

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: P776524

Luminaire Tested: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776524
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B027)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K
Description: 8 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3657.6 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.2 / 1.3
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

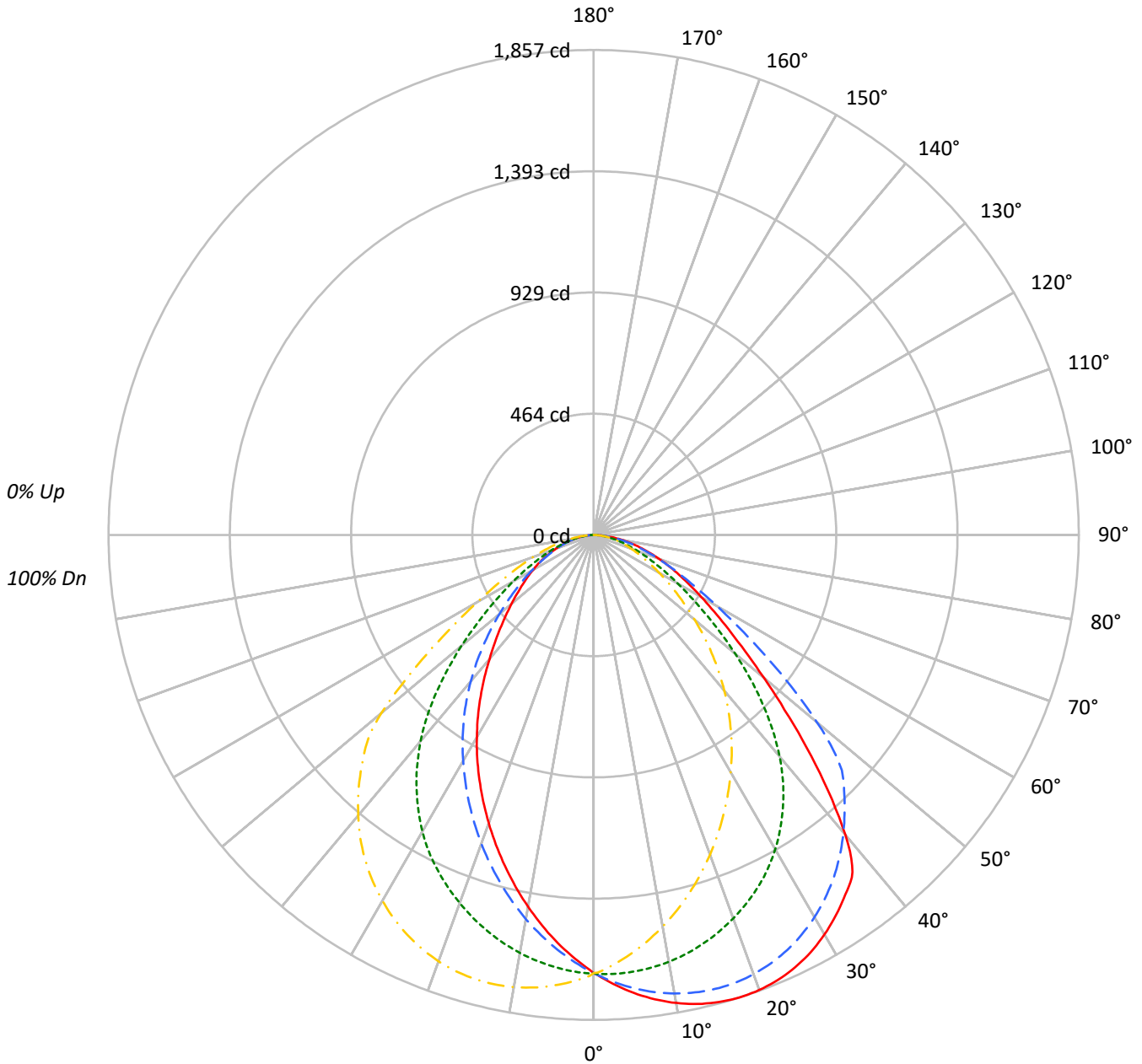
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87																			
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75																			
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65																			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57																			
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50																			
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	64	52	44	38	63	51	43	38	50	43	38	49	42	38	47	42	38	36																			
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32																			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	40245	40245	40245	40245
5°	42368	40430	37763	40007
10°	44312	40408	35193	39564
15°	45967	40215	32574	38987
20°	47314	39866	29968	38271
25°	48322	39355	27373	37442
30°	48916	38481	24764	36296
35°	49192	37009	22077	34606
40°	46909	34638	19410	32256
45°	39187	31021	17149	28848
50°	31779	26411	15309	24598
55°	26333	21668	13909	20439
60°	22818	17782	12862	17034
65°	20431	14843	11853	14355
70°	18600	12521	10720	12150
75°	16926	10525	9737	10265
80°	15189	8699	8520	8409
85°	12380	6740	5502	6190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 45939 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.3	4.3
10°-20°	447.7	12.2
20°-30°	662.2	18.1
30°-40°	763.2	20.9
40°-50°	694.9	19.0
50°-60°	475.9	13.0
60°-70°	279.4	7.6
70°-80°	140.9	3.9
80°-90°	35.3	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1268.2	34.7
0°-40°	2031.4	55.5
0°-60°	3202.1	87.5
0°-90°	3657.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3657.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1678	1678	1678	1678	1678	
5°	1760	1680	1569	1662	1760	170
15°	1852	1620	1312	1570	1852	524
25°	1826	1488	1035	1415	1826	842
35°	1680	1264	754	1182	1680	1045
45°	1156	915	506	851	1156	892
55°	630	518	333	489	630	572
65°	360	262	209	253	360	360
75°	183	114	105	111	183	195
85°	45	24	20	22	45	52
90°	0	0	0	0	0	



