

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: P776421

Luminaire Tested: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776421
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B018)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K
Description: 6 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3473.7 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.19 / 1.3
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

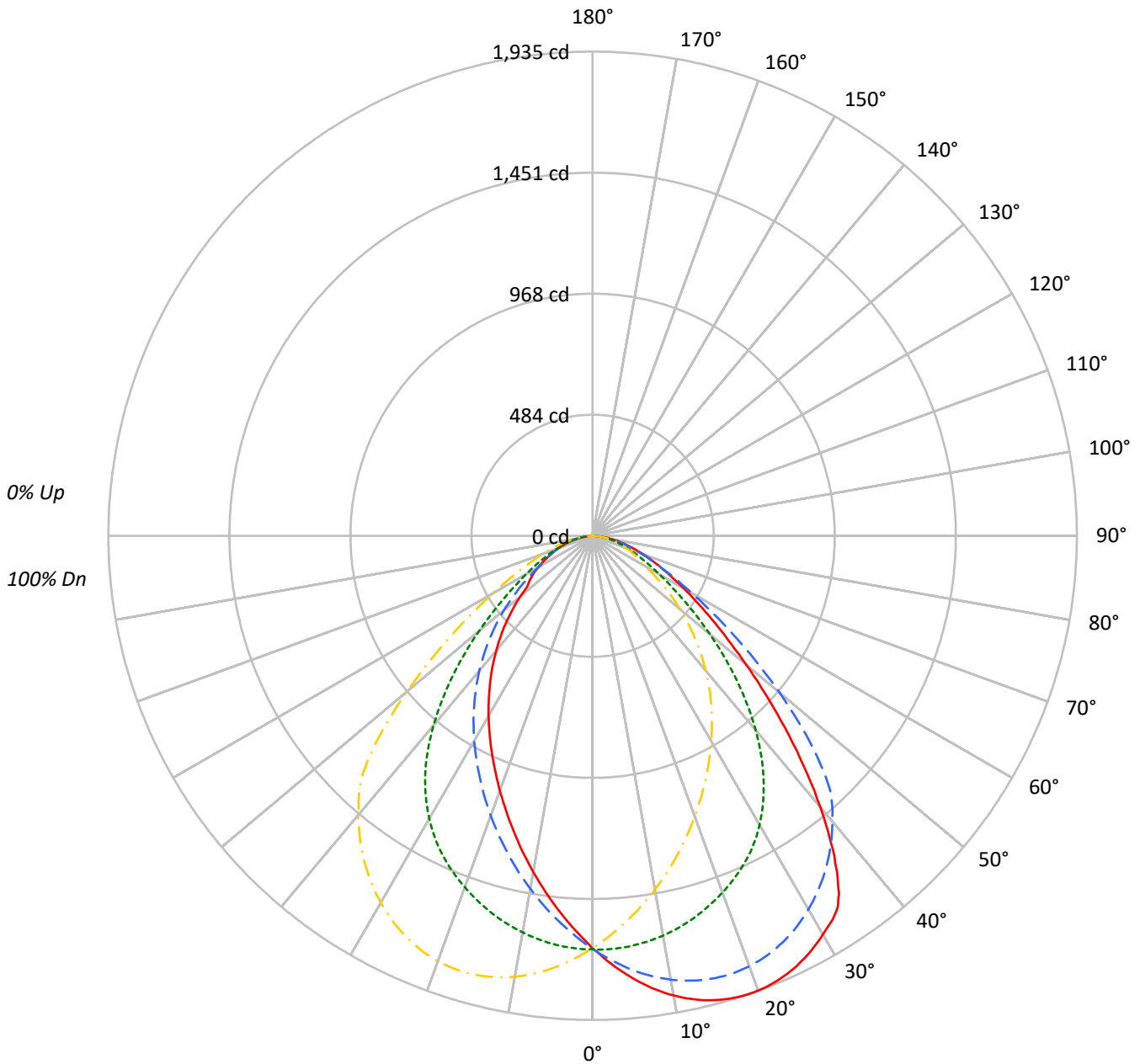
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				100															
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87															
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76				76															
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66															
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	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	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	45				45															
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41				41															
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				37															
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33															
10	57	45	38	33	56	45	37	33	44	37	32	43	37	32	42	36	32	31				31															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	71068	71068	71068	71068
5°	76586	71218	65176	70950
10°	81546	70914	59647	70380
15°	85619	70343	54425	69541
20°	88637	69507	49645	68485
25°	90562	68386	45298	67122
30°	91503	66332	41314	64910
35°	89948	62611	37502	61318
40°	79609	56919	33673	55531
45°	66309	49455	29659	48024
50°	53640	41000	25179	39714
55°	43448	32804	22872	32038
60°	36253	26608	21476	26333
65°	30839	22138	19591	22301
70°	26814	18984	18040	19324
75°	23389	16419	16353	17001
80°	19216	14083	13687	14753
85°	12400	10819	7558	12004

