

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: P776522

Luminaire Tested: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776522
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-3500K
Description: 8 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3554.4 lumens
Efficiency: N/A
Efficacy: 92.3 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

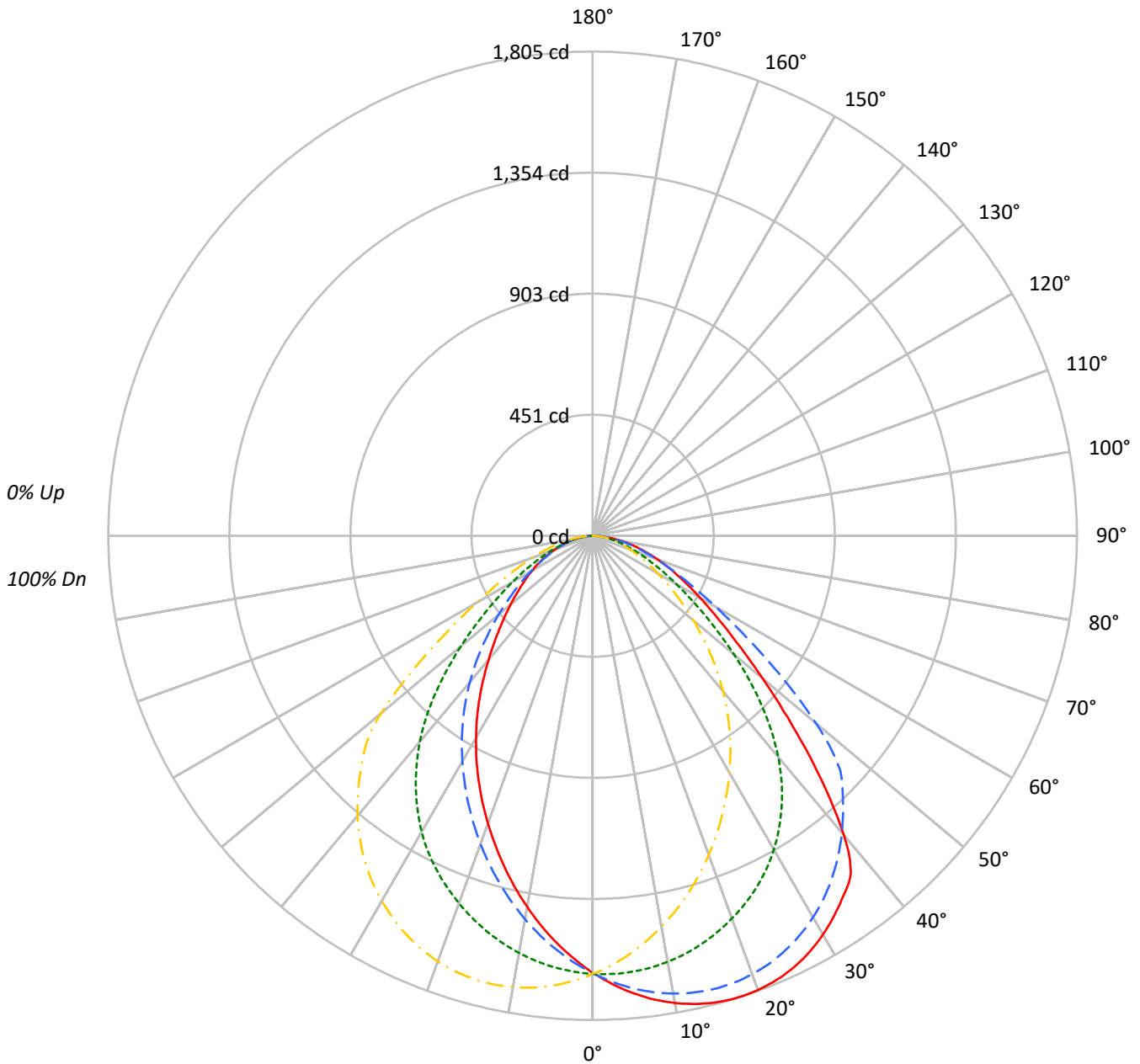
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	39111	39111	39111	39111
5°	41172	39289	36697	38878
10°	43060	39269	34200	38446
15°	44671	39081	31653	37887
20°	45980	38743	29123	37191
25°	46959	38247	26600	36387
30°	47537	37395	24066	35274
35°	47805	35967	21454	33628
40°	45585	33659	18862	31345
45°	38082	30147	16664	28034
50°	30884	25665	14877	23904
55°	25593	21057	13520	19862
60°	22175	17279	12498	16555
65°	19858	14423	11518	13952
70°	18074	12171	10418	11806
75°	16454	10228	9459	9978
80°	14761	8451	8285	8175
85°	12023	6548	5365	5998

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 44643 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.8	4.3
10°-20°	435.1	12.2
20°-30°	643.5	18.1
30°-40°	741.6	20.9
40°-50°	675.3	19.0
50°-60°	462.4	13.0
60°-70°	271.5	7.6
70°-80°	136.9	3.9
80°-90°	34.3	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°	1232.4	34.7
0°-40°	1974.1	55.5
0°-60°	3111.8	87.5
0°-90°	3554.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3554.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1631	1631	1631	1631	1631	
5°	1710	1632	1525	1615	1710	165
15°	1800	1574	1275	1526	1800	509
25°	1775	1446	1005	1375	1775	818
35°	1633	1229	733	1149	1633	1016
45°	1123	889	491	827	1123	867
55°	612	504	323	475	612	556
65°	350	254	203	246	350	349
75°	178	110	102	108	178	189
85°	44	24	20	22	44	51
90°	0	0	0	0	0	



