

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: P95431

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P95431
REPORT SCALED FROM IESNA LM79-08 TEST DATA (P22641)
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-WST
Description: ARCHITECTURAL FLOOD LUMINAIRE
WIDE SYMMETRIC RECTANGULAR DISTRIBUTION
WITH 20 LED'S, 525mA DRIVE CURRENT
Light Source: -
Ballast/Driver: -

Summary

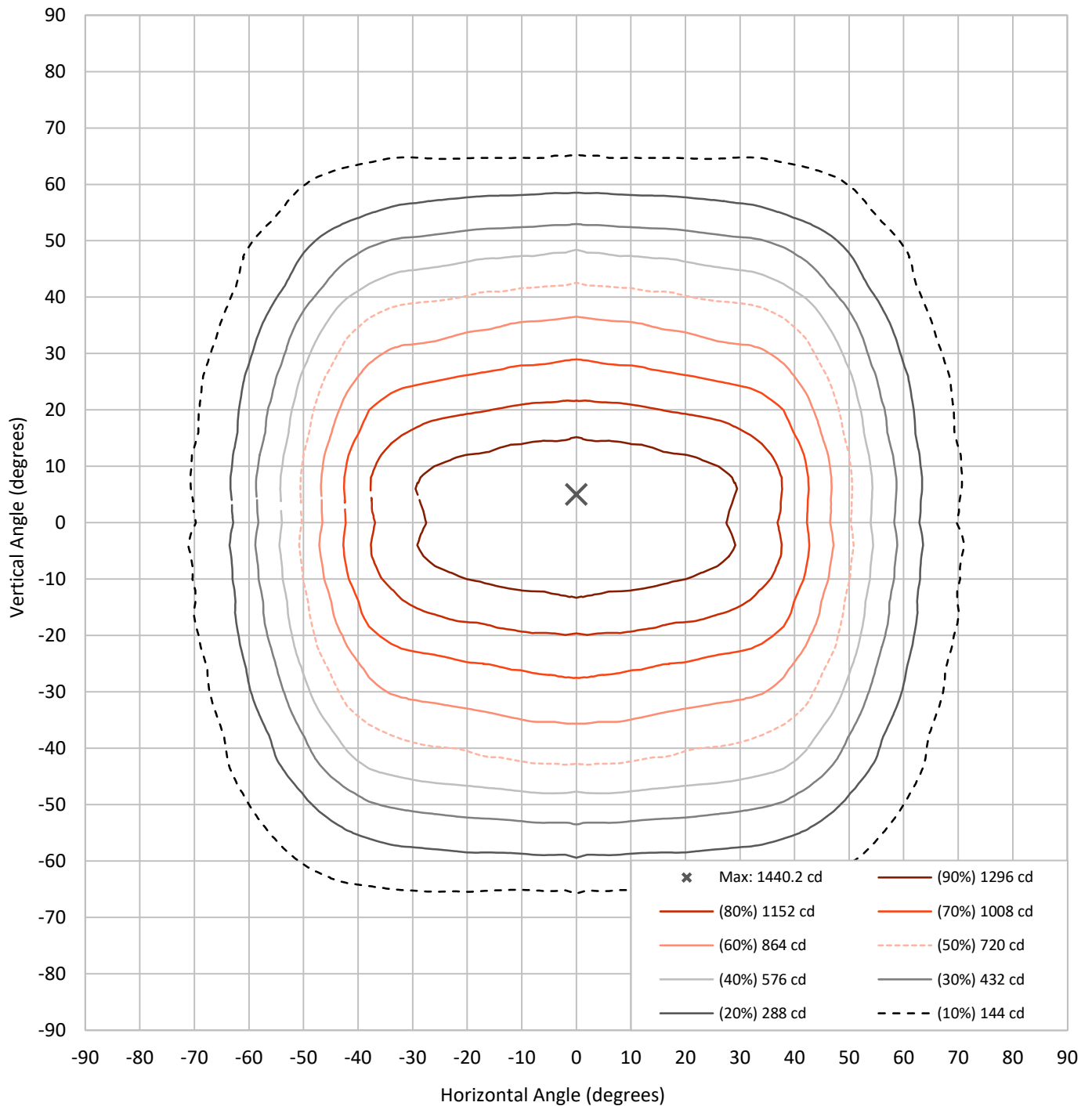
Lumens per Lamp:	N/A	NEMA Type:	7H x 7V
Luminaire Lumens:	3066.3 lumens	Max Intensity:	1440.2 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 5°V
Efficacy:	87.9 lumens/watt		
Luminous Opening:	(L: 0.83 ' x W: 0 ' x H: 0.5 ')		
Beam Angle (50%):	101.1°H x 85.4°V	Field Angle (10%):	140.9°H x 130.5°V
Beam Lumens:	2144.8 lumens	Field Lumens:	2958.1 lumens
Beam Efficiency:	69.9%	Field Efficiency:	96.5%
Input Watts (W):	34.9		
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:	25 FT		



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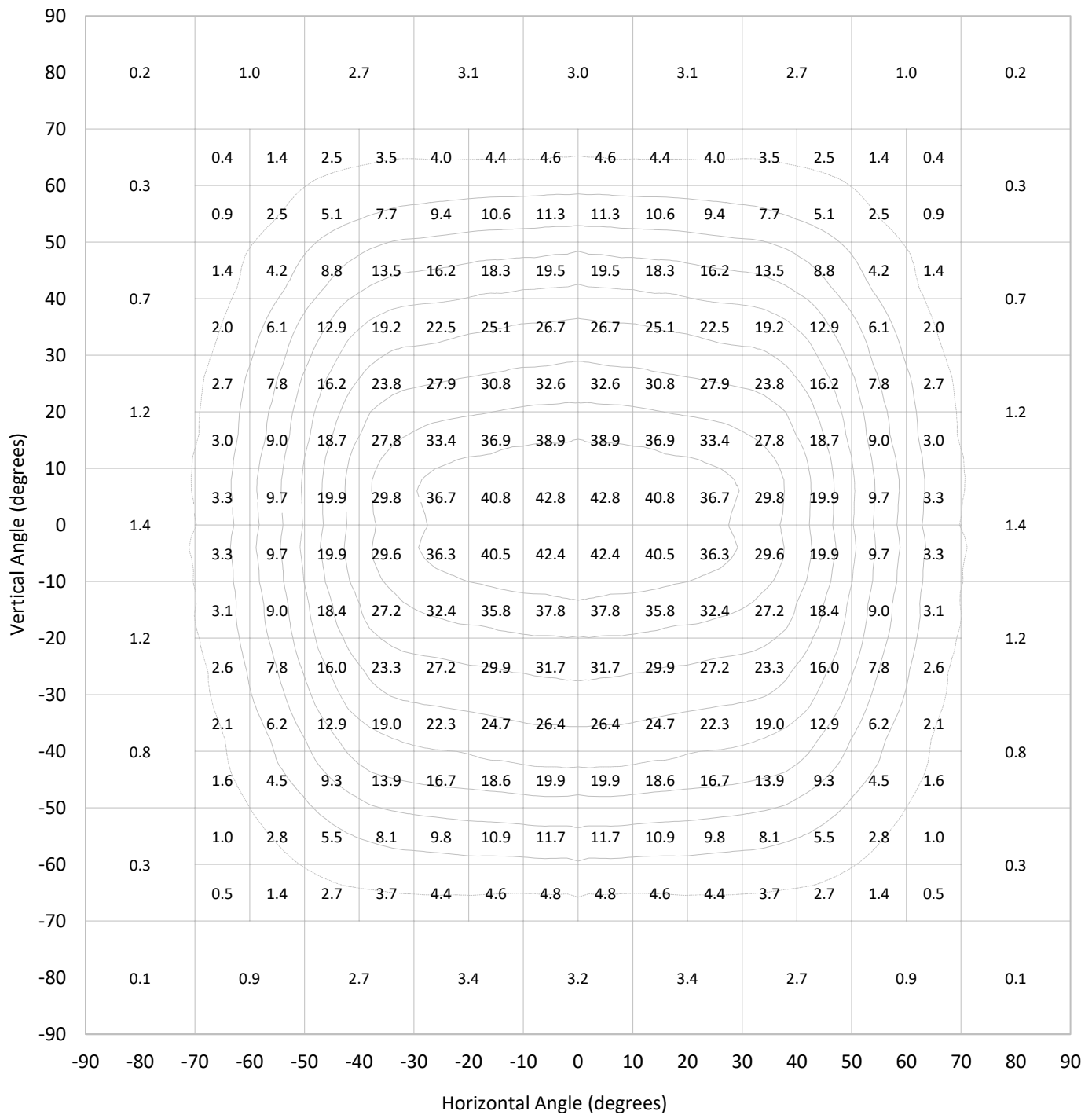
Iso-Candela Plot





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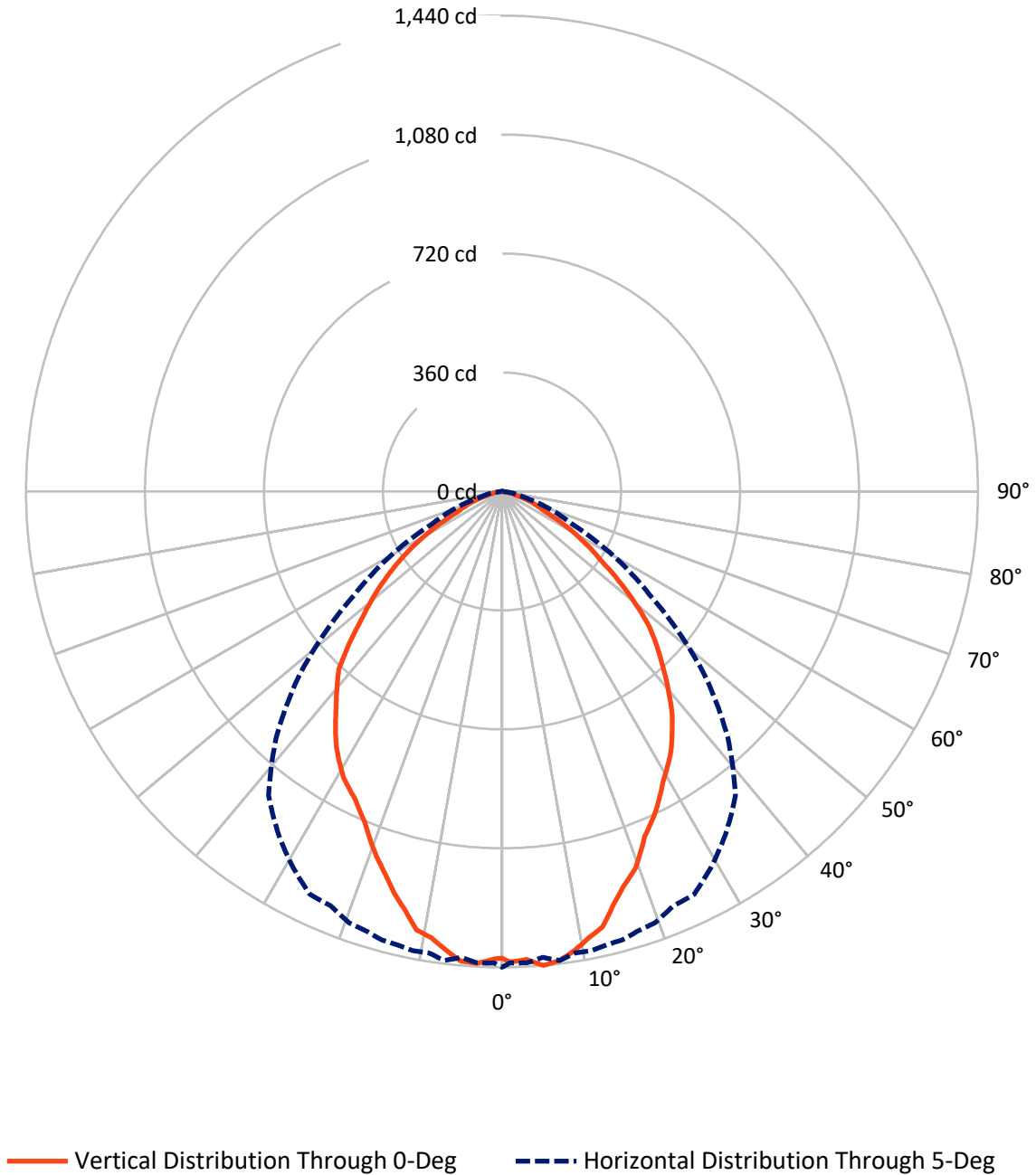
Lumen Table



