

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: P776528

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

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776528
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-4000K
Description: 8 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2955.9 lumens
Efficiency: N/A
Efficacy: 76.8 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')

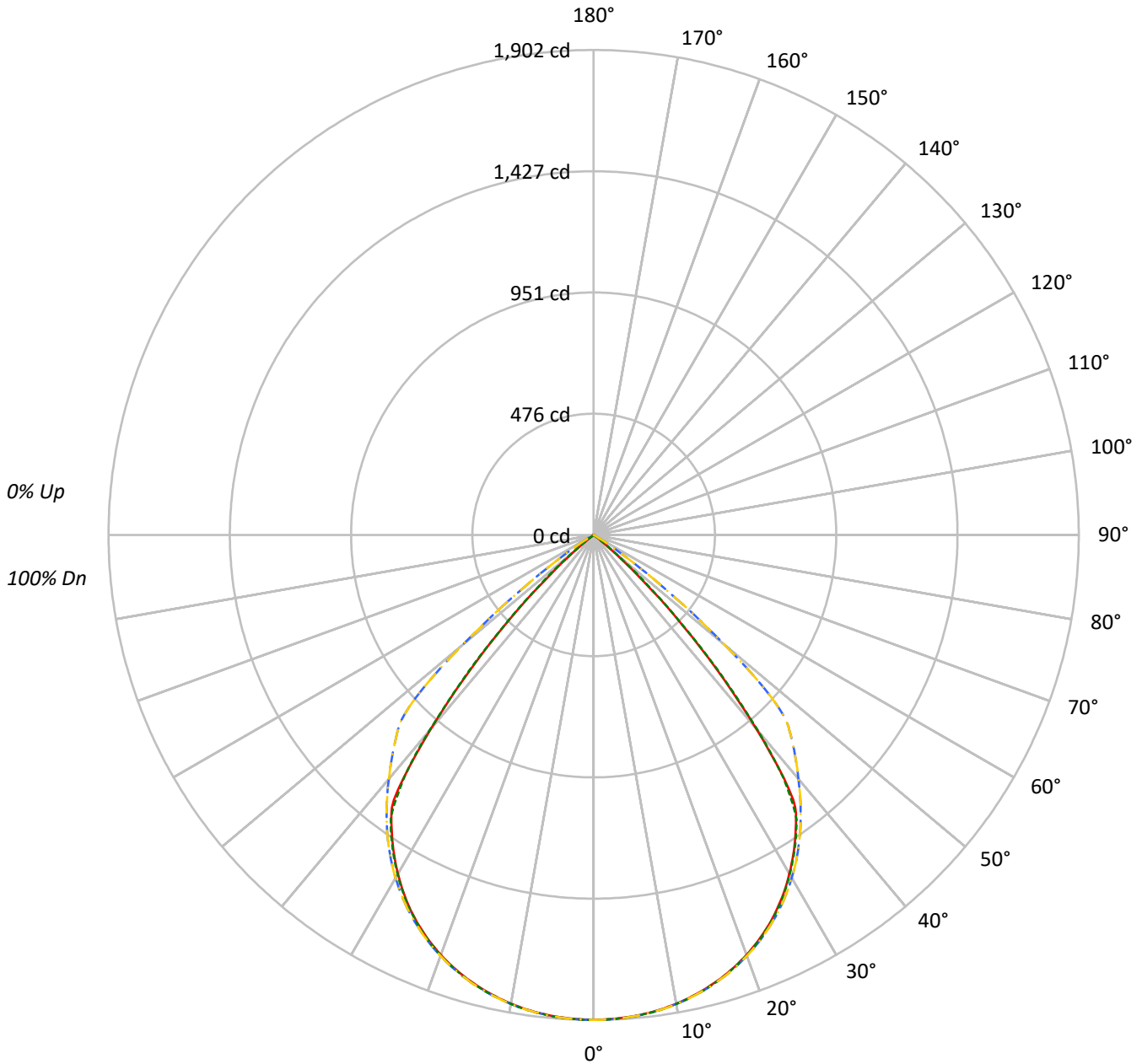
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	45609	45609	45609	45609
5°	45562	45591	45562	45591
10°	45451	45480	45451	45480
15°	45188	45230	45188	45230
20°	44724	44765	44724	44765
25°	43887	43940	43887	43940
30°	42482	42570	42482	42570
35°	40478	40595	40478	40595
40°	31026	31289	31026	31289
45°	15385	15782	15385	15782
50°	3383	4118	3383	4118
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: 36847 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.9	6.1
10°-20°	513.8	17.4
20°-30°	765.0	25.9
30°-40°	865.4	29.3
40°-50°	552.3	18.7
50°-60°	78.3	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°	1458.8	49.4
0°-40°	2324.1	78.6
0°-60°	2954.7	100.0
0°-90°	2955.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2955.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1902	1902	1902	1902	1902	
5°	1893	1894	1893	1894	1893	180
15°	1820	1822	1820	1822	1820	513
25°	1659	1661	1659	1661	1659	762
35°	1383	1387	1383	1387	1383	839
45°	454	465	454	465	454	362
55°	1	2	1	2	1	11
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°	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1
0.5°	1901.3	1901.7	1902.1	1902.5	1902.5	1902.5	1902.1	1901.7	1901.3	1901.7	1902.1
