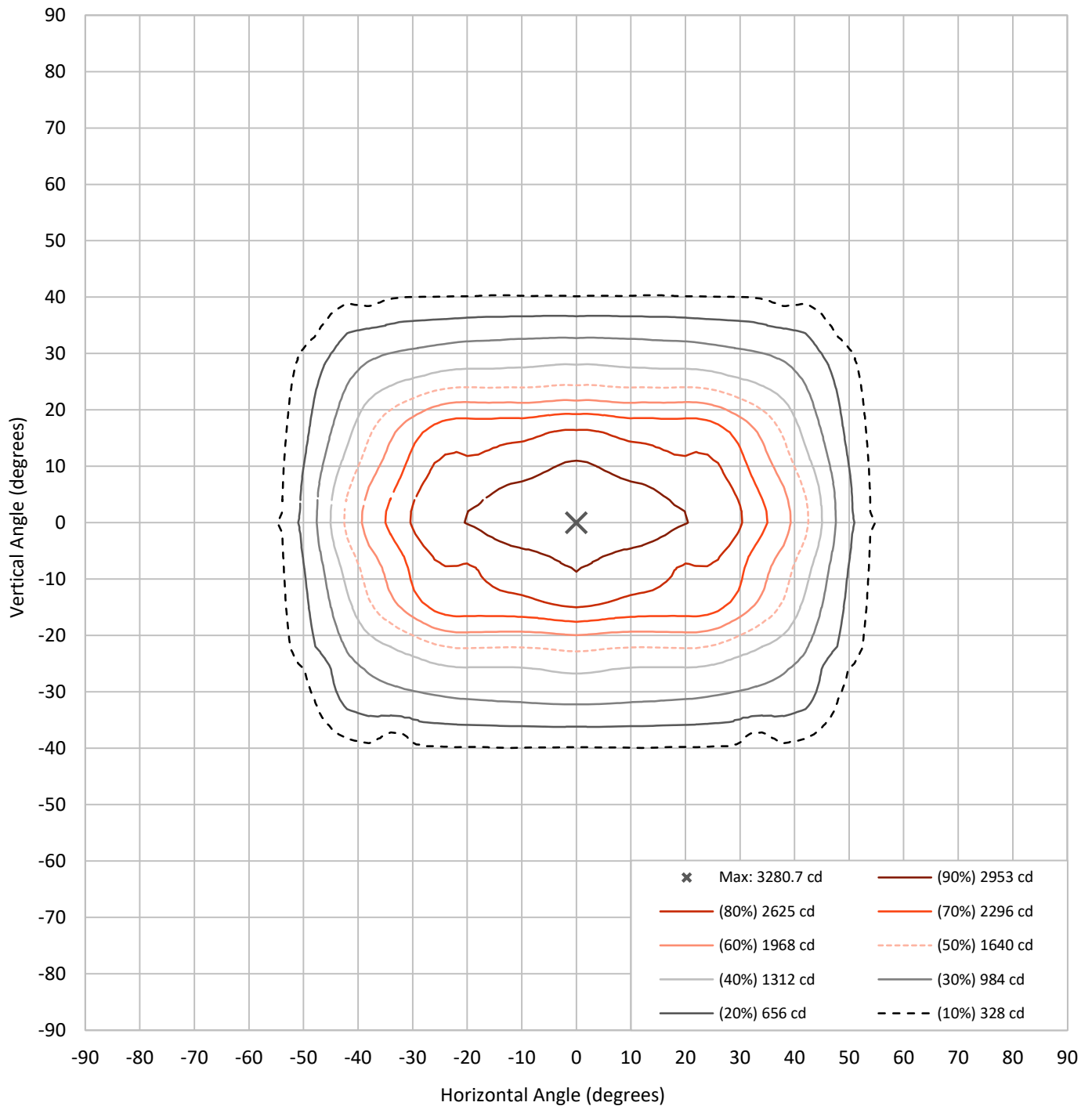
Input Watts (W): 48.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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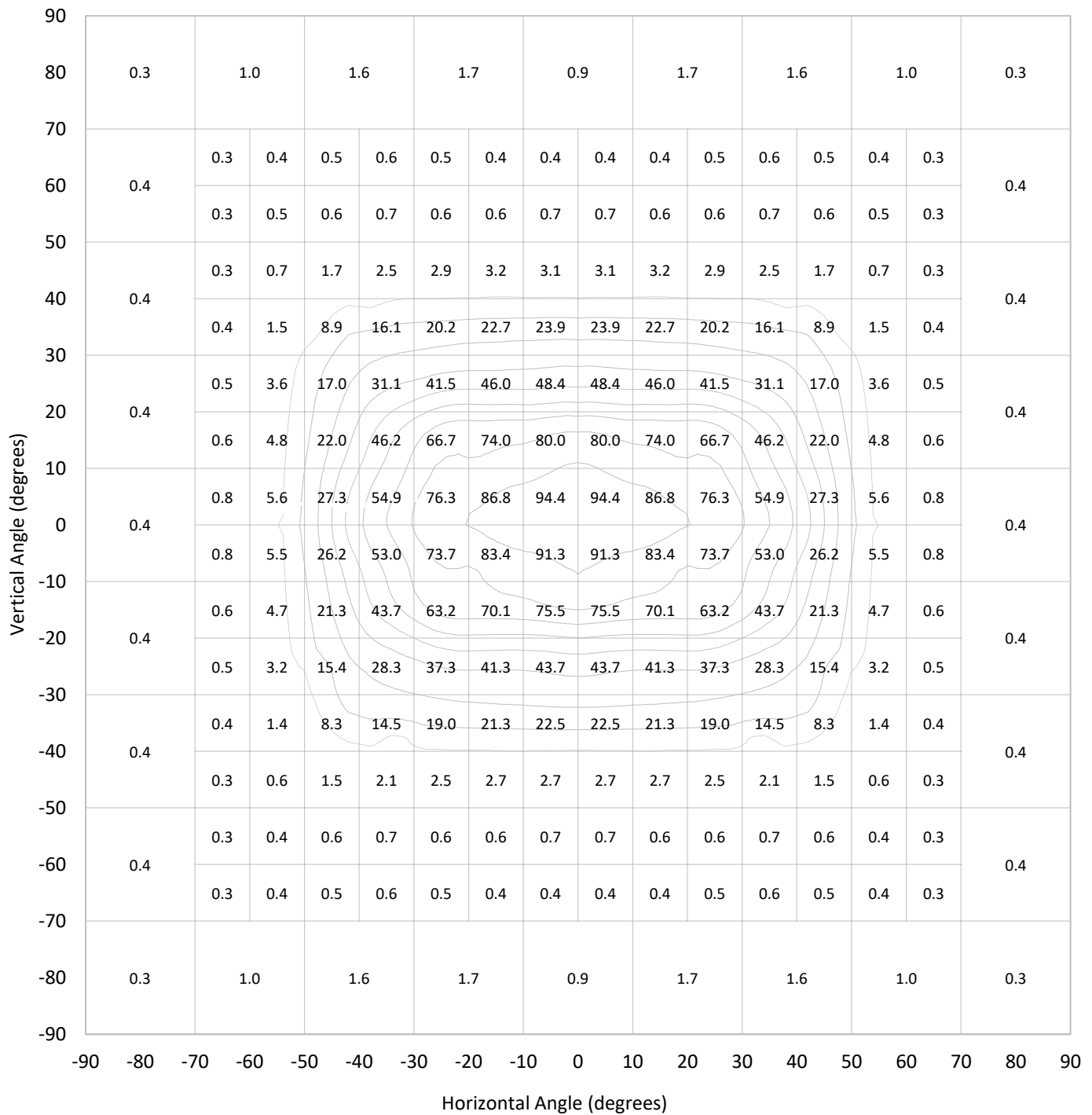
Iso-Candela Plot





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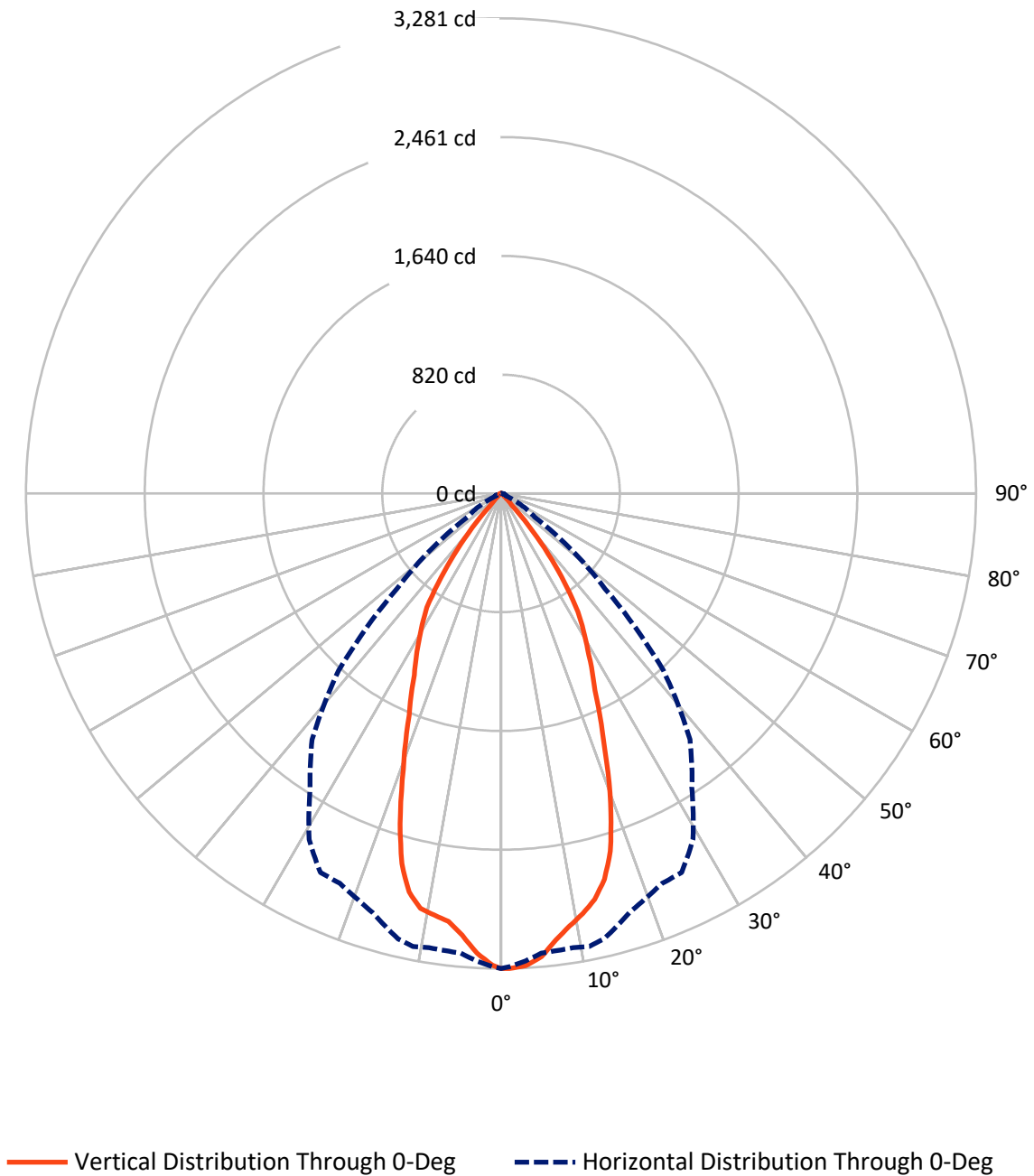
Lumen Table



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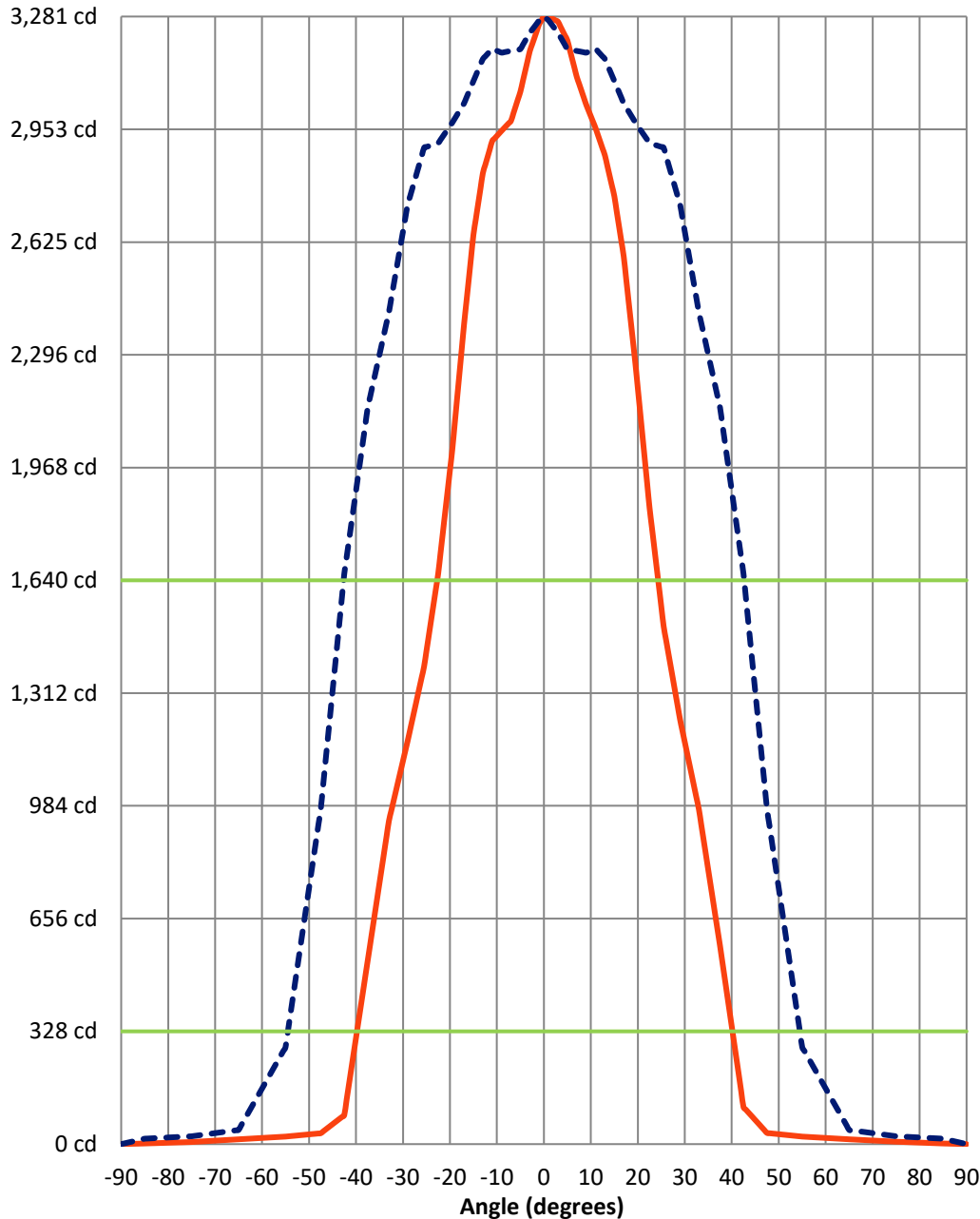
Luminous Intensity Polar Plot



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Luminous Intensity Plot



Beam:
 H Angle: 85.3°
 V Angle: 47.1°
 Lumens: 2453.3
 Efficiency: 66.5%

Field:
 H Angle: 109°
 V Angle: 79.9°
 Lumens: 3524.8
 Efficiency: 95.5%

Spill:
 Lumens: 166.7
 Efficiency: 4.5%

— Vertical Distribution through 0-Deg
 - - - Horizontal Distribution through 0-Deg



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FIELD
BEAM

CANDELA DISTRIBUTION:

	0°	1°	3°	5°	7°	9°	11°	13°	15°	17°	19.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.8	2.6	4.4	8.8	14.0	16.7	17.5	17.5	17.5	17.5	18.4
75°	7.0	7.0	7.0	6.1	6.1	7.0	7.9	10.5	13.2	15.8	17.5
