

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: P95377

Luminaire Tested: **VFS-K-B20-5-LED-E1-MST**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P95377
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-B20-5-LED-E1-MST
Description: ARCHITECTURAL FLOOD LUMINAIRE
MEDIUM SYMMETRIC RECTANGULAR DISTRIBUTION
WITH 20 LED'S, 525mA DRIVE CURRENT
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp:	N/A	NEMA Type:	6H x 5V
Luminaire Lumens:	3123.3 lumens	Max Intensity:	2775.7 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 0°V
Efficacy:	89.5 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:	2075.6 lumens	Field Lumens:	2982.3 lumens
Beam Efficiency:	66.5%	Field Efficiency:	95.5%

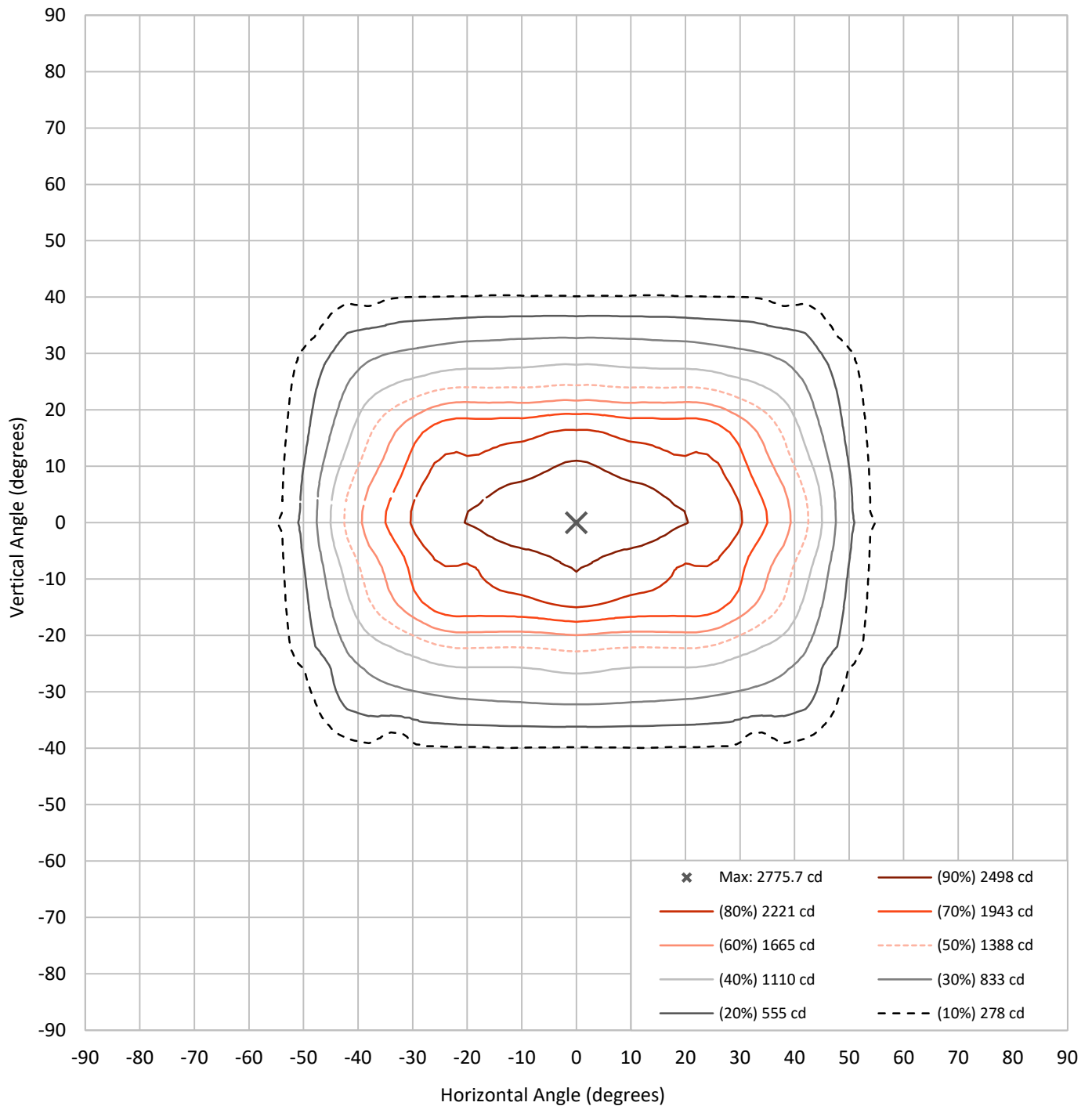
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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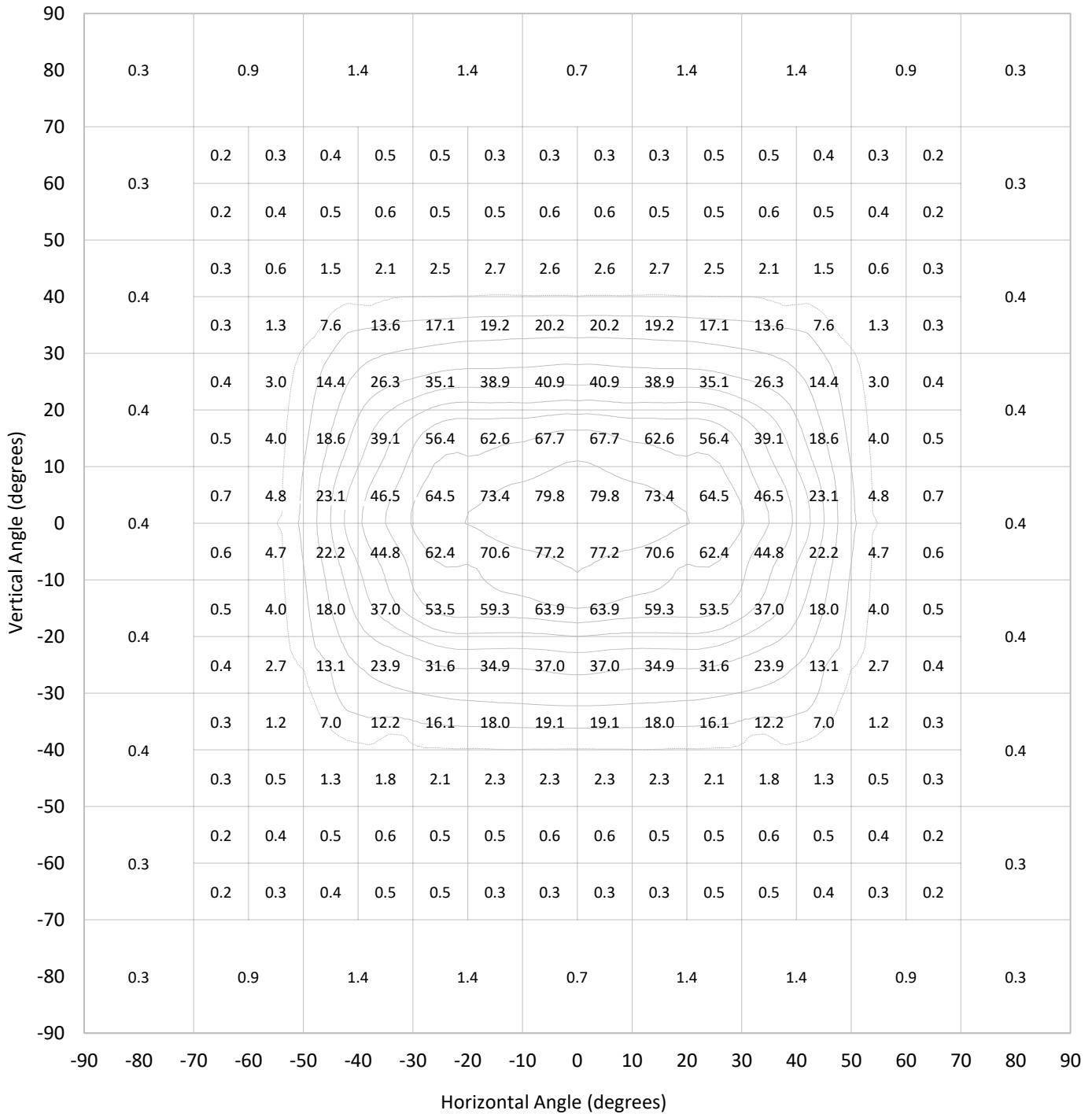
Iso-Candela Plot





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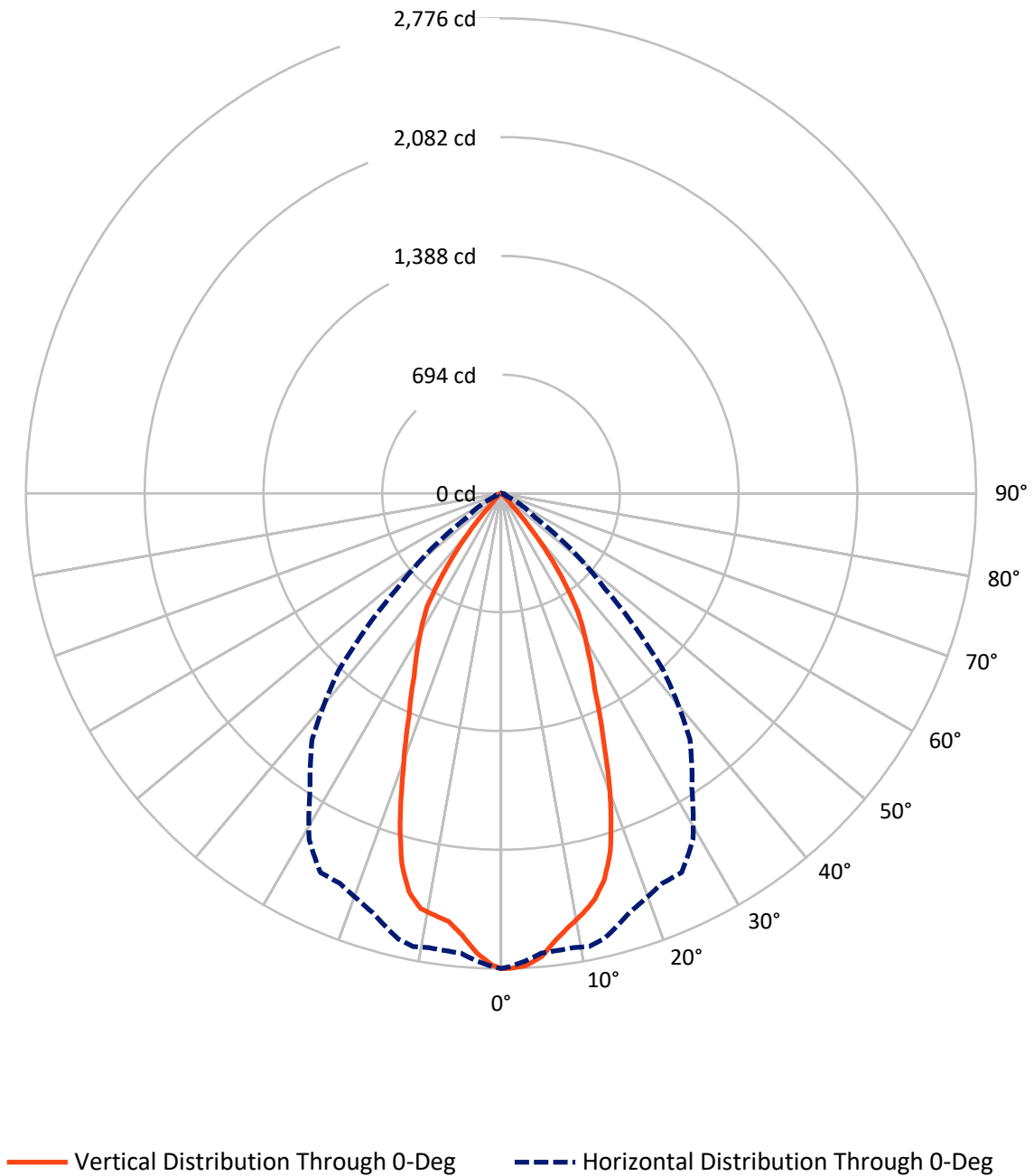
Lumen Table



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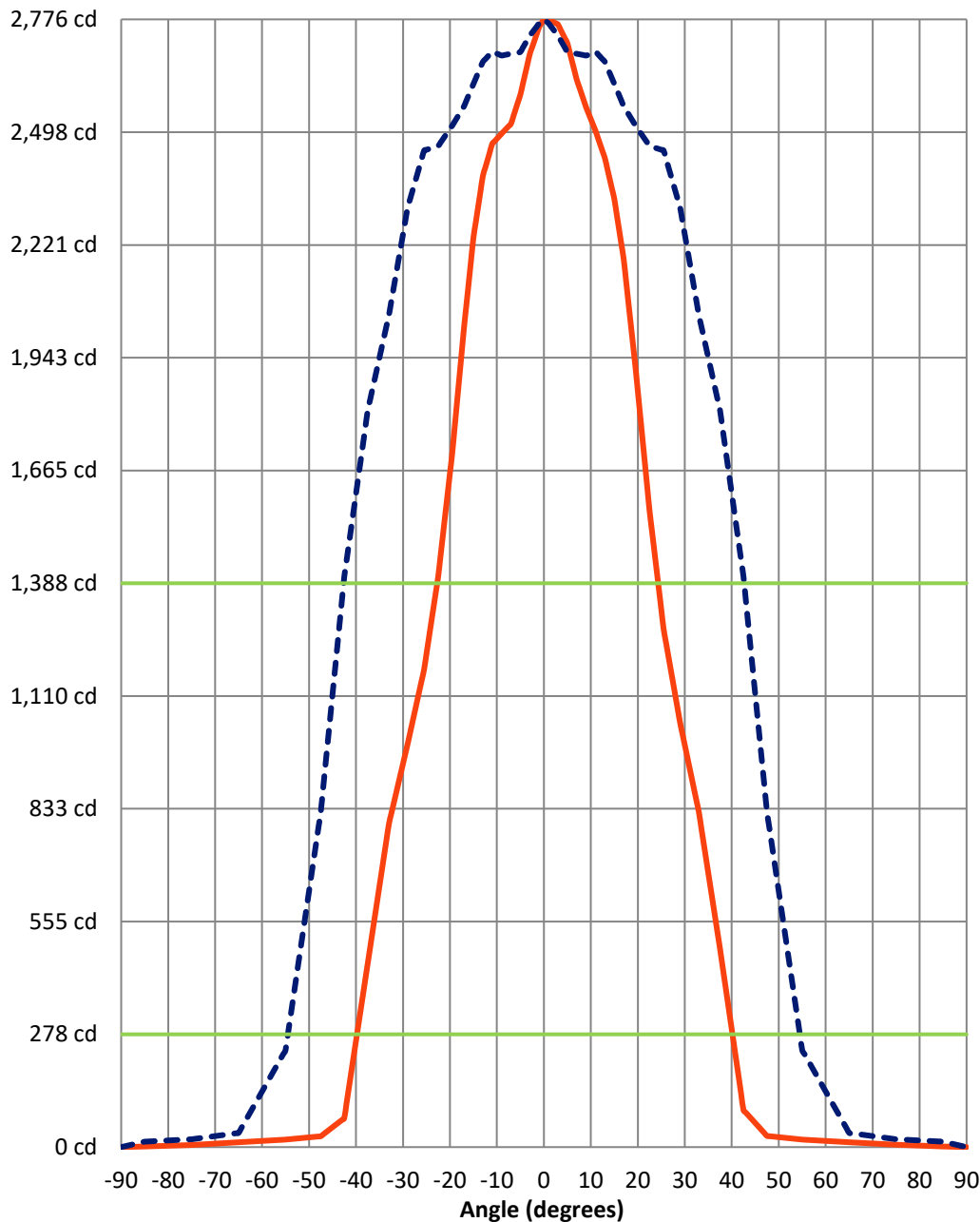
