

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: P776520

Luminaire Tested: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776520
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B027)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K
Description: 8 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3433.5 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.2 / 1.3
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')

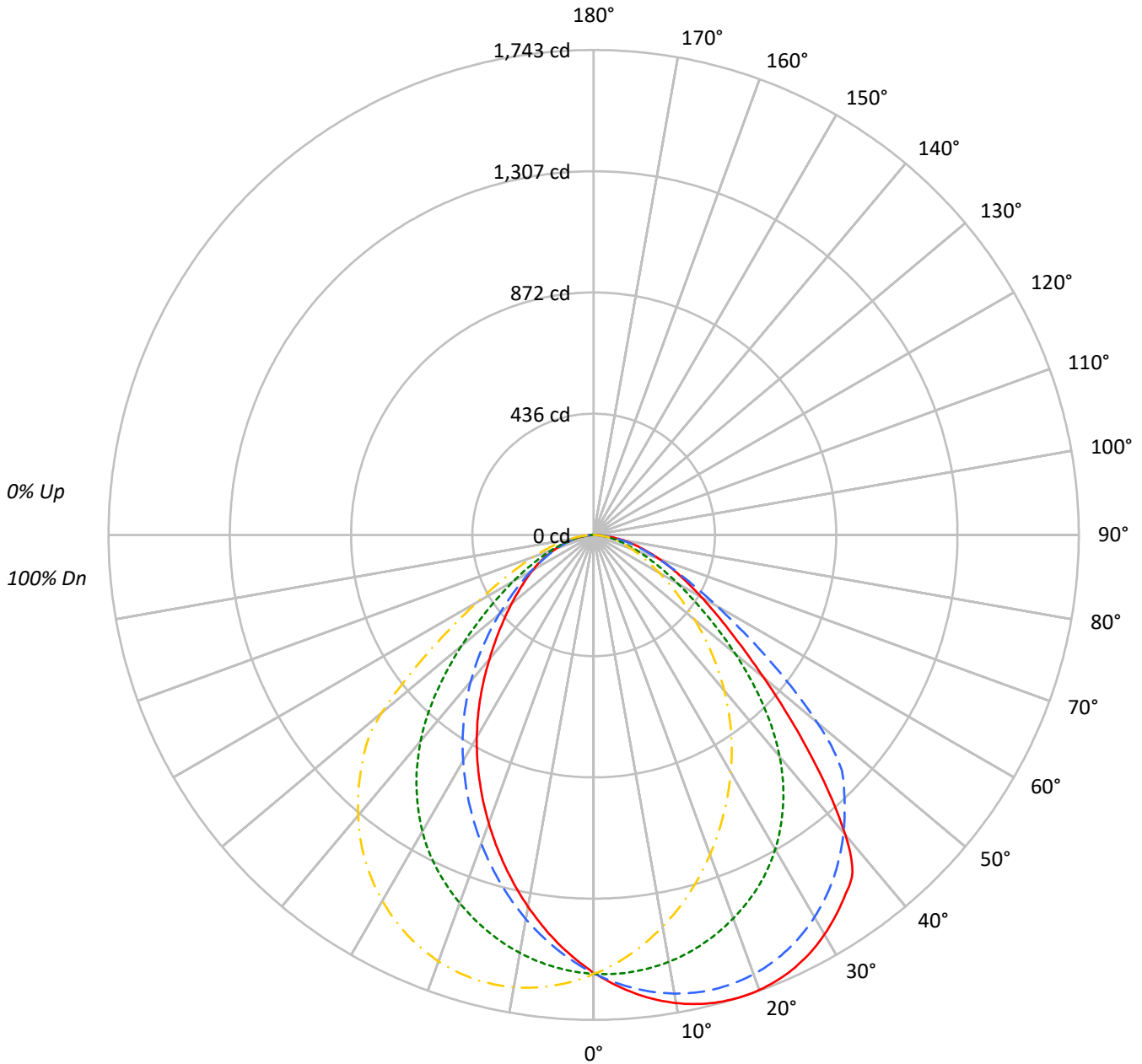
CIE Type: Direct
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87																			
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75																			
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65																			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57																			
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50																			
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	64	52	44	38	63	51	43	38	50	43	38	49	42	38	47	42	38	36																			
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32																			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	37780	37780	37780	37780
5°	39771	37951	35448	37554
10°	41594	37932	33036	37139
15°	43152	37750	30576	36598
20°	44415	37424	28130	35926
25°	45361	36945	25695	35146
30°	45918	36124	23247	34073
35°	46177	34743	20725	32483
40°	44032	32513	18221	30281
45°	36786	29122	16097	27078
50°	29832	24792	14373	23087
55°	24719	20342	13060	19184
60°	21422	16689	12071	15994
65°	19183	13935	11126	13475
70°	17457	11757	10061	11407
75°	15889	9885	9135	9635
80°	14251	8161	7995	7899
85°	11610	6328	5172	5805