1°	1900.9	1901.3	1901.7	1902.1	1902.1	1902.1	1901.7	1901.3	1900.9	1901.3	1901.7
1.5°	1900.5	1900.9	1901.3	1901.7	1901.7	1901.7	1901.3	1900.9	1900.5	1900.9	1901.3
2°	1900.1	1900.1	1900.9	1901.3	1900.9	1901.3	1900.9	1900.1	1900.1	1900.1	1900.9
2.5°	1899.3	1899.7	1900.1	1900.5	1900.5	1900.5	1900.1	1899.7	1899.3	1899.7	1900.1
3°	1898.5	1898.5	1899.3	1899.7	1899.3	1899.7	1899.3	1898.5	1898.5	1898.5	1899.3
3.5°	1897.3	1897.7	1898.1	1898.5	1898.5	1898.5	1898.1	1897.7	1897.3	1897.7	1898.1
4°	1896.1	1896.5	1896.9	1897.3	1896.9	1897.3	1896.9	1896.5	1896.1	1896.5	1896.9
4.5°	1894.5	1894.9	1895.3	1895.7	1895.7	1895.7	1895.3	1894.9	1894.5	1894.9	1895.3
5°	1892.9	1893.3	1894.1	1894.1	1894.1	1894.1	1894.1	1893.3	1892.9	1893.3	1894.1
5.5°	1891.3	1891.7	1892.1	1892.5	1892.1	1892.5	1892.1	1891.7	1891.3	1891.7	1892.1
6°	1889.2	1889.6	1890.0	1890.5	1890.5	1890.5	1890.0	1889.6	1889.2	1889.6	1890.0
6.5°	1887.2	1887.6	1888.0	1888.4	1888.0	1888.4	1888.0	1887.6	1887.2	1887.6	1888.0
7°	1884.8	1885.2	1886.0	1886.0	1886.0	1886.0	1886.0	1885.2	1884.8	1885.2	1886.0
7.5°	1882.4	1882.8	1883.2	1883.6	1883.2	1883.6	1883.2	1882.8	1882.4	1882.8	1883.2
8°	1879.6	1880.0	1880.8	1880.8	1880.8	1880.8	1880.8	1880.0	1879.6	1880.0	1880.8
8.5°	1876.8	1877.2	1878.0	1878.0	1877.6	1878.0	1878.0	1877.2	1876.8	1877.2	1878.0
9°	1873.5	1873.9	1874.7	1875.1	1874.7	1875.1	1874.7	1873.9	1873.5	1873.9	1874.7
9.5°	1870.3	1870.7	1871.5	1871.9	1871.1	1871.9	1871.5	1870.7	1870.3	1870.7	1871.5
10°	1866.7	1867.5	1868.3	1868.3	1867.9	1868.3	1868.3	1867.5	1866.7	1867.5	1868.3
10.5°	1863.1	1863.9	1864.7	1864.7	1864.3	1864.7	1864.7	1863.9	1863.1	1863.9	1864.7
11°	1859.0	1859.8	1861.0	1860.6	1860.2	1860.6	1861.0	1859.8	1859.0	1859.8	1861.0
