

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: P776149

Luminaire Tested: HCDJBS1525CSD-HCD81TRMW-2500lm-5000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776149  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B044)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL51525CSD-HCD81TRMW-2500lm-5000K  
Description: 8 INCH ROUND SHALLOW-WIDE MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

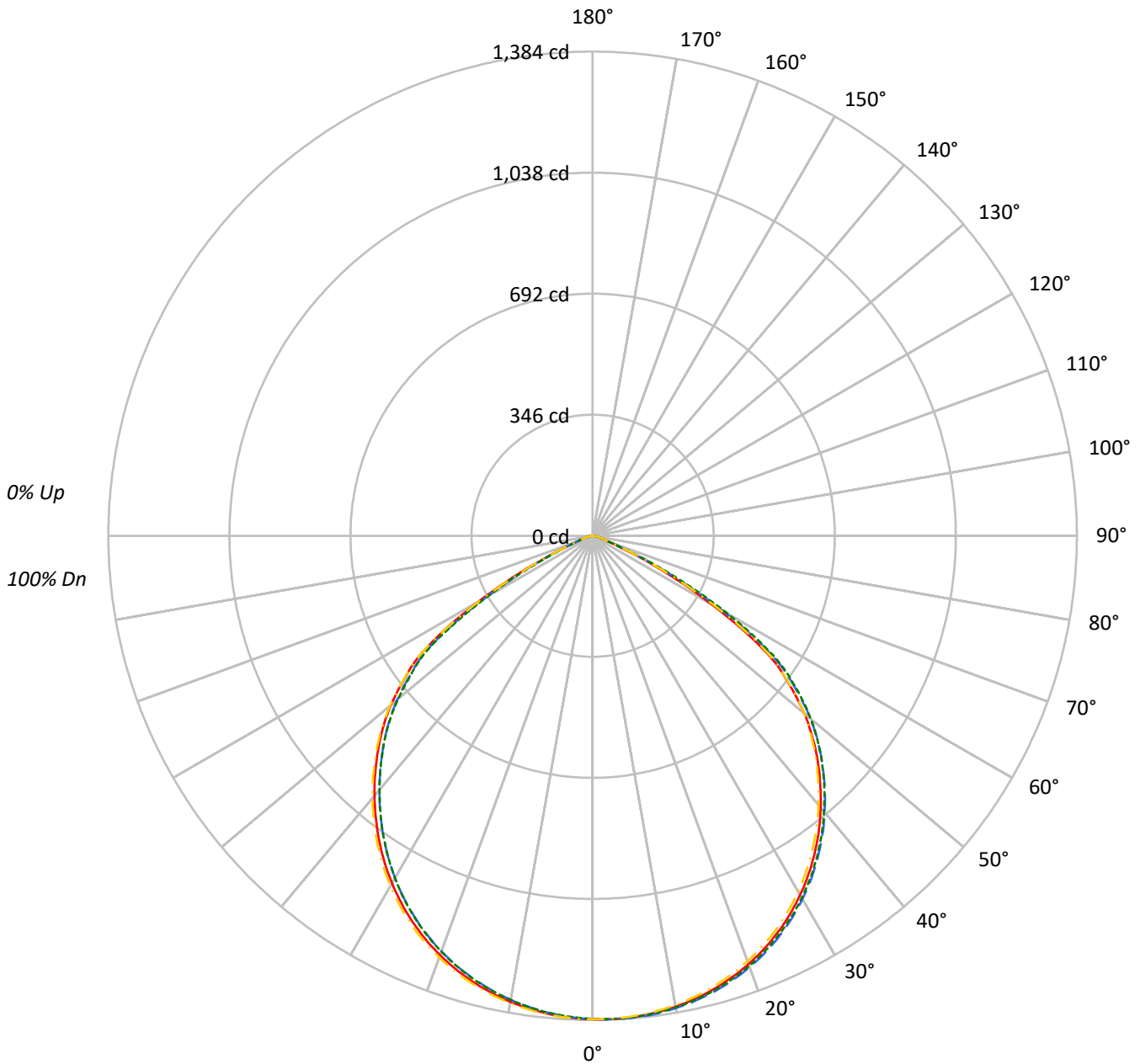
Lumens per Lamp: N/A  
Luminaire Lumens: 3184.8 lumens  
Efficiency: N/A  
Efficacy: 127.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.35  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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





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**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	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89					89			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77					77			
3	95	86	79	73	92	84	78	72	81	76	71	79	74	70	76	72	69	67					67			
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58					58			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	54	62	57	53	51					51			
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40					40			
8	65	52	44	39	63	51	44	38	50	43	38	49	43	38	48	42	38	36					36			
9	60	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	32					32			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	29					29			

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

	0°	90°	180°	270°
0°	42193	42193	42193	42193
5°	42305	42323	42094	41983
10°	42373	42444	41939	41765
15°	42392	42515	41725	41478
20°	42334	42519	41437	41093
25°	42148	42408	41010	40555
30°	41807	42142	40432	39833
35°	41247	41687	39648	38881
40°	40412	41010	38647	37762
45°	39282	40085	37455	36454
50°	37451	38677	35722	34440
55°	34199	35860	32591	31218
60°	24186	27227	23032	21078
65°	11876	14203	10721	9673
70°	3776	4169	3803	3731
75°	2737	3079	2772	2831
80°	1899	2268	1899	2039
85°	1086	1541	1086	1261

