

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: P776529

Luminaire Tested: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776529  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B024-HCD8TSQMB)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K  
Description: 8 INCH SQUARE MEDIUM MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2999.6 lumens  
Efficiency: N/A  
Efficacy: 77.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.28  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')

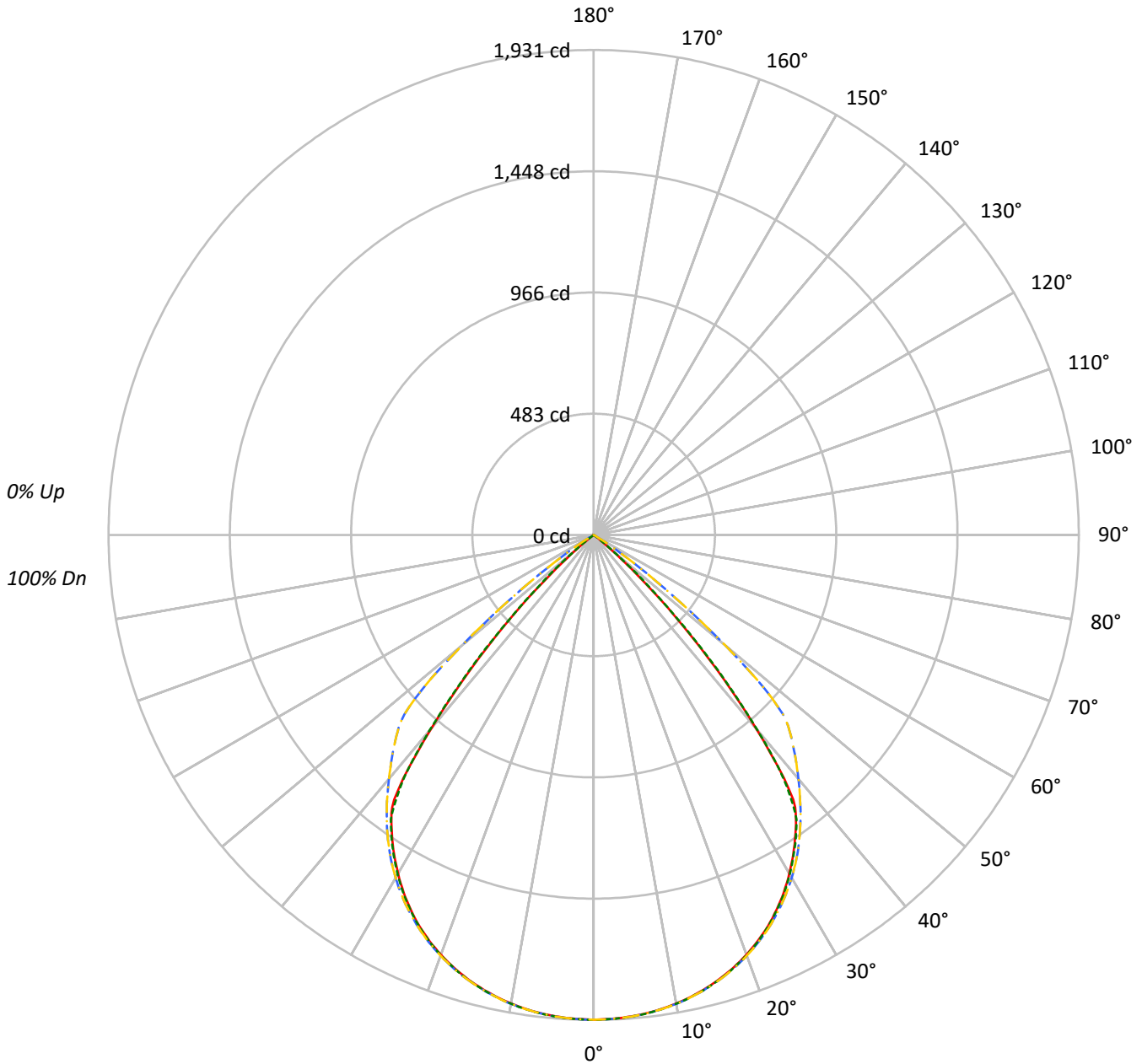
CIE Type: Direct

Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (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					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92		
2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84		
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	77	76		
4	93	85	78	73	91	84	78	73	81	76	72	79	75	71	77	74	70	69		
5	88	78	71	66	86	77	71	66	75	70	65	73	68	65	72	67	64	62		
6	82	72	65	60	81	71	64	60	69	64	59	68	63	59	67	62	58	57		
7	77	66	59	55	76	66	59	54	64	58	54	63	58	54	62	57	53	52		
8	72	62	55	50	71	61	54	50	60	54	50	59	53	49	58	53	49	47		
9	68	57	50	46	67	57	50	46	56	50	45	55	49	45	54	49	45	44		
10	64	53	47	42	63	53	46	42	52	46	42	51	46	42	50	45	42	40		

