

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: P776499

Luminaire Tested: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776499
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B022)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K
Description: 8 INCH ROUND MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

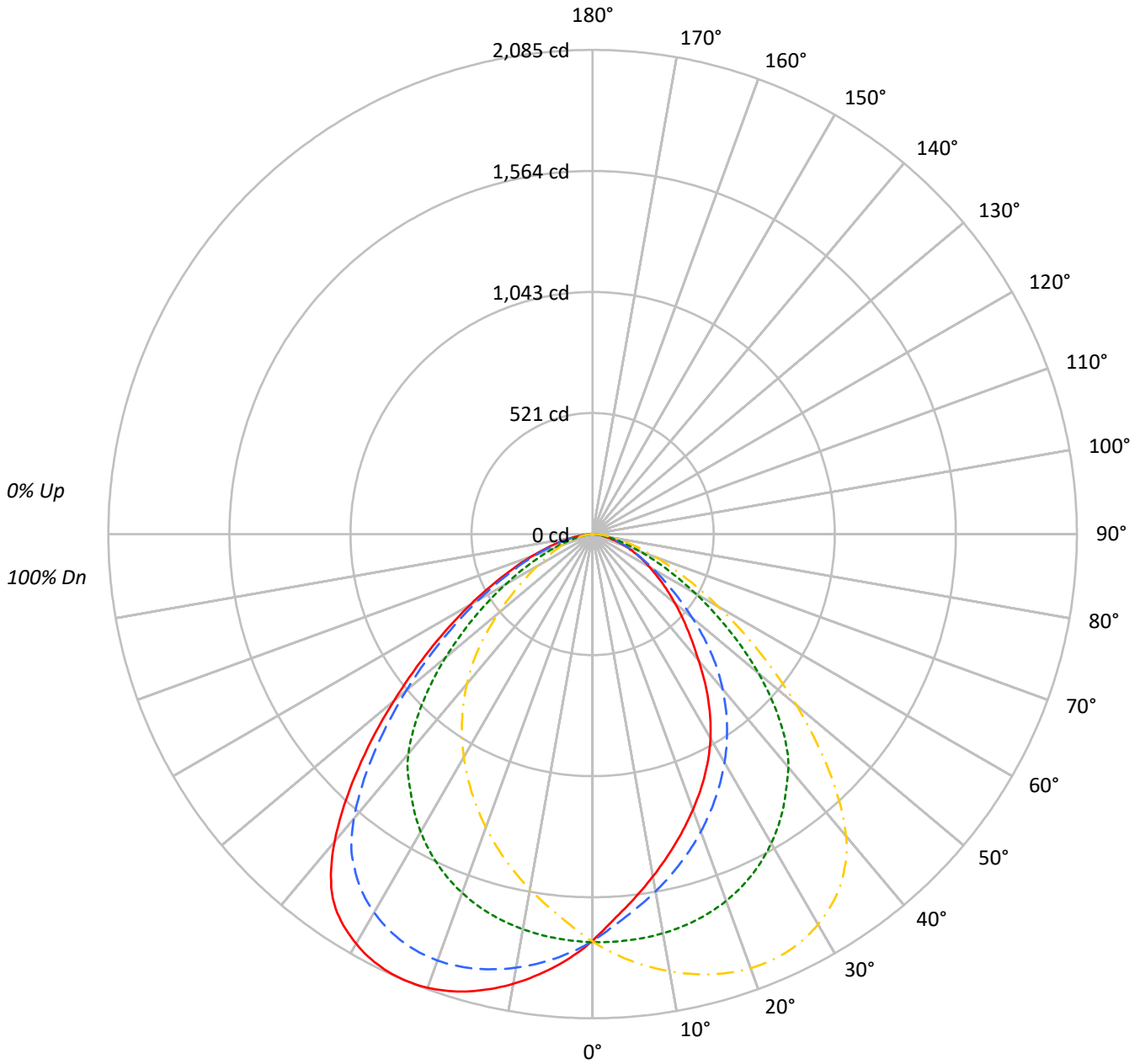
Lumens per Lamp: N/A
Luminaire Lumens: 4099.0 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.32
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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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	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	94	89	83	99	93	87	83	89	85	81	86	82	79	83	80	77	75																			
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	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	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44																			
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39																			
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35																			
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32																			
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	53520	53520	53520	53520
5°	49525	53825	57325	53574
10°	46393	54106	60955	53573
15°	43590	54412	64422	53559
20°	41031	54615	67536	53406
25°	38534	54589	70064	52975
30°	35768	54216	71797	52182
35°	32325	53383	72335	50822
40°	28305	52273	68872	49176
45°	24852	49299	61613	44938
50°	21977	44286	53049	39213
55°	19402	37914	44727	32836
60°	17189	31178	37119	26482
65°	15337	25003	30356	20748
70°	13077	19388	24726	15773
75°	10475	14721	19935	11584
80°	8123	10865	15683	7841
85°	5430	7742	10018	4449