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 78207 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.9	4.5
10°-20°	442.6	12.7
20°-30°	656.5	18.9
30°-40°	750.3	21.6
40°-50°	652.3	18.8
50°-60°	424.4	12.2
60°-70°	241.8	7.0
70°-80°	121.1	3.5
80°-90°	28.8	0.8
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°	1255.0	36.1
0°-40°	2005.3	57.7
0°-60°	3082.0	88.7
0°-90°	3473.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3473.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1651	1651	1651	1651	1651	
5°	1772	1648	1508	1642	1772	172
15°	1921	1578	1221	1560	1921	544
25°	1906	1440	954	1413	1906	878
35°	1711	1191	714	1167	1711	1050
45°	1089	812	487	789	1089	841
55°	579	437	305	427	579	527
65°	303	217	192	219	303	304
75°	141	99	98	102	141	149
85°	25	22	15	24	25	33
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°	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6
0.5°	1660.8	1660.8	1660.8	1658.8	1654.1	1650.6	1638.4	1633.7	1633.7	1635.7	1640.8
1°	1673.7	1672.9	1669.8	1663.9	1654.1	1645.5	1629.0	1621.2	1620.0	1622.8	1631.0
1.5°	1687.0	1685.4	1679.2	1669.0	1654.1	1640.0	1618.9	1608.7	1605.9	1609.8	1620.8
2°	1699.9	1697.6	1688.2	1673.7	1653.7	1634.5	1609.1	1595.7	1592.2	1597.3	1610.6
2.5°	1712.4	1708.9	1697.6	1678.4	1653.3	1628.6	1599.3	1582.8	1578.1	1584.0	1600.1
3°	1725.0	1720.7	1706.2	1682.7	1652.5	1623.2	1588.7	1569.9	1564.4	1571.1	1589.5
3.5°	1737.1	1732.0	1714.4	1687.0	1651.7	1617.3	1578.5	1557.0	1550.3	1557.8	1578.9
4°	1748.9	1743.0	1723.0	1690.9	1650.2	1610.6	1567.9	1544.1	1536.6	1544.8	1568.3
4.5°	1760.6	1753.6	1730.8	1694.8	1649.0	1604.8	1557.8	1530.4	1522.1	1531.1	1557.8
5°	1772.0	1764.1	1738.7	1698.7	1647.8	1598.1	1547.2	1517.4	1508.0	1517.8	1546.8
5.5°	1782.5	1774.3	1746.5	1701.9	1645.9	1591.4	1536.2	1504.1	1493.9	1504.5	1535.8
6°	1793.1	1784.1	1753.6	1705.0	1643.9	1584.4	1525.3	1490.8	1479.8	1490.8	1524.5
6.5°	1803.7	1793.5	1760.6	1708.1	1642.0	1577.7	1514.7	1477.5	1465.3	1477.5	1513.5
7°	1813.5	1802.9	1767.3	1710.9	1639.6	1571.1	1503.7	1463.8	1450.9	1463.8	1502.2
7.5°	1822.9	1811.5	1773.9	1713.6	1637.3	1563.2	1492.4	1450.1	1436.4	1450.1	1490.8
8°	1831.9	1820.1	1779.8	1716.0	1634.5	1556.2	1481.0	1436.8	1422.3	1436.4	1479.4
8.5°	1840.9	1828.0	1785.7	1717.9	1631.8	1548.4	1470.0	1423.1	1407.8	1423.1	1467.7
9°	1849.5	1836.2	1791.2	1719.5	1628.6	1540.9	1458.7	1409.7	1392.9	1409.0	1456.3
9.5°	1857.7	1843.6	1796.2	1721.1	1625.5	1533.5	1447.3	1395.6	1378.8	1395.3	1444.6
10°	1865.2	1850.7	1801.3	1722.6	1622.0	1525.3	1435.6	1381.9	1364.3	1381.5	1432.8
10.5°	1872.6	1857.7	1806.0	1723.8	1618.9	1517.4	1423.8	1368.2	1350.2	1367.8	1421.1
11°	1879.7	1864.0	1810.0	1724.6	1614.9	1509.2	1412.1	1354.5	1335.7	1353.7	1409.4
11.5°	1886.3	1869.9	1814.3	1725.4	1611.0	1500.6	1400.3	1341.2	1320.8	1340.4	1397.6
12°	1892.6	1875.7	1817.8	1725.4	1606.7	1492.0	1388.6	1326.7	1306.8	1326.3	1385.5
12.5°	1898.5	1880.8	1820.9	1725.8	1602.4	1483.4	1376.8	1313.4	1292.7	1312.6	1373.7
13°	1903.5	1885.9	1824.0	1725.4	1598.1	1475.1	1364.7	1299.7	1278.2	1298.5	1361.6
13.5°	1908.6	1890.2	1826.8	1725.0	1593.0	1466.1	1352.6	1286.0	1263.7	1285.2	1349.4
14°	1912.9	1894.5	1829.1	1724.6	1588.3	1457.1	1340.8	1272.3	1249.6	1271.1	1337.3
14.5°	1917.2	1898.1	1831.1	1723.8	1583.2	1448.1	1328.3	1258.2	1235.1	1257.4	1325.2
15°	1920.8	1901.6	1832.7	1722.6	1578.1	1438.7	1316.2	1244.5	1221.0	1243.7	1313.0
15.5°	1924.3	1904.3	1834.2	1721.1	1572.6	1429.7	1304.0	1231.2	1206.9	1230.4	1300.5
16°	1927.0	1907.1	1835.0	1719.5	1567.2	1420.3	1291.9	1217.5	1192.8	1216.3	1288.3
16.5°	1929.4	1909.0	1835.8	1717.5	1561.7	1410.9	1279.7	1203.8	1179.1	1203.0	1276.2
17°	1931.3	1910.6	1836.2	1715.2	1555.4	1401.1	1267.2	1190.1	1165.0	1189.3	1264.1
17.5°	1932.9	1911.8	1836.2	1712.8	1549.5	1391.7	1255.1	1176.7	1151.3	1175.6	1251.5
18°	1934.1	1912.5	1835.8	1710.5	1543.3	1382.3	1242.9	1163.0	1137.2	1162.3	1239.0
18.5°	1934.9	1913.3	1835.0	1707.4	1537.0	1372.1	1230.4	1149.7	1123.9	1148.9	1226.9
19°	1934.9	1913.3	1833.8	1704.2	1530.4	1362.0	1218.3	1136.4	1110.6	1135.6	1214.7
19.5°	1934.9	1912.9	1832.7	1701.1	1524.1	1352.2	1205.7	1123.1	1096.9	1122.3	1202.6
20°	1934.5	1912.2	1830.7	1697.2	1517.0	1342.4	1193.2	1109.8	1083.5	1109.0	1190.1
20.5°	1933.3	1911.0	1828.7	1693.6	1510.4	1332.2	1181.1	1096.5	1069.8	1096.1	1177.5
21°	1932.1	1909.4	1826.0	1689.3	1502.9	1321.6	1168.5	1083.5	1056.9	1082.8	1165.4