65°	14.0	14.0	14.0	13.2	13.2	13.2	12.3	12.3	11.4	13.2	14.9
55°	21.9	21.9	21.9	21.0	21.0	21.0	21.0	20.2	20.2	19.3	19.3
47.5°	32.4	32.4	32.4	32.4	31.6	31.6	31.6	31.6	30.7	30.7	30.7
42.5°	107.9	115.8	108.7	114.9	112.3	117.5	128.9	135.9	141.2	130.7	114.9
37.5°	577.0	591.1	582.3	591.1	582.3	576.2	582.3	572.7	574.4	574.4	563.9
33°	974.3	984.8	979.6	982.2	973.4	968.2	970.8	960.3	948.0	948.0	938.3
29°	1234.8	1244.4	1240.0	1229.5	1216.3	1205.8	1202.3	1194.4	1177.7	1177.7	1175.1
25.5°	1506.6	1511.0	1512.7	1494.3	1476.8	1460.1	1462.8	1463.6	1448.7	1457.5	1461.9
22.5°	1851.3	1868.8	1863.5	1834.6	1823.2	1802.1	1814.4	1821.4	1810.9	1814.4	1827.6
19.5°	2268.7	2285.3	2274.8	2246.8	2223.1	2188.9	2200.3	2211.7	2199.4	2192.4	2208.2
17°	2582.6	2594.9	2585.3	2547.6	2507.2	2468.6	2460.7	2460.7	2445.8	2428.3	2437.1
15°	2758.0	2765.9	2747.5	2694.0	2657.2	2603.7	2592.3	2582.6	2562.5	2537.0	2536.2
13°	2876.4	2877.3	2853.6	2803.6	2757.1	2699.3	2683.5	2666.8	2638.8	2604.6	2592.3
11°	2956.2	2956.2	2934.3	2885.2	2838.7	2784.3	2763.3	2743.1	2708.0	2662.4	2638.8
9°	3024.6	3024.6	3006.2	2963.2	2925.5	2867.6	2849.2	2822.9	2782.6	2727.3	2689.6