Luminous Intensity Polar Plot



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Luminous Intensity Plot



Beam:
 H Angle: 85.3°
 V Angle: 47.1°
 Lumens: 2075.6
 Efficiency: 66.5%

Field:
 H Angle: 109°
 V Angle: 79.9°
 Lumens: 2982.3
 Efficiency: 95.5%

Spill:
 Lumens: 141
 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°	1.5	2.2	3.7	7.4	11.9	14.1	14.8	14.8	14.8	14.8	15.6
75°	5.9	5.9	5.9	5.2	5.2	5.9	6.7	8.9	11.1	13.4	14.8
65°	11.9	11.9	11.9	11.1	11.1	11.1	10.4	10.4	9.6	11.1	12.6
55°	18.5	18.5	18.5	17.8	17.8	17.8	17.8	17.1	17.1	16.3	16.3
47.5°	27.5	27.5	27.5	27.5	26.7	26.7	26.7	26.7	26.0	26.0	26.0
42.5°	91.3	97.9	92.0	97.2	95.0	99.4	109.1	115.0	119.5	110.6	97.2
37.5°	488.2	500.1	492.7	500.1	492.7	487.5	492.7	484.5	486.0	486.0	477.1
33°	824.3	833.2	828.8	831.0	823.6	819.1	821.4	812.5	802.1	802.1	793.9
29°	1044.7	1052.8	1049.1	1040.2	1029.1	1020.2	1017.2	1010.6	996.5	996.5	994.2
25.5°	1274.7	1278.4	1279.9	1264.3	1249.5	1235.4	1237.6	1238.3	1225.7	1233.1	1236.9
22.5°	1566.3	1581.1	1576.7	1552.2	1542.5	1524.7	1535.1	1541.1	1532.2	1535.1	1546.3