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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°	1925.1	1902.0	1816.6	1675.6	1480.6	1290.7	1131.7	1044.8	1017.4	1044.4	1128.2
23°	1922.3	1898.8	1812.7	1670.5	1473.2	1280.1	1119.2	1031.9	1004.4	1031.5	1116.0
23.5°	1918.8	1895.3	1808.4	1665.5	1465.0	1269.6	1107.0	1018.9	991.5	1018.9	1103.9
24°	1914.9	1891.0	1804.1	1659.6	1456.7	1258.6	1094.5	1006.4	979.0	1006.0	1091.4
24.5°	1910.6	1886.7	1799.0	1654.1	1448.5	1248.0	1082.4	993.9	966.5	993.1	1079.2
25°	1906.3	1882.0	1793.9	1647.8	1439.5	1236.7	1070.2	980.9	953.5	980.6	1066.7
25.5°	1901.2	1876.5	1788.4	1641.6	1430.9	1226.1	1057.7	968.4	941.0	968.4	1055.0
26°	1895.7	1871.4	1782.5	1634.5	1421.5	1214.7	1045.6	955.9	928.5	955.5	1042.4
26.5°	1889.8	1865.2	1776.3	1627.9	1412.1	1203.4	1033.4	943.7	915.9	943.4	1030.3
27°	1884.0	1859.3	1770.0	1620.8	1402.3	1192.0	1021.3	931.2	903.8	930.8	1018.1
27.5°	1877.7	1852.6	1763.0	1613.0	1391.7	1180.7	1008.7	918.7	891.7	918.7	1006.4
28°	1870.6	1846.0	1755.5	1604.8	1380.8	1168.9	996.6	906.2	879.1	906.2	994.3
28.5°	1863.6	1838.5	1748.5	1596.5	1370.2	1156.8	984.9	894.0	867.0	894.0	982.1
29°	1856.2	1830.7	1740.6	1587.5	1358.4	1144.6	972.3	881.9	855.2	881.9	970.0
29.5°	1848.3	1822.9	1732.4	1578.1	1346.7	1132.5	960.6	869.7	843.1	870.1	957.8
30°	1840.5	1814.7	1724.2	1568.3	1334.2	1119.6	948.1	858.0	831.0	857.6	945.7
30.5°	1832.3	1806.0	1715.6	1558.2	1321.6	1106.6	935.9	845.5	818.8	845.8	934.0
31°	1824.4	1797.4	1706.6	1547.6	1308.7	1094.1	923.8	833.3	807.1	834.1	921.8
31.5°	1816.6	1788.4	1697.2	1535.8	1295.4	1080.8	911.6	822.0	795.3	822.0	909.7
32°	1808.8	1779.0	1687.8	1524.1	1281.7	1067.5	899.5	809.8	783.6	810.2	897.5
32.5°	1799.4	1770.0	1677.6	1511.6	1267.2	1054.2	887.4	797.7	771.8	798.5	885.8
33°	1788.8	1760.6	1667.8	1498.6	1252.3	1040.5	875.2	786.3	760.1	786.7	873.6
33.5°	1775.9	1751.6	1657.6	1485.3	1237.8	1026.8	863.1	774.6	748.3	775.4	861.5
34°	1755.9	1742.2	1647.0	1471.6	1222.6	1012.7	850.5	762.8	737.0	763.2	849.4
34.5°	1738.3	1732.0	1635.7	1456.7	1207.3	998.6	838.4	750.7	725.2	751.9	837.2
35°	1711.3	1719.9	1624.3	1441.5	1191.2	984.1	826.3	739.3	713.5	740.1	825.5
35.5°	1686.2	1706.2	1612.6	1425.8	1175.2	970.0	814.5	727.6	702.1	728.8	813.3
36°	1661.9	1687.0	1600.4	1409.4	1158.3	955.5	802.0	716.2	690.8	717.4	801.2
36.5°	1630.6	1668.2	1587.9	1392.9	1141.1	941.0	789.5	704.5	679.0	705.7	788.7
37°	1605.1	1643.5	1575.0	1375.7	1123.9	926.1	777.3	692.7	667.7	693.9	776.9
37.5°	1574.2	1617.3	1561.7	1357.3	1106.3	911.2	764.8	681.4	656.3	682.5	764.4
38°	1542.1	1595.4	1548.4	1338.5	1087.5	896.4	752.6	669.6	645.0	671.2	752.3
38.5°	1513.1	1564.4	1534.3	1319.7	1069.8	881.5	740.1	658.3	633.6	659.8	740.1
39°	1478.7	1538.2	1520.6	1300.5	1051.0	866.6	727.6	646.9	621.9	648.5	728.4
39.5°	1448.9	1510.0	1505.7	1280.1	1032.2	851.3	715.1	635.2	610.5	637.1	715.8
40°	1416.4	1477.5	1490.8	1259.0	1012.7	835.7	702.5	623.8	599.1	625.8	703.3
40.5°	1380.4	1451.6	1475.5	1237.8	993.5	820.4	690.4	612.5	588.2	614.4	691.2
41°	1351.0	1418.4	1461.4	1216.3	973.9	805.1	677.5	601.1	576.8	603.1	679.4
41.5°	1315.4	1387.0	1445.8	1193.6	953.9	789.5	664.9	589.7	565.9	592.1	666.5
42°	1283.3	1357.7	1428.5	1170.5	934.0	774.2	652.8	578.4	554.5	580.7	654.4
42.5°	1251.1	1323.6	1410.1	1147.8	914.0	758.5	640.6	567.4	543.1	569.4	642.6