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

	0°	90°	180°	270°
0°	46286	46286	46286	46286
5°	46236	46265	46236	46265
10°	46123	46152	46123	46152
15°	45858	45898	45858	45898
20°	45385	45426	45385	45426
25°	44536	44591	44536	44591
30°	43110	43201	43110	43201
35°	41078	41195	41078	41195
40°	31483	31752	31483	31752
45°	15612	16016	15612	16016
50°	3432	4178	3432	4178
55°	50	67	50	67
60°	38	58	38	58
65°	45	45	45	45
70°	28	28	28	28
75°	37	37	37	37
80°	0	0	0	0
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 37393 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.6	6.1
10°-20°	521.4	17.4
20°-30°	776.3	25.9
30°-40°	878.2	29.3
40°-50°	560.4	18.7
50°-60°	79.5	2.7
60°-70°	0.8	0.0
70°-80°	0.3	0.0
80°-90°	0.0	0.0
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°	1480.4	49.4
0°-40°	2358.5	78.6
0°-60°	2998.5	100.0
0°-90°	2999.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2999.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1930	1930	1930	1930	1930	
5°	1921	1922	1921	1922	1921	183
15°	1847	1849	1847	1849	1847	521
25°	1683	1685	1683	1685	1683	774
35°	1403	1407	1403	1407	1403	852
45°	460	472	460	472	460	368
55°	1	2	1	2	1	12
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
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°	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3
0.5°	1929.5	1929.9	1930.3	1930.7	1930.7	1930.7	1930.3	1929.9	1929.5	1929.9	1930.3
1°	1929.1	1929.5	1929.9	1930.3	1930.3	1930.3	1929.9	1929.5	1929.1	1929.5	1929.9
1.5°	1928.7	1929.1	1929.5	1929.9	1929.9	1929.9	1929.5	1929.1	1928.7	1929.1	1929.5
2°	1928.3	1928.3	1929.1	1929.5	1929.1	1929.5	1929.1	1928.3	1928.3	1928.3	1929.1
2.5°	1927.4	1927.8	1928.3	1928.7	1928.7	1928.7	1928.3	1927.8	1927.4	1927.8	1928.3
3°	1926.6	1926.6	1927.4	1927.8	1927.4	1927.8	1927.4	1926.6	1926.6	1926.6	1927.4
3.5°	1925.4	1925.8	1926.2	1926.6	1926.6	1926.6	1926.2	1925.8	1925.4	1925.8	1926.2
4°	1924.2	1924.6	1925.0	1925.4	1925.0	1925.4	1925.0	1924.6	1924.2	1924.6	1925.0
4.5°	1922.5	1922.9	1923.4	1923.8	1923.8	1923.8	1923.4	1922.9	1922.5	1922.9	1923.4
5°	1920.9	1921.3	1922.1	1922.1	1922.1	1922.1	1922.1	1921.3	1920.9	1921.3	1922.1
5.5°	1919.3	1919.7	1920.1	1920.5	1920.1	1920.5	1920.1	1919.7	1919.3	1919.7	1920.1
6°	1917.2	1917.6	1918.0	1918.4	1918.4	1918.4	1918.0	1917.6	1917.2	1917.6	1918.0
6.5°	1915.2	1915.6	1916.0	1916.4	1916.0	1916.4	1916.0	1915.6	1915.2	1915.6	1916.0