19.5°	1919.5	1933.6	1924.7	1900.9	1880.9	1851.9	1861.6	1871.2	1860.8	1854.9	1868.3
17°	2185.1	2195.5	2187.3	2155.4	2121.3	2088.6	2082.0	2082.0	2069.3	2054.5	2061.9
15°	2333.5	2340.2	2324.6	2279.3	2248.2	2202.9	2193.2	2185.1	2168.0	2146.5	2145.8
13°	2433.6	2434.4	2414.4	2372.1	2332.7	2283.8	2270.4	2256.3	2232.6	2203.6	2193.2
11°	2501.2	2501.2	2482.6	2441.1	2401.7	2355.7	2337.9	2320.9	2291.2	2252.6	2232.6
9°	2559.0	2559.0	2543.5	2507.1	2475.2	2426.2	2410.6	2388.4	2354.3	2307.5	2275.6
7°	2627.3	2629.5	2615.4	2584.3	2565.0	2519.0	2504.1	2473.7	2429.2	2375.0	2333.5
5°	2717.1	2717.1	2697.8	2666.6	2654.0	2619.9	2610.2	2577.6	2524.9	2461.1	2411.4
3°	2763.1	2757.9	2730.4	2694.1	2687.4	2672.6	2676.3	2648.8	2594.7	2528.6	2477.4
1°	2775.7	2770.5	2738.6	2694.1	2693.3	2687.4	2699.3	2675.5	2623.6	2567.2	2528.6
0°	2775.7	2766.0	2735.6	2695.6	2691.1	2686.7	2696.3	2671.1	2616.9	2562.0	2514.5
-1°	2757.1	2749.0	2720.8	2685.2	2674.8	2669.6	2675.5	2645.1	2591.7	2530.8	2469.3
-3°	2690.4	2680.0	2657.7	2634.7	2608.7	2587.2	2585.7	2545.7	2494.5	2444.0	2381.7
-5°	2590.9	2582.0	2562.7	2539.0	2505.6	2475.2	2460.4	2418.8	2378.0	2335.0	2279.3