43°	1214.7	1295.0	1390.9	1124.3	893.6	743.2	628.1	556.1	531.8	558.4	630.5
43.5°	1186.5	1262.5	1365.9	1100.0	873.3	727.6	615.2	544.7	520.8	547.1	617.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1089.0	1165.4	1284.4	1027.2	812.2	680.6	578.4	511.0	487.1	513.8	581.9
45.5°	1054.6	1136.4	1257.4	1002.1	791.4	665.3	566.2	499.7	476.2	502.8	569.8
46°	1028.3	1105.1	1226.5	977.4	771.4	649.7	553.7	488.7	464.8	491.5	557.6
46.5°	994.7	1071.8	1195.1	952.0	751.1	634.4	541.6	477.4	453.5	480.5	545.1
47°	966.8	1044.8	1166.2	926.5	730.7	619.1	529.0	466.0	442.5	469.1	533.4
47.5°	938.3	1011.1	1132.5	901.5	710.4	603.8	516.9	455.0	431.5	458.6	521.2
48°	906.2	984.9	1101.9	876.4	690.4	589.0	505.2	443.7	420.6	447.2	509.1
48.5°	883.0	955.1	1070.6	850.9	670.4	573.3	493.0	432.7	409.6	436.2	496.9
49°	850.5	924.6	1036.9	825.9	650.4	558.4	480.5	421.4	398.3	425.3	485.2
49.5°	828.6	899.5	1007.6	800.4	631.3	543.5	468.7	410.4	387.3	414.3	473.0
50°	800.8	867.4	974.7	775.4	612.1	529.0	456.6	399.4	375.9	403.3	461.3
50.5°	775.4	844.7	943.4	750.3	592.1	514.2	444.9	388.1	365.0	392.4	449.6
51°	753.0	814.9	912.8	725.2	573.3	499.7	433.1	377.5	354.4	381.4	437.4
51.5°	724.5	791.4	880.3	701.0	555.3	486.0	421.4	366.1	343.0	370.4	426.1
52°	706.4	766.7	852.5	676.7	537.3	471.5	409.6	355.2	332.9	359.9	414.3
52.5°	679.8	740.1	822.0	652.8	518.9	457.8	398.6	344.2	327.8	348.9	403.0
53°	661.4	719.0	793.0	629.3	502.0	444.1	386.9	335.6	323.1	339.9	391.6
53.5°	639.9	690.8	764.4	606.2	484.8	430.4	375.5	327.0	318.4	330.9	380.2
54°	618.3	672.0	735.0	583.5	468.7	417.4	364.6	318.8	314.1	321.9	369.3
54.5°	600.7	646.5	709.6	561.5	452.7	404.1	353.6	310.1	309.4	312.9	358.7
55°	578.8	626.9	681.4	540.4	437.0	391.6	342.6	301.9	304.7	303.9	347.7
55.5°	563.9	605.8	657.1	520.0	422.1	379.5	332.1	297.2	299.6	299.2	337.2
56°	542.0	584.3	630.5	500.1	407.3	366.9	321.5	292.5	294.5	294.9	327.0
56.5°	528.3	566.2	607.0	480.9	393.6	355.2	310.5	287.4	289.4	289.8	316.8
57°	509.9	543.9	583.5	462.5	379.8	343.4	300.0	282.7	283.9	285.1	306.6
57.5°	495.4	528.3	559.6	444.5	366.9	332.9	290.6	277.6	278.4	280.0	296.0
58°	479.7	507.1	538.1	427.6	354.4	321.9	280.4	272.6	272.9	274.9	286.6
58.5°	464.0	492.6	516.1	411.2	342.3	310.9	270.6	267.5	267.1	269.8	276.5
59°	450.3	473.0	496.5	395.9	330.9	300.4	261.2	262.4	261.2	264.7	267.1
59.5°	434.7	459.3	475.8	380.6	319.9	290.6	251.8	256.9	255.3	259.2	258.1
60°	421.0	441.7	457.4	366.5	309.0	281.2	242.8	251.8	249.4	253.8	249.1
60.5°	406.9	428.4	438.6	352.8	297.6	271.8	234.2	245.9	243.6	248.3	240.4
61°	393.6	412.0	421.7	339.5	287.4	262.8	226.3	240.8	237.7	242.8	232.2
61.5°	381.0	398.6	404.1	327.0	277.6	253.8	221.3	235.0	231.4	237.3	224.8
62°	368.9	384.2	389.2	314.8	268.2	245.5	216.9	229.5	225.6	231.4	219.3
62.5°	356.4	371.6	372.8	303.5	258.8	237.3	212.2	224.0	219.7	226.0	215.0
63°	345.4	357.9	358.7	292.5	250.2	229.5	207.5	218.1	213.8	220.1	210.3
63.5°	333.6	346.2	344.2	281.6	241.6	221.6	203.2	212.6	208.3	214.6	206.0
64°	323.5	333.2	330.9	271.4	233.4	214.2	198.5	207.2	202.8	208.7	201.7
64.5°	312.1	322.3	317.6	261.6	225.2	207.2	193.8	201.7	197.4	203.6	197.0
65°	302.7	310.5	305.4	252.2	217.3	200.1	189.1	196.2	192.3	198.1	192.7
65.5°	292.5	300.4	293.7	243.6	209.9	193.4	184.8	191.1	187.2	192.7	188.0
66°	283.1	289.0	282.3	234.6	202.5	186.8	179.7	186.0	182.1	187.2	183.3