7°	3105.3	3107.9	3091.3	3054.4	3031.6	2977.3	2959.7	2923.8	2871.1	2807.1	2758.0
5°	3211.4	3211.4	3188.6	3151.8	3136.9	3096.5	3085.1	3046.5	2984.3	2908.9	2850.1
3°	3265.8	3259.6	3227.2	3184.2	3176.3	3158.8	3163.2	3130.7	3066.7	2988.7	2928.2
1°	3280.7	3274.5	3236.8	3184.2	3183.3	3176.3	3190.4	3162.3	3100.9	3034.3	2988.7
0°	3280.7	3269.3	3233.3	3186.0	3180.7	3175.5	3186.9	3157.0	3093.0	3028.1	2972.0
-1°	3258.8	3249.1	3215.8	3173.7	3161.4	3155.3	3162.3	3126.3	3063.2	2991.3	2918.5
-3°	3179.8	3167.6	3141.3	3114.1	3083.4	3057.9	3056.2	3008.8	2948.3	2888.7	2815.0
-5°	3062.3	3051.8	3029.0	3000.9	2961.5	2925.5	2908.0	2858.9	2810.6	2759.8	2694.0
-7°	2977.3	2969.4	2940.4	2905.4	2862.4	2819.4	2789.6	2752.8	2713.3	2665.1	2611.6
-9°	2948.3	2942.2	2908.9	2866.8	2816.8	2762.4	2737.0	2708.0	2674.7	2630.9	2591.4
-11°	2918.5	2909.7	2876.4	2828.2	2775.6	2724.7	2698.4	2673.8	2645.8	2610.7	2582.6
-13°	2824.7	2808.9	2782.6	2731.7	2681.7	2641.4	2616.8	2597.5	2580.9	2557.2	2542.3
-15°	2645.8	2640.5	2624.7	2573.0	2530.9	2499.3	2479.2	2466.9	2466.0	2449.3	2446.7
-17°	2384.4	2359.9	2358.1	2323.9	2285.3	2277.5	2266.1	2257.3	2258.2	2258.2	2261.7