7°	1912.7	1913.1	1913.9	1913.9	1913.9	1913.9	1913.9	1913.1	1912.7	1913.1	1913.9
7.5°	1910.3	1910.7	1911.1	1911.5	1911.1	1911.5	1911.1	1910.7	1910.3	1910.7	1911.1
8°	1907.4	1907.8	1908.6	1908.6	1908.6	1908.6	1908.6	1907.8	1907.4	1907.8	1908.6
8.5°	1904.5	1905.0	1905.8	1905.8	1905.4	1905.8	1905.8	1905.0	1904.5	1905.0	1905.8
9°	1901.3	1901.7	1902.5	1902.9	1902.5	1902.9	1902.5	1901.7	1901.3	1901.7	1902.5
9.5°	1898.0	1898.4	1899.2	1899.6	1898.8	1899.6	1899.2	1898.4	1898.0	1898.4	1899.2
10°	1894.3	1895.1	1896.0	1896.0	1895.5	1896.0	1896.0	1895.1	1894.3	1895.1	1896.0
10.5°	1890.6	1891.5	1892.3	1892.3	1891.9	1892.3	1892.3	1891.5	1890.6	1891.5	1892.3
11°	1886.6	1887.4	1888.6	1888.2	1887.8	1888.2	1888.6	1887.4	1886.6	1887.4	1888.6
11.5°	1882.5	1883.3	1884.5	1884.1	1883.7	1884.1	1884.5	1883.3	1882.5	1883.3	1884.5
12°	1878.0	1878.8	1880.0	1880.0	1879.2	1880.0	1880.0	1878.8	1878.0	1878.8	1880.0
12.5°	1873.5	1874.3	1875.5	1875.5	1874.7	1875.5	1875.5	1874.3	1873.5	1874.3	1875.5
13°	1868.6	1869.8	1871.0	1871.0	1870.2	1871.0	1871.0	1869.8	1868.6	1869.8	1871.0
13.5°	1863.7	1864.9	1866.1	1866.1	1865.3	1866.1	1866.1	1864.9	1863.7	1864.9	1866.1
14°	1858.3	1859.6	1860.8	1860.8	1860.0	1860.8	1860.8	1859.6	1858.3	1859.6	1860.8
14.5°	1853.0	1854.3	1855.5	1855.5	1854.7	1855.5	1855.5	1854.3	1853.0	1854.3	1855.5
15°	1847.3	1848.5	1850.2	1849.8	1848.9	1849.8	1850.2	1848.5	1847.3	1848.5	1850.2
15.5°	1841.6	1842.8	1844.4	1844.0	1843.2	1844.0	1844.4	1842.8	1841.6	1842.8	1844.4
16°	1835.4	1836.7	1838.3	1838.3	1837.1	1838.3	1838.3	1836.7	1835.4	1836.7	1838.3
16.5°	1829.3	1830.5	1832.2	1832.2	1830.9	1832.2	1832.2	1830.5	1829.3	1830.5	1832.2
17°	1822.4	1824.0	1826.0	1825.6	1824.4	1825.6	1826.0	1824.0	1822.4	1824.0	1826.0
17.5°	1815.8	1817.5	1819.1	1819.1	1817.9	1819.1	1819.1	1817.5	1815.8	1817.5	1819.1
18°	1808.9	1810.5	1812.5	1812.1	1810.5	1812.1	1812.5	1810.5	1808.9	1810.5	1812.5
18.5°	1801.5	1803.5	1805.2	1804.8	1803.1	1804.8	1805.2	1803.5	1801.5	1803.5	1805.2
19°	1794.1	1796.2	1797.8	1797.4	1795.8	1797.4	1797.8	1796.2	1794.1	1796.2	1797.8
19.5°	1786.4	1788.4	1790.5	1790.1	1788.4	1790.1	1790.5	1788.4	1786.4	1788.4	1790.5
20°	1778.6	1780.7	1782.7	1782.3	1780.2	1782.3	1782.7	1780.7	1778.6	1780.7	1782.7
20.5°	1770.0	1772.5	1774.9	1774.1	1772.1	1774.1	1774.9	1772.5	1770.0	1772.5	1774.9
21°	1761.4	1764.3	1766.8	1765.9	1763.5	1765.9	1766.8	1764.3	1761.4	1764.3	1766.8