TEST NUMBER: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	254.9	259.6	250.2	209.9	181.7	168.4	165.6	170.7	167.2	171.9	169.2
68°	246.3	249.8	240.0	202.1	175.0	162.5	160.9	166.0	162.5	167.2	164.5
68.5°	237.7	240.8	231.0	194.6	168.8	157.0	156.2	161.3	157.4	162.1	159.8
69°	229.1	232.2	221.3	187.2	162.9	151.5	151.5	156.2	152.7	157.4	154.7
69.5°	220.9	223.2	212.6	180.1	156.2	146.5	146.8	151.5	148.0	152.3	150.0
70°	213.0	215.0	204.4	173.5	150.8	141.0	142.1	146.8	143.3	147.6	145.3
70.5°	204.8	206.4	195.8	166.4	144.9	136.3	137.8	142.1	138.6	142.9	141.0
71°	197.0	198.5	188.0	160.2	139.4	131.2	133.1	137.4	134.3	138.2	136.3
71.5°	189.5	190.7	180.1	153.9	133.9	126.5	128.4	133.1	129.6	133.5	131.6
72°	182.1	182.9	172.3	147.6	128.4	121.8	124.1	128.4	124.9	128.8	126.9
72.5°	174.7	175.4	164.9	141.8	123.4	117.1	119.8	123.7	120.6	124.1	122.6
73°	167.2	167.6	157.8	136.3	118.3	112.8	115.5	119.0	115.9	119.4	118.3
73.5°	160.2	160.6	150.8	130.4	113.2	108.9	111.2	114.7	111.6	115.1	113.6
74°	153.1	153.5	143.7	124.9	108.1	104.6	106.9	110.0	107.3	110.4	109.3
74.5°	146.1	146.5	137.4	119.4	103.4	101.0	102.6	105.7	102.6	106.1	104.9
75°	140.6	140.6	131.2	114.0	98.7	97.5	98.3	101.0	98.3	101.4	100.6
75.5°	133.9	133.9	124.9	108.9	94.4	94.0	94.0	96.7	94.0	97.1	96.3
76°	127.3	127.3	118.7	103.8	89.7	90.5	90.1	92.0	89.7	92.8	92.0
76.5°	120.2	120.6	112.4	98.7	85.4	86.5	85.8	87.7	85.4	88.1	87.7
77°	113.6	114.0	106.1	93.6	81.1	83.0	81.5	83.4	81.1	83.8	83.4
77.5°	107.7	108.1	100.2	88.5	76.8	79.1	77.1	79.1	76.8	79.5	79.1
78°	101.4	101.8	94.8	83.8	72.4	75.6	73.2	74.4	72.1	75.2	75.2
78.5°	95.2	95.9	88.9	79.1	68.5	71.7	68.9	70.1	67.7	70.9	70.9
79°	89.3	89.7	83.4	74.4	64.6	67.7	65.0	65.8	63.4	66.2	66.6
79.5°	83.4	84.2	77.9	70.1	60.7	64.2	61.1	61.5	59.5	61.9	62.3
80°	77.5	78.3	72.4	65.4	56.8	60.3	57.2	57.2	55.2	57.6	58.3
80.5°	72.1	72.8	67.4	61.1	52.9	56.8	53.3	52.5	50.9	53.3	54.4
81°	66.6	67.4	62.3	56.8	49.3	52.9	49.3	48.6	47.0	48.9	50.1
81.5°	61.1	61.9	57.2	52.5	45.8	49.3	45.4	43.9	42.7	44.6	46.2
82°	55.6	56.4	52.5	48.6	41.9	45.8	41.5	39.9	38.8	40.7	42.7
82.5°	50.5	51.3	47.8	44.6	38.8	42.3	38.0	36.0	34.5	36.8	38.8
83°	45.4	46.2	43.5	40.7	35.2	38.8	34.5	32.1	30.5	32.5	35.6
83.5°	39.9	40.7	38.8	36.8	32.1	35.2	30.9	28.6	26.6	28.6	32.1
84°	34.9	35.6	34.9	32.9	28.6	31.7	27.8	24.7	22.7	24.7	29.0
84.5°	29.8	30.9	30.9	29.4	25.5	28.2	24.3	20.8	18.8	20.8	25.5
85°	25.1	26.2	27.4	25.8	21.9	24.7	20.8	17.6	15.3	17.2	22.3
85.5°	20.0	21.5	23.5	22.3	18.8	21.1	17.6	14.9	12.9	14.5	19.2
86°	16.4	18.0	20.0	18.8	16.1	18.0	14.5	12.5	11.0	12.1	16.1
86.5°	13.7	14.9	16.4	15.7	12.9	14.5	11.4	10.2	9.0	9.8	13.3
87°	11.4	12.1	13.3	12.1	10.2	11.4	8.6	7.8	6.7	7.8	10.6
87.5°	8.6	9.0	10.2	9.0	7.4	8.2	5.5	5.1	4.7	5.5	7.4
88°	6.3	6.3	7.0	5.9	4.7	5.1	2.7	2.7	2.7	3.1	4.7
88.5°	3.5	3.5	3.9	2.7	2.0	2.3	0.8	0.8	1.2	1.2	2.0