-19.5°	2020.5	2014.4	1995.9	1967.9	1949.5	1943.3	1938.1	1939.8	1949.5	1950.3	1958.2
-22.5°	1660.1	1655.7	1649.6	1617.1	1609.2	1597.8	1589.0	1590.8	1597.8	1597.8	1607.5
-25.5°	1390.0	1386.5	1377.7	1351.4	1336.5	1319.8	1304.9	1305.8	1307.5	1307.5	1311.9
-29°	1173.4	1171.6	1170.7	1159.3	1147.1	1139.2	1129.5	1126.0	1118.1	1112.9	1106.7
-33°	940.1	938.3	941.8	934.8	931.3	927.8	916.4	920.8	911.2	903.3	896.2
-37.5°	534.9	534.1	543.7	542.8	535.8	527.9	532.3	530.6	527.0	523.5	520.0
-42.5°	84.2	83.3	83.3	91.2	91.2	102.6	112.3	113.1	107.9	95.6	96.5
-47.5°	31.6	31.6	31.6	31.6	30.7	30.7	29.8	29.8	29.8	28.9	28.9
-55°	21.9	21.9	21.9	21.0	21.0	21.0	20.2	20.2	20.2	19.3	19.3
-65°	14.0	14.0	14.0	13.2	13.2	12.3	12.3	11.4	11.4	12.3	14.9
-75°	6.1	6.1	6.1	6.1	6.1	6.1	7.0	9.6	13.2	15.8	17.5
-85°	1.8	2.6	4.4	8.8	14.9	17.5	18.4	17.5	18.4	18.4	18.4
-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):

	22.5°	25.5°	29°	33°	37.5°	42.5°	47.5°	55°	65°	75°	85°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	19.3	19.3	19.3
75°	19.3	20.2	20.2	20.2	20.2	20.2	20.2	19.3	19.3	19.3	19.3