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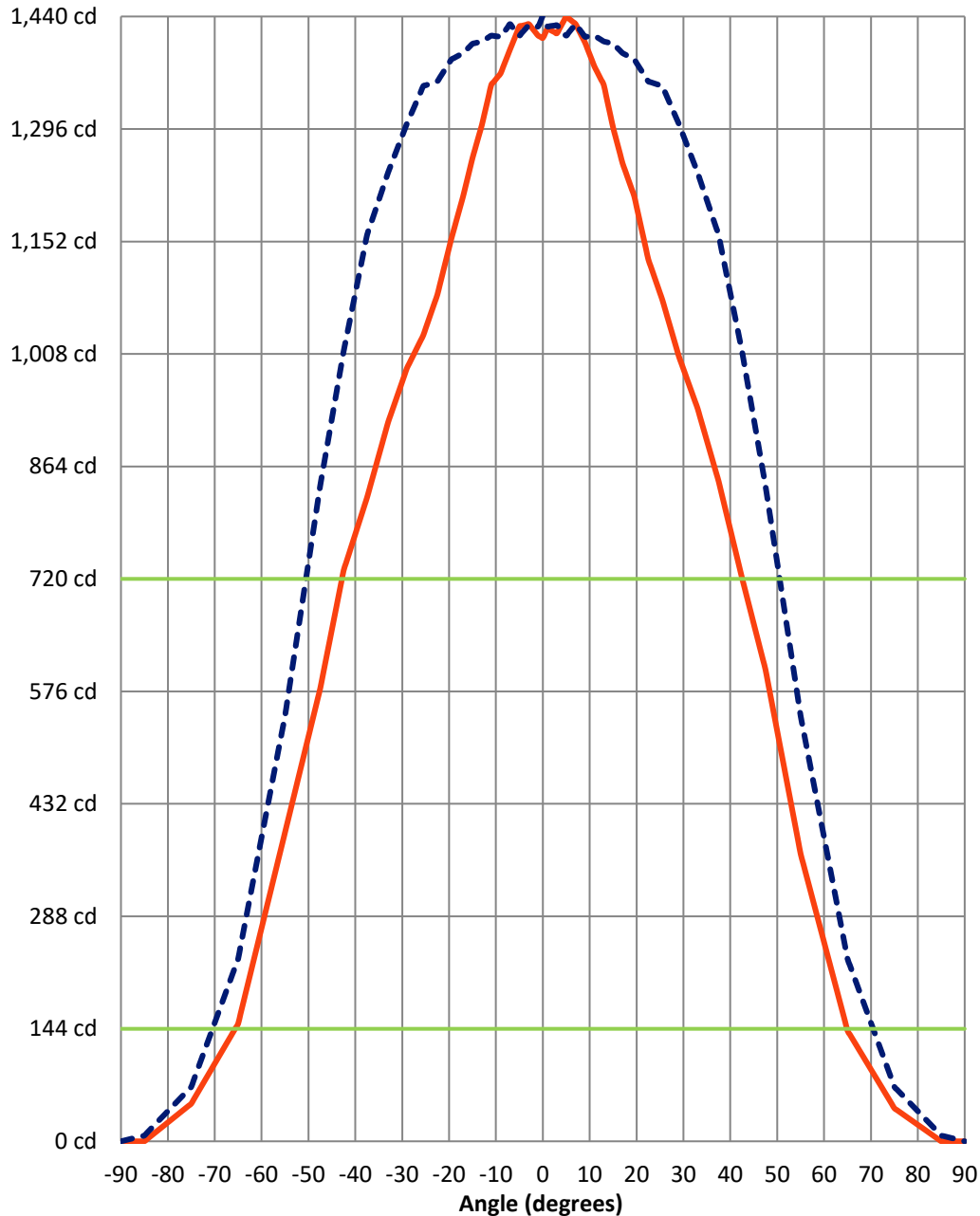
Luminous Intensity Polar Plot



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Luminous Intensity Plot



Beam:
 H Angle: 101.1°
 V Angle: 85.4°
 Lumens: 2144.8
 Efficiency: 69.9%

Field:
 H Angle: 140.9°
 V Angle: 130.5°
 Lumens: 2958.1
 Efficiency: 96.5%

Spill:
 Lumens: 108.2
 Efficiency: 3.5%

— Vertical Distribution through 0-Deg
 - - - Horizontal Distribution through 5-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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.5	7.4	1.5
75°	42.3	31.9	43.8	33.4	36.4	34.9	40.8	37.8	39.3	42.3	40.8
65°	141.7	134.3	141.7	137.3	126.9	135.8	131.3	132.8	132.8	132.8	132.8
55°	368.0	365.0	366.5	366.5	365.0	357.6	357.6	353.2	356.1	351.7	347.2
47.5°	604.0	588.4	586.9	586.9	570.6	572.1	573.5	564.6	561.7	560.2	551.3
42.5°	721.2	712.3	706.4	707.8	700.4	697.4	697.4	678.9	681.9	688.5	664.1
37.5°	845.1	843.6	834.7	831.7	828.8	828.8	822.8	810.2	804.3	801.3	792.4
33°	938.6	937.1	929.7	922.3	920.8	913.4	919.3	908.9	890.4	885.9	881.5
29°	1005.4	1006.8	1002.4	992.0	988.3	985.3	988.3	974.9	966.0	961.6	944.5