TEST NUMBER: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

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: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6
0.5°	1647.8	1653.7	1660.0	1657.2	1658.8	1660.8
1°	1642.0	1652.9	1664.3	1666.6	1670.5	1673.7
1.5°	1636.1	1652.1	1669.0	1675.2	1682.7	1687.0
2°	1629.8	1651.4	1672.9	1683.9	1694.4	1699.9
2.5°	1623.9	1650.2	1676.8	1692.5	1705.8	1712.4
3°	1617.3	1648.6	1680.3	1700.7	1717.1	1725.0
3.5°	1610.6	1647.0	1683.9	1708.9	1728.5	1737.1
4°	1604.0	1645.5	1687.0	1716.8	1739.1	1748.9
4.5°	1596.9	1643.5	1690.5	1724.2	1749.6	1760.6
5°	1589.9	1641.6	1693.3	1731.6	1759.8	1772.0
5.5°	1582.8	1638.8	1696.0	1738.7	1770.0	1782.5
6°	1575.4	1636.5	1698.3	1745.7	1779.4	1793.1
6.5°	1567.9	1633.7	1700.3	1752.0	1788.4	1803.7
7°	1560.5	1631.0	1702.7	1758.3	1797.4	1813.5
7.5°	1552.7	1627.9	1704.2	1764.1	1806.0	1822.9
8°	1544.8	1624.7	1705.8	1770.0	1814.3	1831.9
8.5°	1537.0	1621.2	1707.0	1775.1	1822.1	1840.9
9°	1528.8	1617.7	1708.1	1780.2	1829.5	1849.5
9.5°	1520.6	1613.8	1708.9	1784.9	1837.0	1857.7
10°	1512.3	1609.8	1709.3	1789.6	1843.6	1865.2
10.5°	1503.7	1605.5	1709.7	1793.5	1849.9	1872.6
11°	1495.1	1601.2	1709.7	1797.4	1856.2	1879.7
11.5°	1486.5	1596.9	1709.3	1800.6	1862.0	1886.3
12°	1477.9	1591.8	1708.9	1803.7	1867.1	1892.6
12.5°	1468.9	1587.1	1708.5	1806.8	1872.2	1898.5
13°	1459.9	1582.0	1707.4	1809.2	1876.9	1903.5
13.5°	1450.5	1577.0	1706.2	1811.5	1881.2	1908.6
14°	1441.1	1571.5	1704.6	1813.5	1884.7	1912.9
14.5°	1431.7	1566.0	1703.0	1814.7	1888.3	1917.2
15°	1422.3	1560.1	1701.1	1816.2	1891.4	1920.8
15.5°	1412.9	1554.2	1699.1	1817.0	1893.8	1924.3
16°	1403.5	1548.4	1696.4	1817.4	1896.1	1927.0
16.5°	1393.7	1542.1	1693.6	1817.4	1897.7	1929.4
17°	1383.5	1535.8	1690.9	1817.0	1898.8	1931.3
17.5°	1373.7	1529.2	1687.8	1816.6	1900.0	1932.9
18°	1363.9	1522.5	1684.2	1815.8	1900.4	1934.1
18.5°	1353.7	1515.9	1680.3	1814.7	1900.4	1934.9
19°	1344.0	1508.8	1676.8	1812.7	1900.4	1934.9
19.5°	1333.4	1501.8	1672.5	1810.7	1899.6	1934.9
20°	1323.2	1494.7	1668.2	1808.8	1898.5	1934.5
20.5°	1313.0	1487.3	1663.5	1806.0	1896.9	1933.3
21°	1302.4	1479.4	1658.8	1802.9	1894.9	1932.1