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 40171 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.8	4.1
10°-20°	375.3	11.8
20°-30°	568.0	17.8
30°-40°	677.0	21.3
40°-50°	683.3	21.5
50°-60°	542.7	17.0
60°-70°	176.0	5.5
70°-80°	27.0	0.8
80°-90°	4.7	0.1
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°	1074.1	33.7
0°-40°	1751.1	55.0
0°-60°	2977.1	93.5
0°-90°	3184.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3184.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1382	1382	1382	1382	1382	
5°	1380	1381	1374	1370	1380	131
15°	1341	1345	1320	1312	1341	379
25°	1251	1259	1217	1204	1251	576
35°	1107	1118	1064	1043	1107	692
45°	910	928	868	844	910	700
55°	642	674	612	586	642	554
65°	164	197	148	134	164	178
75°	23	26	24	24	23	26
85°	3	4	3	4	3	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0
0.5°	1382.8	1382.5	1382.5	1382.8	1381.5	1381.7	1382.2	1382.2	1382.0	1381.5	1381.2
1°	1382.8	1382.8	1383.0	1383.3	1382.0	1382.0	1382.0	1382.0	1381.5	1380.7	1380.4
1.5°	1383.0	1383.0	1383.3	1383.5	1382.2	1382.0	1382.0	1381.7	1380.7	1379.9	1379.4
2°	1382.8	1383.0	1383.5	1383.8	1382.5	1382.0	1381.7	1381.2	1380.2	1378.9	1378.4
2.5°	1382.5	1383.0	1383.5	1383.8	1382.5	1382.0	1381.2	1380.4	1379.1	1378.1	1377.3
3°	1382.5	1383.0	1383.5	1383.8	1382.2	1381.7	1381.0	1379.7	1378.4	1376.8	1376.3
3.5°	1382.0	1382.8	1383.3	1383.8	1382.2	1381.2	1380.2	1378.9	1377.3	1375.5	1374.8
4°	1381.7	1382.5	1383.0	1383.3	1382.0	1381.0	1379.4	1377.9	1376.1	1374.2	1373.5
4.5°	1381.0	1382.0	1382.8	1383.0	1381.5	1380.2	1378.6	1376.8	1374.8	1372.7	1371.7
5°	1380.4	1381.5	1382.5	1382.5	1381.0	1379.7	1377.6	1375.5	1373.5	1371.1	1370.1
5.5°	1379.7	1380.7	1381.7	1382.0	1380.2	1378.9	1376.6	1374.2	1371.7	1369.3	1368.3
6°	1378.6	1379.9	1381.0	1381.2	1379.4	1377.9	1375.3	1373.0	1370.1	1367.5	1366.5
6.5°	1377.6	1379.1	1380.2	1380.4	1378.6	1376.8	1374.0	1371.4	1368.3	1365.5	1364.4
7°	1376.3	1378.1	1379.4	1379.4	1377.6	1375.5	1372.7	1369.9	1366.5	1363.4	1362.1
7.5°	1375.0	1376.8	1378.4	1378.4	1376.6	1374.2	1371.4	1367.8	1364.4	1361.3	1360.1
8°	1373.7	1375.5	1377.1	1377.3	1375.3	1373.0	1369.6	1366.0	1362.4	1359.0	1357.5
8.5°	1371.9	1374.2	1375.8	1375.8	1374.0	1371.1	1367.8	1363.9	1360.1	1356.7	1355.2
9°	1370.4	1373.0	1374.5	1374.5	1372.4	1369.6	1365.7	1361.9	1357.7	1354.1	1352.6
9.5°	1368.6	1371.1	1373.0	1373.0	1370.9	1368.1	1363.9	1359.5	1355.4	1351.5	1349.7
10°	1366.8	1369.6	1371.1	1371.1	1369.1	1366.0	1361.9	1357.2	1352.8	1348.7	1346.9
10.5°	1364.7	1367.8	1369.3	1369.3	1367.3	1363.9	1359.8	1354.6	1350.0	1345.9	1343.8
11°	1362.6	1365.7	1367.5	1367.5	1365.2	1361.9	1357.2	1352.1	1347.2	1342.8	1340.7
11.5°	1360.3	1363.7	1365.5	1365.5	1363.2	1359.5	1354.6	1349.5	1344.3	1339.7	1337.6
12°	1358.0	1361.6	1363.4	1363.4	1360.8	1357.2	1352.1	1346.4	1341.2	1336.6	1334.3
12.5°	1355.7	1359.3	1361.1	1361.1	1358.8	1354.6	1349.5	1343.5	1337.9	1333.0	1330.6
13°	1352.8	1356.7	1358.8	1358.5	1356.2	1352.1	1346.6	1340.4	1334.5	1329.6	1327.3
13.5°	1350.0	1353.9	1356.2	1355.9	1353.6	1349.2	1343.8	1337.1	1331.2	1326.0	1323.4
14°	1347.2	1351.3	1353.6	1353.3	1350.8	1346.4	1340.7	1334.0	1327.5	1322.4	1319.5
14.5°	1344.3	1348.4	1351.0	1350.5	1348.2	1343.3	1337.3	1330.4	1323.9	1318.5	1315.7
15°	1341.2	1345.9	1348.2	1347.7	1345.1	1340.4	1334.0	1326.8	1320.1	1314.4	1311.8
15.5°	1337.9	1342.5	1345.1	1344.6	1342.0	1337.1	1330.6	1323.4	1316.2	1310.5	1307.4
16°	1334.5	1339.4	1342.0	1341.2	1338.6	1333.7	1327.0	1319.3	1312.1	1306.1	1303.0
16.5°	1331.2	1336.1	1338.6	1337.9	1335.5	1330.4	1323.4	1315.4	1307.9	1302.0	1298.6
17°	1327.3	1332.7	1335.3	1334.5	1332.2	1326.8	1319.5	1311.3	1303.8	1297.6	1294.0