25.5°	1077.3	1066.9	1065.5	1058.0	1061.0	1053.6	1053.6	1044.7	1037.3	1033.6	1024.7
22.5°	1129.3	1136.7	1127.8	1122.6	1124.8	1121.1	1112.2	1107.8	1100.3	1091.4	1084.0
19.5°	1210.1	1198.3	1201.2	1196.8	1193.8	1189.4	1182.0	1174.5	1164.9	1157.5	1150.0
17°	1252.4	1245.0	1245.0	1251.0	1249.5	1231.7	1234.6	1233.1	1213.9	1204.2	1201.2
15°	1297.7	1290.3	1282.9	1279.9	1287.3	1271.0	1263.6	1262.1	1245.0	1233.1	1231.7
13°	1352.6	1337.0	1331.1	1329.6	1331.1	1323.7	1322.2	1322.2	1299.2	1288.8	1285.8
11°	1376.3	1367.4	1360.0	1351.1	1358.5	1351.1	1346.7	1341.5	1326.6	1317.7	1311.8
9°	1406.8	1399.3	1397.9	1389.0	1399.3	1397.9	1386.7	1385.2	1374.9	1357.1	1349.6
7°	1430.5	1426.1	1421.6	1408.3	1415.7	1405.3	1409.7	1405.3	1394.9	1383.8	1383.8
5°	1440.2	1427.5	1429.0	1415.7	1430.5	1414.2	1415.7	1408.3	1405.3	1393.4	1385.2
3°	1418.6	1417.2	1414.2	1408.3	1420.1	1408.3	1408.3	1403.8	1399.3	1385.2	1380.8
1°	1424.6	1417.2	1415.7	1397.9	1409.7	1405.3	1412.7	1396.4	1391.9	1382.3	1379.3
0°	1412.7	1411.2	1406.8	1390.4	1403.8	1406.8	1399.3	1397.9	1386.7	1373.4	1374.9
-1°	1415.7	1409.7	1403.8	1397.9	1409.7	1399.3	1403.8	1406.8	1393.4	1377.8	1370.4
-3°	1430.5	1420.1	1415.7	1421.6	1423.1	1421.6	1411.2	1412.7	1409.7	1390.4	1385.2