TEST NUMBER: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1270.7	1455.9	1642.7	1791.9	1886.7	1925.1
23°	1260.2	1447.7	1636.9	1787.6	1883.2	1922.3
23.5°	1249.2	1439.5	1630.6	1782.9	1879.3	1918.8
24°	1238.6	1430.9	1624.3	1777.8	1875.0	1914.9
24.5°	1227.3	1421.9	1617.7	1772.8	1870.3	1910.6
25°	1216.3	1412.9	1611.0	1766.9	1865.2	1906.3
25.5°	1205.3	1403.5	1603.6	1761.0	1859.7	1901.2
26°	1194.0	1394.1	1596.5	1754.3	1853.8	1895.7
26.5°	1182.6	1384.3	1588.7	1748.1	1847.5	1889.8
27°	1171.3	1374.1	1580.9	1741.0	1841.7	1884.0
27.5°	1159.5	1363.1	1572.3	1733.6	1834.6	1877.7
28°	1147.4	1352.6	1563.6	1726.2	1827.6	1870.6
28.5°	1135.6	1341.2	1554.6	1718.3	1819.7	1863.6
29°	1123.5	1329.5	1544.8	1710.1	1812.3	1856.2
29.5°	1111.0	1317.7	1535.1	1701.9	1804.1	1848.3
30°	1098.0	1305.6	1524.5	1692.9	1795.9	1840.5
30.5°	1085.5	1292.7	1513.5	1683.9	1786.8	1832.3
31°	1072.6	1280.1	1502.2	1674.5	1777.8	1824.4
31.5°	1059.7	1266.8	1490.4	1665.1	1768.8	1816.6
32°	1046.7	1253.5	1478.3	1654.9	1759.0	1808.8
32.5°	1033.0	1239.4	1465.3	1644.7	1749.6	1799.4
33°	1019.7	1225.7	1452.4	1634.5	1739.9	1788.8
33.5°	1006.4	1211.6	1438.7	1623.9	1730.1	1775.9
34°	992.7	1196.7	1424.6	1613.0	1721.1	1755.9
34.5°	978.6	1181.8	1410.5	1601.6	1711.3	1738.3
35°	964.9	1166.6	1395.6	1589.9	1699.5	1711.3
35.5°	951.2	1150.1	1380.0	1578.1	1687.0	1686.2
36°	936.7	1134.1	1364.3	1565.6	1670.2	1661.9
36.5°	922.6	1116.8	1348.3	1553.1	1649.8	1630.6
37°	908.5	1099.6	1331.0	1540.1	1630.2	1605.1
37.5°	894.0	1081.6	1313.4	1526.8	1602.8	1574.2
38°	879.5	1063.2	1294.6	1513.1	1579.7	1542.1
38.5°	863.9	1044.8	1275.0	1498.6	1553.5	1513.1
39°	849.0	1026.0	1255.5	1484.9	1523.3	1478.7
39.5°	834.1	1007.2	1234.7	1470.8	1499.8	1448.9
40°	818.8	988.0	1212.8	1455.9	1468.9	1416.4
40.5°	803.6	968.4	1190.8	1440.3	1439.1	1380.4
41°	787.9	948.4	1168.5	1425.8	1411.7	1351.0
41.5°	772.6	929.6	1146.2	1410.9	1379.2	1315.4
42°	757.3	909.7	1123.1	1395.3	1350.2	1283.3
42.5°	741.7	889.3	1100.0	1379.2	1319.3	1251.1
43°	726.4	869.3	1076.1	1362.0	1286.4	1214.7
43.5°	710.7	849.4	1052.2	1343.2	1258.6	1186.5

TEST NUMBER: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	664.5	788.7	979.0	1272.3	1165.4	1089.0
45.5°	648.9	768.7	954.7	1242.5	1131.3	1054.6
46°	633.2	748.7	929.6	1215.1	1104.3	1028.3
46.5°	617.9	728.8	905.0	1186.5	1072.6	994.7
47°	603.1	709.2	880.3	1154.0	1043.6	966.8
47.5°	588.2	688.8	855.2	1125.1	1014.6	938.3
48°	572.9	669.2	830.6	1093.3	982.1	906.2
48.5°	558.0	650.0	806.3	1060.8	957.8	883.0
49°	543.5	630.5	781.6	1031.5	926.5	850.5
49.5°	529.4	611.7	757.0	998.2	901.5	828.6
50°	514.6	592.9	732.7	967.2	874.8	800.8
50.5°	499.7	574.1	708.4	937.1	845.1	775.4
51°	486.0	556.1	684.5	905.4	822.3	753.0
51.5°	472.3	538.1	661.4	876.8	792.6	724.5
52°	458.6	521.2	638.7	845.8	771.8	706.4
52.5°	444.5	504.4	616.0	816.5	746.4	679.8
53°	431.5	487.5	593.3	789.1	722.1	661.4
53.5°	418.6	471.5	572.5	759.3	700.2	639.9
54°	405.7	456.2	551.4	733.1	673.9	618.3
54.5°	393.6	441.7	531.4	705.3	655.5	600.7
55°	381.0	426.8	511.8	679.8	630.1	578.8
55.5°	369.3	412.7	493.4	654.7	612.5	563.9
56°	357.9	399.0	475.4	628.9	589.7	542.0
56.5°	346.6	386.5	458.2	606.6	571.3	528.3
57°	336.4	373.6	441.3	582.7	552.1	509.9
57.5°	325.8	361.1	425.7	561.2	532.2	495.4
58°	315.6	349.3	410.4	538.4	515.7	479.7
58.5°	305.4	337.9	395.5	518.5	496.2	464.0
59°	294.9	327.0	381.8	498.5	481.7	450.3
59.5°	285.5	316.0	368.5	478.9	463.3	434.7
60°	276.5	305.8	355.6	460.5	449.9	421.0
60.5°	267.9	295.7	343.0	442.1	432.3	406.9
61°	259.2	285.9	330.9	425.7	419.8	393.6
61.5°	251.0	276.9	319.5	408.4	403.7	381.0
62°	242.8	267.9	308.6	393.6	391.6	368.9
62.5°	235.0	258.8	298.0	378.3	376.7	356.4
63°	227.5	250.2	287.8	363.8	365.0	345.4
63.5°	220.1	242.0	277.6	349.7	351.7	333.6
64°	213.0	234.2	267.9	336.8	340.3	323.5
64.5°	206.4	226.3	258.8	323.5	327.4	312.1
65°	199.7	218.9	249.8	311.3	317.2	302.7
65.5°	193.1	211.5	241.2	299.6	305.1	292.5
66°	186.8	204.4	232.6	288.2	295.7	283.1