17.5°	1323.7	1329.1	1331.9	1330.9	1328.6	1323.2	1315.4	1307.2	1299.2	1292.7	1289.4
18°	1319.8	1325.2	1328.1	1327.3	1325.0	1319.3	1311.5	1302.8	1294.8	1288.1	1284.5
18.5°	1315.9	1321.6	1324.4	1323.2	1321.1	1315.2	1307.4	1298.4	1290.1	1283.2	1279.6
19°	1311.5	1317.7	1320.3	1319.5	1317.0	1311.0	1303.0	1293.7	1285.2	1278.0	1274.4
19.5°	1307.4	1313.6	1316.4	1315.4	1312.8	1306.9	1298.6	1289.1	1280.3	1273.1	1269.2
20°	1303.0	1309.2	1312.3	1311.3	1308.7	1302.5	1294.0	1284.5	1275.4	1267.9	1263.8
20.5°	1298.6	1304.8	1307.9	1306.9	1304.3	1298.1	1289.4	1279.3	1270.0	1262.5	1258.4
21°	1293.7	1300.5	1303.3	1302.5	1299.7	1293.5	1284.2	1274.1	1264.8	1256.8	1252.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1279.0	1286.0	1289.4	1288.1	1285.5	1278.8	1269.0	1258.4	1248.1	1239.6	1235.2
23°	1273.6	1281.1	1284.2	1283.2	1280.6	1273.6	1263.8	1252.5	1242.1	1233.9	1229.0
23.5°	1268.5	1275.9	1279.3	1278.0	1275.2	1268.5	1258.1	1247.0	1236.2	1227.4	1222.8
24°	1262.8	1270.5	1273.9	1272.8	1270.0	1263.0	1252.5	1241.1	1230.3	1221.5	1216.3
24.5°	1257.1	1265.1	1268.5	1267.2	1264.6	1257.4	1246.8	1235.2	1223.8	1214.8	1209.6
25°	1251.2	1259.4	1262.8	1261.5	1258.9	1251.4	1241.1	1229.0	1217.4	1208.3	1202.9
25.5°	1245.5	1253.7	1257.1	1255.8	1253.2	1245.7	1235.2	1222.5	1211.2	1201.9	1196.2
26°	1239.6	1247.8	1251.2	1250.1	1247.3	1239.8	1229.0	1216.3	1204.5	1194.9	1189.5
26.5°	1233.4	1241.9	1245.5	1244.2	1241.1	1233.9	1222.5	1209.9	1197.8	1188.0	1182.3
27°	1226.9	1235.7	1239.0	1238.0	1234.9	1227.7	1216.3	1203.2	1190.8	1181.0	1175.1
27.5°	1220.5	1229.2	1233.1	1231.6	1229.0	1221.2	1209.6	1196.5	1183.8	1173.8	1167.8
28°	1213.8	1222.8	1226.7	1225.1	1222.5	1214.8	1202.9	1189.2	1176.6	1166.5	1160.6
28.5°	1207.0	1216.1	1219.9	1218.7	1215.8	1208.1	1196.2	1182.3	1169.4	1158.8	1152.9
29°	1200.3	1209.6	1213.2	1211.9	1209.1	1201.1	1189.0	1175.1	1162.1	1151.6	1145.1
29.5°	1193.1	1202.9	1206.5	1205.2	1202.4	1194.4	1182.0	1167.8	1154.4	1143.6	1137.4
30°	1185.9	1195.7	1199.3	1198.3	1195.4	1187.2	1174.8	1160.3	1146.9	1135.8	1129.4
30.5°	1178.9	1188.5	1192.3	1191.0	1188.5	1180.2	1167.6	1152.9	1138.9	1127.8	1121.1
31°	1171.2	1181.2	1185.1	1183.8	1181.0	1172.7	1159.8	1145.1	1131.2	1119.8	1113.1
31.5°	1163.7	1173.8	1177.6	1176.3	1173.8	1165.2	1152.3	1137.1	1123.2	1111.6	1104.9
32°	1156.0	1166.0	1170.1	1168.9	1166.3	1157.8	1144.6	1129.4	1114.9	1103.3	1096.6
32.5°	1148.0	1158.3	1162.7	1161.1	1158.5	1150.0	1136.6	1121.1	1106.7	1094.8	1087.6
33°	1140.2	1150.5	1154.9	1153.4	1151.1	1142.3	1128.6	1113.1	1098.2	1086.3	1079.3
33.5°	1132.0	1142.5	1146.9	1145.6	1143.1	1134.3	1120.3	1104.6	1089.9	1077.3	1070.3
34°	1123.4	1134.3	1138.9	1137.4	1134.8	1126.3	1112.3	1096.1	1081.1	1068.5	1061.5
34.5°	1115.2	1126.0	1130.7	1129.1	1126.5	1117.8	1103.8	1087.6	1072.4	1059.7	1052.2
35°	1106.7	1117.5	1122.4	1120.9	1118.5	1109.5	1095.3	1079.1	1063.8	1050.7	1043.5
35.5°	1097.9	1109.0	1113.9	1112.3	1110.0	1101.0	1086.5	1070.0	1054.8	1041.4	1034.2
36°	1089.1	1100.5	1105.1	1104.1	1101.8	1092.5	1078.0	1061.0	1045.5	1032.4	1024.9
36.5°	1080.1	1091.4	1096.4	1095.3	1092.7	1083.7	1069.3	1052.2	1036.5	1023.1	1015.6
37°	1071.1	1082.4	1087.6	1086.5	1084.2	1074.9	1060.2	1043.5	1026.9	1013.5	1006.3
37.5°	1062.0	1073.4	1078.8	1077.5	1075.2	1065.6	1051.2	1033.9	1017.7	1004.2	996.5
38°	1052.5	1064.1	1069.5	1068.5	1066.2	1056.9	1041.9	1024.6	1008.4	994.4	986.9
38.5°	1043.2	1054.8	1060.2	1059.5	1056.9	1047.6	1032.6	1015.3	998.8	984.9	977.1
39°	1033.7	1045.3	1050.9	1049.9	1047.8	1038.3	1023.3	1005.8	989.3	975.1	967.6
39.5°	1023.8	1035.7	1041.4	1040.6	1038.6	1028.7	1013.5	996.2	979.5	965.3	957.8
40°	1014.0	1025.9	1032.1	1031.1	1029.0	1019.5	1004.0	986.2	969.7	955.5	947.7
