

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776138

Luminaire Tested: HCDJBL51525CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776138  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B048)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS1525CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K  
Description: 8 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3120.5 lumens  
Efficiency: N/A  
Efficacy: 124.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.17 / 1.27  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

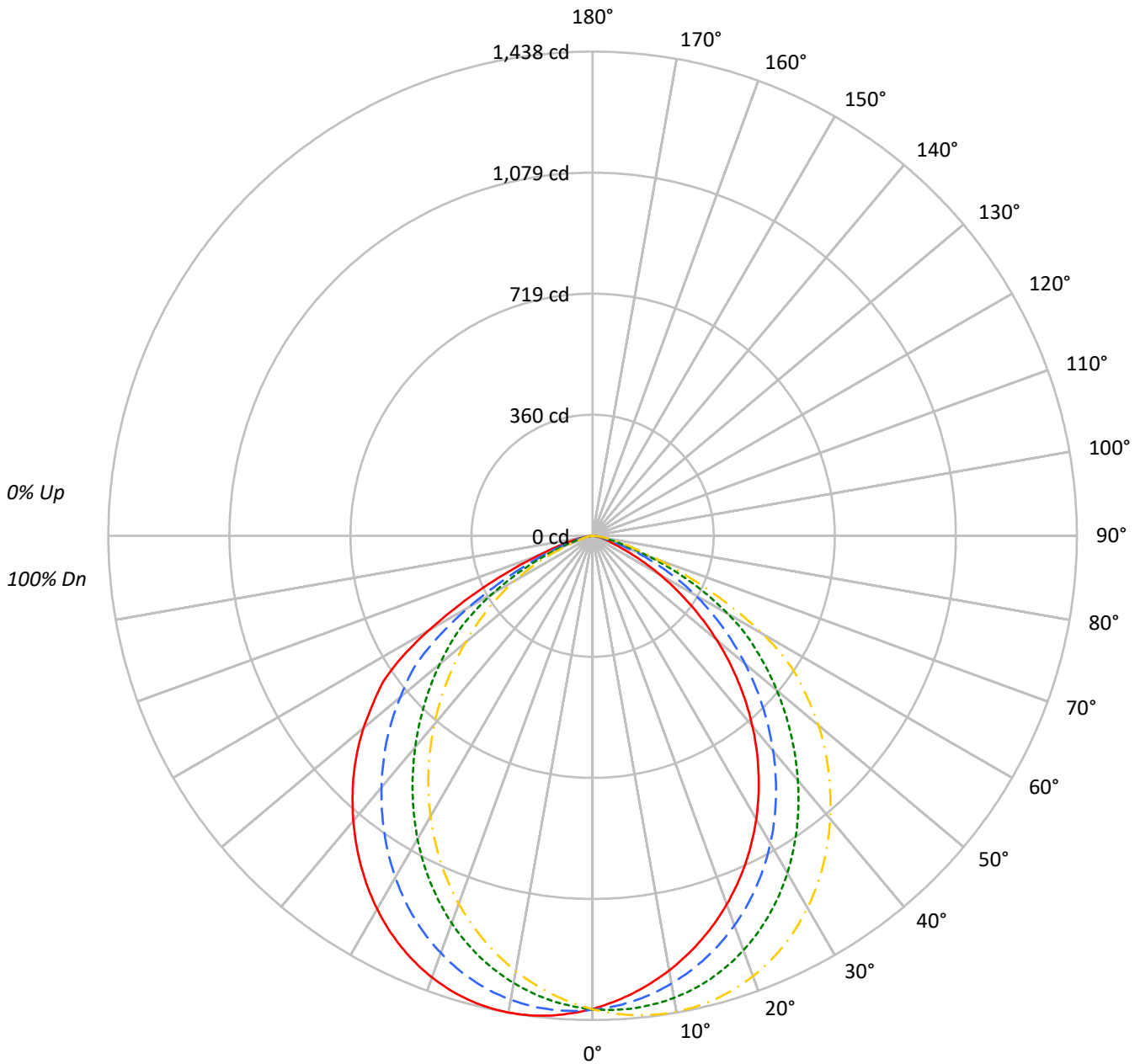
Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	107	103	100	108	105	101	98	100	98	95	97	94	92	93	91	90	88					88			
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76					76			
3	94	85	77	72	92	83	76	71	80	74	70	77	73	69	75	71	67	65					65			
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57					57			
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39					39			
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	42	37	35					35			
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32					32			
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29					29			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	42941	42941	42941	42941
5°	41812	43166	43831	42483
10°	40624	43194	44580	41814
15°	39313	43008	45081	40928
20°	37850	42558	45343	39767
25°	36179	41822	45352	38328
30°	34256	40774	45121	36660
35°	32019	39421	44669	34740
40°	29405	37786	44059	32669
45°	26381	35940	43297	30474
50°	22836	33922	42168	28137
55°	18704	31612	40506	25549
60°	14020	28350	34292	20895
65°	8980	22828	24851	14954
70°	5088	15684	15362	9007
75°	3869	9177	9720	4884
80°	2725	5046	5538	2321
85°	1611	2767	1436	981