TEST NUMBER: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	168.8	184.0	209.1	256.9	264.7	254.9
68°	163.3	177.4	201.3	247.1	255.7	246.3
68.5°	157.8	171.1	194.2	237.7	246.3	237.7
69°	152.3	165.3	187.2	228.7	237.3	229.1
69.5°	147.2	159.4	180.1	219.7	228.7	220.9
70°	142.1	153.5	173.5	211.1	219.7	213.0
70.5°	137.1	147.6	166.8	202.8	211.5	204.8
71°	132.4	141.8	160.6	194.6	203.2	197.0
71.5°	127.7	136.7	154.3	186.8	195.4	189.5
72°	123.0	131.6	148.0	179.0	187.6	182.1
72.5°	118.3	126.5	142.1	171.9	179.7	174.7
73°	114.0	121.8	136.7	164.5	172.7	167.2
73.5°	109.6	116.7	131.2	157.0	164.9	160.2
74°	105.7	111.6	125.7	150.4	157.8	153.1
74.5°	101.4	106.9	120.2	143.3	150.8	146.1
75°	97.9	102.2	114.7	137.1	143.7	140.6
75.5°	94.4	97.5	109.6	130.8	137.4	133.9
76°	90.9	92.8	104.2	124.5	130.8	127.3
76.5°	86.9	88.5	99.5	118.3	124.5	120.2
77°	83.4	84.2	94.4	112.0	117.9	113.6
77.5°	79.5	79.9	89.7	106.1	111.6	107.7
78°	75.6	75.6	85.0	100.2	105.3	101.4
78.5°	72.1	71.7	79.9	94.4	99.5	95.2
79°	68.1	67.4	75.6	88.5	93.2	89.3
79.5°	64.2	63.4	70.9	83.0	87.3	83.4
80°	60.7	59.5	66.6	77.5	81.5	77.5
80.5°	56.8	55.6	62.3	72.4	76.0	72.1
81°	52.9	52.1	58.0	67.4	70.1	66.6
81.5°	49.3	48.2	53.6	62.3	64.6	61.1
82°	45.8	44.6	49.3	57.2	59.1	55.6
82.5°	42.3	41.1	45.4	52.5	54.0	50.5
83°	38.8	37.6	41.5	47.8	48.9	45.4
83.5°	35.2	34.1	37.6	43.5	43.5	39.9
84°	31.7	30.9	33.7	39.2	38.4	34.9
84.5°	28.2	27.4	30.2	34.9	33.7	29.8
85°	24.7	24.3	26.2	30.9	29.4	25.1
85.5°	21.1	21.1	22.7	27.0	25.1	20.0
86°	17.6	18.0	19.2	23.5	21.1	16.4
86.5°	14.5	14.9	15.7	19.6	17.6	13.7
87°	11.4	11.7	12.5	16.1	14.5	11.4
87.5°	8.2	9.0	9.4	12.9	11.4	8.6
88°	5.1	5.9	6.3	9.8	8.2	6.3
88.5°	2.3	3.1	2.7	6.7	5.5	3.5



TEST NUMBER: P776421

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-3000K

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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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°	1930.2	1907.1	1823.3	1685.0	1495.9	1311.1	1156.4	1070.6	1043.6	1069.8	1152.9
22°	1927.8	1904.7	1820.1	1680.3	1488.5	1301.3	1143.8	1057.7	1030.7	1056.9	1140.7



44°	1151.3	1228.4	1341.6	1076.5	852.9	711.9	603.1	533.4	509.9	535.7	605.8
44.5°	1120.7	1199.5	1314.6	1051.4	832.5	696.3	590.9	522.0	498.5	524.7	593.7



66.5°	273.3	279.6	271.0	226.0	195.4	180.5	175.0	180.9	177.0	182.1	178.6
67°	264.3	269.0	260.4	217.7	188.4	174.3	170.3	175.8	171.9	177.0	173.9



89°	1.2	0.8	0.8	0.8	0.4	0.4	0.0	0.4	0.0	0.4	0.4
89.5°	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	1291.9	1472.0	1653.3	1799.8	1892.6	1930.2
22°	1281.3	1464.2	1648.2	1796.2	1889.8	1927.8



44°	695.1	829.4	1027.5	1320.5	1224.9	1151.3
44.5°	680.2	809.4	1003.3	1295.4	1195.5	1120.7



66.5°	180.5	197.4	224.8	277.6	284.3	273.3
67°	174.7	190.7	216.6	266.7	275.3	264.3

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89°	0.4	0.8	0.8	3.5	2.3	1.2
89.5°	0.0	0.0	0.0	0.8	0.4	0.0

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(END OF REPORT)