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43124 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.6	4.3
10°-20°	420.3	12.2
20°-30°	621.6	18.1
30°-40°	716.4	20.9
40°-50°	652.3	19.0
50°-60°	446.7	13.0
60°-70°	262.3	7.6
70°-80°	132.2	3.9
80°-90°	33.1	1.0
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°	1190.5	34.7
0°-40°	1906.9	55.5
0°-60°	3005.9	87.5
0°-90°	3433.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3433.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1576	1576	1576	1576	1576	
5°	1652	1577	1473	1560	1652	160
15°	1738	1521	1232	1474	1738	492
25°	1714	1396	971	1328	1714	790
35°	1578	1187	708	1110	1578	981
45°	1085	859	475	798	1085	838
55°	591	487	312	459	591	537
65°	338	246	196	238	338	338
75°	172	107	99	104	172	183
85°	42	23	19	21	42	49
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°	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6
0.5°	1581.7	1582.1	1582.1	1580.2	1578.3	1575.6	1573.3	1564.1	1563.7	1564.4	1567.9
1°	1590.5	1590.1	1588.6	1584.4	1578.6	1572.5	1567.5	1555.6	1554.1	1555.6	1560.6
1.5°	1599.0	1598.6	1594.8	1587.8	1579.4	1569.4	1561.4	1547.2	1544.9	1546.4	1553.3
2°	1607.0	1606.6	1601.3	1591.7	1579.4	1566.0	1554.8	1538.3	1534.9	1536.8	1545.6
2.5°	1615.5	1614.3	1607.4	1595.1	1579.4	1562.5	1548.3	1529.5	1524.9	1527.6	1538.0
3°	1623.1	1621.6	1613.6	1598.6	1579.4	1559.1	1541.8	1519.9	1514.9	1518.0	1529.9
3.5°	1630.8	1628.9	1619.3	1601.7	1579.0	1555.2	1534.9	1510.7	1504.6	1508.0	1521.8
4°	1638.5	1636.2	1624.7	1604.3	1578.6	1551.0	1527.6	1501.5	1494.2	1498.1	1513.4
4.5°	1645.4	1643.1	1629.7	1607.0	1577.9	1547.2	1520.7	1491.9	1483.5	1487.7	1505.0
5°	1652.3	1649.6	1635.0	1609.7	1576.7	1542.6	1513.0	1481.6	1472.7	1477.3	1496.1
5.5°	1659.2	1656.1	1640.0	1612.0	1575.6	1538.3	1505.3	1472.0	1461.6	1467.0	1487.3
6°	1665.7	1662.3	1644.6	1613.9	1574.4	1533.4	1497.7	1461.6	1450.5	1456.2	1478.5
6.5°	1671.9	1668.0	1648.9	1615.9	1572.9	1528.8	1489.6	1451.6	1439.7	1445.5	1469.7
7°	1678.0	1674.2	1653.1	1617.4	1571.3	1523.4	1481.6	1440.9	1427.8	1434.4	1460.1
7.5°	1683.8	1679.6	1657.3	1619.3	1569.4	1518.4	1473.1	1430.1	1416.7	1423.6	1450.9
8°	1689.1	1684.9	1661.1	1620.5	1567.5	1513.0	1464.7	1419.4	1404.8	1412.1	1441.3
8.5°	1694.1	1689.9	1664.6	1621.6	1565.6	1507.3	1455.8	1408.6	1392.9	1401.0	1431.7
9°	1699.1	1694.5	1667.7	1622.4	1563.3	1501.9	1447.4	1397.9	1381.0	1389.1	1421.7
9.5°	1704.1	1699.1	1671.1	1623.1	1560.6	1495.8	1438.6	1386.8	1369.1	1377.9	1412.1
10°	1708.3	1703.3	1673.8	1623.5	1557.9	1489.6	1429.4	1375.3	1356.8	1366.1	1402.1
10.5°	1712.6	1707.2	1676.5	1623.9	1554.8	1483.5	1420.2	1364.1	1344.9	1354.2	1391.8
11°	1716.8	1711.0	1678.8	1623.9	1551.8	1476.9	1410.6	1352.6	1332.7	1342.6	1381.4
11.5°	1720.2	1714.5	1681.1	1623.9	1548.7	1470.4	1401.4	1341.1	1320.4	1330.4	1370.7
12°	1723.7	1717.5	1683.0	1623.5	1545.3	1463.9	1391.8	1329.6	1307.7	1318.5	1360.3
12.5°	1726.8	1720.6	1684.5	1623.1	1541.8	1457.0	1382.2	1317.7	1295.4	1306.6	1349.9
13°	1729.8	1723.3	1686.1	1622.4	1538.0	1450.1	1372.2	1305.8	1282.8	1293.9	1339.2
13.5°	1732.1	1725.6	1687.2	1621.2	1533.7	1442.8	1362.2	1293.9	1270.1	1281.6	1328.4
14°	1734.4	1727.9	1688.4	1620.1	1529.5	1435.5	1351.9	1281.6	1257.5	1269.4	1317.3
14.5°	1736.7	1729.8	1689.1	1618.9	1525.3	1428.2	1341.9	1269.7	1244.8	1257.1	1306.2
15°	1738.3	1731.4	1689.5	1617.4	1520.7	1420.2	1331.5	1257.1	1231.7	1244.4	1295.1
15.5°	1739.8	1732.9	1689.9	1615.5	1516.1	1412.5	1321.2	1245.2	1219.1	1232.1	1283.9
16°	1740.9	1734.0	1689.5	1613.6	1511.1	1404.4	1310.4	1232.9	1206.0	1219.5	1272.8
16.5°	1742.1	1734.8	1689.1	1611.3	1506.5	1396.4	1299.7	1220.6	1193.4	1207.2	1261.7
17°	1742.5	1735.2	1688.8	1608.9	1501.1	1388.3	1288.9	1208.0	1180.3	1194.1	1249.8
17.5°	1742.9	1735.2	1688.0	1606.3	1495.8	1379.9	1277.8	1195.7	1167.3	1181.9	1238.7
18°	1743.3	1735.6	1686.8	1603.6	1490.4	1371.4	1267.1	1183.4	1154.2	1168.4	1227.1
18.5°	1742.9	1735.2	1685.7	1600.5	1484.6	1363.0	1255.9	1170.7	1141.2	1156.2	1215.2
19°	1742.5	1734.4	1684.2	1597.1	1478.5	1354.2	1244.8	1158.1	1128.1	1143.5	1203.7
19.5°	1741.7	1733.7	1682.2	1593.6	1472.7	1345.3	1233.7	1145.8	1115.5	1130.8	1192.2
20°	1740.6	1732.5	1680.3	1590.1	1466.6	1336.5	1222.5	1133.1	1102.4	1117.8	1179.9
20.5°	1739.4	1731.4	1678.0	1586.3	1460.4	1327.3	1211.0	1120.5	1089.0	1104.7	1168.1
21°	1737.5	1729.4	1675.3	1582.5	1453.9	1318.5	1199.5	1107.4	1076.0	1092.1	1156.5