65°	17.5	20.2	21.9	22.8	23.7	24.6	22.8	21.9	20.2	20.2	19.3
55°	20.2	21.9	23.7	27.2	28.1	28.9	28.1	25.4	21.9	21.0	19.3
47.5°	29.8	30.7	31.6	34.2	36.0	36.8	36.0	29.8	23.7	21.9	19.3
42.5°	135.9	123.7	135.9	132.4	126.3	118.4	90.3	33.3	24.6	21.9	19.3
37.5°	549.9	540.2	527.9	512.1	369.2	405.2	182.4	36.8	25.4	21.9	19.3
33°	919.0	897.1	872.6	844.5	799.8	687.5	332.4	54.4	26.3	21.9	19.3
29°	1161.1	1133.9	1094.4	1055.9	985.7	841.0	560.4	93.0	27.2	21.9	18.4
25.5°	1452.2	1410.1	1328.6	1251.4	1138.3	934.0	636.7	121.9	28.1	21.9	18.4
22.5°	1822.3	1760.0	1627.6	1479.4	1299.6	1008.5	688.4	143.8	28.9	21.9	17.5
19.5°	2206.4	2127.5	1954.7	1739.9	1478.5	1083.0	729.6	162.2	29.8	21.9	17.5
17°	2445.8	2377.4	2195.9	1936.3	1606.6	1155.8	763.0	175.4	29.8	21.9	17.5
15°	2557.2	2499.3	2309.9	2035.4	1688.1	1215.5	791.9	185.0	29.8	21.9	16.7
13°	2621.2	2578.2	2378.3	2098.6	1758.3	1281.2	822.6	192.9	30.7	21.9	16.7
11°	2666.8	2643.1	2439.7	2148.5	1830.2	1352.3	860.3	199.9	31.6	21.9	16.7
9°	2709.8	2699.3	2506.3	2208.2	1917.9	1441.7	898.0	205.2	33.3	21.9	16.7
7°	2762.4	2755.4	2574.7	2268.7	1995.1	1525.9	932.2	209.6	35.1	21.9	15.8