TEST NUMBER: P776522

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1
0.5°	1637.4	1637.8	1637.8	1635.8	1633.9	1631.1	1628.7	1619.2	1618.8	1619.6	1623.1
1°	1646.6	1646.2	1644.6	1640.2	1634.3	1627.9	1622.7	1610.4	1608.8	1610.4	1615.6
1.5°	1655.3	1654.9	1650.9	1643.8	1635.0	1624.7	1616.4	1601.7	1599.3	1600.9	1608.0
2°	1663.7	1663.3	1657.7	1647.8	1635.0	1621.1	1609.6	1592.5	1589.0	1591.0	1600.1
2.5°	1672.4	1671.2	1664.0	1651.3	1635.0	1617.6	1602.9	1583.4	1578.6	1581.4	1592.1
3°	1680.3	1678.7	1670.4	1654.9	1635.0	1614.0	1596.1	1573.5	1568.3	1571.5	1583.8
3.5°	1688.3	1686.3	1676.4	1658.1	1634.7	1610.0	1589.0	1563.9	1557.6	1561.2	1575.5
4°	1696.2	1693.8	1681.9	1660.9	1634.3	1605.7	1581.4	1554.4	1546.9	1550.8	1566.7
4.5°	1703.4	1701.0	1687.1	1663.7	1633.5	1601.7	1574.3	1544.5	1535.7	1540.1	1558.0
5°	1710.5	1707.7	1692.6	1666.4	1632.3	1596.9	1566.3	1533.8	1524.6	1529.4	1548.8
5.5°	1717.7	1714.5	1697.8	1668.8	1631.1	1592.5	1558.4	1523.8	1513.1	1518.7	1539.7
6°	1724.4	1720.9	1702.6	1670.8	1629.9	1587.4	1550.4	1513.1	1501.6	1507.5	1530.6
6.5°	1730.8	1726.8	1707.0	1672.8	1628.3	1582.6	1542.1	1502.8	1490.5	1496.4	1521.4
7°	1737.1	1733.2	1711.3	1674.4	1626.7	1577.1	1533.8	1491.6	1478.1	1484.9	1511.5
7.5°	1743.1	1738.7	1715.7	1676.4	1624.7	1571.9	1525.0	1480.5	1466.6	1473.8	1502.0
8°	1748.7	1744.3	1719.7	1677.6	1622.7	1566.3	1516.3	1469.4	1454.3	1461.9	1492.0
8.5°	1753.8	1749.5	1723.2	1678.7	1620.7	1560.4	1507.1	1458.3	1442.0	1450.3	1482.1
9°	1759.0	1754.2	1726.4	1679.5	1618.4	1554.8	1498.4	1447.2	1429.7	1438.0	1471.8
9.5°	1764.2	1759.0	1730.0	1680.3	1615.6	1548.5	1489.3	1435.6	1417.4	1426.5	1461.9
10°	1768.5	1763.4	1732.8	1680.7	1612.8	1542.1	1479.7	1423.7	1404.6	1414.2	1451.5
10.5°	1772.9	1767.3	1735.6	1681.1	1609.6	1535.7	1470.2	1412.2	1392.3	1401.9	1440.8
11°	1777.3	1771.3	1737.9	1681.1	1606.4	1529.0	1460.3	1400.3	1379.6	1390.0	1430.1
11.5°	1780.8	1774.9	1740.3	1681.1	1603.3	1522.2	1450.7	1388.4	1366.9	1377.2	1418.9
12°	1784.4	1778.1	1742.3	1680.7	1599.7	1515.5	1440.8	1376.4	1353.8	1364.9	1408.2
12.5°	1787.6	1781.2	1743.9	1680.3	1596.1	1508.3	1430.9	1364.1	1341.1	1352.6	1397.5
13°	1790.8	1784.0	1745.5	1679.5	1592.1	1501.2	1420.5	1351.8	1328.0	1339.5	1386.4
13.5°	1793.2	1786.4	1746.7	1678.3	1587.8	1493.6	1410.2	1339.5	1314.9	1326.8	1375.3
14°	1795.5	1788.8	1747.9	1677.2	1583.4	1486.1	1399.5	1326.8	1301.8	1314.1	1363.7
14.5°	1797.9	1790.8	1748.7	1676.0	1579.0	1478.5	1389.2	1314.5	1288.7	1301.4	1352.2
15°	1799.5	1792.4	1749.1	1674.4	1574.3	1470.2	1378.4	1301.4	1275.1	1288.3	1340.7
15.5°	1801.1	1793.9	1749.5	1672.4	1569.5	1462.2	1367.7	1289.1	1262.0	1275.5	1329.2
16°	1802.3	1795.1	1749.1	1670.4	1564.3	1453.9	1356.6	1276.3	1248.5	1262.4	1317.7
16.5°	1803.5	1795.9	1748.7	1668.0	1559.6	1445.6	1345.5	1263.6	1235.4	1249.7	1306.1
17°	1803.9	1796.3	1748.3	1665.6	1554.0	1437.2	1334.3	1250.5	1221.9	1236.2	1293.8
17.5°	1804.3	1796.3	1747.5	1662.9	1548.5	1428.5	1322.8	1237.8	1208.4	1223.5	1282.3
18°	1804.7	1796.7	1746.3	1660.1	1542.9	1419.7	1311.7	1225.1	1194.9	1209.6	1270.4
18.5°	1804.3	1796.3	1745.1	1656.9	1536.9	1411.0	1300.2	1212.0	1181.4	1196.9	1258.1
19°	1803.9	1795.5	1743.5	1653.3	1530.6	1401.9	1288.7	1198.9	1167.9	1183.8	1246.1
19.5°	1803.1	1794.7	1741.5	1649.7	1524.6	1392.7	1277.1	1186.2	1154.8	1170.7	1234.2
20°	1801.9	1793.5	1739.5	1646.2	1518.3	1383.6	1265.6	1173.1	1141.3	1157.2	1221.5
20.5°	1800.7	1792.4	1737.1	1642.2	1511.9	1374.1	1253.7	1159.9	1127.4	1143.7	1209.2
21°	1798.7	1790.4	1734.4	1638.2	1505.2	1364.9	1241.8	1146.4	1113.9	1130.6	1197.3