40.5°	1004.2	1016.1	1022.0	1021.5	1019.5	1009.7	994.2	976.4	959.9	945.1	937.9
41°	993.9	1006.0	1012.2	1011.7	1009.4	999.9	984.4	966.6	949.8	935.3	927.6
41.5°	983.6	996.0	1002.2	1001.9	999.9	990.0	974.6	956.8	940.0	925.3	917.5
42°	973.5	985.9	992.4	992.1	990.0	980.0	964.5	947.0	929.7	915.0	907.2
42.5°	963.2	975.6	982.3	982.0	980.0	969.9	954.4	936.6	919.3	904.9	897.2
43°	952.9	965.0	972.0	972.0	970.2	959.9	944.4	926.6	909.3	894.3	886.8
43.5°	942.3	954.7	961.7	961.9	959.9	949.5	934.1	916.3	899.0	884.0	876.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	909.8	922.2	929.9	930.4	928.4	918.1	902.8	885.3	867.5	852.3	845.0
45.5°	898.4	911.1	918.8	919.9	917.8	907.2	892.0	874.2	856.9	841.7	834.5
46°	887.4	900.3	908.0	909.0	907.0	896.4	881.4	863.6	846.1	830.8	823.6
46.5°	876.0	888.4	896.9	897.9	896.1	885.5	870.3	852.8	835.0	820.0	812.8
47°	864.1	877.0	885.5	886.8	885.3	874.2	859.0	841.4	823.9	808.9	801.4
47.5°	852.3	865.2	873.9	875.5	874.2	862.8	847.6	830.1	812.8	797.3	790.1
48°	840.4	853.0	862.3	863.9	862.3	851.5	837.0	819.0	801.4	785.9	778.7
48.5°	827.7	840.6	849.9	852.0	851.0	840.1	824.7	807.4	789.6	774.3	766.9
49°	815.4	828.5	837.8	840.4	839.1	827.7	812.8	795.2	777.2	762.0	754.5
49.5°	802.2	815.6	825.2	827.7	827.0	815.6	800.4	782.9	765.0	749.6	741.8
50°	788.5	802.2	812.3	815.1	814.3	803.2	788.3	770.5	752.1	736.7	728.7
50.5°	774.6	788.0	798.8	801.4	801.2	790.6	775.1	757.0	739.0	723.0	715.2
51°	760.9	774.3	784.9	788.3	788.0	776.7	761.2	743.4	725.1	709.3	701.6
51.5°	746.0	759.6	770.5	774.1	774.6	763.0	747.5	729.4	711.6	696.2	687.9
52°	731.2	745.4	756.3	759.9	760.1	748.8	733.3	715.0	696.9	681.7	673.4
52.5°	716.5	730.2	741.6	744.9	745.7	734.1	718.6	700.5	683.0	667.5	659.5
53°	701.8	715.2	726.6	730.7	731.0	719.6	703.9	686.1	668.8	653.6	645.8
53.5°	687.4	700.3	711.9	715.8	716.5	705.4	689.4	672.4	655.4	640.7	633.2
54°	673.4	686.6	697.7	702.1	702.3	691.0	675.8	658.7	642.5	627.5	619.8
54.5°	659.0	672.4	683.5	687.9	688.2	677.6	662.1	644.5	628.3	613.3	605.8
55°	642.5	655.6	667.5	672.2	673.7	662.4	646.9	629.1	612.3	597.6	590.1
55.5°	624.2	637.3	650.0	654.6	656.9	645.8	629.6	611.5	593.2	578.0	571.3
56°	602.7	617.7	629.3	634.2	638.1	627.3	610.0	590.4	571.8	557.1	549.9
56.5°	580.0	595.5	607.4	612.8	617.2	606.6	589.1	568.4	549.9	534.1	526.9
57°	555.8	571.0	584.2	589.8	595.0	583.4	565.9	545.5	526.1	510.4	502.6
57.5°	530.2	544.7	559.9	566.6	571.8	559.4	541.9	521.7	502.1	486.6	477.9
58°	503.7	518.4	534.9	542.9	548.0	534.1	516.1	496.4	477.6	461.6	452.8
58.5°	477.6	491.8	508.8	518.4	523.8	509.1	490.8	471.7	453.1	437.6	427.8
59°	450.0	465.5	483.0	493.3	498.0	481.7	463.9	445.4	427.5	412.3	402.0
59.5°	423.4	438.4	456.4	467.0	471.9	455.4	437.1	419.0	402.3	387.3	377.0
60°	396.1	412.3	429.9	441.2	445.9	428.8	410.3	392.2	377.2	362.8	352.7
60.5°	370.3	386.3	403.0	414.4	419.8	403.3	383.4	366.7	352.2	338.0	328.2
61°	344.2	360.7	376.2	387.6	392.7	377.2	357.4	340.1	326.9	314.3	304.5
61.5°	318.9	335.9	350.4	360.2	366.9	352.7	331.8	314.8	302.4	291.1	281.0
62°	294.4	310.7	325.1	333.6	341.4	326.9	307.1	289.8	278.4	268.3	258.8
62.5°	270.7	286.7	300.1	306.8	315.0	302.1	282.3	265.3	256.2	247.2	238.2
63°	247.7	262.9	275.6	281.2	290.0	277.9	260.6	243.3	234.0	226.0	217.3
63.5°	225.3	240.0	250.8	255.2	265.8	255.7	238.7	221.1	211.8	204.6	196.4
64°	203.6	217.3	227.6	230.9	242.8	233.3	216.7	198.9	189.6	183.5	175.7
64.5°	183.2	196.1	204.9	207.5	219.8	211.1	194.8	177.0	167.7	162.0	157.1
65°	164.4	175.5	182.9	185.3	196.6	188.6	173.1	157.7	148.4	143.5	140.1
65.5°	145.3	155.6	162.3	164.6	173.7	166.4	153.5	139.9	130.8	125.9	124.4
66°	125.9	136.5	142.2	144.5	152.5	146.0	135.7	123.6	114.0	109.9	109.7