5°	2838.7	2826.4	2652.8	2338.8	2061.7	1589.0	956.8	213.1	38.6	22.8	15.8
3°	2893.9	2879.9	2711.5	2398.5	2118.7	1639.0	969.9	214.9	40.3	22.8	15.8
1°	2916.8	2903.6	2737.9	2426.5	2146.8	1661.8	976.9	216.6	41.2	22.8	15.8
0°	2912.4	2899.2	2733.5	2420.4	2143.3	1659.2	976.1	282.4	41.2	22.8	15.8
-1°	2890.4	2878.2	2712.4	2398.5	2125.7	1642.5	969.9	216.6	40.3	22.8	15.8
-3°	2808.9	2799.2	2632.6	2323.1	2062.6	1585.5	949.7	214.9	37.7	21.9	15.8
-5°	2701.0	2699.3	2530.0	2229.2	1973.1	1498.7	917.3	213.1	35.1	21.9	15.8
-7°	2628.2	2628.2	2450.2	2155.6	1875.8	1408.4	877.8	209.6	33.3	21.9	15.8
-9°	2612.4	2602.8	2409.9	2121.4	1813.5	1347.0	846.3	205.2	31.6	21.0	15.8
-11°	2608.9	2586.1	2382.7	2095.9	1767.9	1298.8	822.6	199.1	30.7	21.0	15.8
-13°	2566.8	2523.9	2318.7	2035.4	1708.3	1245.3	799.8	192.9	29.8	21.0	16.7
-15°	2465.1	2401.1	2198.5	1931.9	1631.1	1187.4	777.0	184.2	28.9	20.2	16.7
-17°	2269.6	2195.9	2000.3	1765.3	1516.3	1126.9	751.5	174.5	28.9	21.0	16.7
-19.5°	1962.6	1895.1	1733.7	1546.9	1354.9	1055.9	716.5	161.4	28.1	21.0	16.7
-22.5°	1607.5	1547.8	1425.1	1300.5	1183.0	976.1	670.9	142.9	28.1	21.0	16.7