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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°	1792.0	1783.2	1724.8	1624.3	1484.5	1335.5	1205.6	1107.5	1073.3	1090.8	1159.9
23°	1789.2	1780.4	1721.3	1619.2	1476.9	1325.6	1193.7	1094.0	1059.8	1077.3	1147.6
23.5°	1786.0	1777.3	1717.3	1614.0	1469.4	1315.7	1181.8	1080.5	1046.3	1064.2	1135.3
24°	1782.4	1773.7	1713.3	1608.8	1461.9	1305.3	1169.5	1067.4	1032.8	1050.7	1122.6
24.5°	1778.9	1769.7	1708.5	1603.3	1453.9	1295.0	1157.2	1054.3	1018.9	1037.6	1109.9
25°	1774.9	1765.7	1703.8	1597.3	1445.6	1284.7	1144.9	1041.2	1005.4	1024.1	1097.6
25.5°	1770.1	1761.4	1698.6	1591.0	1437.2	1273.6	1132.5	1028.1	992.3	1010.6	1085.3
26°	1765.3	1756.6	1693.8	1585.0	1428.9	1262.8	1120.2	1014.6	978.4	997.5	1072.2
26.5°	1760.6	1751.4	1688.3	1578.2	1420.1	1252.1	1107.9	1001.1	964.5	984.0	1059.8
27°	1755.4	1746.3	1682.3	1571.9	1411.0	1241.0	1095.2	987.5	951.0	970.9	1047.1
27.5°	1749.9	1740.7	1676.4	1564.7	1401.5	1229.9	1082.9	974.4	937.9	957.0	1034.4
28°	1743.5	1734.8	1670.0	1557.2	1391.9	1218.3	1070.2	961.3	924.0	943.8	1021.7
28.5°	1737.5	1728.4	1663.7	1549.6	1382.0	1206.8	1057.9	947.8	910.1	930.3	1009.4
29°	1730.8	1721.6	1656.9	1542.1	1372.1	1194.9	1045.1	934.3	896.6	916.8	996.3
29.5°	1724.0	1714.9	1650.1	1534.1	1361.3	1183.4	1032.4	921.2	883.1	903.3	983.6
30°	1716.9	1708.1	1642.6	1525.8	1350.6	1171.1	1019.7	907.3	869.2	889.8	970.9
30.5°	1709.7	1700.6	1635.0	1517.1	1339.5	1158.8	1007.4	894.2	855.3	876.3	958.1
31°	1701.8	1693.0	1627.5	1507.9	1328.4	1146.0	994.3	880.3	841.8	863.2	945.4
31.5°	1693.8	1685.1	1619.6	1498.8	1316.9	1133.7	981.2	867.2	828.3	849.7	932.7
32°	1685.9	1677.2	1611.2	1488.9	1304.9	1121.0	968.5	853.7	814.7	836.2	920.0
32.5°	1677.2	1668.4	1602.5	1478.9	1292.6	1107.5	955.4	840.2	800.8	822.7	907.3
33°	1668.8	1660.1	1593.7	1469.0	1280.3	1094.4	942.7	826.3	787.7	809.2	894.6
33.5°	1660.1	1650.9	1584.6	1458.3	1268.0	1081.3	929.5	813.6	773.8	796.1	881.9
34°	1650.9	1642.2	1575.9	1447.6	1254.9	1068.2	916.4	799.6	759.9	782.6	868.4
34.5°	1641.8	1632.7	1565.9	1436.4	1241.8	1054.7	903.3	786.1	746.4	769.1	855.7
35°	1633.1	1623.1	1556.4	1424.9	1228.7	1041.2	890.2	772.6	732.9	756.0	842.9
35.5°	1624.3	1613.6	1546.1	1412.6	1214.8	1027.3	876.7	759.5	719.4	742.4	829.8
36°	1616.0	1603.7	1536.1	1400.7	1200.9	1014.2	863.6	746.0	705.9	728.9	816.7
36.5°	1606.4	1594.1	1525.8	1388.0	1186.2	1000.3	850.5	732.1	692.4	715.4	803.6
37°	1595.3	1584.6	1514.7	1375.3	1171.9	986.0	837.0	718.6	679.3	701.9	790.5
37.5°	1581.4	1575.1	1504.0	1362.5	1156.8	971.7	823.1	705.5	666.2	688.8	777.4
38°	1561.2	1565.9	1492.4	1349.0	1140.9	957.8	810.0	692.0	653.1	675.7	764.3
38.5°	1540.1	1555.2	1480.9	1335.1	1125.4	943.5	796.5	678.5	640.4	662.2	751.2
39°	1514.7	1543.3	1469.4	1320.4	1109.1	929.1	783.0	665.4	627.6	649.5	738.1
39.5°	1486.5	1526.2	1457.5	1306.1	1092.8	914.5	769.5	652.3	614.9	636.4	724.6
40°	1456.3	1507.5	1445.2	1291.0	1075.3	899.8	756.0	639.2	602.6	623.7	711.5
40.5°	1423.3	1483.7	1433.3	1275.1	1058.3	885.5	742.4	626.1	590.7	611.0	698.4
41°	1391.9	1459.1	1420.5	1258.5	1040.8	870.4	728.5	613.7	578.8	599.0	684.8
41.5°	1357.8	1428.1	1407.8	1241.8	1022.9	855.7	715.0	601.0	567.3	586.3	671.3
42°	1325.2	1399.9	1394.7	1223.9	1004.6	840.6	701.5	588.7	555.7	574.4	658.2
42.5°	1291.0	1367.3	1381.6	1205.6	986.0	825.9	688.0	576.4	544.6	562.5	645.1
43°	1257.3	1337.1	1368.9	1186.6	967.3	810.8	674.5	564.5	533.5	551.0	632.0
43.5°	1222.7	1303.4	1355.4	1168.3	948.2	795.3	661.0	552.2	522.4	539.1	618.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1123.0	1205.2	1316.5	1105.9	889.0	750.0	620.5	518.0	491.4	506.1	579.6
45.5°	1088.4	1171.5	1303.4	1084.9	869.2	734.5	607.0	506.9	481.1	495.4	566.9
46°	1058.3	1139.7	1288.3	1063.0	849.3	719.4	593.5	495.8	471.5	484.6	553.8
46.5°	1024.5	1105.5	1272.8	1040.4	829.0	703.9	580.4	485.0	461.6	474.3	541.0
47°	996.3	1075.3	1250.5	1017.3	808.8	688.8	566.9	474.7	452.1	464.4	528.7
47.5°	962.9	1042.0	1229.5	993.5	788.1	673.3	553.8	464.8	442.9	454.4	516.4
48°	936.7	1013.0	1202.5	969.3	768.7	658.2	540.6	454.0	433.8	444.9	504.5
48.5°	905.3	979.6	1177.0	945.0	748.0	643.1	527.5	444.1	424.7	435.4	492.2
49°	880.7	952.6	1146.4	920.8	727.7	628.0	514.8	434.6	415.9	425.8	480.3
49.5°	850.9	921.2	1117.8	896.2	707.9	612.9	502.1	425.0	407.6	416.7	468.7
50°	827.9	895.4	1085.3	871.5	688.0	597.8	489.4	415.5	398.8	407.6	457.2
50.5°	800.0	866.4	1053.9	846.1	667.4	582.8	477.1	406.4	390.5	398.8	445.7
51°	778.6	840.6	1021.3	820.7	648.3	568.1	465.2	397.2	382.9	390.5	434.6
51.5°	752.8	813.6	989.9	795.7	628.8	553.8	453.3	388.1	375.0	381.7	423.9
52°	732.1	789.7	956.6	771.0	609.8	539.1	441.3	379.8	367.1	373.4	413.1
52.5°	709.1	765.1	926.0	746.4	590.7	524.4	429.8	371.0	359.1	365.5	402.4
53°	689.6	741.7	893.8	721.4	572.8	510.1	418.7	362.7	351.6	357.1	392.1
53.5°	668.2	718.6	863.6	696.8	554.6	496.2	407.6	354.3	344.4	349.6	381.7
54°	649.1	696.0	832.2	672.5	537.1	482.3	396.4	346.8	337.3	342.0	372.2
54.5°	630.0	675.3	802.8	649.1	519.6	468.3	385.7	339.2	330.5	334.9	362.3
55°	612.2	653.5	774.2	625.7	503.7	454.8	375.4	331.3	323.4	327.3	352.8
55.5°	595.1	636.4	745.2	603.4	487.0	441.3	365.1	323.8	316.6	320.2	343.2
56°	577.6	614.5	718.6	581.6	471.1	428.2	354.7	316.2	309.5	313.0	334.5
56.5°	562.5	599.0	691.2	560.5	455.6	415.5	345.2	308.7	303.5	305.9	325.7
57°	545.0	578.8	666.6	539.9	440.9	402.8	335.7	302.3	297.1	299.1	317.0
57.5°	531.9	564.5	640.4	520.4	426.2	390.5	326.5	295.5	290.8	292.4	308.3
58°	515.6	545.8	616.9	500.9	412.3	378.6	317.0	288.8	284.4	285.6	299.5
58.5°	503.7	531.1	593.9	483.0	398.8	366.7	307.9	282.0	278.1	279.3	291.2
59°	487.8	514.8	571.2	465.6	385.3	355.1	298.3	275.3	272.1	272.9	282.8
59.5°	477.1	500.5	550.6	448.9	372.6	344.4	289.6	268.9	266.2	266.5	274.9
60°	462.4	485.4	529.1	432.6	360.3	333.7	280.9	262.6	260.6	260.6	266.9
60.5°	450.5	470.3	510.9	417.1	348.0	323.0	272.9	256.2	254.6	254.6	259.4
61°	437.8	457.6	490.2	402.0	336.9	312.2	264.6	249.9	249.1	248.7	251.9
61.5°	425.8	442.5	473.5	388.1	325.7	301.5	256.2	243.9	243.5	243.1	244.7
62°	414.3	431.0	455.6	374.6	314.2	291.2	248.7	238.3	237.9	237.2	237.2
62.5°	402.8	417.5	438.2	361.5	303.1	281.6	241.1	232.4	232.0	231.6	230.4
63°	391.7	405.6	423.1	348.8	293.2	271.7	233.6	226.8	226.0	226.0	223.6
63.5°	381.0	393.3	407.2	336.9	282.8	262.6	226.0	221.3	220.5	220.5	216.9
64°	370.6	381.0	392.9	324.5	273.3	253.4	218.9	215.7	214.5	214.9	210.5
64.5°	359.9	370.2	378.6	313.4	263.8	244.7	212.1	210.1	208.6	208.9	204.2
65°	350.0	358.7	364.3	302.7	254.2	236.0	205.4	204.6	203.0	203.4	197.8
65.5°	340.0	348.4	352.0	292.0	245.1	227.6	199.0	198.6	197.4	197.8	191.9
66°	330.1	337.7	338.8	281.6	236.4	219.3	192.7	193.1	191.9	192.7	185.9