-7°	2519.0	2512.3	2487.8	2458.1	2421.8	2385.4	2360.2	2329.0	2295.6	2254.8	2209.6
-9°	2494.5	2489.3	2461.1	2425.5	2383.2	2337.2	2315.7	2291.2	2263.0	2225.9	2192.5
-11°	2469.3	2461.8	2433.6	2392.8	2348.3	2305.3	2283.0	2262.3	2238.5	2208.8	2185.1
-13°	2389.9	2376.5	2354.3	2311.2	2268.9	2234.8	2214.0	2197.7	2183.6	2163.6	2151.0
-15°	2238.5	2234.1	2220.7	2176.9	2141.3	2114.6	2097.5	2087.1	2086.4	2072.3	2070.1
-17°	2017.4	1996.6	1995.1	1966.2	1933.6	1926.9	1917.2	1909.8	1910.6	1910.6	1913.5
-19.5°	1709.5	1704.3	1688.7	1665.0	1649.4	1644.2	1639.7	1641.2	1649.4	1650.1	1656.8
-22.5°	1404.5	1400.8	1395.6	1368.2	1361.5	1351.9	1344.4	1345.9	1351.9	1351.9	1360.0
-25.5°	1176.0	1173.0	1165.6	1143.4	1130.8	1116.7	1104.0	1104.8	1106.3	1106.3	1110.0
-29°	992.7	991.3	990.5	980.9	970.5	963.8	955.7	952.7	946.0	941.6	936.4
-33°	795.4	793.9	796.9	790.9	788.0	785.0	775.4	779.1	770.9	764.2	758.3
-37.5°	452.6	451.9	460.0	459.3	453.3	446.7	450.4	448.9	445.9	443.0	440.0
-42.5°	71.2	70.5	70.5	77.2	77.2	86.8	95.0	95.7	91.3	80.9	81.6
-47.5°	26.7	26.7	26.7	26.7	26.0	26.0	25.2	25.2	25.2	24.5	24.5