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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°	1734.4	1737.7	1740.6	1739.4	1736.5	1739.4	1740.6	1737.7	1734.4	1737.7	1740.6
23°	1724.6	1728.3	1731.6	1730.0	1726.7	1730.0	1731.6	1728.3	1724.6	1728.3	1731.6
23.5°	1714.8	1718.9	1722.2	1720.1	1716.9	1720.1	1722.2	1718.9	1714.8	1718.9	1722.2
24°	1705.0	1708.7	1712.4	1710.3	1706.6	1710.3	1712.4	1708.7	1705.0	1708.7	1712.4
24.5°	1694.4	1698.5	1702.6	1700.1	1696.4	1700.1	1702.6	1698.5	1694.4	1698.5	1702.6
25°	1683.3	1688.2	1692.3	1689.5	1685.4	1689.5	1692.3	1688.2	1683.3	1688.2	1692.3
25.5°	1671.9	1677.6	1682.1	1678.8	1674.3	1678.8	1682.1	1677.6	1671.9	1677.6	1682.1
26°	1660.9	1666.6	1671.5	1667.8	1663.3	1667.8	1671.5	1666.6	1660.9	1666.6	1671.5
26.5°	1648.6	1655.1	1660.4	1656.4	1651.4	1656.4	1660.4	1655.1	1648.6	1655.1	1660.4
27°	1636.7	1643.3	1649.4	1644.5	1639.2	1644.5	1649.4	1643.3	1636.7	1643.3	1649.4
27.5°	1624.5	1631.4	1638.0	1632.6	1626.9	1632.6	1638.0	1631.4	1624.5	1631.4	1638.0
28°	1611.4	1619.1	1626.1	1620.4	1614.2	1620.4	1626.1	1619.1	1611.4	1619.1	1626.1
28.5°	1598.3	1606.5	1614.2	1608.1	1601.2	1608.1	1614.2	1606.5	1598.3	1606.5	1614.2
29°	1584.8	1593.4	1602.0	1595.0	1588.1	1595.0	1602.0	1593.4	1584.8	1593.4	1602.0
29.5°	1571.3	1580.3	1589.3	1581.9	1574.2	1581.9	1589.3	1580.3	1571.3	1580.3	1589.3
30°	1557.0	1566.8	1576.6	1568.9	1560.3	1568.9	1576.6	1566.8	1557.0	1566.8	1576.6
30.5°	1542.7	1553.3	1563.5	1555.0	1546.4	1555.0	1563.5	1553.3	1542.7	1553.3	1563.5
31°	1528.4	1539.0	1550.0	1541.1	1532.1	1541.1	1550.0	1539.0	1528.4	1539.0	1550.0
31.5°	1513.7	1525.1	1536.6	1527.1	1516.9	1527.1	1536.6	1525.1	1513.7	1525.1	1536.6
32°	1498.9	1510.8	1522.7	1512.8	1502.2	1512.8	1522.7	1510.8	1498.9	1510.8	1522.7
32.5°	1483.8	1496.1	1508.3	1498.1	1487.1	1498.1	1508.3	1496.1	1483.8	1496.1	1508.3
33°	1468.3	1481.4	1494.0	1483.4	1472.0	1483.4	1494.0	1481.4	1468.3	1481.4	1494.0
33.5°	1452.3	1466.2	1478.9	1468.7	1456.4	1468.7	1478.9	1466.2	1452.3	1466.2	1478.9
34°	1436.0	1451.5	1463.8	1453.6	1440.5	1453.6	1463.8	1451.5	1436.0	1451.5	1463.8
34.5°	1419.6	1436.0	1448.6	1438.0	1424.1	1438.0	1448.6	1436.0	1419.6	1436.0	1448.6
35°	1403.3	1420.4	1432.7	1422.5	1407.3	1422.5	1432.7	1420.4	1403.3	1420.4	1432.7
35.5°	1386.1	1404.9	1417.2	1406.9	1390.2	1406.9	1417.2	1404.9	1386.1	1404.9	1417.2
36°	1368.9	1388.9	1401.2	1391.0	1362.8	1391.0	1401.2	1388.9	1368.9	1388.9	1401.2
36.5°	1348.5	1372.2	1384.9	1374.6	1332.5	1374.6	1384.9	1372.2	1348.5	1372.2	1384.9
37°	1320.3	1355.4	1368.5	1358.3	1297.0	1358.3	1368.5	1355.4	1320.3	1355.4	1368.5
37.5°	1277.3	1338.7	1351.7	1341.1	1262.6	1341.1	1351.7	1338.7	1277.3	1338.7	1351.7
38°	1230.7	1321.9	1335.0	1321.9	1223.4	1321.9	1335.0	1321.9	1230.7	1321.9	1335.0
38.5°	1175.5	1303.9	1318.2	1294.5	1178.4	1294.5	1318.2	1303.9	1175.5	1303.9	1318.2
39°	1119.5	1280.2	1301.9	1262.6	1128.1	1262.6	1301.9	1280.2	1119.5	1280.2	1301.9
39.5°	1062.7	1247.9	1284.7	1229.5	1072.1	1229.5	1284.7	1247.9	1062.7	1247.9	1284.7
40°	1005.8	1206.2	1267.5	1193.5	1014.4	1193.5	1267.5	1206.2	1005.8	1206.2	1267.5
40.5°	948.6	1157.5	1251.2	1153.0	955.5	1153.0	1251.2	1157.5	948.6	1157.5	1251.2
41°	890.5	1104.8	1234.4	1108.1	899.1	1108.1	1234.4	1104.8	890.5	1104.8	1234.4
41.5°	834.5	1051.6	1218.0	1058.6	843.5	1058.6	1218.0	1051.6	834.5	1051.6	1218.0
42°	777.7	998.1	1201.7	1005.0	789.1	1005.0	1201.7	998.1	777.7	998.1	1201.7
42.5°	722.9	944.9	1185.3	950.6	735.2	950.6	1185.3	944.9	722.9	944.9	1185.3
43°	668.1	890.5	1169.0	895.4	680.4	895.4	1169.0	890.5	668.1	890.5	1169.0
43.5°	614.5	836.2	1152.2	842.3	626.0	842.3	1152.2	836.2	614.5	836.2	1152.2