-5°	1427.5	1424.6	1418.6	1421.6	1421.6	1424.6	1415.7	1412.7	1399.3	1386.7	1374.9
-7°	1397.9	1389.0	1390.4	1380.8	1386.7	1382.3	1380.8	1376.3	1373.4	1345.2	1341.5
-9°	1367.4	1367.4	1364.5	1363.0	1370.4	1360.0	1354.1	1349.6	1346.7	1326.6	1317.7
-11°	1352.6	1337.0	1332.6	1325.1	1320.7	1325.1	1316.2	1308.8	1302.9	1288.8	1281.4
-13°	1301.4	1294.7	1297.7	1278.4	1275.4	1275.4	1269.5	1266.5	1249.5	1237.6	1237.6
-15°	1259.1	1252.4	1257.6	1251.0	1252.4	1249.5	1242.0	1234.6	1219.8	1204.2	1202.7
-17°	1210.1	1213.9	1216.8	1205.7	1210.1	1208.7	1202.7	1202.7	1186.4	1168.6	1164.9
-19.5°	1156.0	1164.9	1158.9	1151.5	1154.5	1153.0	1141.1	1133.7	1127.8	1118.1	1118.1
-22.5°	1084.0	1097.4	1089.9	1084.0	1085.5	1085.5	1074.4	1069.9	1061.0	1052.1	1049.1
-25.5°	1032.1	1040.2	1030.6	1026.1	1029.1	1018.7	1017.2	1015.8	1000.9	997.9	996.5
-29°	989.8	986.8	985.3	980.9	977.9	973.5	963.1	963.1	938.6	943.0	938.6
-33°	920.8	923.7	913.4	908.9	916.3	907.4	899.3	893.3	881.5	875.5	866.6
-37.5°	824.3	827.3	821.4	816.9	821.4	814.7	807.3	793.9	788.0	783.5	771.6
-42.5°	730.8	736.8	733.8	725.6	733.8	722.7	716.7	704.9	704.9	704.9	688.5