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 43897 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.7	4.3
10°-20°	375.5	12.0
20°-30°	552.8	17.7
30°-40°	633.8	20.3
40°-50°	610.0	19.5
50°-60°	486.4	15.6
60°-70°	252.5	8.1
70°-80°	68.1	2.2
80°-90°	8.7	0.3
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°-30°	1061.0	34.0
0°-40°	1694.8	54.3
0°-60°	2791.2	89.4
0°-90°	3120.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3120.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1406	1406	1406	1406	1406	
5°	1364	1408	1430	1386	1364	129
15°	1244	1361	1426	1295	1244	350
25°	1074	1242	1346	1138	1074	493
35°	859	1058	1198	932	859	536
45°	611	832	1003	706	611	470
55°	351	594	761	480	351	314
65°	124	316	344	207	124	128
75°	33	78	82	41	33	36
85°	5	8	4	3	5	6
90°	0	1	0	0	0	



TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5
0.5°	1401.4	1407.5	1407.0	1406.3	1407.0	1408.3	1409.1	1409.1	1408.0	1412.4	1409.3
1°	1397.9	1405.0	1405.5	1406.0	1408.0	1410.6	1412.1	1412.1	1411.1	1414.4	1410.6
1.5°	1394.1	1402.2	1403.7	1405.7	1408.5	1412.1	1414.6	1415.2	1414.1	1416.2	1411.3
2°	1390.2	1399.4	1401.9	1405.0	1409.1	1413.9	1417.2	1418.2	1416.9	1417.9	1412.1
2.5°	1386.2	1396.3	1399.6	1404.5	1409.3	1415.4	1419.7	1421.0	1419.5	1419.7	1412.6
3°	1382.1	1393.0	1397.6	1403.5	1409.6	1416.9	1422.0	1423.5	1421.8	1421.3	1412.9
3.5°	1378.0	1389.7	1395.3	1402.4	1409.6	1418.2	1424.1	1426.1	1424.3	1422.5	1413.1
4°	1373.5	1386.2	1392.8	1401.2	1409.3	1419.2	1425.8	1428.4	1426.3	1423.5	1413.1
4.5°	1369.1	1382.6	1390.0	1399.6	1409.1	1420.0	1427.6	1430.4	1428.4	1424.6	1412.9
5°	1364.3	1378.8	1387.2	1398.1	1408.5	1420.5	1429.1	1432.4	1430.2	1425.3	1412.6
5.5°	1359.7	1375.0	1384.4	1396.3	1407.8	1421.0	1430.4	1434.2	1431.7	1425.8	1411.8
6°	1354.6	1370.9	1381.1	1394.3	1407.0	1421.3	1431.7	1435.7	1433.2	1426.1	1411.3
6.5°	1349.6	1366.6	1377.8	1392.3	1405.7	1421.5	1432.7	1437.0	1434.5	1426.3	1410.6
7°	1344.5	1362.3	1374.5	1390.0	1404.5	1421.5	1433.7	1438.5	1435.5	1426.3	1409.6
7.5°	1339.1	1357.7	1370.9	1387.7	1402.9	1421.3	1434.2	1439.6	1436.3	1426.1	1408.3
8°	1333.5	1353.1	1367.1	1384.9	1401.7	1421.0	1434.7	1440.3	1437.0	1425.8	1406.8
8.5°	1327.9	1348.3	1363.0	1382.1	1399.9	1420.2	1435.2	1441.1	1437.5	1425.1	1405.2
9°	1322.1	1343.5	1359.0	1379.0	1397.9	1419.7	1435.2	1441.6	1438.0	1424.6	1403.5
9.5°	1316.5	1338.4	1354.9	1376.0	1395.8	1418.7	1435.2	1441.8	1438.0	1423.5	1401.4
10°	1310.4	1333.3	1350.3	1372.7	1393.3	1417.4	1435.0	1442.1	1438.0	1422.3	1399.4
10.5°	1304.6	1327.9	1345.7	1369.1	1391.0	1416.4	1434.7	1441.8	1437.5	1421.0	1397.1
11°	1298.2	1322.4	1341.2	1365.3	1388.2	1414.9	1434.0	1441.6	1437.0	1419.5	1394.6
11.5°	1291.8	1317.0	1336.3	1361.8	1385.4	1413.4	1433.2	1441.1	1436.5	1417.9	1391.8
12°	1285.2	1311.2	1331.5	1357.7	1382.4	1411.6	1432.4	1440.6	1435.5	1415.9	1389.0
12.5°	1278.9	1305.3	1326.2	1353.4	1379.3	1409.6	1431.2	1439.6	1434.5	1413.9	1385.9
13°	1272.0	1299.2	1321.1	1349.0	1376.0	1407.5	1429.9	1438.5	1433.2	1411.6	1382.6
13.5°	1265.1	1293.1	1315.5	1344.7	1372.4	1405.2	1428.4	1437.3	1431.9	1409.3	1379.3
14°	1258.3	1287.0	1309.9	1339.9	1368.6	1402.7	1426.6	1436.0	1430.4	1406.5	1375.5
14.5°	1250.9	1280.7	1304.3	1335.3	1364.8	1399.9	1424.8	1434.5	1428.4	1403.7	1371.9
15°	1243.8	1274.3	1298.5	1330.2	1360.7	1396.8	1422.8	1432.4	1426.3	1400.7	1367.9
15.5°	1236.4	1267.4	1292.4	1325.1	1356.4	1394.1	1420.5	1430.4	1424.1	1397.6	1363.8
16°	1229.0	1260.6	1286.0	1319.8	1351.8	1390.7	1417.9	1428.4	1421.8	1394.1	1359.7
16.5°	1221.4	1253.7	1279.6	1314.2	1347.3	1387.2	1415.4	1425.8	1419.2	1390.5	1355.2
17°	1213.5	1246.6	1273.3	1308.4	1342.4	1383.6	1412.6	1423.3	1416.4	1386.7	1350.3
17.5°	1205.7	1239.5	1266.7	1302.8	1337.6	1379.8	1409.6	1420.5	1413.4	1382.6	1345.5
18°	1198.0	1232.1	1260.1	1296.7	1332.3	1375.7	1406.5	1417.4	1410.1	1378.5	1340.4
18.5°	1189.9	1224.7	1252.9	1290.6	1326.9	1371.4	1403.2	1414.4	1406.5	1374.2	1335.3
19°	1181.2	1217.1	1245.8	1284.2	1321.3	1367.4	1399.6	1411.1	1403.2	1369.9	1330.0
19.5°	1173.1	1209.2	1238.7	1277.6	1315.7	1362.8	1395.8	1407.5	1399.4	1365.1	1324.4
20°	1165.0	1201.6	1231.3	1271.2	1309.9	1357.9	1392.0	1403.7	1395.6	1360.2	1318.5
20.5°	1156.3	1193.4	1224.0	1264.4	1303.5	1353.1	1387.9	1399.9	1391.5	1355.2	1312.9
21°	1147.2	1185.6	1216.3	1257.5	1297.4	1348.0	1383.6	1395.8	1387.2	1350.1	1306.8



TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1121.0	1160.4	1192.4	1235.4	1277.9	1331.8	1369.6	1382.4	1372.9	1333.5	1287.8
23°	1111.8	1151.8	1184.3	1227.8	1271.0	1325.9	1364.6	1377.8	1367.9	1327.4	1280.9
23.5°	1102.4	1143.1	1175.9	1220.1	1263.6	1320.1	1359.5	1372.7	1362.8	1321.6	1274.3
24°	1093.0	1134.2	1167.3	1212.3	1256.5	1313.7	1354.1	1367.6	1357.4	1315.2	1267.2
24.5°	1083.6	1125.3	1158.6	1203.9	1249.1	1307.4	1348.5	1362.3	1351.8	1308.9	1260.1
25°	1074.0	1116.2	1150.0	1195.7	1241.5	1301.0	1342.7	1356.7	1346.3	1302.3	1252.7
25.5°	1064.3	1106.7	1141.1	1187.3	1233.6	1294.1	1336.8	1351.1	1340.1	1295.7	1245.3
26°	1054.4	1097.6	1131.9	1178.7	1225.7	1287.3	1330.7	1345.2	1334.0	1288.8	1237.7
26.5°	1044.5	1088.2	1122.8	1169.8	1217.6	1280.4	1324.6	1339.1	1327.9	1281.7	1230.1
27°	1034.3	1078.8	1113.6	1161.2	1209.5	1273.3	1318.0	1332.8	1321.6	1274.6	1221.9
27.5°	1024.1	1069.1	1104.2	1152.3	1201.1	1265.9	1311.4	1326.7	1315.0	1267.4	1214.0
28°	1013.9	1059.2	1094.8	1143.1	1192.2	1258.0	1304.8	1320.1	1308.4	1259.8	1205.7
28.5°	1003.3	1049.0	1085.1	1133.7	1183.5	1250.7	1297.9	1313.2	1301.2	1252.2	1197.5
29°	992.8	1039.1	1075.2	1124.0	1174.6	1242.5	1290.6	1306.3	1294.4	1244.3	1188.9
29.5°	982.4	1028.9	1065.6	1114.6	1165.7	1234.6	1283.5	1299.5	1287.0	1236.4	1180.2
30°	971.7	1019.0	1055.4	1105.0	1156.6	1226.5	1276.1	1292.4	1279.9	1228.5	1171.3
30.5°	960.8	1008.4	1045.2	1095.3	1147.2	1217.9	1268.5	1285.0	1272.3	1220.1	1162.7
31°	949.9	997.9	1035.1	1085.6	1138.0	1209.5	1260.8	1277.3	1264.6	1212.0	1153.8
31.5°	938.7	987.5	1024.6	1075.2	1128.4	1200.8	1252.7	1269.7	1256.8	1203.6	1144.6
32°	927.8	976.8	1014.2	1065.1	1118.4	1191.9	1244.8	1261.8	1248.9	1195.2	1135.5
32.5°	916.6	965.6	1003.5	1054.6	1108.5	1183.0	1236.7	1254.2	1240.7	1186.3	1126.3
33°	905.4	955.0	992.6	1044.5	1098.6	1173.6	1228.3	1246.3	1232.6	1177.7	1116.7
33.5°	893.9	944.0	981.9	1033.8	1088.4	1164.5	1219.9	1237.7	1224.2	1168.5	1107.3
34°	882.2	933.1	971.2	1023.4	1078.5	1155.3	1211.0	1229.3	1215.8	1159.6	1097.6
34.5°	870.8	921.9	960.3	1012.4	1068.1	1145.6	1202.3	1220.9	1207.2	1150.7	1087.9
35°	859.1	910.5	949.4	1002.0	1057.7	1136.0	1193.4	1212.5	1198.5	1141.3	1078.0
35.5°	847.4	899.0	937.9	990.8	1047.0	1126.3	1184.3	1203.6	1189.9	1131.9	1068.4
36°	835.5	887.6	926.7	979.9	1036.6	1116.4	1175.4	1194.5	1180.7	1122.3	1057.9
36.5°	823.5	876.1	915.3	968.4	1025.9	1106.5	1165.7	1185.6	1171.8	1113.1	1047.8
37°	811.6	864.4	904.1	957.8	1015.2	1096.1	1156.3	1176.7	1162.4	1103.2	1037.8
37.5°	799.6	852.8	892.4	946.6	1004.0	1085.9	1146.7	1167.3	1153.3	1093.5	1027.7
38°	787.2	841.1	880.7	935.1	993.1	1075.5	1137.0	1157.9	1143.9	1083.6	1017.3
38.5°	775.0	829.1	869.0	923.2	981.9	1065.1	1127.3	1148.4	1134.5	1074.0	1006.8
39°	763.0	816.9	857.3	912.2	971.2	1054.6	1117.4	1139.3	1124.8	1063.8	996.4
39.5°	750.8	805.2	845.6	900.6	959.5	1043.9	1107.3	1129.4	1115.4	1053.6	986.0
40°	737.8	793.3	833.7	889.1	948.1	1033.0	1097.3	1119.5	1105.5	1043.4	975.0
40.5°	725.6	781.1	821.7	877.2	936.7	1022.3	1087.2	1109.5	1095.6	1033.3	964.6
41°	712.9	768.9	809.8	865.7	925.2	1011.4	1076.5	1099.9	1085.6	1022.8	953.7
41.5°	700.5	756.6	797.8	854.0	913.8	1000.2	1066.3	1089.7	1075.5	1012.9	943.0
42°	687.5	744.4	785.4	842.3	902.3	989.0	1055.6	1079.3	1065.3	1002.3	932.3
42.5°	675.3	732.0	773.7	830.6	890.9	978.1	1045.5	1069.1	1055.1	991.6	921.1
43°	662.3	719.5	761.5	818.9	879.2	966.9	1034.5	1058.9	1045.0	980.6	910.2
43.5°	649.4	707.1	749.5	806.7	867.5	955.7	1023.9	1048.5	1034.5	970.2	899.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	611.0	669.2	712.7	771.1	832.4	921.4	991.1	1016.7	1002.8	937.2	865.5
45.5°	598.0	656.7	700.7	759.4	820.7	910.0	979.9	1006.1	992.1	925.7	854.0
46°	585.0	644.0	688.3	747.2	809.0	898.5	968.7	994.9	981.1	914.5	842.6
46.5°	572.1	631.3	676.3	735.3	797.3	886.8	957.5	983.9	970.2	903.1	830.9
47°	559.3	618.8	663.8	723.3	785.6	875.1	945.8	972.8	958.8	891.4	819.2
47.5°	546.1	606.1	651.6	711.4	773.4	863.4	934.6	961.3	947.3	879.7	807.0
48°	532.7	593.4	639.2	699.7	761.7	851.7	922.9	949.9	936.1	867.2	795.0
48.5°	519.9	580.5	627.0	687.5	750.0	840.0	911.2	938.2	924.5	855.0	782.8
49°	507.0	568.0	614.5	675.5	738.1	827.8	899.3	926.5	912.5	842.6	770.4
49.5°	494.0	555.3	602.6	663.6	725.9	815.9	887.6	914.5	900.0	829.9	757.9
50°	480.8	542.6	590.6	651.4	714.2	803.9	875.1	902.3	887.8	817.2	745.5
50.5°	467.6	529.9	578.2	639.7	702.2	791.7	862.7	889.9	875.1	803.9	733.3
51°	454.6	516.9	566.0	627.7	690.3	779.5	850.2	877.2	862.4	791.2	721.1
51.5°	441.9	504.2	553.8	615.8	678.3	767.3	837.5	864.2	849.4	778.8	709.1
52°	428.7	491.7	541.6	603.8	666.1	754.6	824.5	851.0	836.2	766.8	697.7
52.5°	416.0	479.0	529.3	591.9	653.9	742.2	811.6	837.8	823.0	755.1	685.7
53°	402.7	466.3	517.4	579.9	641.7	729.2	798.3	825.0	810.5	742.7	673.8
53.5°	389.8	453.8	505.2	568.2	629.8	716.5	785.1	811.6	798.3	729.7	659.8
54°	377.1	441.4	493.2	555.8	617.6	703.8	772.4	799.4	786.4	714.9	645.5
54.5°	364.3	428.9	481.0	544.1	605.6	691.6	760.0	787.7	773.9	698.7	629.3
55°	351.4	416.5	469.1	532.1	593.9	679.4	748.0	775.7	761.0	680.4	612.5
55.5°	338.9	403.7	457.4	520.7	582.5	667.7	735.5	762.2	745.5	662.6	594.9
56°	326.2	391.8	445.2	509.0	570.8	655.5	722.6	747.2	728.4	642.7	576.9
56.5°	313.7	379.6	433.5	497.3	559.1	642.5	708.1	730.5	710.6	622.9	558.8
57°	301.3	367.1	422.1	486.1	546.4	628.5	692.6	713.4	691.6	602.6	540.5
57.5°	288.8	355.2	410.6	474.7	533.7	614.5	676.0	694.4	671.0	582.5	521.0
58°	277.1	343.2	398.7	463.2	520.2	599.3	659.0	674.8	650.1	560.6	501.6
58.5°	264.9	331.5	387.0	451.0	507.0	583.8	641.2	653.9	629.0	538.8	482.3
59°	253.0	319.8	375.5	438.8	492.7	567.7	621.9	632.8	606.9	517.4	463.0
59.5°	241.0	308.2	363.8	426.4	478.8	551.0	602.6	610.2	584.3	496.3	443.4
60°	229.6	296.2	352.1	413.9	464.3	534.4	582.7	588.3	561.6	474.2	424.3
60.5°	218.1	284.8	339.9	401.5	450.3	517.4	562.7	565.7	539.0	452.8	405.3
61°	207.0	273.6	328.2	388.5	435.3	500.1	541.8	543.8	516.6	431.7	386.5
61.5°	195.5	261.9	316.3	376.0	420.5	482.6	520.7	521.2	493.8	410.1	367.6
62°	184.8	250.4	304.3	363.1	406.0	464.8	500.4	499.3	471.6	389.3	348.8
62.5°	174.2	239.0	292.6	350.4	390.8	447.0	479.0	477.2	449.0	368.9	330.8
63°	163.7	227.8	280.4	337.6	375.8	428.7	458.2	455.1	427.4	349.8	313.2
63.5°	153.1	216.6	268.7	324.2	360.8	410.6	437.6	433.2	405.8	330.5	295.9
64°	143.4	205.9	257.0	311.5	346.0	392.8	417.7	412.1	384.9	312.2	279.2
64.5°	133.7	195.0	245.4	298.5	331.0	374.8	397.4	391.3	364.6	294.4	262.9
65°	124.3	184.1	233.9	285.8	316.0	357.0	378.1	371.0	344.0	277.1	247.4
65.5°	115.2	173.7	222.2	272.8	301.0	339.4	358.7	350.9	323.9	260.9	233.7
66°	106.5	163.5	210.8	260.1	286.0	322.1	339.7	331.3	304.1	245.1	220.2





TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	84.2	133.7	176.7	222.2	242.8	272.6	285.5	276.6	247.9	203.9	179.5
68°	77.8	124.3	165.8	209.8	229.3	256.8	268.5	259.6	232.1	189.9	167.6
68.5°	71.7	115.2	155.1	197.3	215.9	241.3	251.7	243.1	216.4	176.2	156.6
69°	65.3	106.0	144.2	185.1	202.4	227.0	237.2	228.3	200.6	164.5	146.2
69.5°	60.5	97.1	133.5	172.6	189.2	213.1	222.7	213.8	185.1	153.6	136.3
70°	57.0	89.2	123.1	161.2	175.7	198.8	208.5	199.1	172.1	143.1	127.1
70.5°	54.7	81.6	112.9	149.5	163.7	184.6	194.0	184.6	159.9	133.5	118.5
71°	52.1	74.2	103.2	138.1	152.3	172.4	179.5	172.1	148.5	124.3	110.1
71.5°	49.6	66.9	93.8	127.1	141.1	159.9	167.0	160.2	137.8	115.7	102.5
72°	47.0	59.5	86.2	116.7	130.4	148.5	155.1	149.0	128.1	107.8	95.3
72.5°	44.5	54.2	78.8	106.8	120.0	137.5	144.2	138.6	119.0	100.2	88.2
73°	42.0	50.3	71.4	97.6	110.3	127.4	134.0	128.7	110.6	93.1	81.9
73.5°	39.7	47.8	64.1	88.7	101.4	117.7	124.3	119.5	103.0	86.4	75.8
74°	37.4	45.3	56.4	81.6	93.1	108.8	115.2	111.1	95.6	80.1	69.9
74.5°	35.1	43.0	51.1	74.2	84.9	100.4	106.8	103.2	88.7	74.2	64.6
75°	32.8	40.7	46.3	67.1	77.8	92.5	98.9	95.9	82.4	68.6	59.2
75.5°	30.8	38.4	42.5	60.0	70.9	85.2	91.5	89.0	76.0	63.1	54.4
76°	28.7	36.1	38.9	54.2	64.6	78.3	84.7	82.4	70.2	58.0	49.6
76.5°	27.0	34.1	35.8	48.8	58.5	71.7	78.3	76.5	64.6	53.1	45.3
77°	25.2	31.8	33.3	44.2	53.4	66.1	72.2	70.7	59.0	48.6	40.9
77.5°	23.4	29.7	31.0	39.9	48.3	60.3	66.6	65.3	53.9	44.0	36.9
78°	21.6	28.0	29.2	36.1	43.7	54.9	61.0	60.0	49.1	39.9	33.1
78.5°	20.1	26.2	27.2	32.8	39.4	50.1	55.9	54.9	44.2	36.1	29.5
79°	18.6	24.4	25.7	29.7	35.6	45.5	51.1	50.3	39.7	32.3	26.2
79.5°	17.0	22.6	23.9	27.0	32.0	41.2	46.5	45.8	35.6	29.0	23.6
80°	15.5	20.8	22.4	24.4	28.7	37.1	42.2	41.4	31.5	26.2	20.8
80.5°	14.2	19.3	20.6	22.1	25.7	33.6	38.1	37.6	27.7	23.1	18.1
81°	13.0	17.8	19.3	20.1	23.4	29.7	34.3	33.8	24.7	20.3	15.5
81.5°	11.7	16.5	17.8	18.3	20.8	26.7	30.5	30.3	21.6	17.5	12.7
82°	10.4	15.0	16.5	16.5	18.6	23.9	27.2	26.7	18.6	14.7	10.7
82.5°	9.4	13.7	15.0	15.0	16.0	21.4	24.4	23.9	15.3	11.9	8.9
83°	8.1	12.2	13.7	13.5	13.7	18.8	21.6	21.1	12.2	9.9	7.1
83.5°	7.1	11.2	12.7	12.5	11.9	16.0	18.8	18.3	9.9	7.9	5.6
84°	6.4	9.9	11.4	11.2	10.4	13.5	16.0	15.5	7.6	6.1	4.3
84.5°	5.3	8.9	10.2	10.2	9.2	11.7	13.2	12.7	5.8	4.6	3.3
85°	4.6	7.9	9.2	9.2	7.9	9.9	11.2	10.4	4.1	3.1	2.3
85.5°	3.8	6.9	8.4	8.1	6.6	8.1	9.2	8.4	2.5	2.0	1.5
86°	3.1	5.8	7.4	7.4	5.8	6.9	7.4	6.6	1.5	1.3	0.8
86.5°	2.3	4.8	6.4	6.4	4.8	5.6	5.8	4.8	1.0	0.5	0.3
87°	1.8	4.1	5.3	5.6	4.1	4.3	4.6	3.6	0.8	0.3	0.0
87.5°	1.3	3.3	4.6	4.8	3.3	3.6	3.3	2.5	0.5	0.0	0.0
88°	1.0	2.5	3.8	4.1	2.8	2.5	2.3	1.5	0.3	0.0	0.0
88.5°	0.5	2.0	3.1	3.3	2.0	1.8	1.5	0.8	0.3	0.0	0.0



TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.8	1.3	1.5	0.8	0.5	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1406.5	1406.5	1406.5	1406.5	1406.5	1406.5
0.5°	1406.3	1405.0	1403.7	1402.9	1401.9	1401.4
1°	1406.0	1403.5	1401.2	1399.6	1398.1	1397.9
1.5°	1405.5	1401.9	1398.4	1395.8	1394.3	1394.1
2°	1405.0	1400.2	1395.6	1392.3	1390.2	1390.2
2.5°	1404.0	1398.1	1392.5	1388.5	1386.2	1386.2
3°	1402.9	1396.1	1389.2	1384.4	1381.8	1382.1
3.5°	1401.9	1394.1	1385.9	1380.3	1377.5	1378.0
4°	1400.4	1391.5	1382.4	1376.0	1372.7	1373.5
4.5°	1399.1	1389.0	1378.5	1371.4	1368.1	1369.1
5°	1397.4	1386.2	1374.7	1366.8	1363.0	1364.3
5.5°	1395.6	1383.1	1370.7	1362.0	1358.2	1359.7
6°	1393.5	1380.1	1366.3	1357.2	1353.1	1354.6
6.5°	1391.3	1376.8	1362.0	1352.1	1347.8	1349.6
7°	1389.0	1373.5	1357.4	1347.0	1342.4	1344.5
7.5°	1386.4	1369.6	1352.9	1341.7	1336.8	1339.1
8°	1383.6	1365.8	1348.0	1336.1	1331.3	1333.5
8.5°	1380.8	1361.8	1342.9	1330.5	1325.4	1327.9
9°	1377.5	1357.7	1337.9	1324.6	1319.3	1322.1
9.5°	1374.5	1353.4	1332.5	1318.8	1313.2	1316.5
10°	1370.9	1348.8	1326.9	1312.7	1307.1	1310.4
10.5°	1367.4	1344.5	1321.3	1306.3	1300.7	1304.6
11°	1363.5	1339.4	1315.5	1300.2	1294.4	1298.2
11.5°	1359.7	1334.3	1309.4	1293.6	1287.8	1291.8
12°	1355.4	1329.2	1303.3	1287.0	1280.9	1285.2
12.5°	1351.1	1323.9	1296.9	1280.1	1274.0	1278.9
13°	1346.5	1318.5	1290.6	1273.3	1267.2	1272.0
13.5°	1341.9	1312.7	1284.0	1266.2	1260.3	1265.1
14°	1337.1	1306.8	1277.1	1259.3	1252.9	1258.3
14.5°	1332.3	1301.0	1270.5	1251.9	1245.6	1250.9
15°	1326.9	1294.9	1263.4	1244.3	1238.2	1243.8
15.5°	1321.6	1288.5	1256.0	1236.7	1230.3	1236.4
16°	1316.0	1281.9	1248.9	1229.0	1222.9	1229.0
16.5°	1310.4	1275.3	1241.2	1221.2	1215.1	1221.4
17°	1304.6	1268.5	1233.6	1213.3	1207.2	1213.5
17.5°	1298.5	1261.3	1225.7	1204.9	1199.0	1205.7
18°	1292.1	1254.2	1217.9	1197.0	1190.9	1198.0
18.5°	1285.7	1246.8	1209.7	1188.4	1182.3	1189.9
19°	1279.4	1239.5	1201.3	1180.2	1174.1	1181.2
19.5°	1272.5	1231.8	1192.9	1171.3	1165.5	1173.1
20°	1265.7	1224.0	1184.3	1162.7	1156.8	1165.0
20.5°	1258.5	1216.1	1175.7	1153.5	1148.2	1156.3
21°	1251.4	1207.9	1166.8	1144.6	1139.0	1147.2

TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1229.0	1182.8	1139.5	1116.7	1111.6	1121.0
23°	1221.2	1174.1	1130.4	1107.3	1102.2	1111.8
23.5°	1213.3	1165.2	1121.0	1097.8	1092.8	1102.4
24°	1204.9	1156.1	1111.3	1088.2	1083.1	1093.0
24.5°	1196.8	1147.2	1101.7	1078.0	1073.4	1083.6
25°	1188.4	1137.8	1091.5	1068.1	1063.5	1074.0
25.5°	1179.7	1128.9	1081.8	1058.2	1053.6	1064.3
26°	1171.1	1119.2	1071.9	1048.0	1043.7	1054.4
26.5°	1162.2	1109.8	1061.7	1037.6	1033.5	1044.5
27°	1153.3	1099.9	1051.6	1027.2	1023.4	1034.3
27.5°	1144.1	1090.2	1041.2	1016.7	1012.9	1024.1
28°	1135.0	1080.3	1030.7	1006.3	1002.3	1013.9
28.5°	1125.6	1070.1	1020.3	995.6	991.8	1003.3
29°	1116.2	1060.2	1009.6	984.7	981.4	992.8
29.5°	1106.5	1050.1	998.9	973.8	970.5	982.4
30°	1096.8	1039.9	988.3	963.1	959.5	971.7
30.5°	1087.2	1029.2	977.3	951.9	948.9	960.8
31°	1077.5	1018.8	966.4	941.0	937.7	949.9
31.5°	1067.3	1008.1	955.2	929.8	926.7	938.7
32°	1057.4	997.4	944.0	918.3	915.3	927.8
32.5°	1047.0	986.7	933.1	907.2	904.1	916.6
33°	1036.8	976.1	921.9	895.7	892.7	905.4
33.5°	1026.4	964.9	910.7	884.3	881.2	893.9
34°	1016.0	954.2	899.0	872.8	869.5	882.2
34.5°	1005.8	943.0	887.8	861.4	858.1	870.8
35°	995.1	932.1	876.1	849.7	846.1	859.1
35.5°	984.5	921.1	864.7	837.8	834.7	847.4
36°	973.8	909.7	853.5	826.3	822.5	835.5
36.5°	963.1	898.8	841.8	814.6	811.1	823.5
37°	952.2	887.6	830.4	802.7	798.9	811.6
37.5°	941.2	876.4	818.9	790.7	786.9	799.6
38°	930.3	865.0	807.2	778.8	774.7	787.2
38.5°	919.4	853.5	795.8	767.1	762.7	775.0
39°	908.7	842.3	783.9	755.1	750.5	763.0
39.5°	897.5	831.1	772.4	743.2	738.3	750.8
40°	886.3	819.7	760.7	731.2	726.1	737.8
40.5°	875.4	808.3	749.3	719.3	713.9	725.6
41°	864.2	796.6	737.6	707.3	701.2	712.9
41.5°	853.3	785.6	725.6	695.4	689.0	700.5
42°	842.1	774.4	714.2	683.2	676.8	687.5
42.5°	830.6	762.7	702.7	671.2	664.4	675.3
43°	819.4	751.3	691.3	659.0	651.6	662.3
43.5°	808.3	740.1	679.4	647.3	639.4	649.4

TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	774.2	705.8	644.8	611.2	601.6	611.0
45.5°	762.7	694.9	633.1	599.5	589.4	598.0
46°	751.6	683.7	621.9	587.6	576.9	585.0
46.5°	739.9	672.0	610.2	575.6	564.2	572.1
47°	728.2	660.5	599.0	563.7	551.7	559.3
47.5°	716.5	649.4	587.1	551.7	539.0	546.1
48°	704.5	637.9	576.1	540.0	526.6	532.7
48.5°	692.8	626.5	564.4	528.1	514.1	519.9
49°	680.9	615.3	553.2	516.4	501.6	507.0
49.5°	668.7	603.8	541.8	504.4	489.4	494.0
50°	657.0	592.4	530.4	492.7	476.7	480.8
50.5°	645.3	580.7	518.9	481.3	464.3	467.6
51°	633.8	569.3	507.7	469.6	452.1	454.6
51.5°	622.4	558.3	496.5	457.6	439.9	441.9
52°	611.7	547.7	485.6	446.5	427.6	428.7
52.5°	600.3	537.0	474.7	435.0	415.2	416.0
53°	588.3	526.3	464.3	423.8	403.0	402.7
53.5°	575.6	515.4	453.3	412.4	391.0	389.8
54°	561.9	503.9	442.6	401.2	378.8	377.1
54.5°	548.2	492.2	431.7	390.5	366.9	364.3
55°	532.9	480.0	420.5	379.6	355.2	351.4
55.5°	517.7	467.1	408.8	368.2	343.5	338.9
56°	501.6	454.1	397.4	357.2	332.0	326.2
56.5°	485.9	440.9	385.7	345.8	320.4	313.7
57°	469.1	427.1	374.0	334.6	308.9	301.3
57.5°	452.8	413.2	362.1	323.2	297.5	288.8
58°	436.0	399.2	350.4	312.2	286.3	277.1
58.5°	419.3	385.2	337.9	301.0	275.1	264.9
59°	402.7	370.7	325.9	289.8	263.9	253.0
59.5°	386.2	356.5	313.7	278.7	252.7	241.0
60°	369.4	342.2	301.3	267.7	241.5	229.6
60.5°	353.2	328.0	288.8	256.3	230.6	218.1
61°	337.1	313.7	276.4	245.4	219.7	207.0
61.5°	320.9	299.8	263.9	234.4	209.0	195.5
62°	304.8	285.8	251.7	223.5	198.6	184.8
62.5°	289.6	272.0	239.2	212.3	187.9	174.2
63°	274.3	258.6	226.8	201.4	177.7	163.7
63.5°	259.6	245.1	214.8	189.9	167.6	153.1
64°	245.6	231.9	202.9	179.0	157.9	143.4
64.5°	232.1	219.4	191.2	168.1	148.2	133.7
65°	218.7	207.0	179.5	157.6	138.8	124.3
65.5°	205.4	194.2	168.6	146.7	129.2	115.2
66°	192.0	182.0	157.1	136.0	120.3	106.5



TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL5125CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	155.6	148.7	126.1	107.0	93.8	84.2
68°	145.2	138.1	116.2	97.9	86.7	77.8
68.5°	135.0	127.9	106.8	88.7	79.6	71.7
69°	125.3	118.5	97.9	81.9	72.7	65.3
69.5°	116.4	109.6	89.0	75.0	65.6	60.5
70°	108.3	100.9	82.1	67.9	58.5	57.0
70.5°	100.2	93.1	75.5	61.0	53.4	54.7
71°	92.5	86.4	68.6	55.2	49.8	52.1
71.5°	85.7	79.8	61.8	50.3	47.3	49.6
72°	78.8	73.5	56.2	46.0	45.0	47.0
72.5°	73.0	66.9	51.1	42.2	42.7	44.5
73°	67.1	60.5	46.3	38.9	40.4	42.0
73.5°	61.5	54.9	42.0	35.8	38.1	39.7
74°	56.4	50.1	38.1	33.3	35.8	37.4
74.5°	51.4	45.5	34.8	31.3	33.8	35.1
75°	46.8	41.4	31.5	29.2	31.8	32.8
75.5°	42.5	37.4	28.7	27.5	29.7	30.8
76°	38.6	33.8	25.9	25.7	27.7	28.7
76.5°	34.6	30.3	23.6	24.2	25.9	27.0
77°	31.3	27.2	21.6	22.4	24.2	25.2
77.5°	28.0	24.4	19.6	21.1	22.4	23.4
78°	25.2	21.9	17.8	19.6	20.8	21.6
78.5°	22.6	19.3	16.3	18.1	19.3	20.1
79°	19.8	17.3	14.7	16.8	17.8	18.6
79.5°	17.3	15.3	13.5	15.3	16.3	17.0
80°	14.7	13.2	12.2	14.0	14.7	15.5
80.5°	12.7	11.7	11.2	12.7	13.5	14.2
81°	10.9	10.2	10.2	11.7	12.2	13.0
81.5°	9.2	9.2	9.2	10.4	10.9	11.7
82°	7.6	8.1	8.1	9.4	9.7	10.4
82.5°	6.4	6.9	7.1	8.4	8.6	9.4
83°	5.1	5.8	6.4	7.4	7.6	8.1
83.5°	4.1	4.8	5.3	6.4	6.6	7.1
84°	3.3	4.1	4.6	5.3	5.6	6.4
84.5°	2.3	3.3	4.1	4.6	4.6	5.3
85°	1.8	2.8	3.3	3.8	3.8	4.6
85.5°	1.3	2.0	2.5	3.3	3.1	3.8
86°	0.8	1.5	2.0	2.5	2.5	3.1
86.5°	0.3	1.0	1.3	1.8	2.0	2.3
87°	0.0	0.5	0.8	1.3	1.5	1.8
87.5°	0.0	0.3	0.3	0.8	1.0	1.3
88°	0.0	0.0	0.0	0.3	0.5	1.0
88.5°	0.0	0.0	0.0	0.0	0.3	0.5



TEST NUMBER: P776138

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRH-HCD81TRLWW-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0



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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - 135°-315°

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	1138.5	1177.2	1208.4	1250.1	1291.1	1342.7	1379.0	1391.5	1382.6	1344.7	1300.7
22°	1129.9	1169.0	1200.6	1242.8	1284.7	1337.4	1374.5	1386.9	1378.0	1339.1	1294.1



44°	636.6	694.6	737.1	795.0	855.8	944.0	1012.7	1037.8	1024.1	959.3	888.1
44.5°	623.9	681.9	725.1	783.3	844.1	932.8	1002.0	1027.2	1013.7	948.4	876.9



66.5°	98.4	153.3	199.6	247.4	271.5	305.4	321.1	312.5	284.5	231.4	206.5
67°	90.3	143.1	188.4	234.7	257.3	288.6	303.3	294.4	266.2	217.6	193.0



89°	0.3	1.5	2.5	2.8	1.5	1.3	0.8	0.3	0.0	0.0	0.0
89.5°	0.0	1.0	1.8	2.0	1.0	0.8	0.3	0.0	0.0	0.0	0.0



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21.5°	1244.0	1199.5	1157.9	1135.5	1129.9	1138.5
22°	1236.4	1191.2	1149.0	1126.1	1121.0	1129.9



44°	797.1	728.9	667.7	635.1	627.0	636.6
44.5°	785.4	717.2	656.2	623.4	614.3	623.9

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66.5°	178.7	170.9	146.4	126.1	111.1	98.4
67°	166.5	159.4	135.8	116.2	102.2	90.3

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89°	0.0	0.0	0.0	0.0	0.0	0.3
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)