-55°	18.5	18.5	18.5	17.8	17.8	17.8	17.1	17.1	17.1	16.3	16.3
-65°	11.9	11.9	11.9	11.1	11.1	10.4	10.4	9.6	9.6	10.4	12.6
-75°	5.2	5.2	5.2	5.2	5.2	5.2	5.9	8.2	11.1	13.4	14.8
-85°	1.5	2.2	3.7	7.4	12.6	14.8	15.6	14.8	15.6	15.6	15.6
-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°	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	16.3	16.3	16.3
75°	16.3	17.1	17.1	17.1	17.1	17.1	17.1	16.3	16.3	16.3	16.3
65°	14.8	17.1	18.5	19.3	20.0	20.8	19.3	18.5	17.1	17.1	16.3
55°	17.1	18.5	20.0	23.0	23.7	24.5	23.7	21.5	18.5	17.8	16.3
47.5°	25.2	26.0	26.7	28.9	30.4	31.2	30.4	25.2	20.0	18.5	16.3
42.5°	115.0	104.6	115.0	112.0	106.8	100.2	76.4	28.2	20.8	18.5	16.3
37.5°	465.2	457.1	446.7	433.3	312.4	342.8	154.3	31.2	21.5	18.5	16.3
33°	777.6	759.0	738.3	714.5	676.7	581.7	281.2	46.0	22.3	18.5	16.3
29°	982.4	959.4	926.0	893.3	834.0	711.5	474.1	78.6	23.0	18.5	15.6
25.5°	1228.7	1193.1	1124.1	1058.8	963.1	790.2	538.7	103.1	23.7	18.5	15.6
22.5°	1541.8	1489.1	1377.1	1251.7	1099.6	853.3	582.4	121.7	24.5	18.5	14.8
19.5°	1866.8	1800.0	1653.8	1472.1	1251.0	916.3	617.3	137.3	25.2	18.5	14.8