-47.5°	579.5	586.9	589.9	589.9	589.9	581.0	578.0	569.1	566.1	558.7	554.2
-55°	395.5	385.1	377.7	385.1	380.6	382.1	369.5	372.5	365.0	366.5	365.0
-65°	150.6	140.2	140.2	144.7	140.2	138.7	138.7	138.7	141.7	141.7	146.2
-75°	48.2	34.9	45.3	34.9	39.3	43.8	46.7	43.8	45.3	46.7	43.8
-85°	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	1.5	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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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°	3.0	3.0	1.5	4.5	4.5	8.9	7.4	8.9	7.4	7.4	10.4
75°	42.3	40.8	45.3	48.2	45.3	39.3	39.3	28.9	11.9	8.9	8.9
65°	131.3	131.3	135.8	137.3	128.4	116.5	103.9	80.1	27.5	13.4	5.9
55°	338.3	332.4	319.8	310.9	281.9	249.3	212.9	135.8	57.1	13.4	3.0
47.5°	538.7	526.8	514.9	510.5	471.1	404.4	332.4	212.9	97.9	27.5	7.4
42.5°	649.2	641.8	632.2	617.3	578.0	503.8	395.5	250.8	99.4	14.8	0.0
37.5°	777.6	763.5	760.5	745.7	703.4	624.7	493.4	313.9	131.3	40.8	5.9
33°	868.1	849.6	837.7	833.2	795.4	709.3	572.1	359.1	153.6	51.2	7.4
29°	937.1	925.2	920.8	907.4	858.5	767.9	629.2	391.0	170.7	55.6	7.4
25.5°	1014.3	1000.9	988.3	973.5	923.7	818.4	687.1	430.3	191.4	57.1	7.4
22.5°	1072.9	1062.5	1046.2	1027.6	972.0	863.6	716.7	449.6	197.4	57.1	4.5