11.5°	1855.0	1855.8	1857.0	1856.6	1856.2	1856.6	1857.0	1855.8	1855.0	1855.8	1857.0
12°	1850.6	1851.4	1852.6	1852.6	1851.8	1852.6	1852.6	1851.4	1850.6	1851.4	1852.6
12.5°	1846.1	1846.9	1848.1	1848.1	1847.3	1848.1	1848.1	1846.9	1846.1	1846.9	1848.1
13°	1841.3	1842.5	1843.7	1843.7	1842.9	1843.7	1843.7	1842.5	1841.3	1842.5	1843.7
13.5°	1836.5	1837.7	1838.9	1838.9	1838.1	1838.9	1838.9	1837.7	1836.5	1837.7	1838.9
14°	1831.2	1832.4	1833.6	1833.6	1832.8	1833.6	1833.6	1832.4	1831.2	1832.4	1833.6
14.5°	1826.0	1827.2	1828.4	1828.4	1827.6	1828.4	1828.4	1827.2	1826.0	1827.2	1828.4
15°	1820.3	1821.6	1823.2	1822.8	1822.0	1822.8	1823.2	1821.6	1820.3	1821.6	1823.2
15.5°	1814.7	1815.9	1817.5	1817.1	1816.3	1817.1	1817.5	1815.9	1814.7	1815.9	1817.5
16°	1808.7	1809.9	1811.5	1811.5	1810.3	1811.5	1811.5	1809.9	1808.7	1809.9	1811.5
16.5°	1802.6	1803.8	1805.4	1805.4	1804.2	1805.4	1805.4	1803.8	1802.6	1803.8	1805.4
17°	1795.8	1797.4	1799.4	1799.0	1797.8	1799.0	1799.4	1797.4	1795.8	1797.4	1799.4
17.5°	1789.3	1790.9	1792.5	1792.5	1791.3	1792.5	1792.5	1790.9	1789.3	1790.9	1792.5
18°	1782.5	1784.1	1786.1	1785.7	1784.1	1785.7	1786.1	1784.1	1782.5	1784.1	1786.1
18.5°	1775.2	1777.2	1778.8	1778.4	1776.8	1778.4	1778.8	1777.2	1775.2	1777.2	1778.8
19°	1768.0	1770.0	1771.6	1771.2	1769.6	1771.2	1771.6	1770.0	1768.0	1770.0	1771.6
19.5°	1760.3	1762.3	1764.3	1763.9	1762.3	1763.9	1764.3	1762.3	1760.3	1762.3	1764.3
20°	1752.7	1754.7	1756.7	1756.3	1754.3	1756.3	1756.7	1754.7	1752.7	1754.7	1756.7
20.5°	1744.2	1746.6	1749.0	1748.2	1746.2	1748.2	1749.0	1746.6	1744.2	1746.6	1749.0
21°	1735.7	1738.6	1741.0	1740.2	1737.7	1740.2	1741.0	1738.6	1735.7	1738.6	1741.0