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CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	460.4	676.7	1102.7	686.9	472.3	686.9	1102.7	676.7	460.4	676.7	1102.7
45.5°	411.7	625.6	1086.0	635.0	424.8	635.0	1086.0	625.6	411.7	625.6	1086.0
46°	365.9	575.3	1064.3	584.7	379.4	584.7	1064.3	575.3	365.9	575.3	1064.3
46.5°	321.4	525.4	1039.0	535.2	335.3	535.2	1039.0	525.4	321.4	525.4	1039.0
47°	277.2	476.3	1003.4	486.6	296.4	486.6	1003.4	476.3	277.2	476.3	1003.4
47.5°	235.1	428.5	963.7	439.5	263.3	439.5	963.7	428.5	235.1	428.5	963.7
48°	198.3	383.5	915.9	394.2	230.6	394.2	915.9	383.5	198.3	383.5	915.9
48.5°	164.8	340.2	863.5	350.8	197.9	350.8	863.5	340.2	164.8	340.2	863.5
49°	139.0	297.3	804.3	309.5	165.2	309.5	804.3	297.3	139.0	297.3	804.3
49.5°	114.9	255.5	744.2	271.1	136.2	271.1	744.2	255.5	114.9	255.5	744.2
50°	92.0	216.3	682.0	237.6	112.0	237.6	682.0	216.3	92.0	216.3	682.0
50.5°	73.2	181.1	621.1	206.1	88.3	206.1	621.1	181.1	73.2	181.1	621.1
51°	54.8	151.3	561.8	175.8	67.1	175.8	561.8	151.3	54.8	151.3	561.8
51.5°	39.3	126.3	506.6	147.6	52.7	147.6	506.6	126.3	39.3	126.3	506.6
52°	23.7	102.6	452.6	121.8	42.1	121.8	452.6	102.6	23.7	102.6	452.6
52.5°	8.6	82.6	400.7	98.5	31.5	98.5	400.7	82.6	8.6	82.6	400.7
53°	4.9	64.2	351.2	78.5	21.3	78.5	351.2	64.2	4.9	64.2	351.2
53.5°	3.7	47.4	307.5	59.7	12.3	59.7	307.5	47.4	3.7	47.4	307.5
54°	2.5	32.7	266.2	43.7	3.3	43.7	266.2	32.7	2.5	32.7	266.2
54.5°	1.2	18.0	227.7	32.7	1.6	32.7	227.7	18.0	1.2	18.0	227.7
55°	1.2	6.1	193.0	22.1	1.6	22.1	193.0	6.1	1.2	6.1	193.0
55.5°	1.2	3.7	159.9	13.5	1.6	13.5	159.9	3.7	1.2	3.7	159.9
56°	1.2	2.9	130.8	8.2	1.2	8.2	130.8	2.9	1.2	2.9	130.8
56.5°	1.2	1.6	107.9	3.3	1.2	3.3	107.9	1.6	1.2	1.6	107.9
57°	1.2	1.2	86.3	2.0	1.2	2.0	86.3	1.2	1.2	1.2	86.3
57.5°	1.2	1.2	67.1	1.2	1.2	67.1	1.2	1.2	1.2	1.2	67.1
58°	1.2	1.2	49.9	1.2	1.2	49.9	1.2	1.2	1.2	1.2	49.9
58.5°	0.8	0.8	36.0	1.2	1.2	36.0	0.8	0.8	0.8	0.8	36.0
59°	0.8	0.8	27.4	0.8	1.2	27.4	0.8	0.8	0.8	0.8	27.4
59.5°	0.8	0.8	20.0	0.8	1.2	20.0	0.8	0.8	0.8	0.8	20.0
60°	0.8	0.8	13.1	0.8	1.2	13.1	0.8	0.8	0.8	0.8	13.1
60.5°	0.8	0.8	7.8	0.8	0.8	7.8	0.8	0.8	0.8	0.8	7.8
61°	0.8	0.8	4.9	0.8	0.8	4.9	0.8	0.8	0.8	0.8	4.9
61.5°	0.8	0.8	2.9	0.8	0.8	2.9	0.8	0.8	0.8	0.8	2.9
62°	0.8	0.8	1.2	0.8	0.8	1.2	0.8	0.8	0.8	0.8	1.2
62.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
63°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
64°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.4	0.8	0.8	0.4	0.8	0.8	0.8	0.8	0.4
65.5°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4