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 62670 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.2	4.1
10°-20°	481.7	11.8
20°-30°	737.3	18.0
30°-40°	873.0	21.3
40°-50°	801.7	19.6
50°-60°	560.6	13.7
60°-70°	314.1	7.7
70°-80°	135.7	3.3
80°-90°	28.6	0.7
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°	1385.2	33.8
0°-40°	2258.2	55.1
0°-60°	3620.6	88.3
0°-90°	4099.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4099.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1753	1753	1753	1753	1753	
5°	1616	1756	1870	1748	1616	151
15°	1379	1722	2038	1694	1379	387
25°	1144	1620	2080	1573	1144	525
35°	867	1432	1941	1364	867	540
45°	576	1142	1427	1041	576	446
55°	364	712	840	617	364	328
65°	212	346	420	287	212	210
75°	89	125	169	98	89	96
85°	16	22	29	13	16	20
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°	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0
0.5°	1736.3	1737.5	1742.0	1748.1	1757.5	1761.2	1764.9	1764.9	1764.1	1762.5	1761.2
1°	1722.4	1724.8	1732.2	1742.8	1757.5	1766.5	1774.3	1777.2	1777.6	1775.1	1770.2
1.5°	1708.0	1711.3	1722.4	1737.5	1758.0	1772.3	1783.7	1789.5	1790.3	1786.6	1778.8
2°	1693.3	1698.2	1712.1	1732.2	1758.0	1777.2	1792.7	1800.9	1802.5	1798.0	1787.8
2.5°	1679.4	1685.1	1701.9	1726.5	1758.0	1782.1	1801.7	1812.0	1814.4	1809.1	1796.0
3°	1665.9	1672.4	1692.1	1721.1	1758.0	1787.4	1809.9	1823.0	1826.3	1819.7	1804.2
3.5°	1652.8	1660.6	1681.9	1715.4	1757.5	1791.9	1818.5	1833.6	1837.7	1830.0	1811.5
4°	1640.5	1648.7	1672.4	1709.3	1757.1	1796.4	1826.7	1844.3	1848.8	1840.2	1819.3
4.5°	1627.9	1637.3	1662.6	1703.5	1756.7	1800.9	1834.9	1854.9	1859.8	1850.0	1826.7
5°	1616.0	1625.8	1653.2	1697.4	1756.3	1805.4	1842.6	1864.7	1870.5	1859.8	1834.0
5.5°	1603.7	1614.4	1644.2	1691.3	1755.9	1809.1	1850.4	1875.0	1881.1	1869.6	1841.0
6°	1591.9	1603.3	1634.8	1685.5	1755.1	1813.2	1857.8	1884.4	1891.3	1879.1	1848.0
6.5°	1580.0	1592.3	1625.8	1679.4	1754.3	1817.3	1865.6	1894.2	1901.6	1887.6	1854.5
7°	1567.7	1581.2	1616.8	1673.3	1753.5	1821.0	1872.5	1903.2	1911.4	1896.6	1861.1
7.5°	1555.9	1570.2	1607.8	1667.1	1752.2	1824.6	1879.9	1912.2	1920.8	1905.6	1867.2
8°	1544.0	1558.7	1598.8	1661.0	1751.0	1827.9	1886.4	1921.2	1930.6	1914.2	1873.3
8.5°	1532.1	1547.7	1589.8	1654.9	1749.8	1831.2	1893.4	1930.2	1940.0	1922.4	1879.5
9°	1520.3	1536.6	1580.4	1648.3	1748.5	1834.5	1899.5	1938.4	1949.0	1930.2	1885.2
9.5°	1508.4	1525.6	1571.4	1642.2	1746.9	1837.3	1906.1	1946.6	1957.6	1938.4	1890.5
10°	1496.5	1514.1	1562.0	1636.0	1745.3	1840.6	1911.8	1955.1	1966.2	1945.7	1895.8
10.5°	1485.1	1503.1	1552.6	1629.9	1743.6	1843.0	1917.9	1962.5	1974.8	1953.5	1901.1
11°	1472.8	1492.0	1543.2	1623.4	1741.6	1845.5	1924.1	1970.3	1983.0	1960.5	1906.1
11.5°	1460.9	1481.0	1533.8	1616.8	1739.5	1848.0	1929.4	1977.6	1990.7	1967.4	1911.0
12°	1449.1	1469.5	1523.9	1610.3	1737.5	1850.4	1934.7	1985.0	1998.1	1974.4	1915.5
12.5°	1437.6	1458.5	1514.5	1603.3	1735.5	1852.5	1940.0	1992.4	2005.5	1980.5	1919.6
13°	1425.8	1447.4	1505.1	1596.4	1733.0	1854.5	1944.9	1998.9	2012.8	1987.1	1923.6
13.5°	1414.3	1436.4	1495.3	1589.8	1730.1	1856.1	1949.8	2005.1	2019.4	1992.8	1927.7
14°	1402.4	1424.9	1485.5	1582.4	1727.3	1857.4	1954.3	2011.6	2025.9	1998.5	1931.4
14.5°	1390.6	1413.9	1475.7	1575.5	1724.4	1859.0	1958.8	2017.3	2032.1	2003.8	1934.7
15°	1379.1	1402.4	1465.8	1567.7	1721.5	1860.2	1962.9	2023.1	2038.2	2009.1	1938.0
15.5°	1367.3	1391.0	1456.0	1560.8	1718.3	1861.1	1966.6	2028.4	2043.9	2013.6	1940.8
16°	1355.8	1379.9	1445.8	1553.0	1715.0	1861.9	1970.3	2033.7	2049.2	2018.1	1943.3
16.5°	1344.3	1368.9	1435.6	1545.6	1711.3	1862.3	1973.6	2038.2	2054.2	2022.6	1945.7
17°	1332.5	1357.4	1425.8	1537.4	1707.6	1862.7	1976.8	2042.7	2058.7	2026.3	1947.8
17.5°	1321.0	1346.4	1415.1	1529.3	1703.5	1862.7	1979.7	2046.8	2062.7	2030.0	1949.4
18°	1309.2	1334.9	1404.9	1521.1	1699.5	1862.7	1982.1	2050.5	2066.8	2033.3	1951.1
18.5°	1297.7	1323.9	1394.3	1512.9	1695.0	1862.3	1984.2	2054.2	2070.1	2035.7	1952.3
19°	1286.2	1312.4	1384.0	1504.3	1690.5	1861.9	1986.2	2057.4	2073.4	2038.6	1953.1
19.5°	1274.4	1301.4	1373.4	1496.1	1686.0	1861.1	1987.9	2059.9	2076.2	2040.7	1953.5
20°	1262.9	1289.5	1362.8	1487.1	1681.0	1859.8	1989.1	2062.3	2078.7	2042.3	1953.9
20.5°	1251.1	1278.1	1352.1	1478.5	1676.1	1858.2	1990.3	2064.4	2080.7	2043.5	1953.5
21°	1239.6	1266.6	1341.1	1469.5	1670.4	1856.5	1990.7	2066.0	2082.4	2044.7	1953.1