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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°	1709.1	1712.4	1715.2	1714.0	1711.2	1714.0	1715.2	1712.4	1709.1	1712.4	1715.2
23°	1699.5	1703.1	1706.3	1704.7	1701.5	1704.7	1706.3	1703.1	1699.5	1703.1	1706.3
23.5°	1689.8	1693.8	1697.1	1695.0	1691.8	1695.0	1697.1	1693.8	1689.8	1693.8	1697.1
24°	1680.1	1683.8	1687.4	1685.4	1681.7	1685.4	1687.4	1683.8	1680.1	1683.8	1687.4
24.5°	1669.7	1673.7	1677.7	1675.3	1671.7	1675.3	1677.7	1673.7	1669.7	1673.7	1677.7
25°	1658.8	1663.6	1667.6	1664.8	1660.8	1664.8	1667.6	1663.6	1658.8	1663.6	1667.6
25.5°	1647.5	1653.1	1657.6	1654.3	1649.9	1654.3	1657.6	1653.1	1647.5	1653.1	1657.6
26°	1636.6	1642.3	1647.1	1643.5	1639.0	1643.5	1647.1	1642.3	1636.6	1642.3	1647.1
26.5°	1624.5	1631.0	1636.2	1632.2	1627.4	1632.2	1636.2	1631.0	1624.5	1631.0	1636.2
27°	1612.8	1619.3	1625.3	1620.5	1615.3	1620.5	1625.3	1619.3	1612.8	1619.3	1625.3
27.5°	1600.8	1607.6	1614.1	1608.8	1603.2	1608.8	1614.1	1607.6	1600.8	1607.6	1614.1
28°	1587.9	1595.5	1602.4	1596.7	1590.7	1596.7	1602.4	1595.5	1587.9	1595.5	1602.4
28.5°	1575.0	1583.0	1590.7	1584.6	1577.8	1584.6	1590.7	1583.0	1575.0	1583.0	1590.7
29°	1561.7	1570.1	1578.6	1571.7	1564.9	1571.7	1578.6	1570.1	1561.7	1570.1	1578.6
29.5°	1548.4	1557.2	1566.1	1558.9	1551.2	1558.9	1566.1	1557.2	1548.4	1557.2	1566.1
30°	1534.3	1543.9	1553.6	1546.0	1537.5	1546.0	1553.6	1543.9	1534.3	1543.9	1553.6
30.5°	1520.2	1530.7	1540.7	1532.3	1523.8	1532.3	1540.7	1530.7	1520.2	1530.7	1540.7
31°	1506.1	1516.6	1527.4	1518.6	1509.7	1518.6	1527.4	1516.6	1506.1	1516.6	1527.4
31.5°	1491.6	1502.9	1514.1	1504.9	1494.8	1504.9	1514.1	1502.9	1491.6	1502.9	1514.1
32°	1477.1	1488.8	1500.4	1490.8	1480.3	1490.8	1500.4	1488.8	1477.1	1488.8	1500.4
32.5°	1462.2	1474.2	1486.3	1476.3	1465.4	1476.3	1486.3	1474.2	1462.2	1474.2	1486.3
33°	1446.8	1459.7	1472.2	1461.8	1450.5	1461.8	1472.2	1459.7	1446.8	1459.7	1472.2
33.5°	1431.1	1444.8	1457.3	1447.3	1435.2	1447.3	1457.3	1444.8	1431.1	1444.8	1457.3
34°	1415.0	1430.3	1442.4	1432.3	1419.4	1432.3	1442.4	1430.3	1415.0	1430.3	1442.4
34.5°	1398.9	1415.0	1427.5	1417.0	1403.3	1417.0	1427.5	1415.0	1398.9	1415.0	1427.5
35°	1382.8	1399.7	1411.8	1401.7	1386.8	1401.7	1411.8	1399.7	1382.8	1399.7	1411.8
35.5°	1365.9	1384.4	1396.5	1386.4	1369.9	1386.4	1396.5	1384.4	1365.9	1384.4	1396.5
36°	1348.9	1368.7	1380.8	1370.7	1342.9	1370.7	1380.8	1368.7	1348.9	1368.7	1380.8
36.5°	1328.8	1352.2	1364.7	1354.6	1313.1	1354.6	1364.7	1352.2	1328.8	1352.2	1364.7
37°	1301.0	1335.6	1348.5	1338.5	1278.0	1338.5	1348.5	1335.6	1301.0	1335.6	1348.5
37.5°	1258.7	1319.1	1332.0	1321.5	1244.2	1321.5	1332.0	1319.1	1258.7	1319.1	1332.0
38°	1212.8	1302.6	1315.5	1302.6	1205.5	1302.6	1315.5	1302.6	1212.8	1302.6	1315.5
38.5°	1158.4	1284.9	1299.0	1275.6	1161.2	1275.6	1299.0	1284.9	1158.4	1284.9	1299.0
39°	1103.2	1261.5	1282.9	1244.2	1111.6	1244.2	1282.9	1261.5	1103.2	1261.5	1282.9
39.5°	1047.2	1229.7	1265.9	1211.5	1056.4	1211.5	1265.9	1229.7	1047.2	1229.7	1265.9