TEST NUMBER: P776149

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRMW-2500lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	82.6	88.0	91.6	93.7	98.3	95.5	89.5	82.3	72.0	72.2	73.8
68°	73.0	77.9	82.1	83.9	83.9	81.3	76.6	71.7	62.2	63.5	64.8
68.5°	63.5	68.1	72.8	74.1	71.5	68.9	66.1	62.4	54.4	56.8	57.3
69°	54.2	58.3	63.5	64.5	61.2	58.8	57.5	54.7	48.8	51.1	51.1
69.5°	44.6	48.5	54.2	54.7	52.9	51.3	50.3	48.5	44.9	46.4	46.2
70°	42.3	43.9	44.9	44.9	46.7	45.9	45.2	44.1	42.6	42.8	43.1
70.5°	40.3	41.0	41.8	41.8	42.8	42.6	42.3	41.5	40.5	40.8	40.8
71°	37.9	39.0	39.7	39.7	40.5	40.5	40.3	39.5	38.4	38.7	39.0
71.5°	35.9	37.2	37.9	37.9	38.7	38.4	38.2	37.4	36.1	36.6	36.9
72°	33.8	35.1	35.9	35.9	36.6	36.6	36.4	35.6	34.3	34.8	35.1
72.5°	32.0	33.0	34.1	34.1	34.8	34.6	34.3	33.5	32.3	32.8	33.3
73°	29.9	31.2	32.0	32.3	33.0	32.8	32.5	31.7	30.4	31.0	31.5
73.5°	28.1	29.4	30.2	30.4	31.2	31.0	30.7	29.9	28.6	29.2	29.7
74°	26.6	27.6	28.6	28.6	29.4	29.2	29.2	28.1	26.8	27.4	27.9
74.5°	24.8	25.8	26.8	26.8	27.6	27.6	27.4	26.3	25.0	25.8	26.3
75°	23.2	24.3	25.3	25.3	26.1	25.8	25.8	24.8	23.5	24.0	24.8
75.5°	21.7	22.7	23.7	23.7	24.5	24.3	24.3	23.2	22.2	22.4	23.2
76°	20.1	21.2	22.2	22.2	23.0	23.0	22.7	21.7	20.6	21.2	21.9
76.5°	18.8	19.6	20.6	20.9	21.7	21.4	21.4	20.4	19.4	19.9	20.4
77°	17.5	18.3	19.4	19.6	20.1	20.1	19.9	19.1	17.8	18.3	19.1
77.5°	16.3	17.0	18.1	18.3	18.8	18.8	18.6	17.5	16.5	17.0	17.8
78°	15.0	15.7	16.8	17.0	17.5	17.5	17.3	16.3	15.2	15.7	16.3
78.5°	13.9	14.7	15.5	15.7	16.3	16.3	16.0	15.0	13.9	14.4	15.2
79°	12.9	13.4	14.4	14.7	15.0	15.0	14.7	13.7	12.9	13.2	13.9
79.5°	11.6	12.4	13.4	13.4	13.9	13.9	13.7	12.6	11.9	12.1	12.9
80°	10.8	11.4	12.1	12.4	12.9	12.9	12.6	11.6	10.8	11.1	11.9
80.5°	9.8	10.3	11.1	11.4	11.9	11.9	11.6	10.6	9.8	10.1	10.8
81°	8.8	9.3	10.3	10.6	10.8	10.8	10.6	9.5	8.8	9.0	9.8
81.5°	8.0	8.5	9.3	9.5	9.8	9.8	9.5	8.8	8.0	8.3	8.8
82°	7.2	7.7	8.5	8.5	9.0	9.0	8.8	7.7	7.2	7.2	8.0
82.5°	6.2	6.7	7.5	7.7	8.0	8.0	7.7	7.0	6.2	6.5	7.2
83°	5.4	5.9	6.7	7.0	7.2	7.2	7.0	6.2	5.4	5.7	6.5
83.5°	4.9	5.2	5.9	6.2	6.5	6.5	6.2	5.4	4.9	4.9	5.7
84°	4.1	4.4	5.2	5.4	5.7	5.7	5.4	4.6	4.1	4.4	4.9
84.5°	3.6	3.9	4.4	4.6	4.9	4.9	4.6	3.9	3.6	3.6	4.1
85°	3.1	3.4	3.9	4.1	4.4	4.4	4.1	3.4	3.1	3.1	3.6
85.5°	2.3	2.6	3.4	3.6	3.6	3.6	3.4	2.6	2.6	2.3	3.1
86°	2.1	2.1	2.8	2.8	3.1	3.1	2.8	2.1	2.1	1.8	2.6
86.5°	1.5	1.5	2.3	2.3	2.6	2.6	2.3	1.8	1.5	1.5	2.1
87°	1.0	1.3	1.8	2.1	2.1	2.1	1.8	1.3	1.0	1.0	1.5
87.5°	0.8	1.0	1.3	1.5	1.5	1.5	1.5	1.0	0.8	0.8	1.3
88°	0.5	0.8	1.0	1.0	1.3	1.3	1.0	0.8	0.5	0.5	0.8
88.5°	0.3	0.5	0.5	0.8	0.8	0.8	0.8	0.5	0.3	0.3	0.5