19.5°	1141.1	1130.8	1113.7	1087.0	1029.1	899.3	748.6	478.6	204.0	61.6	7.4
17°	1189.4	1176.0	1157.5	1122.6	1053.6	932.7	769.4	487.5	207.0	61.6	5.9
15°	1224.2	1199.8	1179.0	1148.6	1077.3	949.7	782.0	489.0	207.0	58.6	1.5
13°	1275.4	1249.5	1228.7	1184.9	1121.1	982.4	811.7	517.9	224.8	75.7	7.4
11°	1301.4	1287.3	1257.6	1202.7	1130.8	991.3	827.3	525.3	227.8	75.7	5.9
9°	1328.1	1314.8	1279.9	1233.1	1157.5	1006.8	833.2	540.2	233.7	74.2	8.9
7°	1348.2	1341.5	1305.9	1243.5	1161.9	1014.3	843.6	547.6	243.4	72.7	10.4
5°	1357.1	1351.1	1302.9	1240.6	1160.4	1011.3	839.2	544.6	233.7	69.7	7.4
3°	1352.6	1332.6	1281.4	1231.7	1154.5	1002.4	834.7	540.2	226.3	63.1	4.5
1°	1352.6	1332.6	1281.4	1228.7	1156.0	1008.3	840.6	538.7	232.2	63.1	5.9
0°	1338.5	1322.2	1276.9	1215.3	1145.6	1002.4	831.7	534.2	221.8	57.1	3.0
-1°	1338.5	1325.1	1279.9	1222.8	1150.0	1008.3	839.2	537.2	230.8	63.1	4.5
-3°	1354.1	1334.1	1302.9	1240.6	1154.5	1014.3	854.0	551.3	243.4	81.6	14.8
-5°	1349.6	1337.0	1299.2	1239.1	1164.9	1018.7	855.5	549.1	243.4	81.6	19.3
-7°	1316.2	1304.4	1272.5	1222.8	1148.6	1000.9	830.3	532.7	224.8	66.8	10.4
-9°	1301.4	1288.8	1252.4	1201.2	1130.8	995.0	830.3	532.7	232.2	71.2	14.8