40°	991.2	1188.6	1249.0	1176.1	999.6	1176.1	1249.0	1188.6	991.2	1188.6	1249.0
40.5°	934.7	1140.6	1232.9	1136.2	941.6	1136.2	1232.9	1140.6	934.7	1140.6	1232.9
41°	877.5	1088.7	1216.4	1091.9	886.0	1091.9	1216.4	1088.7	877.5	1088.7	1216.4
41.5°	822.3	1036.3	1200.3	1043.1	831.2	1043.1	1200.3	1036.3	822.3	1036.3	1200.3
42°	766.3	983.5	1184.2	990.4	777.6	990.4	1184.2	983.5	766.3	983.5	1184.2
42.5°	712.3	931.1	1168.0	936.8	724.4	936.8	1168.0	931.1	712.3	931.1	1168.0
43°	658.4	877.5	1151.9	882.4	670.4	882.4	1151.9	877.5	658.4	877.5	1151.9
43.5°	605.6	823.9	1135.4	830.0	616.9	830.0	1135.4	823.9	605.6	823.9	1135.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	453.7	666.8	1086.6	676.9	465.4	676.9	1086.6	666.8	453.7	666.8	1086.6
45.5°	405.7	616.5	1070.1	625.7	418.6	625.7	1070.1	616.5	405.7	616.5	1070.1
46°	360.6	566.9	1048.8	576.2	373.9	576.2	1048.8	566.9	360.6	566.9	1048.8
46.5°	316.7	517.7	1023.8	527.4	330.4	527.4	1023.8	517.7	316.7	517.7	1023.8
47°	273.2	469.4	988.7	479.5	292.1	479.5	988.7	469.4	273.2	469.4	988.7
47.5°	231.7	422.2	949.7	433.1	259.5	433.1	949.7	422.2	231.7	422.2	949.7
48°	195.4	377.9	902.5	388.4	227.2	388.4	902.5	377.9	195.4	377.9	902.5
48.5°	162.4	335.2	850.9	345.7	195.0	345.7	850.9	335.2	162.4	335.2	850.9
49°	137.0	292.9	792.5	305.0	162.8	305.0	792.5	292.9	137.0	292.9	792.5
49.5°	113.2	251.8	733.3	267.1	134.2	267.1	733.3	251.8	113.2	251.8	733.3
50°	90.7	213.1	672.1	234.1	110.4	234.1	672.1	213.1	90.7	213.1	672.1
50.5°	72.1	178.5	612.0	203.1	87.0	203.1	612.0	178.5	72.1	178.5	612.0
51°	54.0	149.1	553.6	173.3	66.1	173.3	553.6	149.1	54.0	149.1	553.6
51.5°	38.7	124.5	499.2	145.5	52.0	145.5	499.2	124.5	38.7	124.5	499.2
52°	23.4	101.1	446.0	120.1	41.5	120.1	446.0	101.1	23.4	101.1	446.0
52.5°	8.5	81.4	394.9	97.1	31.0	97.1	394.9	81.4	8.5	81.4	394.9
53°	4.8	63.3	346.1	77.4	21.0	77.4	346.1	63.3	4.8	63.3	346.1
53.5°	3.6	46.7	303.0	58.8	12.1	58.8	303.0	46.7	3.6	46.7	303.0
54°	2.4	32.2	262.3	43.1	3.2	43.1	262.3	32.2	2.4	32.2	262.3
54.5°	1.2	17.7	224.4	32.2	1.6	32.2	224.4	17.7	1.2	17.7	224.4
55°	1.2	6.0	190.2	21.8	1.6	21.8	190.2	6.0	1.2	6.0	190.2
55.5°	1.2	3.6	157.5	13.3	1.6	13.3	157.5	3.6	1.2	3.6	157.5
56°	1.2	2.8	128.9	8.1	1.2	8.1	128.9	2.8	1.2	2.8	128.9
56.5°	1.2	1.6	106.4	3.2	1.2	3.2	106.4	1.6	1.2	1.6	106.4
57°	1.2	1.2	85.0	2.0	1.2	2.0	85.0	1.2	1.2	1.2	85.0
57.5°	1.2	1.2	66.1	1.2	1.2	1.2	66.1	1.2	1.2	1.2	66.1
58°	1.2	1.2	49.2	1.2	1.2	1.2	49.2	1.2	1.2	1.2	49.2
58.5°	0.8	0.8	35.5	1.2	1.2	1.2	35.5	0.8	0.8	0.8	35.5
59°	0.8	0.8	27.0	0.8	1.2	0.8	27.0	0.8	0.8	0.8	27.0
59.5°	0.8	0.8	19.7	0.8	1.2	0.8	19.7	0.8	0.8	0.8	19.7
60°	0.8	0.8	12.9	0.8	1.2	0.8	12.9	0.8	0.8	0.8	12.9
60.5°	0.8	0.8	7.7	0.8	0.8	0.8	7.7	0.8	0.8	0.8	7.7
61°	0.8	0.8	4.8	0.8	0.8	0.8	4.8	0.8	0.8	0.8	4.8
61.5°	0.8	0.8	2.8	0.8	0.8	0.8	2.8	0.8	0.8	0.8	2.8
62°	0.8	0.8	1.2	0.8	0.8	0.8	1.2	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	0.8	0.4	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: P776528