TEST NUMBER: P776529

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
77°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
77.5°	0.0	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.0	0.4	0.0
78°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776529  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776529

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1930.3	1930.3	1930.3	1930.3	1930.3	1930.3
0.5°	1930.7	1930.7	1930.7	1930.3	1929.9	1929.5
1°	1930.3	1930.3	1930.3	1929.9	1929.5	1929.1
1.5°	1929.9	1929.9	1929.9	1929.5	1929.1	1928.7
2°	1929.5	1929.1	1929.5	1929.1	1928.3	1928.3
2.5°	1928.7	1928.7	1928.7	1928.3	1927.8	1927.4
3°	1927.8	1927.4	1927.8	1927.4	1926.6	1926.6
3.5°	1926.6	1926.6	1926.6	1926.2	1925.8	1925.4
4°	1925.4	1925.0	1925.4	1925.0	1924.6	1924.2
4.5°	1923.8	1923.8	1923.8	1923.4	1922.9	1922.5
5°	1922.1	1922.1	1922.1	1922.1	1921.3	1920.9
5.5°	1920.5	1920.1	1920.5	1920.1	1919.7	1919.3
6°	1918.4	1918.4	1918.4	1918.0	1917.6	1917.2
6.5°	1916.4	1916.0	1916.4	1916.0	1915.6	1915.2
7°	1913.9	1913.9	1913.9	1913.9	1913.1	1912.7
7.5°	1911.5	1911.1	1911.5	1911.1	1910.7	1910.3
8°	1908.6	1908.6	1908.6	1908.6	1907.8	1907.4
8.5°	1905.8	1905.4	1905.8	1905.8	1905.0	1904.5
9°	1902.9	1902.5	1902.9	1902.5	1901.7	1901.3
9.5°	1899.6	1898.8	1899.6	1899.2	1898.4	1898.0
10°	1896.0	1895.5	1896.0	1896.0	1895.1	1894.3
10.5°	1892.3	1891.9	1892.3	1892.3	1891.5	1890.6
11°	1888.2	1887.8	1888.2	1888.6	1887.4	1886.6
11.5°	1884.1	1883.7	1884.1	1884.5	1883.3	1882.5
12°	1880.0	1879.2	1880.0	1880.0	1878.8	1878.0
12.5°	1875.5	1874.7	1875.5	1875.5	1874.3	1873.5
13°	1871.0	1870.2	1871.0	1871.0	1869.8	1868.6
13.5°	1866.1	1865.3	1866.1	1866.1	1864.9	1863.7
14°	1860.8	1860.0	1860.8	1860.8	1859.6	1858.3
14.5°	1855.5	1854.7	1855.5	1855.5	1854.3	1853.0
15°	1849.8	1848.9	1849.8	1850.2	1848.5	1847.3
15.5°	1844.0	1843.2	1844.0	1844.4	1842.8	1841.6
16°	1838.3	1837.1	1838.3	1838.3	1836.7	1835.4
16.5°	1832.2	1830.9	1832.2	1832.2	1830.5	1829.3
17°	1825.6	1824.4	1825.6	1826.0	1824.0	1822.4
17.5°	1819.1	1817.9	1819.1	1819.1	1817.5	1815.8
18°	1812.1	1810.5	1812.1	1812.5	1810.5	1808.9
18.5°	1804.8	1803.1	1804.8	1805.2	1803.5	1801.5
19°	1797.4	1795.8	1797.4	1797.8	1796.2	1794.1
19.5°	1790.1	1788.4	1790.1	1790.5	1788.4	1786.4
20°	1782.3	1780.2	1782.3	1782.7	1780.7	1778.6
20.5°	1774.1	1772.1	1774.1	1774.9	1772.5	1770.0
21°	1765.9	1763.5	1765.9	1766.8	1764.3	1761.4