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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°	1731.0	1722.5	1666.1	1569.0	1434.0	1290.1	1164.6	1069.8	1036.8	1053.7	1120.5
23°	1728.3	1719.8	1662.7	1564.1	1426.7	1280.5	1153.1	1056.8	1023.8	1040.7	1108.6
23.5°	1725.2	1716.8	1658.8	1559.1	1419.4	1270.9	1141.6	1043.7	1010.7	1028.0	1096.7
24°	1721.8	1713.3	1655.0	1554.1	1412.1	1260.9	1129.7	1031.1	997.7	1014.9	1084.4
24.5°	1718.3	1709.5	1650.4	1548.7	1404.4	1250.9	1117.8	1018.4	984.2	1002.3	1072.1
25°	1714.5	1705.6	1645.8	1542.9	1396.4	1241.0	1105.9	1005.7	971.2	989.2	1060.2
25.5°	1709.9	1701.4	1640.8	1536.8	1388.3	1230.2	1094.0	993.1	958.5	976.2	1048.3
26°	1705.3	1696.8	1636.2	1531.1	1380.3	1219.9	1082.1	980.0	945.1	963.5	1035.7
26.5°	1700.7	1691.8	1630.8	1524.5	1371.8	1209.5	1070.2	967.0	931.7	950.5	1023.8
27°	1695.7	1686.8	1625.1	1518.4	1363.0	1198.7	1057.9	953.9	918.6	937.8	1011.5
27.5°	1690.3	1681.5	1619.3	1511.5	1353.8	1188.0	1046.0	941.3	906.0	924.4	999.2
28°	1684.2	1675.7	1613.2	1504.2	1344.6	1176.9	1033.7	928.6	892.5	911.7	986.9
28.5°	1678.4	1669.6	1607.0	1496.9	1335.0	1165.7	1021.9	915.6	879.1	898.7	975.0
29°	1671.9	1663.1	1600.5	1489.6	1325.4	1154.2	1009.6	902.5	866.1	885.6	962.4
29.5°	1665.4	1656.5	1594.0	1481.9	1315.0	1143.1	997.3	889.9	853.0	872.6	950.1
30°	1658.4	1650.0	1586.7	1473.9	1304.7	1131.2	985.0	876.4	839.6	859.5	937.8
30.5°	1651.5	1642.7	1579.4	1465.4	1293.9	1119.3	973.1	863.8	826.2	846.5	925.5
31°	1643.9	1635.4	1572.1	1456.6	1283.2	1107.0	960.5	850.3	813.1	833.8	913.3
31.5°	1636.2	1627.8	1564.4	1447.8	1272.0	1095.1	947.8	837.7	800.1	820.8	901.0
32°	1628.5	1620.1	1556.4	1438.2	1260.5	1082.9	935.5	824.6	787.0	807.7	888.7
32.5°	1620.1	1611.6	1547.9	1428.6	1248.6	1069.8	922.9	811.6	773.6	794.7	876.4
33°	1612.0	1603.6	1539.5	1419.0	1236.7	1057.2	910.6	798.1	760.9	781.6	864.1
33.5°	1603.6	1594.8	1530.7	1408.6	1224.8	1044.5	897.9	785.9	747.5	769.0	851.9
34°	1594.8	1586.3	1522.2	1398.3	1212.2	1031.8	885.2	772.4	734.1	755.9	838.8
34.5°	1585.9	1577.1	1512.6	1387.5	1199.5	1018.8	872.6	759.4	721.0	742.9	826.5
35°	1577.5	1567.9	1503.4	1376.4	1186.9	1005.7	859.9	746.3	708.0	730.2	814.3
35.5°	1569.0	1558.7	1493.4	1364.5	1173.4	992.3	846.9	733.7	694.9	717.2	801.6
36°	1561.0	1549.1	1483.9	1353.0	1160.0	979.6	834.2	720.6	681.9	704.1	788.9
36.5°	1551.8	1539.9	1473.9	1340.7	1145.8	966.2	821.6	707.2	668.8	691.1	776.3
37°	1541.0	1530.7	1463.1	1328.4	1132.0	952.4	808.5	694.2	656.2	678.0	763.6
37.5°	1527.6	1521.5	1452.8	1316.2	1117.4	938.6	795.1	681.5	643.5	665.4	750.9
38°	1508.0	1512.6	1441.6	1303.1	1102.1	925.2	782.4	668.4	630.8	652.7	738.3
38.5°	1487.7	1502.3	1430.5	1289.7	1087.1	911.3	769.4	655.4	618.6	639.7	725.6
39°	1463.1	1490.8	1419.4	1275.5	1071.4	897.5	756.3	642.7	606.3	627.4	713.0
39.5°	1435.9	1474.3	1407.9	1261.7	1055.6	883.3	743.3	630.1	594.0	614.7	699.9
40°	1406.7	1456.2	1396.0	1247.1	1038.7	869.1	730.2	617.4	582.1	602.4	687.2
40.5°	1374.9	1433.2	1384.5	1231.7	1022.2	855.3	717.2	604.7	570.6	590.2	674.6
41°	1344.6	1409.4	1372.2	1215.6	1005.4	840.7	703.7	592.9	559.1	578.7	661.5
41.5°	1311.6	1379.5	1359.9	1199.5	988.1	826.5	690.7	580.6	548.0	566.4	648.5
42°	1280.1	1352.2	1347.2	1182.2	970.4	812.0	677.7	568.7	536.8	554.9	635.8
42.5°	1247.1	1320.8	1334.6	1164.6	952.4	797.8	664.6	556.8	526.1	543.4	623.2
43°	1214.5	1291.6	1322.3	1146.2	934.4	783.2	651.6	545.3	515.3	532.2	610.5
43.5°	1181.1	1259.0	1309.3	1128.5	915.9	768.2	638.5	533.4	504.6	520.7	597.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1084.8	1164.2	1271.7	1068.3	858.8	724.5	599.4	500.4	474.7	488.9	559.9
45.5°	1051.4	1131.6	1259.0	1047.9	839.6	709.5	586.3	489.6	464.7	478.5	547.6
46°	1022.2	1100.9	1244.4	1026.8	820.4	694.9	573.3	478.9	455.5	468.1	534.9
46.5°	989.6	1067.9	1229.4	1005.0	800.8	680.0	560.6	468.5	445.9	458.2	522.6
47°	962.4	1038.7	1208.0	982.7	781.3	665.4	547.6	458.5	436.7	448.6	510.7
47.5°	930.1	1006.5	1187.6	959.7	761.3	650.4	534.9	449.0	427.9	439.0	498.8
48°	904.8	978.5	1161.5	936.3	742.5	635.8	522.2	438.6	419.0	429.8	487.3
48.5°	874.5	946.3	1137.0	912.9	722.5	621.2	509.6	429.0	410.2	420.6	475.4
49°	850.7	920.2	1107.4	889.5	703.0	606.7	497.3	419.8	401.8	411.4	463.9
49.5°	821.9	889.9	1079.8	865.7	683.8	592.1	485.0	410.6	393.7	402.5	452.8
50°	799.7	864.9	1048.3	841.9	664.6	577.5	472.7	401.4	385.3	393.7	441.7
50.5°	772.8	836.9	1018.0	817.3	644.7	562.9	460.9	392.5	377.2	385.3	430.5
51°	752.1	812.0	986.6	792.8	626.2	548.7	449.3	383.7	369.9	377.2	419.8
51.5°	727.2	785.9	956.2	768.6	607.4	534.9	437.8	374.9	362.2	368.8	409.4
52°	707.2	762.8	924.0	744.8	589.0	520.7	426.3	366.8	354.6	360.7	399.1
52.5°	684.9	739.0	894.5	721.0	570.6	506.5	415.2	358.4	346.9	353.0	388.7
53°	666.1	716.4	863.4	696.8	553.3	492.7	404.4	350.3	339.6	345.0	378.7
53.5°	645.4	694.2	834.2	673.0	535.7	479.3	393.7	342.3	332.7	337.7	368.8
54°	627.0	672.3	803.9	649.6	518.8	465.8	383.0	335.0	325.8	330.4	359.5
54.5°	608.6	652.3	775.5	627.0	501.9	452.4	372.6	327.7	319.3	323.5	350.0
55°	591.3	631.2	747.9	604.4	486.6	439.4	362.6	320.0	312.4	316.2	340.7
55.5°	574.8	614.7	719.9	582.9	470.4	426.3	352.6	312.7	305.8	309.3	331.5
56°	557.9	593.6	694.2	561.8	455.1	413.7	342.7	305.4	298.9	302.4	323.1
56.5°	543.4	578.7	667.7	541.4	440.1	401.4	333.5	298.2	293.2	295.5	314.7
57°	526.5	559.1	643.9	521.5	425.9	389.1	324.2	292.0	287.0	288.9	306.2
57.5°	513.8	545.3	618.6	502.7	411.7	377.2	315.4	285.5	280.9	282.4	297.8
58°	498.1	527.2	595.9	483.9	398.3	365.7	306.2	279.0	274.7	275.9	289.3
58.5°	486.6	513.0	573.7	466.6	385.3	354.2	297.4	272.4	268.6	269.8	281.3
59°	471.2	497.3	551.8	449.7	372.2	343.0	288.2	265.9	262.8	263.6	273.2
59.5°	460.9	483.5	531.8	433.6	359.9	332.7	279.7	259.8	257.1	257.5	265.5
60°	446.7	468.9	511.1	417.9	348.0	322.3	271.3	253.6	251.7	251.7	257.9
60.5°	435.1	454.3	493.5	402.9	336.1	312.0	263.6	247.5	246.0	246.0	250.6
61°	422.9	442.0	473.5	388.3	325.4	301.6	255.6	241.4	240.6	240.2	243.3
61.5°	411.4	427.5	457.4	374.9	314.7	291.2	247.5	235.6	235.2	234.8	236.4
62°	400.2	416.3	440.1	361.9	303.5	281.3	240.2	230.2	229.8	229.1	229.1
62.5°	389.1	403.3	423.2	349.2	292.8	272.1	232.9	224.5	224.1	223.7	222.6
63°	378.4	391.8	408.7	336.9	283.2	262.5	225.6	219.1	218.3	218.3	216.0
63.5°	368.0	379.9	393.3	325.4	273.2	253.6	218.3	213.7	213.0	213.0	209.5
64°	358.0	368.0	379.5	313.5	264.0	244.8	211.4	208.4	207.2	207.6	203.4
64.5°	347.7	357.6	365.7	302.8	254.8	236.4	204.9	203.0	201.5	201.8	197.2
65°	338.1	346.5	351.9	292.4	245.6	227.9	198.4	197.6	196.1	196.5	191.1
65.5°	328.5	336.5	340.0	282.0	236.8	219.9	192.2	191.9	190.7	191.1	185.3
66°	318.9	326.2	327.3	272.1	228.3	211.8	186.1	186.5	185.3	186.1	179.6



TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	291.6	296.2	293.2	244.0	204.1	188.8	168.5	171.1	169.6	170.8	163.5
68°	283.2	287.0	282.4	235.6	196.5	181.9	163.1	166.2	164.2	165.8	158.5
68.5°	274.4	277.8	272.4	227.2	189.2	175.0	157.7	161.5	159.2	160.8	153.1
69°	265.9	269.0	262.1	218.7	181.9	168.1	152.3	156.6	153.9	155.8	148.1
69.5°	257.9	260.2	252.5	210.7	174.6	161.2	147.3	151.6	148.9	151.2	143.5
70°	249.0	251.3	243.3	202.6	167.7	154.6	142.4	147.0	143.5	146.2	138.5
70.5°	241.0	242.5	234.1	194.9	160.8	148.5	137.8	142.4	138.9	141.6	133.9
71°	232.9	234.1	225.2	187.6	154.3	142.7	132.8	137.4	133.5	136.6	129.3
71.5°	224.9	226.0	216.4	180.3	147.7	136.6	128.2	132.8	128.9	131.6	124.7
72°	217.2	218.0	208.0	173.1	141.6	130.5	123.6	127.8	124.3	127.0	120.5
72.5°	209.5	209.9	199.9	165.8	135.5	125.1	119.0	123.2	120.1	122.4	116.3
73°	201.8	202.2	191.9	159.2	129.3	119.3	114.7	118.6	115.9	118.2	112.0
73.5°	193.8	194.2	183.8	152.3	123.6	114.0	110.5	114.3	111.3	113.6	107.8
74°	186.5	186.5	176.1	145.8	117.8	108.6	106.3	110.1	107.1	109.4	103.6
74.5°	179.2	178.8	168.5	139.3	112.4	103.6	102.1	105.5	102.8	104.8	99.4
75°	171.5	171.5	161.2	133.5	106.7	98.6	98.2	101.7	98.6	100.5	95.2
75.5°	164.6	164.2	153.9	127.4	101.3	93.6	94.0	97.1	94.4	96.3	91.3
76°	157.3	156.9	147.0	121.6	96.3	89.0	90.2	92.9	90.2	92.1	87.1
76.5°	150.0	149.7	140.1	115.5	91.3	84.4	86.3	88.6	86.3	87.9	82.9
77°	143.1	142.7	133.5	109.7	86.3	79.8	82.5	84.4	82.1	83.7	79.4
77.5°	136.6	135.8	127.0	104.0	81.3	75.6	78.3	80.2	78.3	79.4	75.2
78°	130.1	129.3	120.5	98.2	76.7	71.4	74.4	76.0	74.1	75.2	71.4
78.5°	123.2	122.8	114.0	92.9	72.1	67.2	70.6	72.1	70.2	71.4	67.5
79°	116.7	115.9	107.4	87.5	67.9	63.3	67.2	67.9	66.0	67.2	63.7
79.5°	109.7	109.4	100.9	82.1	63.3	59.5	63.3	63.7	62.2	63.3	59.9
80°	103.2	102.8	94.8	77.1	59.1	55.6	59.5	59.5	57.9	59.5	56.0
80.5°	96.7	96.3	88.6	71.8	54.9	52.2	56.0	55.3	54.1	55.3	52.2
81°	90.6	90.2	82.9	67.2	51.0	48.7	52.2	51.0	50.3	51.4	48.7
81.5°	84.0	83.7	77.1	62.2	47.2	45.3	48.3	46.8	46.0	47.2	44.9
82°	77.9	77.9	71.4	57.6	43.4	41.8	44.5	43.0	42.2	43.4	41.4
82.5°	71.8	71.8	65.6	53.0	39.5	38.8	41.1	38.8	38.4	39.5	37.6
83°	65.6	65.6	60.2	48.3	36.5	35.7	37.2	34.9	34.2	35.3	34.2
83.5°	59.5	59.9	54.5	43.7	33.0	32.6	33.8	30.7	30.3	31.5	30.7
84°	53.7	54.1	49.1	39.9	29.5	29.5	30.3	26.9	26.5	27.6	27.2
84.5°	48.0	48.3	44.1	35.7	26.1	26.5	27.2	23.0	22.6	23.8	24.2
85°	42.2	42.6	39.1	31.8	23.0	23.4	23.8	18.8	18.8	19.6	20.7
85.5°	36.5	36.8	34.5	27.6	19.6	20.3	20.3	15.3	15.0	16.1	17.7
86°	30.7	31.5	29.9	24.2	16.5	17.7	17.3	12.3	11.9	12.7	14.6
86.5°	24.9	26.1	25.7	20.3	13.8	14.6	14.2	9.6	9.2	10.0	11.5
87°	19.6	21.1	21.1	16.9	11.1	11.5	11.1	6.9	6.9	7.7	8.8
87.5°	15.7	16.9	16.9	13.0	8.4	8.8	8.4	4.6	4.6	5.0	5.8
88°	12.7	13.0	13.0	10.0	5.8	6.1	5.4	2.3	2.3	2.7	3.1
88.5°	9.6	10.0	10.0	6.9	3.5	3.1	2.7	0.8	0.8	0.8	0.8



TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1575.6	1575.6	1575.6	1575.6	1575.6	1575.6
0.5°	1571.7	1576.7	1580.6	1584.8	1580.2	1581.7
1°	1567.1	1575.6	1582.9	1590.1	1587.8	1590.5
1.5°	1562.5	1574.0	1585.2	1595.1	1595.1	1599.0
2°	1557.5	1572.9	1587.1	1600.1	1602.4	1607.0
2.5°	1552.5	1571.0	1589.0	1605.1	1609.7	1615.5
3°	1547.2	1569.4	1590.5	1609.3	1617.0	1623.1
3.5°	1541.8	1567.1	1591.7	1613.9	1623.5	1630.8
4°	1536.4	1565.2	1592.8	1618.2	1630.1	1638.5
4.5°	1530.7	1562.9	1594.0	1622.0	1636.2	1645.4
5°	1524.5	1560.2	1594.8	1625.4	1642.3	1652.3
5.5°	1518.8	1557.5	1595.5	1628.9	1647.7	1659.2
6°	1512.6	1554.8	1595.9	1632.4	1653.5	1665.7
6.5°	1506.1	1551.8	1595.9	1635.4	1658.8	1671.9
7°	1499.6	1548.3	1595.9	1638.5	1663.8	1678.0
7.5°	1492.7	1545.3	1595.9	1640.8	1668.8	1683.8
8°	1485.8	1541.4	1595.5	1643.1	1673.4	1689.1
8.5°	1478.9	1538.0	1595.1	1645.4	1677.6	1694.1
9°	1472.0	1533.7	1594.0	1647.3	1681.9	1699.1
9.5°	1464.7	1529.9	1593.2	1648.9	1685.7	1704.1
10°	1457.0	1525.3	1592.1	1650.4	1689.1	1708.3
10.5°	1449.7	1521.1	1590.9	1651.5	1692.6	1712.6
11°	1442.0	1516.5	1589.4	1652.7	1695.7	1716.8
11.5°	1434.0	1511.9	1587.5	1653.5	1698.4	1720.2
12°	1425.9	1506.9	1585.5	1654.2	1701.0	1723.7
12.5°	1417.9	1501.9	1583.6	1654.6	1703.3	1726.8
13°	1409.8	1496.5	1580.9	1654.6	1705.3	1729.8
13.5°	1401.4	1491.1	1578.6	1654.2	1707.2	1732.1
14°	1392.9	1485.8	1575.9	1653.8	1708.7	1734.4
14.5°	1384.1	1480.0	1572.9	1653.5	1709.9	1736.7
15°	1375.3	1474.3	1569.8	1652.3	1710.6	1738.3
15.5°	1366.4	1468.1	1566.4	1651.2	1711.4	1739.8
16°	1357.6	1462.0	1562.9	1650.0	1712.2	1740.9
16.5°	1348.4	1455.8	1559.4	1648.5	1712.2	1742.1
17°	1339.2	1449.3	1555.6	1646.6	1712.2	1742.5
17.5°	1329.6	1442.8	1551.4	1644.6	1711.8	1742.9
18°	1320.4	1435.9	1547.2	1642.3	1711.0	1743.3
18.5°	1310.8	1429.0	1542.9	1639.6	1710.3	1742.9
19°	1301.2	1422.1	1538.3	1637.0	1709.1	1742.5
19.5°	1291.6	1415.2	1533.4	1633.9	1707.6	1741.7
20°	1281.6	1407.9	1528.8	1630.8	1705.6	1740.6
20.5°	1271.7	1400.6	1523.4	1627.4	1703.7	1739.4
21°	1261.7	1392.9	1518.0	1623.1	1701.4	1737.5

TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1231.4	1369.9	1501.1	1610.9	1693.0	1731.0
23°	1221.0	1361.8	1495.4	1606.3	1689.5	1728.3
23.5°	1210.6	1353.8	1489.2	1601.3	1686.1	1725.2
24°	1200.3	1345.7	1483.1	1596.3	1682.2	1721.8
24.5°	1189.5	1337.3	1476.6	1590.9	1678.0	1718.3
25°	1179.2	1328.4	1470.0	1585.5	1673.4	1714.5
25.5°	1168.4	1319.6	1463.1	1579.8	1668.4	1709.9
26°	1157.7	1310.8	1456.2	1573.6	1663.8	1705.3
26.5°	1146.6	1301.6	1448.9	1567.5	1658.4	1700.7
27°	1135.8	1292.4	1441.6	1561.0	1652.7	1695.7
27.5°	1124.7	1282.8	1434.0	1554.5	1646.9	1690.3
28°	1113.6	1272.8	1425.9	1547.6	1640.8	1684.2
28.5°	1101.7	1262.8	1417.9	1540.6	1634.3	1678.4
29°	1090.5	1252.5	1409.4	1533.4	1627.8	1671.9
29.5°	1078.6	1241.7	1401.0	1526.1	1620.5	1665.4
30°	1066.7	1230.6	1391.8	1518.4	1613.6	1658.4
30.5°	1054.9	1219.5	1382.2	1510.7	1606.3	1651.5
31°	1042.6	1208.3	1373.0	1502.3	1598.6	1643.9
31.5°	1030.7	1196.4	1363.0	1494.2	1590.5	1636.2
32°	1018.4	1184.6	1352.6	1485.8	1582.5	1628.5
32.5°	1005.7	1172.7	1341.9	1476.9	1574.0	1620.1
33°	993.5	1160.4	1331.1	1468.1	1565.2	1612.0
33.5°	980.4	1148.1	1320.0	1458.5	1556.4	1603.6
34°	967.4	1135.1	1308.5	1449.3	1547.6	1594.8
34.5°	954.7	1122.8	1296.6	1439.7	1538.3	1585.9
35°	942.4	1109.7	1284.7	1429.8	1528.8	1577.5
35.5°	929.0	1096.7	1272.4	1419.8	1519.2	1569.0
36°	915.9	1082.9	1260.1	1409.4	1509.6	1561.0
36.5°	902.9	1069.4	1247.1	1398.7	1499.6	1551.8
37°	890.2	1055.6	1234.1	1387.5	1489.6	1541.0
37.5°	876.8	1041.4	1220.6	1376.4	1479.6	1527.6
38°	863.8	1026.8	1206.8	1364.9	1470.0	1508.0
38.5°	850.3	1012.3	1192.6	1353.0	1460.4	1487.7
39°	837.7	997.7	1178.4	1341.1	1451.2	1463.1
39.5°	823.5	983.1	1163.1	1328.8	1440.1	1435.9
40°	810.4	967.4	1148.1	1316.2	1428.6	1406.7
40.5°	797.0	951.6	1132.4	1303.5	1410.6	1374.9
41°	783.6	935.9	1115.9	1290.8	1392.9	1344.6
41.5°	770.1	919.8	1099.0	1277.4	1369.9	1311.6
42°	756.7	903.3	1082.1	1264.0	1346.1	1280.1
42.5°	743.3	886.4	1064.4	1250.6	1318.1	1247.1
43°	729.8	869.1	1046.0	1237.1	1292.0	1214.5
43.5°	716.0	851.9	1026.8	1222.9	1262.1	1181.1

TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	675.0	798.5	965.8	1179.6	1174.2	1084.8
45.5°	660.8	780.1	944.7	1164.6	1143.5	1051.4
46°	647.0	762.5	922.5	1150.4	1113.9	1022.2
46.5°	633.1	744.4	900.6	1135.1	1083.6	989.6
47°	619.3	726.0	878.0	1120.5	1054.5	962.4
47.5°	605.9	708.0	855.7	1104.0	1023.8	930.1
48°	591.7	689.9	833.1	1087.1	995.4	904.8
48.5°	578.3	671.9	810.0	1068.3	965.8	874.5
49°	564.5	654.2	787.4	1044.1	938.6	850.7
49.5°	551.0	637.0	765.1	1021.1	910.2	821.9
50°	537.6	618.9	742.5	993.8	884.5	799.7
50.5°	523.8	601.7	719.9	966.2	856.5	772.8
51°	510.7	584.4	697.2	937.4	831.1	752.1
51.5°	497.3	567.9	675.4	907.5	805.8	727.2
52°	484.3	551.0	653.9	877.2	782.4	707.2
52.5°	471.2	534.9	632.8	848.8	757.5	684.9
53°	458.2	519.2	611.3	819.2	733.7	666.1
53.5°	445.9	503.8	590.9	790.5	712.2	645.4
54°	433.2	488.1	571.4	761.7	689.5	627.0
54.5°	420.9	473.5	552.2	734.4	669.2	608.6
55°	408.7	458.9	533.8	708.0	646.6	591.3
55.5°	396.8	445.1	515.3	681.1	628.5	574.8
56°	384.9	431.3	497.7	656.2	607.0	557.9
56.5°	373.7	417.9	481.2	631.2	590.5	543.4
57°	362.2	404.4	464.7	607.8	569.8	526.5
57.5°	351.1	391.8	449.0	584.8	554.5	513.8
58°	340.4	379.5	433.6	562.9	535.7	498.1
58.5°	330.4	367.6	419.4	541.8	520.7	486.6
59°	320.4	356.1	405.6	520.7	504.2	471.2
59.5°	310.4	344.6	392.2	502.3	488.9	460.9
60°	300.5	333.5	378.7	483.1	474.3	446.7
60.5°	290.1	322.3	366.5	465.1	459.7	435.1
61°	280.5	312.0	354.2	447.4	446.7	422.9
61.5°	271.7	302.0	342.7	430.9	432.1	411.4
62°	262.5	292.0	331.5	415.2	420.6	400.2
62.5°	253.6	282.0	320.8	400.2	407.1	389.1
63°	244.8	272.8	309.7	385.6	395.2	378.4
63.5°	236.8	263.6	299.7	371.8	383.3	368.0
64°	228.7	254.4	289.7	357.6	371.1	358.0
64.5°	220.6	245.6	280.1	345.4	360.3	347.7
65°	212.6	237.5	270.5	332.7	348.8	338.1
65.5°	204.9	228.7	261.3	321.2	338.8	328.5
66°	197.6	220.6	252.5	309.3	328.1	318.9



TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	176.5	197.2	227.2	277.8	297.8	291.6
68°	170.0	190.3	218.7	267.1	288.6	283.2
68.5°	163.5	183.0	211.0	257.9	279.4	274.4
69°	157.3	176.1	203.4	248.3	269.8	265.9
69.5°	150.8	169.2	196.1	239.1	260.9	257.9
70°	145.0	162.7	188.8	230.2	252.1	249.0
70.5°	138.9	155.8	181.5	221.4	243.3	241.0
71°	133.2	149.7	174.2	213.0	235.2	232.9
71.5°	127.8	143.1	167.7	204.5	226.8	224.9
72°	122.4	137.8	160.8	196.5	218.3	217.2
72.5°	117.0	132.0	154.3	188.8	210.3	209.5
73°	111.7	126.2	147.7	180.7	202.2	201.8
73.5°	106.7	120.5	141.2	173.4	194.5	193.8
74°	101.7	114.7	135.5	166.2	186.9	186.5
74.5°	97.1	109.4	129.7	158.5	179.2	179.2
75°	92.5	104.0	123.9	151.6	171.5	171.5
75.5°	87.9	98.6	117.8	144.7	164.2	164.6
76°	83.3	93.6	112.0	136.6	157.3	157.3
76.5°	79.0	88.6	106.3	130.5	150.0	150.0
77°	75.2	84.0	100.9	124.3	142.7	143.1
77.5°	71.4	79.0	95.5	118.2	135.8	136.6
78°	67.2	74.4	90.2	111.7	129.3	130.1
78.5°	63.3	70.2	85.2	105.5	122.8	123.2
79°	59.9	65.6	79.8	99.4	116.3	116.7
79.5°	56.4	61.4	74.8	93.2	109.4	109.7
80°	53.0	57.2	69.8	87.1	102.8	103.2
80.5°	49.5	53.3	65.2	81.3	96.3	96.7
81°	46.0	49.1	60.6	75.6	90.2	90.6
81.5°	42.6	45.3	56.0	69.8	84.0	84.0
82°	39.5	41.8	51.4	64.1	77.5	77.9
82.5°	36.1	38.0	47.2	58.7	71.8	71.8
83°	33.0	34.5	43.0	53.3	65.6	65.6
83.5°	29.9	31.1	38.8	48.0	59.9	59.5
84°	26.9	27.6	34.5	43.0	53.7	53.7
84.5°	23.8	24.6	30.7	38.0	48.0	48.0
85°	20.7	21.1	26.9	33.4	42.6	42.2
85.5°	17.7	18.4	23.0	29.2	36.8	36.5
86°	14.6	15.3	19.6	24.6	31.5	30.7
86.5°	11.9	12.7	16.1	20.3	26.5	24.9
87°	8.8	10.0	13.0	16.5	21.9	19.6
87.5°	5.8	7.3	10.0	12.3	17.7	15.7
88°	3.1	4.6	6.9	9.2	13.8	12.7
88.5°	0.8	1.9	3.8	6.1	10.4	9.6



TEST NUMBER: P776520

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.4	0.4



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Peachtree City, GA 30269

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°	1735.6	1727.5	1672.6	1578.3	1447.4	1308.9	1188.0	1094.8	1063.3	1079.4	1144.6
22°	1733.7	1725.2	1669.6	1573.6	1440.9	1299.7	1176.5	1082.1	1049.9	1066.7	1132.4



44°	1148.9	1227.5	1296.6	1109.0	897.1	753.6	625.5	522.6	494.6	510.0	584.8
44.5°	1115.9	1195.3	1283.9	1089.0	878.3	739.0	612.4	511.1	484.3	499.2	572.5



66.5°	310.0	315.8	315.4	262.5	220.3	203.8	180.0	181.5	180.0	180.7	174.2
67°	300.8	306.2	304.3	253.3	212.2	196.5	174.2	176.5	174.6	175.7	168.8



89°	6.5	6.5	6.5	3.8	1.2	0.8	0.8	0.4	0.0	0.4	0.4
89.5°	3.5	3.5	3.5	0.8	0.0	0.0	0.0	0.4	0.0	0.4	0.0

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21.5°	1251.7	1385.2	1512.6	1619.3	1699.1	1735.6
22°	1241.7	1377.6	1506.9	1615.5	1696.1	1733.7



44°	702.2	834.2	1007.3	1208.7	1234.1	1148.9
44.5°	688.8	816.6	986.9	1194.1	1203.4	1115.9

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66.5°	190.7	213.0	243.7	298.5	317.7	310.0
67°	183.4	205.3	235.2	287.8	308.1	300.8

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89°	0.0	0.4	0.8	3.1	6.9	6.5
89.5°	0.0	0.0	0.0	0.4	3.8	3.5

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Scaled Data Report



(END OF REPORT)