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

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: P776528
CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-4000K

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: P776528

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1902.1	1902.1	1902.1	1902.1	1902.1	1902.1
0.5°	1902.5	1902.5	1902.5	1902.1	1901.7	1901.3
1°	1902.1	1902.1	1902.1	1901.7	1901.3	1900.9
1.5°	1901.7	1901.7	1901.7	1901.3	1900.9	1900.5
2°	1901.3	1900.9	1901.3	1900.9	1900.1	1900.1
2.5°	1900.5	1900.5	1900.5	1900.1	1899.7	1899.3
3°	1899.7	1899.3	1899.7	1899.3	1898.5	1898.5
3.5°	1898.5	1898.5	1898.5	1898.1	1897.7	1897.3
4°	1897.3	1896.9	1897.3	1896.9	1896.5	1896.1
4.5°	1895.7	1895.7	1895.7	1895.3	1894.9	1894.5
5°	1894.1	1894.1	1894.1	1894.1	1893.3	1892.9
5.5°	1892.5	1892.1	1892.5	1892.1	1891.7	1891.3
6°	1890.5	1890.5	1890.5	1890.0	1889.6	1889.2
6.5°	1888.4	1888.0	1888.4	1888.0	1887.6	1887.2
7°	1886.0	1886.0	1886.0	1886.0	1885.2	1884.8
7.5°	1883.6	1883.2	1883.6	1883.2	1882.8	1882.4
8°	1880.8	1880.8	1880.8	1880.8	1880.0	1879.6
8.5°	1878.0	1877.6	1878.0	1878.0	1877.2	1876.8
9°	1875.1	1874.7	1875.1	1874.7	1873.9	1873.5
9.5°	1871.9	1871.1	1871.9	1871.5	1870.7	1870.3
10°	1868.3	1867.9	1868.3	1868.3	1867.5	1866.7
10.5°	1864.7	1864.3	1864.7	1864.7	1863.9	1863.1
11°	1860.6	1860.2	1860.6	1861.0	1859.8	1859.0
11.5°	1856.6	1856.2	1856.6	1857.0	1855.8	1855.0
12°	1852.6	1851.8	1852.6	1852.6	1851.4	1850.6
12.5°	1848.1	1847.3	1848.1	1848.1	1846.9	1846.1
13°	1843.7	1842.9	1843.7	1843.7	1842.5	1841.3
13.5°	1838.9	1838.1	1838.9	1838.9	1837.7	1836.5
14°	1833.6	1832.8	1833.6	1833.6	1832.4	1831.2
14.5°	1828.4	1827.6	1828.4	1828.4	1827.2	1826.0
15°	1822.8	1822.0	1822.8	1823.2	1821.6	1820.3
15.5°	1817.1	1816.3	1817.1	1817.5	1815.9	1814.7
16°	1811.5	1810.3	1811.5	1811.5	1809.9	1808.7
16.5°	1805.4	1804.2	1805.4	1805.4	1803.8	1802.6
17°	1799.0	1797.8	1799.0	1799.4	1797.4	1795.8
17.5°	1792.5	1791.3	1792.5	1792.5	1790.9	1789.3
18°	1785.7	1784.1	1785.7	1786.1	1784.1	1782.5
18.5°	1778.4	1776.8	1778.4	1778.8	1777.2	1775.2
19°	1771.2	1769.6	1771.2	1771.6	1770.0	1768.0
19.5°	1763.9	1762.3	1763.9	1764.3	1762.3	1760.3
20°	1756.3	1754.3	1756.3	1756.7	1754.7	1752.7
20.5°	1748.2	1746.2	1748.2	1749.0	1746.6	1744.2
21°	1740.2	1737.7	1740.2	1741.0	1738.6	1735.7