TEST NUMBER: P776529

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1739.4	1736.5	1739.4	1740.6	1737.7	1734.4
23°	1730.0	1726.7	1730.0	1731.6	1728.3	1724.6
23.5°	1720.1	1716.9	1720.1	1722.2	1718.9	1714.8
24°	1710.3	1706.6	1710.3	1712.4	1708.7	1705.0
24.5°	1700.1	1696.4	1700.1	1702.6	1698.5	1694.4
25°	1689.5	1685.4	1689.5	1692.3	1688.2	1683.3
25.5°	1678.8	1674.3	1678.8	1682.1	1677.6	1671.9
26°	1667.8	1663.3	1667.8	1671.5	1666.6	1660.9
26.5°	1656.4	1651.4	1656.4	1660.4	1655.1	1648.6
27°	1644.5	1639.2	1644.5	1649.4	1643.3	1636.7
27.5°	1632.6	1626.9	1632.6	1638.0	1631.4	1624.5
28°	1620.4	1614.2	1620.4	1626.1	1619.1	1611.4
28.5°	1608.1	1601.2	1608.1	1614.2	1606.5	1598.3
29°	1595.0	1588.1	1595.0	1602.0	1593.4	1584.8
29.5°	1581.9	1574.2	1581.9	1589.3	1580.3	1571.3
30°	1568.9	1560.3	1568.9	1576.6	1566.8	1557.0
30.5°	1555.0	1546.4	1555.0	1563.5	1553.3	1542.7
31°	1541.1	1532.1	1541.1	1550.0	1539.0	1528.4
31.5°	1527.1	1516.9	1527.1	1536.6	1525.1	1513.7
32°	1512.8	1502.2	1512.8	1522.7	1510.8	1498.9
32.5°	1498.1	1487.1	1498.1	1508.3	1496.1	1483.8
33°	1483.4	1472.0	1483.4	1494.0	1481.4	1468.3
33.5°	1468.7	1456.4	1468.7	1478.9	1466.2	1452.3
34°	1453.6	1440.5	1453.6	1463.8	1451.5	1436.0
34.5°	1438.0	1424.1	1438.0	1448.6	1436.0	1419.6
35°	1422.5	1407.3	1422.5	1432.7	1420.4	1403.3
35.5°	1406.9	1390.2	1406.9	1417.2	1404.9	1386.1
36°	1391.0	1362.8	1391.0	1401.2	1388.9	1368.9
36.5°	1374.6	1332.5	1374.6	1384.9	1372.2	1348.5
37°	1358.3	1297.0	1358.3	1368.5	1355.4	1320.3
37.5°	1341.1	1262.6	1341.1	1351.7	1338.7	1277.3
38°	1321.9	1223.4	1321.9	1335.0	1321.9	1230.7
38.5°	1294.5	1178.4	1294.5	1318.2	1303.9	1175.5
39°	1262.6	1128.1	1262.6	1301.9	1280.2	1119.5
39.5°	1229.5	1072.1	1229.5	1284.7	1247.9	1062.7
40°	1193.5	1014.4	1193.5	1267.5	1206.2	1005.8
40.5°	1153.0	955.5	1153.0	1251.2	1157.5	948.6
41°	1108.1	899.1	1108.1	1234.4	1104.8	890.5
41.5°	1058.6	843.5	1058.6	1218.0	1051.6	834.5
42°	1005.0	789.1	1005.0	1201.7	998.1	777.7
42.5°	950.6	735.2	950.6	1185.3	944.9	722.9
43°	895.4	680.4	895.4	1169.0	890.5	668.1
43.5°	842.3	626.0	842.3	1152.2	836.2	614.5