17°	2069.3	2011.5	1857.9	1638.3	1359.3	977.9	645.5	148.4	25.2	18.5	14.8
15°	2163.6	2114.6	1954.3	1722.1	1428.3	1028.4	670.0	156.6	25.2	18.5	14.1
13°	2217.7	2181.4	2012.2	1775.5	1487.6	1084.0	696.0	163.2	26.0	18.5	14.1
11°	2256.3	2236.3	2064.1	1817.8	1548.5	1144.1	727.9	169.2	26.7	18.5	14.1
9°	2292.7	2283.8	2120.5	1868.3	1622.7	1219.8	759.8	173.6	28.2	18.5	14.1
7°	2337.2	2331.3	2178.4	1919.5	1688.0	1291.0	788.7	177.3	29.7	18.5	13.4
5°	2401.7	2391.4	2244.4	1978.8	1744.4	1344.4	809.5	180.3	32.6	19.3	13.4
3°	2448.5	2436.6	2294.2	2029.3	1792.6	1386.7	820.6	181.8	34.1	19.3	13.4
1°	2467.8	2456.6	2316.4	2053.0	1816.3	1406.0	826.5	183.3	34.9	19.3	13.4
0°	2464.1	2452.9	2312.7	2047.8	1813.4	1403.8	825.8	238.9	34.9	19.3	13.4
-1°	2445.5	2435.1	2294.9	2029.3	1798.5	1389.7	820.6	183.3	34.1	19.3	13.4
-3°	2376.5	2368.4	2227.4	1965.5	1745.1	1341.5	803.5	181.8	31.9	18.5	13.4
-5°	2285.3	2283.8	2140.6	1886.1	1669.4	1268.0	776.1	180.3	29.7	18.5	13.4
-7°	2223.7	2223.7	2073.1	1823.8	1587.1	1191.6	742.7	177.3	28.2	18.5	13.4
-9°	2210.3	2202.2	2038.9	1794.8	1534.4	1139.7	716.0	173.6	26.7	17.8	13.4
-11°	2207.3	2188.1	2015.9	1773.3	1495.8	1098.9	696.0	168.4	26.0	17.8	13.4