TEST NUMBER: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	301.9	306.7	303.5	252.6	211.3	195.4	174.4	177.2	175.6	176.8	169.2
68°	293.2	297.1	292.4	243.9	203.4	188.3	168.8	172.0	170.0	171.6	164.1
68.5°	284.0	287.6	282.0	235.2	195.8	181.1	163.3	167.2	164.9	166.4	158.5
69°	275.3	278.5	271.3	226.4	188.3	174.0	157.7	162.1	159.3	161.3	153.3
69.5°	266.9	269.3	261.4	218.1	180.7	166.8	152.5	156.9	154.1	156.5	148.6
70°	257.8	260.2	251.9	209.7	173.6	160.1	147.4	152.1	148.6	151.3	143.4
70.5°	249.5	251.1	242.3	201.8	166.4	153.7	142.6	147.4	143.8	146.6	138.6
71°	241.1	242.3	233.2	194.3	159.7	147.8	137.4	142.2	138.2	141.4	133.9
71.5°	232.8	234.0	224.0	186.7	152.9	141.4	132.7	137.4	133.5	136.3	129.1
72°	224.8	225.6	215.3	179.2	146.6	135.1	127.9	132.3	128.7	131.5	124.7
72.5°	216.9	217.3	207.0	171.6	140.2	129.5	123.1	127.5	124.3	126.7	120.4
73°	208.9	209.3	198.6	164.9	133.9	123.5	118.8	122.7	120.0	122.4	116.0
73.5°	200.6	201.0	190.3	157.7	127.9	118.0	114.4	118.4	115.2	117.6	111.6
74°	193.1	193.1	182.3	151.0	122.0	112.4	110.0	114.0	110.8	113.2	107.3
74.5°	185.5	185.1	174.4	144.2	116.4	107.3	105.7	109.2	106.5	108.4	102.9
75°	177.6	177.6	166.8	138.2	110.4	102.1	101.7	105.3	102.1	104.1	98.5
75.5°	170.4	170.0	159.3	131.9	104.9	96.9	97.3	100.5	97.7	99.7	94.5
76°	162.9	162.5	152.1	125.9	99.7	92.2	93.4	96.1	93.4	95.3	90.2
76.5°	155.3	154.9	145.0	119.6	94.5	87.4	89.4	91.8	89.4	91.0	85.8
77°	148.2	147.8	138.2	113.6	89.4	82.6	85.4	87.4	85.0	86.6	82.2
77.5°	141.4	140.6	131.5	107.7	84.2	78.3	81.0	83.0	81.0	82.2	77.9
78°	134.7	133.9	124.7	101.7	79.4	73.9	77.1	78.7	76.7	77.9	73.9
78.5°	127.5	127.1	118.0	96.1	74.7	69.5	73.1	74.7	72.7	73.9	69.9
79°	120.8	120.0	111.2	90.6	70.3	65.5	69.5	70.3	68.3	69.5	65.9
79.5°	113.6	113.2	104.5	85.0	65.5	61.6	65.5	65.9	64.4	65.5	62.0
80°	106.9	106.5	98.1	79.8	61.2	57.6	61.6	61.6	60.0	61.6	58.0
80.5°	100.1	99.7	91.8	74.3	56.8	54.0	58.0	57.2	56.0	57.2	54.0
81°	93.7	93.4	85.8	69.5	52.8	50.4	54.0	52.8	52.0	53.2	50.4
81.5°	87.0	86.6	79.8	64.4	48.9	46.9	50.1	48.5	47.7	48.9	46.5
82°	80.6	80.6	73.9	59.6	44.9	43.3	46.1	44.5	43.7	44.9	42.9
82.5°	74.3	74.3	67.9	54.8	40.9	40.1	42.5	40.1	39.7	40.9	38.9
83°	67.9	67.9	62.4	50.1	37.7	36.9	38.5	36.1	35.4	36.5	35.4
83.5°	61.6	62.0	56.4	45.3	34.2	33.8	35.0	31.8	31.4	32.6	31.8
84°	55.6	56.0	50.8	41.3	30.6	30.6	31.4	27.8	27.4	28.6	28.2
84.5°	49.7	50.1	45.7	36.9	27.0	27.4	28.2	23.8	23.4	24.6	25.0
85°	43.7	44.1	40.5	33.0	23.8	24.2	24.6	19.5	19.5	20.3	21.5
85.5°	37.7	38.1	35.8	28.6	20.3	21.1	21.1	15.9	15.5	16.7	18.3
86°	31.8	32.6	31.0	25.0	17.1	18.3	17.9	12.7	12.3	13.1	15.1
86.5°	25.8	27.0	26.6	21.1	14.3	15.1	14.7	9.9	9.5	10.3	11.9
87°	20.3	21.8	21.8	17.5	11.5	11.9	11.5	7.2	7.2	7.9	9.1
87.5°	16.3	17.5	17.5	13.5	8.7	9.1	8.7	4.8	4.8	5.2	6.0
88°	13.1	13.5	13.5	10.3	6.0	6.4	5.6	2.4	2.4	2.8	3.2
88.5°	9.9	10.3	10.3	7.2	3.6	3.2	2.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