TEST NUMBER: P776529

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	686.9	472.3	686.9	1102.7	676.7	460.4
45.5°	635.0	424.8	635.0	1086.0	625.6	411.7
46°	584.7	379.4	584.7	1064.3	575.3	365.9
46.5°	535.2	335.3	535.2	1039.0	525.4	321.4
47°	486.6	296.4	486.6	1003.4	476.3	277.2
47.5°	439.5	263.3	439.5	963.7	428.5	235.1
48°	394.2	230.6	394.2	915.9	383.5	198.3
48.5°	350.8	197.9	350.8	863.5	340.2	164.8
49°	309.5	165.2	309.5	804.3	297.3	139.0
49.5°	271.1	136.2	271.1	744.2	255.5	114.9
50°	237.6	112.0	237.6	682.0	216.3	92.0
50.5°	206.1	88.3	206.1	621.1	181.1	73.2
51°	175.8	67.1	175.8	561.8	151.3	54.8
51.5°	147.6	52.7	147.6	506.6	126.3	39.3
52°	121.8	42.1	121.8	452.6	102.6	23.7
52.5°	98.5	31.5	98.5	400.7	82.6	8.6
53°	78.5	21.3	78.5	351.2	64.2	4.9
53.5°	59.7	12.3	59.7	307.5	47.4	3.7
54°	43.7	3.3	43.7	266.2	32.7	2.5
54.5°	32.7	1.6	32.7	227.7	18.0	1.2
55°	22.1	1.6	22.1	193.0	6.1	1.2
55.5°	13.5	1.6	13.5	159.9	3.7	1.2
56°	8.2	1.2	8.2	130.8	2.9	1.2
56.5°	3.3	1.2	3.3	107.9	1.6	1.2
57°	2.0	1.2	2.0	86.3	1.2	1.2
57.5°	1.2	1.2	1.2	67.1	1.2	1.2
58°	1.2	1.2	1.2	49.9	1.2	1.2
58.5°	1.2	1.2	1.2	36.0	0.8	0.8
59°	0.8	1.2	0.8	27.4	0.8	0.8
59.5°	0.8	1.2	0.8	20.0	0.8	0.8
60°	0.8	1.2	0.8	13.1	0.8	0.8
60.5°	0.8	0.8	0.8	7.8	0.8	0.8
61°	0.8	0.8	0.8	4.9	0.8	0.8
61.5°	0.8	0.8	0.8	2.9	0.8	0.8
62°	0.8	0.8	0.8	1.2	0.8	0.8
62.5°	0.8	0.8	0.8	0.8	0.8	0.8
63°	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.8	0.8	0.8	0.8	0.8	0.8
64°	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.4	0.8	0.8
65.5°	0.4	0.8	0.4	0.4	0.4	0.4
66°	0.4	0.8	0.4	0.4	0.4	0.4



TEST NUMBER: P776529

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.4	0.4	0.4	0.4	0.4	0.4
68°	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.4	0.0	0.4	0.4
77°	0.4	0.4	0.4	0.0	0.4	0.4
77.5°	0.4	0.4	0.4	0.0	0.4	0.0
78°	0.0	0.4	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776529  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-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°	1752.8	1755.7	1758.2	1757.3	1754.9	1757.3	1758.2	1755.7	1752.8	1755.7	1758.2
22°	1743.9	1746.7	1749.6	1748.4	1745.9	1748.4	1749.6	1746.7	1743.9	1746.7	1749.6



44°	561.4	782.6	1135.9	789.9	573.2	789.9	1135.9	782.6	561.4	782.6	1135.9
44.5°	510.3	729.4	1119.5	738.0	522.1	738.0	1119.5	729.4	510.3	729.4	1119.5



66.5°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
67°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4



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



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21.5°	1757.3	1754.9	1757.3	1758.2	1755.7	1752.8
22°	1748.4	1745.9	1748.4	1749.6	1746.7	1743.9



44°	789.9	573.2	789.9	1135.9	782.6	561.4
44.5°	738.0	522.1	738.0	1119.5	729.4	510.3

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66.5°	0.4	0.8	0.4	0.4	0.4	0.4
67°	0.4	0.8	0.4	0.4	0.4	0.4

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

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(END OF REPORT)