TEST NUMBER: P776528

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1714.0	1711.2	1714.0	1715.2	1712.4	1709.1
23°	1704.7	1701.5	1704.7	1706.3	1703.1	1699.5
23.5°	1695.0	1691.8	1695.0	1697.1	1693.8	1689.8
24°	1685.4	1681.7	1685.4	1687.4	1683.8	1680.1
24.5°	1675.3	1671.7	1675.3	1677.7	1673.7	1669.7
25°	1664.8	1660.8	1664.8	1667.6	1663.6	1658.8
25.5°	1654.3	1649.9	1654.3	1657.6	1653.1	1647.5
26°	1643.5	1639.0	1643.5	1647.1	1642.3	1636.6
26.5°	1632.2	1627.4	1632.2	1636.2	1631.0	1624.5
27°	1620.5	1615.3	1620.5	1625.3	1619.3	1612.8
27.5°	1608.8	1603.2	1608.8	1614.1	1607.6	1600.8
28°	1596.7	1590.7	1596.7	1602.4	1595.5	1587.9
28.5°	1584.6	1577.8	1584.6	1590.7	1583.0	1575.0
29°	1571.7	1564.9	1571.7	1578.6	1570.1	1561.7
29.5°	1558.9	1551.2	1558.9	1566.1	1557.2	1548.4
30°	1546.0	1537.5	1546.0	1553.6	1543.9	1534.3
30.5°	1532.3	1523.8	1532.3	1540.7	1530.7	1520.2
31°	1518.6	1509.7	1518.6	1527.4	1516.6	1506.1
31.5°	1504.9	1494.8	1504.9	1514.1	1502.9	1491.6
32°	1490.8	1480.3	1490.8	1500.4	1488.8	1477.1
32.5°	1476.3	1465.4	1476.3	1486.3	1474.2	1462.2
33°	1461.8	1450.5	1461.8	1472.2	1459.7	1446.8
33.5°	1447.3	1435.2	1447.3	1457.3	1444.8	1431.1
34°	1432.3	1419.4	1432.3	1442.4	1430.3	1415.0
34.5°	1417.0	1403.3	1417.0	1427.5	1415.0	1398.9
35°	1401.7	1386.8	1401.7	1411.8	1399.7	1382.8
35.5°	1386.4	1369.9	1386.4	1396.5	1384.4	1365.9
36°	1370.7	1342.9	1370.7	1380.8	1368.7	1348.9
36.5°	1354.6	1313.1	1354.6	1364.7	1352.2	1328.8
37°	1338.5	1278.0	1338.5	1348.5	1335.6	1301.0
37.5°	1321.5	1244.2	1321.5	1332.0	1319.1	1258.7
38°	1302.6	1205.5	1302.6	1315.5	1302.6	1212.8
38.5°	1275.6	1161.2	1275.6	1299.0	1284.9	1158.4
39°	1244.2	1111.6	1244.2	1282.9	1261.5	1103.2
39.5°	1211.5	1056.4	1211.5	1265.9	1229.7	1047.2
40°	1176.1	999.6	1176.1	1249.0	1188.6	991.2
40.5°	1136.2	941.6	1136.2	1232.9	1140.6	934.7
41°	1091.9	886.0	1091.9	1216.4	1088.7	877.5
41.5°	1043.1	831.2	1043.1	1200.3	1036.3	822.3
42°	990.4	777.6	990.4	1184.2	983.5	766.3
42.5°	936.8	724.4	936.8	1168.0	931.1	712.3
43°	882.4	670.4	882.4	1151.9	877.5	658.4
43.5°	830.0	616.9	830.0	1135.4	823.9	605.6