TEST NUMBER: P776149

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRMW-2500lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776149

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRMW-2500lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1382.0	1382.0	1382.0	1382.0	1382.0	1382.0
0.5°	1381.5	1380.4	1381.0	1381.7	1382.5	1382.8
1°	1380.7	1379.7	1380.4	1381.5	1382.5	1382.8
1.5°	1379.9	1378.9	1379.7	1381.2	1382.5	1383.0
2°	1378.9	1378.1	1378.9	1380.7	1382.2	1382.8
2.5°	1377.9	1377.1	1378.1	1379.9	1381.7	1382.5
3°	1376.6	1375.8	1377.1	1379.1	1381.2	1382.5
3.5°	1375.3	1374.5	1376.1	1378.4	1380.7	1382.0
4°	1373.7	1373.2	1374.8	1377.3	1379.9	1381.7
4.5°	1372.2	1371.7	1373.5	1376.3	1379.1	1381.0
5°	1370.6	1369.9	1372.2	1375.0	1378.1	1380.4
5.5°	1368.6	1368.3	1370.6	1373.7	1377.1	1379.7
6°	1366.8	1366.5	1368.8	1372.4	1375.8	1378.6
6.5°	1365.0	1364.4	1367.0	1370.6	1374.5	1377.6
7°	1362.6	1362.4	1365.5	1369.1	1373.2	1376.3
7.5°	1360.6	1360.1	1363.4	1367.3	1371.7	1375.0
8°	1358.0	1357.7	1361.1	1365.2	1370.1	1373.7
8.5°	1355.7	1355.2	1358.8	1363.4	1368.1	1371.9
9°	1353.1	1352.6	1356.2	1361.1	1366.2	1370.4
9.5°	1350.2	1350.0	1353.9	1358.8	1364.2	1368.6
10°	1347.4	1347.2	1351.3	1356.4	1362.1	1366.8
10.5°	1344.3	1344.3	1348.4	1353.9	1359.8	1364.7
11°	1341.5	1341.2	1345.6	1351.3	1357.5	1362.6
11.5°	1338.1	1338.1	1342.5	1348.4	1355.2	1360.3
12°	1334.8	1334.8	1339.4	1345.6	1352.3	1358.0
12.5°	1331.4	1331.4	1336.3	1342.5	1349.7	1355.7
13°	1327.8	1327.8	1333.0	1339.4	1346.9	1352.8
13.5°	1323.9	1324.2	1329.3	1336.1	1343.8	1350.0
14°	1320.1	1320.1	1325.7	1332.7	1340.7	1347.2
14.5°	1316.2	1316.2	1322.1	1329.3	1337.3	1344.3
15°	1312.3	1312.3	1318.3	1325.7	1334.0	1341.2
15.5°	1307.9	1308.2	1313.9	1321.9	1330.6	1337.9
16°	1303.5	1303.8	1309.7	1318.0	1327.0	1334.5
16.5°	1299.2	1299.4	1305.6	1313.9	1323.2	1331.2
17°	1294.8	1295.0	1301.2	1309.7	1319.3	1327.3
17.5°	1289.6	1290.1	1296.8	1305.6	1315.4	1323.7
18°	1285.0	1285.5	1291.9	1301.2	1311.0	1319.8
18.5°	1280.1	1280.3	1287.3	1296.6	1306.9	1315.9
19°	1274.9	1275.4	1282.4	1291.9	1302.5	1311.5
19.5°	1269.7	1270.0	1277.2	1287.3	1298.1	1307.4
20°	1264.3	1264.8	1272.1	1282.4	1293.2	1303.0
20.5°	1258.7	1259.2	1266.9	1277.2	1288.6	1298.6
21°	1253.0	1253.5	1261.2	1272.1	1283.7	1293.7