-25.5°	1306.7	1265.4	1195.3	1123.4	1036.6	893.6	429.7	121.0	27.2	21.0	17.5
-29°	1094.4	1069.9	1034.8	991.8	930.4	812.1	391.1	92.1	27.2	21.9	18.4
-33°	885.7	860.3	834.0	804.2	758.6	663.9	313.1	53.5	26.3	21.9	18.4
-37.5°	511.3	500.7	485.0	218.4	437.6	365.7	169.3	36.8	25.4	21.9	19.3
-42.5°	116.6	95.6	113.1	106.1	107.9	100.0	75.4	32.4	24.6	21.9	19.3
-47.5°	28.9	28.9	29.8	32.4	34.2	35.1	34.2	29.8	23.7	21.9	19.3
-55°	20.2	21.0	23.7	27.2	28.1	28.9	28.1	25.4	21.9	21.0	19.3
-65°	17.5	20.2	21.9	22.8	23.7	24.6	23.7	21.9	20.2	20.2	19.3
-75°	19.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2	19.3	19.3	19.3
-85°	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
-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°
90°	0.0
85°	0.0
75°	0.0
65°	0.0
55°	0.0
47.5°	0.0
42.5°	0.0
37.5°	0.0
33°	0.0
29°	0.0
25.5°	0.0
22.5°	0.0
19.5°	0.0
17°	0.0
15°	0.0
13°	0.0
11°	0.0
9°	0.0
7°	0.0
5°	0.0
3°	0.0
1°	0.0
0°	0.0
-1°	0.0
-3°	0.0
-5°	0.0
-7°	0.0
-9°	0.0
-11°	0.0
-13°	0.0
-15°	0.0
-17°	0.0
-19.5°	0.0
-22.5°	0.0
-25.5°	0.0
-29°	0.0
-33°	0.0
-37.5°	0.0
-42.5°	0.0
-47.5°	0.0
-55°	0.0
-65°	0.0
-75°	0.0
-85°	0.0
-90°	0.0

(END OF REPORT)