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: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1631.1	1631.1	1631.1	1631.1	1631.1	1631.1
0.5°	1627.1	1632.3	1636.2	1640.6	1635.8	1637.4
1°	1622.3	1631.1	1638.6	1646.2	1643.8	1646.6
1.5°	1617.6	1629.5	1641.0	1651.3	1651.3	1655.3
2°	1612.4	1628.3	1643.0	1656.5	1658.9	1663.7
2.5°	1607.2	1626.3	1645.0	1661.7	1666.4	1672.4
3°	1601.7	1624.7	1646.6	1666.0	1674.0	1680.3
3.5°	1596.1	1622.3	1647.8	1670.8	1680.7	1688.3
4°	1590.6	1620.4	1649.0	1675.2	1687.5	1696.2
4.5°	1584.6	1618.0	1650.1	1679.1	1693.8	1703.4
5°	1578.2	1615.2	1650.9	1682.7	1700.2	1710.5
5.5°	1572.3	1612.4	1651.7	1686.3	1705.8	1717.7
6°	1565.9	1609.6	1652.1	1689.9	1711.7	1724.4
6.5°	1559.2	1606.4	1652.1	1693.0	1717.3	1730.8
7°	1552.4	1602.9	1652.1	1696.2	1722.4	1737.1
7.5°	1545.3	1599.7	1652.1	1698.6	1727.6	1743.1
8°	1538.1	1595.7	1651.7	1701.0	1732.4	1748.7
8.5°	1531.0	1592.1	1651.3	1703.4	1736.7	1753.8
9°	1523.8	1587.8	1650.1	1705.4	1741.1	1759.0
9.5°	1516.3	1583.8	1649.4	1707.0	1745.1	1764.2
10°	1508.3	1579.0	1648.2	1708.5	1748.7	1768.5
10.5°	1500.8	1574.7	1647.0	1709.7	1752.2	1772.9
11°	1492.8	1569.9	1645.4	1710.9	1755.4	1777.3
11.5°	1484.5	1565.1	1643.4	1711.7	1758.2	1780.8
12°	1476.2	1560.0	1641.4	1712.5	1761.0	1784.4
12.5°	1467.8	1554.8	1639.4	1712.9	1763.4	1787.6
13°	1459.5	1549.2	1636.6	1712.9	1765.3	1790.8
13.5°	1450.7	1543.7	1634.3	1712.5	1767.3	1793.2
14°	1442.0	1538.1	1631.5	1712.1	1768.9	1795.5
14.5°	1432.9	1532.2	1628.3	1711.7	1770.1	1797.9
15°	1423.7	1526.2	1625.1	1710.5	1770.9	1799.5
15.5°	1414.6	1519.8	1621.5	1709.3	1771.7	1801.1
16°	1405.4	1513.5	1618.0	1708.1	1772.5	1802.3
16.5°	1395.9	1507.1	1614.4	1706.6	1772.5	1803.5
17°	1386.4	1500.4	1610.4	1704.6	1772.5	1803.9
17.5°	1376.4	1493.6	1606.1	1702.6	1772.1	1804.3
18°	1366.9	1486.5	1601.7	1700.2	1771.3	1804.7
18.5°	1357.0	1479.3	1597.3	1697.4	1770.5	1804.3
19°	1347.0	1472.2	1592.5	1694.6	1769.3	1803.9
19.5°	1337.1	1465.0	1587.4	1691.5	1767.7	1803.1
20°	1326.8	1457.5	1582.6	1688.3	1765.7	1801.9
20.5°	1316.5	1449.9	1577.1	1684.7	1763.8	1800.7
21°	1306.1	1442.0	1571.5	1680.3	1761.4	1798.7