TEST NUMBER: P776528

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	676.9	465.4	676.9	1086.6	666.8	453.7
45.5°	625.7	418.6	625.7	1070.1	616.5	405.7
46°	576.2	373.9	576.2	1048.8	566.9	360.6
46.5°	527.4	330.4	527.4	1023.8	517.7	316.7
47°	479.5	292.1	479.5	988.7	469.4	273.2
47.5°	433.1	259.5	433.1	949.7	422.2	231.7
48°	388.4	227.2	388.4	902.5	377.9	195.4
48.5°	345.7	195.0	345.7	850.9	335.2	162.4
49°	305.0	162.8	305.0	792.5	292.9	137.0
49.5°	267.1	134.2	267.1	733.3	251.8	113.2
50°	234.1	110.4	234.1	672.1	213.1	90.7
50.5°	203.1	87.0	203.1	612.0	178.5	72.1
51°	173.3	66.1	173.3	553.6	149.1	54.0
51.5°	145.5	52.0	145.5	499.2	124.5	38.7
52°	120.1	41.5	120.1	446.0	101.1	23.4
52.5°	97.1	31.0	97.1	394.9	81.4	8.5
53°	77.4	21.0	77.4	346.1	63.3	4.8
53.5°	58.8	12.1	58.8	303.0	46.7	3.6
54°	43.1	3.2	43.1	262.3	32.2	2.4
54.5°	32.2	1.6	32.2	224.4	17.7	1.2
55°	21.8	1.6	21.8	190.2	6.0	1.2
55.5°	13.3	1.6	13.3	157.5	3.6	1.2
56°	8.1	1.2	8.1	128.9	2.8	1.2
56.5°	3.2	1.2	3.2	106.4	1.6	1.2
57°	2.0	1.2	2.0	85.0	1.2	1.2
57.5°	1.2	1.2	1.2	66.1	1.2	1.2
58°	1.2	1.2	1.2	49.2	1.2	1.2
58.5°	1.2	1.2	1.2	35.5	0.8	0.8
59°	0.8	1.2	0.8	27.0	0.8	0.8
59.5°	0.8	1.2	0.8	19.7	0.8	0.8
60°	0.8	1.2	0.8	12.9	0.8	0.8
60.5°	0.8	0.8	0.8	7.7	0.8	0.8
61°	0.8	0.8	0.8	4.8	0.8	0.8
61.5°	0.8	0.8	0.8	2.8	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: P776528

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

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: P776528

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

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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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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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Peachtree City, GA 30269

Scaled Data Report





21.5°	1727.3	1730.1	1732.5	1731.7	1729.3	1731.7	1732.5	1730.1	1727.3	1730.1	1732.5
22°	1718.4	1721.2	1724.0	1722.8	1720.4	1722.8	1724.0	1721.2	1718.4	1721.2	1724.0



44°	553.2	771.2	1119.3	778.4	564.9	778.4	1119.3	771.2	553.2	771.2	1119.3
44.5°	502.8	718.8	1103.2	727.3	514.5	727.3	1103.2	718.8	502.8	718.8	1103.2



66.5°	0.4	0.4	0.4	0.4	0.8	0.4	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	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°	1731.7	1729.3	1731.7	1732.5	1730.1	1727.3
22°	1722.8	1720.4	1722.8	1724.0	1721.2	1718.4



44°	778.4	564.9	778.4	1119.3	771.2	553.2
44.5°	727.3	514.5	727.3	1103.2	718.8	502.8

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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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Scaled Data Report



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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Scaled Data Report



(END OF REPORT)