-11°	1266.5	1248.0	1215.3	1179.0	1116.7	976.4	813.2	528.3	223.3	71.2	13.4
-13°	1216.8	1201.2	1177.5	1144.1	1078.8	944.5	788.0	502.3	211.5	60.1	4.5
-15°	1193.8	1176.0	1160.4	1136.7	1065.5	932.7	779.1	499.3	220.4	72.7	7.4
-17°	1160.4	1142.6	1126.3	1100.3	1043.2	925.2	765.0	494.9	218.9	72.7	8.9
-19.5°	1110.7	1092.9	1075.8	1053.6	1000.9	881.5	739.7	480.1	205.5	63.1	5.9
-22.5°	1037.3	1024.7	1017.2	1000.9	949.7	846.6	719.7	454.1	195.9	57.1	4.5
-25.5°	985.3	972.0	961.6	948.2	897.8	802.8	673.0	427.4	178.1	49.7	1.5
-29°	926.7	914.8	905.9	900.7	852.5	762.0	627.7	401.4	173.6	54.2	8.9
-33°	858.5	848.1	842.1	821.4	788.0	706.4	576.5	359.1	160.3	46.7	7.4
-37.5°	760.5	756.1	748.6	730.8	691.5	617.3	493.4	312.4	134.3	34.9	1.5
-42.5°	677.4	677.4	667.0	643.3	612.9	535.7	430.3	280.5	126.9	45.3	16.3
-47.5°	549.1	540.2	528.3	507.5	483.0	417.7	338.3	215.9	103.9	27.5	5.9
-55°	356.1	347.2	339.8	332.4	309.4	274.5	224.8	153.6	69.7	19.3	7.4
-65°	143.2	146.2	143.2	140.2	132.8	126.9	108.3	78.6	36.4	10.4	4.5
-75°	48.2	48.2	46.7	49.7	54.2	45.3	37.8	23.0	16.3	7.4	4.5
-85°	1.5	1.5	0.0	1.5	4.5	0.0	1.5	7.4	7.4	1.5	4.5
-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)