TEST NUMBER: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1274.8	1418.2	1554.0	1667.6	1752.6	1792.0
23°	1264.0	1409.8	1548.1	1662.9	1749.1	1789.2
23.5°	1253.3	1401.5	1541.7	1657.7	1745.5	1786.0
24°	1242.6	1393.1	1535.3	1652.5	1741.5	1782.4
24.5°	1231.5	1384.4	1528.6	1647.0	1737.1	1778.9
25°	1220.7	1375.3	1521.8	1641.4	1732.4	1774.9
25.5°	1209.6	1366.1	1514.7	1635.4	1727.2	1770.1
26°	1198.5	1357.0	1507.5	1629.1	1722.4	1765.3
26.5°	1187.0	1347.4	1500.0	1622.7	1716.9	1760.6
27°	1175.8	1337.9	1492.4	1616.0	1710.9	1755.4
27.5°	1164.3	1328.0	1484.5	1609.2	1705.0	1749.9
28°	1152.8	1317.7	1476.2	1602.1	1698.6	1743.5
28.5°	1140.5	1307.3	1467.8	1594.9	1691.9	1737.5
29°	1129.0	1296.6	1459.1	1587.4	1685.1	1730.8
29.5°	1116.6	1285.5	1450.3	1579.8	1677.6	1724.0
30°	1104.3	1274.0	1440.8	1571.9	1670.4	1716.9
30.5°	1092.0	1262.4	1430.9	1563.9	1662.9	1709.7
31°	1079.3	1250.9	1421.3	1555.2	1654.9	1701.8
31.5°	1067.0	1238.6	1411.0	1546.9	1646.6	1693.8
32°	1054.3	1226.3	1400.3	1538.1	1638.2	1685.9
32.5°	1041.2	1214.0	1389.2	1529.0	1629.5	1677.2
33°	1028.5	1201.3	1378.0	1519.8	1620.4	1668.8
33.5°	1015.0	1188.5	1366.5	1509.9	1611.2	1660.1
34°	1001.4	1175.0	1354.6	1500.4	1602.1	1650.9
34.5°	988.3	1162.3	1342.3	1490.5	1592.5	1641.8
35°	975.6	1148.8	1330.0	1480.1	1582.6	1633.1
35.5°	961.7	1135.3	1317.3	1469.8	1572.7	1624.3
36°	948.2	1121.0	1304.5	1459.1	1562.8	1616.0
36.5°	934.7	1107.1	1291.0	1447.9	1552.4	1606.4
37°	921.6	1092.8	1277.5	1436.4	1542.1	1595.3
37.5°	907.7	1078.1	1263.6	1424.9	1531.8	1581.4
38°	894.2	1063.0	1249.3	1413.0	1521.8	1561.2
38.5°	880.3	1047.9	1234.6	1400.7	1511.9	1540.1
39°	867.2	1032.8	1219.9	1388.4	1502.4	1514.7
39.5°	852.5	1017.7	1204.0	1375.7	1490.9	1486.5
40°	839.0	1001.4	1188.5	1362.5	1478.9	1456.3
40.5°	825.1	985.2	1172.3	1349.4	1460.3	1423.3
41°	811.2	968.9	1155.2	1336.3	1442.0	1391.9
41.5°	797.3	952.2	1137.7	1322.4	1418.2	1357.8
42°	783.4	935.1	1120.2	1308.5	1393.5	1325.2
42.5°	769.5	917.6	1102.0	1294.6	1364.5	1291.0
43°	755.6	899.8	1082.9	1280.7	1337.5	1257.3
43.5°	741.3	881.9	1063.0	1266.0	1306.5	1222.7