TEST NUMBER: P776149

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRMW-2500lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1235.2	1235.9	1244.5	1255.6	1268.2	1279.0
23°	1229.2	1229.8	1238.3	1249.9	1262.8	1273.6
23.5°	1222.8	1223.6	1232.3	1244.2	1257.1	1268.5
24°	1216.3	1217.1	1226.1	1238.0	1251.4	1262.8
24.5°	1209.9	1210.7	1219.4	1232.1	1245.5	1257.1
25°	1203.2	1203.9	1213.0	1225.6	1239.6	1251.2
25.5°	1196.2	1197.2	1206.5	1219.4	1233.4	1245.5
26°	1189.5	1190.3	1199.8	1212.7	1227.2	1239.6
26.5°	1182.3	1183.3	1193.1	1206.3	1220.5	1233.4
27°	1175.1	1176.1	1185.9	1199.3	1214.0	1226.9
27.5°	1167.8	1168.6	1178.7	1192.3	1207.3	1220.5
28°	1160.3	1161.1	1171.4	1185.4	1200.6	1213.8
28.5°	1152.6	1153.6	1164.2	1178.1	1193.6	1207.0
29°	1144.9	1145.9	1156.2	1170.9	1186.4	1200.3
29.5°	1136.9	1138.2	1148.7	1163.4	1179.2	1193.1
30°	1128.6	1129.9	1141.0	1155.7	1172.0	1185.9
30.5°	1120.6	1121.9	1132.7	1148.0	1164.2	1178.9
31°	1112.6	1113.6	1125.0	1140.2	1156.5	1171.2
31.5°	1104.1	1105.4	1116.7	1132.2	1148.7	1163.7
32°	1095.6	1096.6	1108.2	1124.2	1141.0	1156.0
32.5°	1086.8	1088.1	1099.7	1115.7	1133.0	1148.0
33°	1078.3	1079.6	1091.4	1107.4	1125.0	1140.2
33.5°	1069.5	1070.5	1082.4	1099.2	1116.5	1132.0
34°	1060.5	1061.5	1073.6	1090.4	1108.0	1123.4
34.5°	1051.2	1052.7	1064.9	1081.6	1099.4	1115.2
35°	1042.2	1043.2	1055.8	1072.9	1090.7	1106.7
35.5°	1033.1	1034.4	1046.6	1063.8	1081.9	1097.9
36°	1023.8	1024.9	1037.5	1054.8	1072.9	1089.1
36.5°	1014.3	1015.8	1028.2	1045.8	1064.1	1080.1
37°	1005.0	1006.3	1018.7	1036.5	1054.8	1071.1
37.5°	995.2	996.5	1009.1	1026.9	1045.5	1062.0
38°	985.7	986.7	999.3	1017.4	1036.0	1052.5
38.5°	976.1	977.1	989.8	1007.8	1026.4	1043.2
39°	966.0	967.3	980.0	998.3	1016.9	1033.7
39.5°	956.2	957.3	970.2	988.2	1007.3	1023.8
40°	946.4	947.5	960.1	978.4	997.5	1014.0
40.5°	936.4	937.4	949.8	968.4	987.7	1004.2
41°	926.6	927.3	940.0	958.3	977.4	993.9
41.5°	916.3	916.8	929.4	948.0	967.3	983.6
42°	906.2	907.0	919.3	938.2	957.3	973.5
42.5°	896.1	896.4	909.0	927.9	946.7	963.2
43°	885.5	886.3	899.0	917.3	936.4	952.9
43.5°	875.2	875.7	888.1	906.7	925.8	942.3

TEST NUMBER: P776149

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRMW-2500lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	844.0	844.3	856.1	874.7	893.8	909.8
45.5°	833.4	833.4	845.3	863.9	882.4	898.4
46°	822.6	822.3	834.2	852.8	871.4	887.4
46.5°	811.7	811.0	823.1	841.4	860.0	876.0
47°	800.7	800.1	811.5	829.8	848.4	864.1
47.5°	789.0	788.3	799.4	817.9	836.5	852.3
48°	777.4	776.4	787.5	805.8	824.1	840.4
48.5°	765.6	764.0	775.4	793.4	811.7	827.7
49°	753.2	751.6	762.7	780.5	799.4	815.4
49.5°	740.5	738.7	749.6	767.9	786.2	802.2
50°	727.4	725.1	736.1	754.0	772.8	788.5
50.5°	714.0	711.9	722.5	740.3	758.6	774.6
51°	700.3	698.0	708.8	726.6	744.7	760.9
51.5°	686.3	684.0	694.3	712.7	730.5	746.0
52°	671.9	670.1	680.7	698.2	715.8	731.2
52.5°	658.0	656.2	666.7	683.8	700.3	716.5
53°	644.5	643.0	653.3	670.1	686.6	701.8
53.5°	631.4	630.4	640.7	656.9	672.9	687.4
54°	618.7	617.5	627.5	644.0	659.5	673.4
54.5°	604.6	603.0	613.3	629.3	644.8	659.0
55°	589.3	586.5	597.6	613.6	629.1	642.5
55.5°	571.3	566.9	578.0	594.0	609.7	624.2
56°	549.3	545.2	556.6	572.3	588.3	602.7
56.5°	526.4	522.0	533.1	549.6	565.1	580.0
57°	502.6	497.5	508.8	525.3	541.6	555.8
57.5°	477.9	471.9	484.3	500.8	516.6	530.2
58°	452.8	446.1	459.3	476.1	491.3	503.7
58.5°	426.8	420.8	434.0	451.0	463.7	477.6
59°	400.7	394.8	408.5	424.7	438.1	450.0
59.5°	375.2	370.3	383.4	399.4	411.8	423.4
60°	349.6	345.2	358.7	373.6	384.7	396.1
60.5°	324.9	320.7	333.9	347.8	357.6	370.3
61°	300.1	296.2	309.1	322.0	332.1	344.2
61.5°	277.1	273.8	285.4	297.5	307.1	318.9
62°	256.2	250.5	262.7	272.5	281.5	294.4
62.5°	235.6	228.9	240.0	248.5	257.8	270.7
63°	214.9	208.0	217.8	225.3	234.0	247.7
63.5°	194.3	187.8	196.9	203.1	211.8	225.3
64°	173.7	168.5	176.0	181.7	189.9	203.6
64.5°	156.4	150.9	156.6	161.8	170.3	183.2
65°	140.1	133.9	138.3	142.7	151.2	164.4
65.5°	124.9	118.7	121.0	125.1	133.4	145.3
66°	110.4	104.2	104.8	109.1	117.1	125.9