-13°	2171.7	2135.4	1961.8	1722.1	1445.3	1053.6	676.7	163.2	25.2	17.8	14.1
-15°	2085.7	2031.5	1860.1	1634.5	1380.1	1004.6	657.4	155.8	24.5	17.1	14.1
-17°	1920.2	1857.9	1692.4	1493.6	1282.9	953.4	635.9	147.7	24.5	17.8	14.1
-19.5°	1660.5	1603.4	1466.9	1308.8	1146.3	893.3	606.2	136.5	23.7	17.8	14.1
-22.5°	1360.0	1309.6	1205.7	1100.3	1000.9	825.8	567.6	120.9	23.7	17.8	14.1
-25.5°	1105.5	1070.7	1011.3	950.5	877.0	756.1	363.6	102.4	23.0	17.8	14.8
-29°	926.0	905.2	875.5	839.2	787.2	687.1	330.9	77.9	23.0	18.5	15.6
-33°	749.4	727.9	705.6	680.4	641.8	561.7	264.9	45.3	22.3	18.5	15.6
-37.5°	432.6	423.7	410.3	184.7	370.2	309.4	143.2	31.2	21.5	18.5	16.3
-42.5°	98.7	80.9	95.7	89.8	91.3	84.6	63.8	27.5	20.8	18.5	16.3
-47.5°	24.5	24.5	25.2	27.5	28.9	29.7	28.9	25.2	20.0	18.5	16.3
-55°	17.1	17.8	20.0	23.0	23.7	24.5	23.7	21.5	18.5	17.8	16.3
-65°	14.8	17.1	18.5	19.3	20.0	20.8	20.0	18.5	17.1	17.1	16.3
-75°	16.3	17.1	17.1	17.1	17.1	17.1	17.1	17.1	16.3	16.3	16.3
-85°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
-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)