TEST NUMBER: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	698.7	826.7	999.9	1221.1	1215.6	1123.0
45.5°	684.1	807.6	978.0	1205.6	1183.8	1088.4
46°	669.8	789.3	955.0	1190.9	1153.2	1058.3
46.5°	655.4	770.7	932.3	1175.0	1121.8	1024.5
47°	641.1	751.6	908.9	1159.9	1091.6	996.3
47.5°	627.2	732.9	885.9	1142.9	1059.8	962.9
48°	612.5	714.2	862.4	1125.4	1030.4	936.7
48.5°	598.6	695.6	838.6	1105.9	999.9	905.3
49°	584.3	677.3	815.1	1080.9	971.7	880.7
49.5°	570.4	659.4	792.1	1057.1	942.3	850.9
50°	556.5	640.8	768.7	1028.9	915.6	827.9
50.5°	542.2	622.9	745.2	1000.3	886.6	800.0
51°	528.7	605.0	721.8	970.5	860.4	778.6
51.5°	514.8	587.9	699.1	939.5	834.2	752.8
52°	501.3	570.4	676.9	908.1	810.0	732.1
52.5°	487.8	553.8	655.1	878.7	784.2	709.1
53°	474.3	537.5	632.8	848.1	759.5	689.6
53.5°	461.6	521.6	611.8	818.3	737.3	668.2
54°	448.5	505.3	591.5	788.5	713.8	649.1
54.5°	435.8	490.2	571.6	760.3	692.8	630.0
55°	423.1	475.1	552.6	732.9	669.4	612.2
55.5°	410.7	460.8	533.5	705.1	650.7	595.1
56°	398.4	446.5	515.2	679.3	628.4	577.6
56.5°	386.9	432.6	498.1	653.5	611.4	562.5
57°	375.0	418.7	481.1	629.2	589.9	545.0
57.5°	363.5	405.6	464.8	605.4	574.0	531.9
58°	352.4	392.9	448.9	582.8	554.6	515.6
58.5°	342.0	380.6	434.2	560.9	539.1	503.7
59°	331.7	368.6	419.9	539.1	522.0	487.8
59.5°	321.4	356.7	406.0	520.0	506.1	477.1
60°	311.0	345.2	392.1	500.1	491.0	462.4
60.5°	300.3	333.7	379.4	481.5	475.9	450.5
61°	290.4	323.0	366.7	463.2	462.4	437.8
61.5°	281.2	312.6	354.7	446.1	447.3	425.8
62°	271.7	302.3	343.2	429.8	435.4	414.3
62.5°	262.6	292.0	332.1	414.3	421.5	402.8
63°	253.4	282.4	320.6	399.2	409.2	391.7
63.5°	245.1	272.9	310.2	384.9	396.8	381.0
64°	236.8	263.4	299.9	370.2	384.1	370.6
64.5°	228.4	254.2	290.0	357.5	373.0	359.9
65°	220.1	245.9	280.1	344.4	361.1	350.0
65.5°	212.1	236.8	270.5	332.5	350.8	340.0
66°	204.6	228.4	261.4	320.2	339.6	330.1