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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°	1204.0	1232.2	1308.7	1441.7	1653.6	1850.4	1991.1	2068.5	2084.8	2045.2	1949.8
23°	1192.2	1220.8	1297.3	1431.9	1647.5	1847.5	1990.3	2068.5	2084.4	2044.3	1947.8
23.5°	1180.3	1209.3	1286.7	1422.5	1640.9	1844.7	1989.1	2068.1	2084.0	2043.5	1945.7
24°	1168.4	1197.5	1275.2	1412.7	1634.0	1841.4	1987.9	2067.2	2083.2	2041.9	1942.9
24.5°	1156.2	1185.2	1264.2	1402.4	1627.4	1837.7	1986.2	2066.0	2081.6	2039.8	1940.0
25°	1143.9	1173.7	1252.7	1392.6	1620.5	1833.6	1983.8	2064.4	2079.9	2037.8	1936.7
25.5°	1131.6	1161.5	1241.7	1382.4	1613.5	1829.5	1981.3	2062.3	2077.9	2034.9	1933.1
26°	1119.3	1149.6	1230.2	1372.2	1605.8	1825.0	1978.5	2059.9	2075.0	2031.6	1928.6
26.5°	1107.1	1137.3	1218.7	1361.5	1598.0	1819.7	1975.2	2057.0	2071.7	2028.0	1924.1
27°	1094.0	1125.5	1206.9	1350.9	1590.2	1814.8	1971.5	2053.7	2068.5	2024.3	1919.1
27.5°	1080.9	1112.8	1195.4	1340.3	1582.0	1809.1	1967.4	2050.1	2064.4	2019.8	1913.8
28°	1068.2	1100.5	1183.6	1329.2	1573.4	1803.4	1962.9	2045.6	2059.9	2014.5	1908.1
28.5°	1055.1	1087.8	1171.7	1318.2	1564.9	1797.2	1958.0	2041.1	2055.0	2009.6	1902.4
29°	1041.6	1075.1	1159.8	1307.1	1556.3	1790.7	1952.7	2035.7	2049.2	2003.4	1895.8
29.5°	1028.1	1062.1	1148.0	1296.1	1546.9	1783.7	1947.0	2030.4	2043.1	1997.3	1888.9
30°	1014.6	1049.0	1135.7	1285.0	1537.9	1776.4	1940.8	2024.3	2036.6	1990.3	1881.5
30.5°	1000.7	1035.5	1123.4	1273.2	1528.4	1769.0	1934.3	2017.3	2029.6	1983.4	1873.7
31°	986.4	1022.4	1111.1	1261.7	1518.6	1761.2	1927.3	2010.4	2022.2	1975.6	1865.6
31.5°	972.0	1008.5	1098.5	1250.2	1508.4	1752.6	1920.0	2003.0	2014.5	1967.4	1857.0
32°	957.3	995.0	1086.2	1238.0	1498.6	1744.5	1912.2	1994.8	2005.9	1958.4	1848.4
32.5°	942.6	981.1	1073.5	1226.5	1488.3	1735.5	1904.0	1986.6	1997.3	1949.4	1838.5
33°	928.3	966.7	1060.8	1214.2	1477.7	1726.5	1895.4	1977.6	1987.5	1940.0	1828.3
33.5°	913.1	952.4	1048.1	1202.4	1466.7	1716.6	1886.0	1967.8	1977.2	1929.0	1817.7
34°	898.4	938.1	1035.1	1189.7	1455.6	1706.4	1876.2	1957.6	1966.6	1917.9	1805.8
34.5°	882.5	923.4	1022.0	1177.4	1444.2	1696.2	1866.4	1947.0	1954.7	1904.8	1793.1
35°	867.3	908.2	1008.9	1164.7	1432.3	1685.5	1855.3	1934.7	1940.8	1891.3	1779.6
35.5°	851.4	893.5	995.4	1152.1	1420.4	1673.7	1843.5	1921.6	1926.5	1875.8	1765.3
36°	836.2	878.4	981.9	1139.4	1408.2	1661.4	1830.4	1906.9	1910.1	1859.4	1752.2
36.5°	819.9	863.2	968.8	1126.3	1395.5	1649.1	1816.5	1890.5	1892.6	1842.6	1738.7
37°	804.3	847.7	954.9	1113.6	1383.2	1636.0	1802.1	1873.7	1871.3	1824.6	1724.0
37.5°	787.9	832.1	941.0	1100.1	1370.5	1624.2	1788.6	1855.3	1851.6	1803.8	1706.8
38°	772.4	816.2	927.0	1087.8	1359.1	1612.3	1773.5	1834.9	1828.3	1781.7	1687.6
38.5°	755.6	800.6	913.1	1074.7	1347.2	1601.3	1756.7	1813.2	1805.4	1758.8	1666.7
39°	740.5	784.7	899.2	1062.1	1335.3	1588.2	1737.9	1791.1	1780.5	1734.6	1645.4
39.5°	724.9	768.7	884.9	1049.4	1323.9	1573.9	1718.7	1767.4	1755.1	1709.7	1622.5
40°	710.2	752.8	870.6	1036.7	1311.6	1557.9	1697.4	1742.0	1728.1	1683.5	1598.8
40.5°	694.7	736.8	855.9	1023.6	1298.1	1539.5	1674.9	1716.6	1700.3	1656.5	1573.9
41°	680.8	721.3	841.1	1010.5	1283.4	1521.1	1651.6	1689.2	1672.0	1628.7	1548.9
41.5°	666.4	705.7	826.8	997.0	1267.8	1501.4	1627.4	1661.8	1642.6	1600.4	1522.7
42°	653.4	690.2	812.1	983.1	1251.5	1480.6	1602.5	1633.2	1613.1	1571.8	1496.1
42.5°	639.9	675.4	797.4	968.8	1234.7	1460.1	1576.7	1603.7	1583.3	1541.9	1469.5
43°	626.4	661.1	782.2	953.6	1216.7	1438.4	1549.7	1574.3	1552.6	1512.9	1442.5
43.5°	613.3	646.8	767.1	938.1	1198.7	1415.9	1522.3	1544.0	1521.5	1481.8	1414.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	575.6	606.3	720.0	889.8	1141.8	1345.2	1438.4	1451.5	1427.0	1390.6	1329.6
45.5°	564.2	593.2	704.5	873.9	1121.8	1321.0	1409.0	1420.8	1395.9	1359.9	1301.0
46°	551.9	580.1	688.1	856.7	1102.1	1295.7	1380.3	1389.3	1364.0	1329.2	1272.3
46.5°	540.0	567.4	671.8	839.1	1082.1	1270.3	1351.3	1358.3	1332.5	1298.1	1243.7
47°	528.6	555.2	655.4	821.9	1061.2	1244.5	1321.4	1326.3	1300.6	1267.4	1215.1
47.5°	517.1	542.5	638.6	803.9	1040.0	1218.7	1291.6	1295.2	1269.9	1237.2	1186.0
48°	506.1	530.6	621.9	786.3	1018.7	1192.6	1262.5	1265.0	1238.8	1207.3	1157.8
48.5°	495.0	518.8	605.9	768.7	997.4	1166.4	1232.7	1233.9	1208.5	1177.0	1129.6
49°	484.4	506.9	589.5	750.3	976.1	1140.2	1203.2	1203.6	1176.6	1147.6	1101.7
49.5°	473.3	495.4	574.0	732.3	954.0	1113.6	1174.2	1172.5	1146.7	1117.3	1073.9
50°	462.7	484.0	558.0	714.3	932.4	1087.4	1145.1	1142.2	1116.9	1088.2	1045.7
50.5°	452.1	472.9	542.5	695.9	909.9	1061.2	1115.2	1112.4	1087.4	1059.2	1018.3
51°	441.8	461.5	527.8	677.5	887.8	1034.2	1086.2	1082.5	1058.0	1031.0	990.9
51.5°	432.0	450.8	513.0	658.7	866.1	1008.9	1058.4	1053.9	1028.9	1002.7	964.7
52°	421.8	439.8	498.3	640.7	843.6	982.7	1030.1	1024.8	1001.1	974.9	937.7
52.5°	412.0	429.2	484.4	622.3	821.5	956.1	1001.5	995.8	972.0	947.5	911.1
53°	402.2	418.5	470.1	603.8	799.4	930.3	973.7	968.0	945.5	920.9	885.3
53.5°	392.7	408.3	456.2	585.8	777.3	905.0	946.3	940.5	917.2	893.9	860.0
54°	382.9	398.1	442.2	567.8	755.2	879.2	919.7	913.5	891.5	867.7	834.6
54.5°	373.9	388.2	429.2	549.8	733.5	854.2	892.7	886.5	864.0	842.0	810.0
55°	364.5	378.4	416.1	532.3	712.3	829.7	866.1	860.4	840.3	817.8	785.9
55.5°	355.5	368.6	403.4	514.7	691.0	804.3	841.1	834.6	813.7	792.4	762.2
56°	346.9	359.2	390.7	497.1	669.7	780.2	815.0	809.2	790.0	767.9	738.4
56.5°	337.9	349.8	378.8	480.3	649.3	757.3	790.0	784.3	764.2	744.6	715.5
57°	329.3	340.0	366.6	463.9	628.0	733.1	765.4	760.1	742.1	721.3	692.6
57.5°	321.2	331.4	355.1	447.2	608.3	709.8	740.9	736.0	717.6	698.4	670.5
58°	312.6	322.4	344.1	431.2	587.9	686.9	717.6	712.7	695.9	675.9	649.3
58.5°	304.8	313.8	333.0	415.7	568.3	664.8	694.7	690.2	672.6	654.6	627.6
59°	297.0	305.2	322.4	400.1	548.6	642.7	671.8	667.7	651.7	633.3	607.1
59.5°	289.2	297.0	312.2	385.0	529.4	621.4	648.9	645.6	629.6	612.0	586.3
60°	281.5	288.8	301.9	370.2	510.6	600.2	626.8	624.3	607.9	592.0	566.6
60.5°	274.1	280.7	292.1	356.3	492.2	579.3	605.9	603.4	587.9	572.3	547.0
61°	266.7	272.9	282.3	342.0	474.6	558.8	585.4	583.0	566.2	552.7	527.8
61.5°	259.4	265.5	273.7	328.5	456.6	539.2	565.0	562.9	547.0	533.5	509.3
62°	252.4	258.1	264.7	315.8	439.4	520.0	544.9	543.7	527.8	514.7	491.3
62.5°	245.5	250.8	256.1	303.2	423.0	501.2	525.3	524.1	507.7	496.3	473.8
63°	238.9	243.4	247.9	290.9	406.7	481.9	506.5	505.3	490.1	478.3	456.2
63.5°	232.4	236.5	239.7	278.6	389.9	463.5	487.7	486.8	471.3	460.7	439.8
64°	225.8	229.9	232.0	267.2	375.6	445.9	470.1	469.3	453.3	443.5	423.0
64.5°	219.3	223.0	224.6	256.1	360.8	428.7	452.5	451.7	436.9	427.1	407.1
65°	212.3	216.4	217.6	245.5	346.1	412.4	435.3	434.9	420.2	411.2	391.9
65.5°	205.8	209.9	210.3	235.2	331.4	396.0	418.5	418.5	403.4	395.2	376.8
66°	199.2	203.3	203.3	225.0	316.7	379.7	402.6	402.6	387.8	379.7	361.7



TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	178.8	184.1	184.1	197.2	276.2	335.5	357.2	357.6	344.5	336.7	320.3
68°	172.6	178.0	178.0	188.2	263.5	321.2	343.2	343.7	330.2	322.8	306.4
68.5°	166.1	171.8	171.8	180.0	251.6	306.4	328.9	329.3	316.2	308.9	293.3
69°	159.6	165.7	165.7	171.4	239.3	292.9	315.0	315.4	301.9	296.2	280.7
69.5°	153.4	159.1	160.0	164.1	228.3	279.4	300.7	301.5	289.2	283.5	268.4
70°	146.5	153.0	154.2	156.7	217.2	266.3	287.6	288.8	277.0	271.2	256.1
70.5°	140.7	146.5	148.9	149.7	206.6	254.1	274.5	276.2	264.7	259.4	244.6
71°	135.0	140.7	143.6	143.2	196.0	242.6	262.6	264.3	252.8	247.5	233.6
71.5°	128.9	135.4	138.3	137.1	186.1	230.7	250.8	252.4	241.0	236.1	222.6
72°	123.1	129.7	133.0	130.5	176.3	219.3	238.9	240.6	229.9	225.0	211.9
72.5°	117.4	124.4	128.1	124.4	166.9	208.2	227.9	229.5	218.9	214.4	201.3
73°	111.7	118.6	122.7	117.8	157.9	197.6	216.4	218.9	208.2	203.7	191.5
73.5°	105.6	112.9	117.4	112.5	148.9	187.4	206.6	208.2	198.0	193.9	181.6
74°	99.8	107.6	112.5	107.2	140.7	177.6	196.0	198.4	188.2	184.1	172.2
74.5°	94.5	102.3	107.6	101.9	132.6	168.1	185.7	188.2	178.4	175.1	163.2
75°	88.8	96.6	102.7	97.0	124.8	158.7	175.9	178.8	169.0	165.7	154.2
75.5°	83.5	91.6	97.8	92.5	117.0	149.7	166.9	169.4	160.0	156.7	145.6
76°	78.1	86.3	93.3	88.0	110.1	141.1	157.5	160.4	151.0	147.7	137.1
76.5°	73.2	81.0	88.4	83.5	103.1	132.6	148.9	151.8	142.8	139.5	129.3
77°	68.3	76.1	83.9	79.4	96.6	124.8	140.3	143.2	134.2	131.3	121.5
77.5°	64.2	71.2	79.4	75.7	90.0	117.0	132.1	135.0	126.0	123.6	113.7
78°	60.5	66.7	74.9	71.6	83.9	109.2	124.0	127.2	118.2	115.8	106.4
78.5°	56.9	62.6	70.4	67.9	77.7	102.3	116.6	119.5	110.9	108.4	99.4
79°	53.2	58.5	66.3	63.8	72.4	95.3	108.8	112.1	103.1	101.1	92.9
79.5°	49.9	54.8	62.2	60.1	66.7	88.4	101.9	104.7	96.1	94.5	85.9
80°	46.2	51.5	58.1	56.5	61.8	82.2	94.9	97.4	89.2	87.5	79.4
80.5°	43.4	47.9	54.0	53.2	56.5	76.1	88.0	90.8	82.2	81.0	73.6
81°	40.1	44.6	50.3	49.5	52.4	70.0	81.8	84.3	75.7	74.5	67.5
81.5°	36.8	40.9	47.0	45.8	47.5	64.2	75.3	77.7	69.1	68.3	61.8
82°	33.5	37.6	43.4	42.5	43.4	58.9	69.5	71.6	63.0	62.6	56.0
82.5°	30.7	34.4	40.1	39.3	39.3	53.6	63.4	65.5	56.9	56.9	50.7
83°	27.4	31.1	36.8	36.0	35.6	48.7	58.1	59.7	51.1	51.1	45.8
83.5°	24.1	27.8	33.5	33.1	32.3	44.2	52.4	54.0	45.0	45.8	41.3
84°	21.3	25.0	30.3	29.9	29.0	40.1	47.5	48.7	39.7	40.9	36.8
84.5°	18.4	21.7	27.0	27.0	25.4	35.6	42.1	43.4	34.0	36.0	32.3
85°	15.5	18.8	23.7	23.7	22.1	31.5	38.0	38.5	28.6	31.1	27.8
85.5°	13.1	15.5	20.9	20.9	19.2	27.4	33.5	34.0	23.3	26.2	23.3
86°	10.6	13.1	17.6	18.0	16.4	23.3	29.0	29.5	17.6	21.3	18.8
86.5°	8.2	11.0	15.1	15.1	13.9	20.0	24.5	24.5	13.1	17.6	15.1
87°	6.1	8.6	12.3	12.7	11.5	16.4	20.0	20.0	10.6	13.9	11.5
87.5°	4.1	6.1	9.8	10.2	9.0	13.1	16.4	16.0	8.2	10.6	7.8
88°	2.5	4.1	7.0	7.4	7.0	10.2	12.3	12.3	5.7	7.0	4.5
88.5°	1.2	2.5	4.5	4.9	4.9	7.4	9.0	8.2	3.3	3.3	1.2



TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-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	0.4	0.4	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1753.0	1753.0	1753.0	1753.0	1753.0	1753.0
0.5°	1758.0	1756.7	1750.2	1744.5	1739.1	1736.3
1°	1762.5	1756.3	1744.5	1734.2	1725.6	1722.4
1.5°	1767.0	1755.5	1738.3	1723.6	1712.1	1708.0
2°	1771.5	1754.7	1732.2	1713.4	1698.6	1693.3
2.5°	1776.0	1753.9	1726.0	1702.3	1685.5	1679.4
3°	1780.0	1752.6	1719.9	1691.7	1672.9	1665.9
3.5°	1783.7	1751.8	1713.4	1681.0	1660.6	1652.8
4°	1787.8	1750.6	1706.8	1670.8	1647.9	1640.5
4.5°	1791.5	1749.4	1700.3	1660.6	1636.0	1627.9
5°	1794.8	1748.1	1693.3	1650.8	1624.6	1616.0
5.5°	1798.0	1746.5	1686.8	1640.5	1613.1	1603.7
6°	1801.3	1744.9	1679.8	1631.1	1601.7	1591.9
6.5°	1804.2	1743.2	1673.3	1621.3	1590.2	1580.0
7°	1807.0	1741.6	1666.3	1611.9	1578.8	1567.7
7.5°	1809.9	1739.5	1659.4	1602.1	1567.3	1555.9
8°	1812.4	1737.5	1652.8	1592.7	1555.9	1544.0
8.5°	1814.8	1735.5	1645.4	1582.9	1544.4	1532.1
9°	1817.3	1733.0	1638.5	1573.0	1532.5	1520.3
9.5°	1819.3	1730.5	1631.5	1563.2	1521.5	1508.4
10°	1821.4	1728.1	1624.6	1553.8	1510.0	1496.5
10.5°	1823.0	1725.2	1617.2	1543.6	1498.6	1485.1
11°	1824.6	1722.4	1610.3	1533.8	1487.1	1472.8
11.5°	1825.9	1719.5	1602.9	1523.5	1475.7	1460.9
12°	1827.1	1716.6	1595.5	1513.7	1464.2	1449.1
12.5°	1828.3	1713.4	1587.8	1503.5	1452.8	1437.6
13°	1829.1	1709.7	1580.4	1493.3	1441.7	1425.8
13.5°	1830.0	1706.4	1572.6	1483.0	1429.8	1414.3
14°	1830.4	1702.7	1564.9	1472.8	1418.4	1402.4
14.5°	1830.4	1698.6	1557.1	1462.2	1406.9	1390.6
15°	1830.4	1694.5	1549.3	1451.9	1395.5	1379.1
15.5°	1830.4	1690.5	1540.7	1441.3	1383.2	1367.3
16°	1830.0	1686.0	1532.5	1430.7	1372.2	1355.8
16.5°	1829.5	1681.5	1524.4	1420.0	1360.7	1344.3
17°	1828.7	1676.5	1515.8	1409.8	1349.3	1332.5
17.5°	1827.5	1671.6	1506.8	1398.8	1337.4	1321.0
18°	1826.3	1666.7	1498.2	1388.1	1325.9	1309.2
18.5°	1824.6	1661.0	1489.2	1376.7	1314.1	1297.7
19°	1822.6	1655.7	1480.2	1366.0	1302.6	1286.2
19.5°	1820.5	1649.9	1470.8	1355.0	1291.2	1274.4
20°	1818.1	1643.8	1461.8	1344.3	1279.7	1262.9
20.5°	1815.6	1638.1	1451.9	1332.9	1267.8	1251.1
21°	1812.8	1631.5	1442.5	1321.4	1256.4	1239.6

TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	<i>1802.5</i>	<i>1611.1</i>	<i>1412.7</i>	<i>1287.5</i>	<i>1220.8</i>	<i>1204.0</i>
23°	1798.0	1604.1	1402.4	1276.4	1208.9	1192.2
23.5°	1794.0	1596.4	1392.2	1264.6	1197.1	1180.3
24°	1789.0	1589.0	1382.0	1253.1	1185.2	1168.4
24.5°	1784.1	1580.8	1371.3	1241.2	1172.9	1156.2
25°	1778.8	1572.6	1360.7	1229.8	1161.1	1143.9
25.5°	1773.5	1564.4	1349.7	1217.9	1149.2	1131.6
26°	1767.4	1556.3	1339.0	1206.1	1136.9	1119.3
26.5°	1761.2	1547.7	1328.0	1194.2	1124.2	1107.1
27°	1754.7	1538.3	1316.9	1182.3	1112.0	1094.0
27.5°	1747.7	1529.3	1305.5	1170.1	1099.3	1080.9
28°	1740.4	1519.9	1294.0	1157.8	1086.2	1068.2
28.5°	1733.0	1510.4	1282.6	1145.5	1073.9	1055.1
29°	1725.2	1500.2	1271.1	1133.6	1060.8	1041.6
29.5°	1717.0	1490.4	1259.7	1121.4	1048.1	1028.1
30°	1708.5	1480.2	1247.8	1109.1	1035.1	1014.6
30.5°	1699.5	1469.5	1235.5	1096.0	1021.6	1000.7
31°	1690.5	1458.9	1223.7	1083.7	1008.1	986.4
31.5°	1680.6	1448.3	1211.8	1071.1	994.1	972.0
32°	1671.2	1436.4	1199.1	1058.4	980.2	957.3
32.5°	1660.6	1425.3	1186.8	1045.7	966.3	942.6
33°	1649.9	1413.5	1174.2	1032.6	952.4	928.3
33.5°	1638.5	1401.6	1161.9	1019.5	937.7	913.1
34°	1626.2	1388.9	1148.8	1006.4	923.4	898.4
34.5°	1613.9	1376.3	1136.1	993.3	909.0	882.5
35°	1600.9	1363.6	1123.0	979.8	893.9	867.3
35.5°	1588.6	1351.7	1110.3	966.3	879.2	851.4
36°	1577.1	1340.3	1097.6	953.2	864.0	836.2
36.5°	1566.1	1328.8	1085.0	939.3	848.5	819.9
37°	1554.6	1317.3	1072.3	925.4	833.4	804.3
37.5°	1541.9	1305.9	1059.6	911.9	817.8	787.9
38°	1527.6	1293.6	1046.9	898.0	802.3	772.4
38.5°	1511.7	1280.5	1034.2	884.5	786.3	755.6
39°	1493.3	1266.2	1022.0	870.2	770.8	740.5
39.5°	1474.0	1250.7	1008.5	856.7	754.8	724.9
40°	1453.6	1233.9	994.6	842.0	739.3	710.2
40.5°	1433.1	1216.3	980.2	828.0	722.9	694.7
41°	1411.8	1198.7	965.5	813.7	707.4	680.8
41.5°	1389.3	1179.9	950.8	799.4	691.8	666.4
42°	1366.8	1161.1	934.8	784.3	676.7	653.4
42.5°	1343.9	1141.8	918.9	769.5	662.4	639.9
43°	1321.0	1122.2	902.5	754.4	647.6	626.4
43.5°	1296.5	1102.1	886.1	738.9	633.7	613.3



TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1223.2	1040.8	834.2	691.4	592.8	575.6
45.5°	1197.9	1019.5	816.6	675.4	580.1	564.2
46°	1172.5	999.1	799.0	658.7	566.6	551.9
46.5°	1148.4	977.0	781.0	642.7	554.3	540.0
47°	1122.2	955.7	763.0	625.9	542.1	528.6
47.5°	1096.4	933.6	744.6	609.2	529.8	517.1
48°	1071.1	912.7	726.6	592.4	517.5	506.1
48.5°	1046.5	890.6	708.2	576.0	505.7	495.0
49°	1020.3	869.4	690.2	559.7	493.8	484.4
49.5°	995.0	847.7	671.8	544.1	482.3	473.3
50°	969.6	825.6	653.4	528.2	470.9	462.7
50.5°	945.5	804.3	634.9	513.0	459.4	452.1
51°	919.3	783.0	617.8	497.5	448.4	441.8
51.5°	896.0	761.8	599.3	483.2	437.3	432.0
52°	870.6	740.1	581.8	468.4	426.7	421.8
52.5°	846.9	718.4	563.8	454.1	416.1	412.0
53°	822.7	697.9	546.2	439.8	405.8	402.2
53.5°	799.4	677.5	528.6	426.7	395.2	392.7
54°	775.3	656.6	511.8	413.2	385.0	382.9
54.5°	752.8	636.2	495.0	399.7	375.2	373.9
55°	729.9	616.9	478.3	387.0	365.3	364.5
55.5°	707.8	596.9	461.5	374.7	355.9	355.5
56°	685.3	577.7	445.9	362.5	346.5	346.9
56.5°	663.6	558.0	430.0	350.2	337.1	337.9
57°	642.3	539.2	414.4	338.7	327.7	329.3
57.5°	621.9	520.4	398.9	327.7	318.7	321.2
58°	601.0	502.8	384.6	317.1	310.1	312.6
58.5°	581.3	485.2	370.2	306.4	301.5	304.8
59°	560.9	467.6	356.3	296.2	293.3	297.0
59.5°	541.7	450.0	342.4	286.4	285.2	289.2
60°	522.8	433.7	329.3	277.0	277.0	281.5
60.5°	504.4	416.9	316.2	267.6	269.2	274.1
61°	486.0	401.3	303.6	258.6	261.4	266.7
61.5°	468.8	386.2	291.7	250.0	254.1	259.4
62°	451.3	370.7	279.8	241.8	246.7	252.4
62.5°	434.5	355.9	268.0	233.6	239.7	245.5
63°	417.7	341.2	256.9	225.8	232.8	238.9
63.5°	401.7	327.3	246.3	218.1	225.4	232.4
64°	385.8	313.4	236.1	211.1	219.3	225.8
64.5°	370.7	300.3	225.8	204.1	212.7	219.3
65°	356.7	287.2	216.4	197.2	206.2	212.3
65.5°	342.4	274.9	207.0	190.6	200.1	205.8
66°	328.1	262.2	198.0	184.5	193.9	199.2



TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	286.8	227.9	172.6	166.1	175.1	178.8
68°	274.1	216.8	164.9	160.4	168.6	172.6
68.5°	261.8	206.2	157.5	154.6	162.4	166.1
69°	250.0	196.4	150.1	149.3	156.3	159.6
69.5°	238.1	186.6	143.6	144.4	150.1	153.4
70°	226.6	176.7	137.1	139.1	144.4	146.5
70.5°	216.0	167.7	130.5	134.2	138.7	140.7
71°	205.4	158.7	124.0	128.9	133.0	135.0
71.5°	194.7	150.1	117.8	123.6	127.2	128.9
72°	184.9	142.4	112.1	118.6	121.5	123.1
72.5°	175.1	135.0	106.4	113.7	115.8	117.4
73°	165.7	127.2	100.6	108.8	110.1	111.7
73.5°	156.7	119.5	95.7	103.9	104.7	105.6
74°	148.1	111.7	90.8	99.4	99.4	99.8
74.5°	139.5	104.7	86.3	94.5	94.1	94.5
75°	131.3	98.2	81.8	90.0	88.8	88.8
75.5°	123.6	91.6	77.3	85.5	83.5	83.5
76°	115.8	85.5	73.2	81.0	78.5	78.1
76.5°	108.8	79.8	69.1	76.5	73.2	73.2
77°	101.5	74.0	65.5	72.0	68.7	68.3
77.5°	94.9	68.7	61.8	67.9	63.8	64.2
78°	88.4	63.4	58.5	63.4	59.7	60.5
78.5°	81.8	58.5	54.8	59.3	55.6	56.9
79°	76.1	53.6	51.1	55.6	52.0	53.2
79.5°	70.0	49.1	47.9	51.5	48.7	49.9
80°	64.2	44.6	44.6	47.5	45.0	46.2
80.5°	58.9	40.5	41.3	44.2	41.7	43.4
81°	54.0	36.8	38.0	40.5	38.5	40.1
81.5°	49.1	33.1	34.8	37.2	34.8	36.8
82°	44.2	29.5	31.9	34.0	31.5	33.5
82.5°	40.1	26.2	29.0	30.7	28.6	30.7
83°	36.4	23.3	26.2	27.8	25.4	27.4
83.5°	32.3	20.5	22.9	24.5	22.1	24.1
84°	28.2	17.6	20.5	21.7	19.2	21.3
84.5°	24.1	14.7	17.6	18.8	16.4	18.4
85°	20.0	12.7	14.7	16.0	13.9	15.5
85.5°	16.8	10.2	12.3	13.5	11.5	13.1
86°	13.5	8.2	9.8	11.0	9.0	10.6
86.5°	10.2	5.7	7.4	8.2	7.0	8.2
87°	7.4	4.1	4.9	5.7	4.9	6.1
87.5°	4.9	2.0	2.9	3.7	3.3	4.1
88°	2.0	0.8	0.8	1.6	2.0	2.5
88.5°	0.4	0.0	0.0	0.4	0.8	1.2



TEST NUMBER: P776499

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-HCD8TRLWW-4000lm-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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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°	1227.7	1255.2	1330.4	1460.1	1665.1	1854.9	1991.1	2067.2	2083.6	2045.2	1952.3
22°	1215.9	1244.1	1319.4	1451.1	1659.4	1852.9	1991.1	2068.1	2084.0	2045.2	1951.1



44°	600.6	633.3	751.5	922.5	1179.9	1392.6	1495.3	1513.7	1489.6	1451.9	1386.1
44.5°	588.3	619.4	736.0	906.6	1161.5	1369.3	1466.7	1482.6	1459.3	1421.3	1358.3



66.5°	192.3	197.2	196.8	215.2	301.9	364.5	386.6	386.6	372.7	364.9	348.2
67°	185.7	190.6	190.2	205.8	288.8	350.2	371.5	371.5	358.4	351.0	334.2



89°	0.4	1.2	2.0	2.9	3.3	4.5	5.3	4.1	0.8	0.4	0.0
89.5°	0.0	0.4	0.4	0.8	1.6	2.0	2.0	0.8	0.0	0.0	0.0

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21.5°	1809.5	1625.0	1432.7	1310.4	1244.5	1227.7
22°	1805.8	1618.0	1422.9	1298.9	1232.7	1215.9



44°	1272.7	1081.7	869.0	723.3	619.8	600.6
44.5°	1247.0	1061.2	851.4	707.8	606.3	588.3



66.5°	314.2	250.4	189.4	178.4	187.4	192.3
67°	299.9	238.5	180.8	172.2	181.2	185.7

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89°	0.0	0.0	0.0	0.0	0.4	0.4
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)