TEST NUMBER: P776149

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRMW-2500lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	75.3	74.3	73.8	77.1	79.7	82.6
68°	65.8	65.8	65.5	68.1	70.4	73.0
68.5°	57.8	57.3	57.3	59.1	61.4	63.5
69°	51.3	48.8	49.0	50.1	52.1	54.2
69.5°	46.2	44.4	44.6	45.4	46.4	44.6
70°	42.8	41.8	42.1	42.6	42.8	42.3
70.5°	40.8	40.0	40.3	40.5	40.5	40.3
71°	39.0	37.9	38.2	38.7	38.7	37.9
71.5°	36.9	36.1	36.4	36.6	36.6	35.9
72°	35.1	34.1	34.3	34.8	34.6	33.8
72.5°	33.0	32.3	32.5	33.0	32.8	32.0
73°	31.2	30.4	30.7	31.0	30.7	29.9
73.5°	29.7	28.9	28.9	29.4	28.9	28.1
74°	27.9	27.1	27.4	27.6	27.4	26.6
74.5°	26.3	25.5	25.8	26.1	25.5	24.8
75°	24.8	24.0	24.3	24.3	24.0	23.2
75.5°	23.2	22.4	22.7	23.0	22.4	21.7
76°	21.9	21.2	21.2	21.4	20.9	20.1
76.5°	20.4	19.6	19.9	19.9	19.4	18.8
77°	19.1	18.3	18.6	18.6	18.1	17.5
77.5°	17.8	17.0	17.3	17.3	16.8	16.3
78°	16.5	16.0	16.0	16.3	15.5	15.0
78.5°	15.2	14.7	15.0	15.0	14.4	13.9
79°	14.2	13.7	13.7	13.9	13.2	12.9
79.5°	13.2	12.6	12.6	12.6	12.1	11.6
80°	12.1	11.6	11.6	11.6	11.1	10.8
80.5°	11.1	10.6	10.6	10.6	10.1	9.8
81°	10.1	9.8	9.8	9.8	9.3	8.8
81.5°	9.0	8.8	9.0	8.8	8.3	8.0
82°	8.3	8.0	8.0	8.0	7.5	7.2
82.5°	7.5	7.2	7.2	7.2	6.5	6.2
83°	6.7	6.2	6.5	6.2	5.7	5.4
83.5°	5.9	5.7	5.7	5.4	4.9	4.9
84°	5.2	4.9	4.9	4.9	4.4	4.1
84.5°	4.4	4.1	4.4	4.1	3.6	3.6
85°	3.9	3.6	3.6	3.6	3.1	3.1
85.5°	3.4	3.1	3.1	3.1	2.3	2.3
86°	2.6	2.6	2.6	2.6	2.1	2.1
86.5°	2.3	2.1	2.1	2.1	1.5	1.5
87°	1.8	1.5	1.5	1.5	1.3	1.0
87.5°	1.3	1.0	1.0	1.0	1.0	0.8
88°	0.8	0.8	0.8	0.8	0.5	0.5
88.5°	0.5	0.3	0.3	0.3	0.3	0.3



TEST NUMBER: P776149

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRMW-2500lm-5000K

**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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Scaled Data Report



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Scaled Data Report





21.5°	1288.8	1295.8	1298.9	1297.9	1295.0	1288.6	1279.3	1269.0	1259.4	1251.2	1247.0
22°	1283.9	1291.2	1294.0	1293.2	1290.4	1283.7	1274.1	1263.8	1254.0	1245.7	1241.1



44°	931.5	944.1	951.1	951.3	949.3	939.2	923.7	906.2	888.4	873.4	866.2
44.5°	920.6	933.0	940.2	941.0	939.2	928.4	913.2	895.6	878.1	863.1	855.6



66.5°	108.1	119.5	123.9	126.2	133.1	127.7	118.7	108.1	98.3	95.5	96.5
67°	92.1	103.0	106.8	108.9	115.3	111.0	103.2	94.7	83.9	82.8	84.4



89°	0.0	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.0	0.0	0.0
89.5°	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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21.5°	1247.3	1248.1	1255.8	1266.9	1278.5	1288.8
22°	1241.4	1242.1	1250.1	1261.2	1273.4	1283.9



44°	864.9	865.4	877.8	896.4	915.2	931.5
44.5°	854.6	854.8	867.0	885.8	904.6	920.6

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66.5°	97.5	91.6	90.6	95.0	103.0	108.1
67°	86.2	83.1	82.1	85.9	89.0	92.1

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

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Scaled Data Report



(END OF REPORT)