TEST NUMBER: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	182.7	204.2	235.2	287.6	308.3	301.9
68°	176.0	197.0	226.4	276.5	298.7	293.2
68.5°	169.2	189.5	218.5	266.9	289.2	284.0
69°	162.9	182.3	210.5	257.0	279.3	275.3
69.5°	156.1	175.2	203.0	247.5	270.1	266.9
70°	150.2	168.4	195.4	238.3	261.0	257.8
70.5°	143.8	161.3	187.9	229.2	251.9	249.5
71°	137.8	154.9	180.3	220.5	243.5	241.1
71.5°	132.3	148.2	173.6	211.7	234.8	232.8
72°	126.7	142.6	166.4	203.4	226.0	224.8
72.5°	121.2	136.7	159.7	195.4	217.7	216.9
73°	115.6	130.7	152.9	187.1	209.3	208.9
73.5°	110.4	124.7	146.2	179.6	201.4	200.6
74°	105.3	118.8	140.2	172.0	193.5	193.1
74.5°	100.5	113.2	134.3	164.1	185.5	185.5
75°	95.7	107.7	128.3	156.9	177.6	177.6
75.5°	91.0	102.1	122.0	149.8	170.0	170.4
76°	86.2	96.9	116.0	141.4	162.9	162.9
76.5°	81.8	91.8	110.0	135.1	155.3	155.3
77°	77.9	87.0	104.5	128.7	147.8	148.2
77.5°	73.9	81.8	98.9	122.4	140.6	141.4
78°	69.5	77.1	93.4	115.6	133.9	134.7
78.5°	65.5	72.7	88.2	109.2	127.1	127.5
79°	62.0	67.9	82.6	102.9	120.4	120.8
79.5°	58.4	63.6	77.5	96.5	113.2	113.6
80°	54.8	59.2	72.3	90.2	106.5	106.9
80.5°	51.2	55.2	67.5	84.2	99.7	100.1
81°	47.7	50.8	62.8	78.3	93.4	93.7
81.5°	44.1	46.9	58.0	72.3	87.0	87.0
82°	40.9	43.3	53.2	66.3	80.2	80.6
82.5°	37.3	39.3	48.9	60.8	74.3	74.3
83°	34.2	35.8	44.5	55.2	67.9	67.9
83.5°	31.0	32.2	40.1	49.7	62.0	61.6
84°	27.8	28.6	35.8	44.5	55.6	55.6
84.5°	24.6	25.4	31.8	39.3	49.7	49.7
85°	21.5	21.8	27.8	34.6	44.1	43.7
85.5°	18.3	19.1	23.8	30.2	38.1	37.7
86°	15.1	15.9	20.3	25.4	32.6	31.8
86.5°	12.3	13.1	16.7	21.1	27.4	25.8
87°	9.1	10.3	13.5	17.1	22.6	20.3
87.5°	6.0	7.5	10.3	12.7	18.3	16.3
88°	3.2	4.8	7.2	9.5	14.3	13.1
88.5°	0.8	2.0	4.0	6.4	10.7	9.9



TEST NUMBER: P776522

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3500K

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°	1796.7	1788.4	1731.6	1633.9	1498.4	1355.0	1229.9	1133.3	1100.8	1117.4	1185.0
22°	1794.7	1786.0	1728.4	1629.1	1491.6	1345.5	1217.9	1120.2	1086.9	1104.3	1172.3



44°	1189.3	1270.8	1342.3	1148.0	928.8	780.2	647.5	541.0	512.0	527.9	605.4
44.5°	1155.2	1237.4	1329.2	1127.4	909.3	765.1	634.0	529.1	501.3	516.8	592.7



66.5°	321.0	326.9	326.5	271.7	228.0	210.9	186.3	187.9	186.3	187.1	180.3
67°	311.4	317.0	315.0	262.2	219.7	203.4	180.3	182.7	180.7	181.9	174.8



89°	6.8	6.8	6.8	4.0	1.2	0.8	0.8	0.4	0.0	0.4	0.4
89.5°	3.6	3.6	3.6	0.8	0.0	0.0	0.0	0.4	0.0	0.4	0.0

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21.5°	1295.8	1434.0	1565.9	1676.4	1759.0	1796.7
22°	1285.5	1426.1	1560.0	1672.4	1755.8	1794.7



44°	727.0	863.6	1042.8	1251.3	1277.5	1189.3
44.5°	713.1	845.3	1021.7	1236.2	1245.8	1155.2



66.5°	197.4	220.5	252.2	309.1	328.9	321.0
67°	189.9	212.5	243.5	297.9	319.0	311.4

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89°	0.0	0.4	0.8	3.2	7.2	6.8
89.5°	0.0	0.0	0.0	0.4	4.0	3.6

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Scaled Data Report



(END OF REPORT)