TEST NUMBER: P776524

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4
0.5°	1685.0	1685.4	1685.4	1683.3	1681.3	1678.4	1676.0	1666.2	1665.8	1666.6	1670.3
1°	1694.4	1694.0	1692.3	1687.8	1681.7	1675.2	1669.8	1657.2	1655.5	1657.2	1662.5
1.5°	1703.4	1703.0	1698.9	1691.5	1682.5	1671.9	1663.3	1648.2	1645.7	1647.4	1654.7
2°	1711.9	1711.5	1705.8	1695.6	1682.5	1668.2	1656.4	1638.8	1635.1	1637.1	1646.5
2.5°	1720.9	1719.7	1712.4	1699.3	1682.5	1664.5	1649.4	1629.4	1624.5	1627.3	1638.4
3°	1729.1	1727.5	1718.9	1703.0	1682.5	1660.8	1642.5	1619.2	1613.8	1617.1	1629.8
3.5°	1737.3	1735.2	1725.0	1706.2	1682.1	1656.8	1635.1	1609.3	1602.8	1606.5	1621.2
4°	1745.5	1743.0	1730.7	1709.1	1681.7	1652.3	1627.3	1599.5	1591.8	1595.9	1612.2
4.5°	1752.8	1750.4	1736.1	1711.9	1680.9	1648.2	1620.0	1589.3	1580.3	1584.8	1603.2
5°	1760.2	1757.3	1741.8	1714.8	1679.7	1643.3	1611.8	1578.3	1568.9	1573.8	1593.8
5.5°	1767.5	1764.3	1747.1	1717.3	1678.4	1638.8	1603.6	1568.1	1557.0	1562.7	1584.4
6°	1774.5	1770.8	1752.0	1719.3	1677.2	1633.5	1595.4	1557.0	1545.2	1551.3	1575.0
6.5°	1781.0	1776.9	1756.5	1721.3	1675.6	1628.6	1586.9	1546.4	1533.7	1539.9	1565.6
7°	1787.6	1783.5	1761.0	1723.0	1673.9	1622.8	1578.3	1534.9	1521.0	1528.0	1555.4
7.5°	1793.7	1789.2	1765.5	1725.0	1671.9	1617.5	1569.3	1523.5	1509.2	1516.6	1545.6
8°	1799.4	1794.9	1769.6	1726.3	1669.8	1611.8	1560.3	1512.1	1496.5	1504.3	1535.4
8.5°	1804.7	1800.2	1773.3	1727.5	1667.8	1605.7	1550.9	1500.6	1483.8	1492.4	1525.1
9°	1810.1	1805.1	1776.5	1728.3	1665.3	1599.9	1541.9	1489.2	1471.2	1479.8	1514.5
9.5°	1815.4	1810.1	1780.2	1729.1	1662.5	1593.4	1532.5	1477.3	1458.5	1467.9	1504.3
10°	1819.9	1814.5	1783.1	1729.5	1659.6	1586.9	1522.7	1465.0	1445.4	1455.2	1493.7
10.5°	1824.4	1818.6	1785.9	1729.9	1656.4	1580.3	1512.9	1453.2	1432.8	1442.6	1482.6
11°	1828.9	1822.7	1788.4	1729.9	1653.1	1573.4	1502.7	1440.9	1419.7	1430.3	1471.6
11.5°	1832.5	1826.4	1790.8	1729.9	1649.8	1566.4	1492.8	1428.7	1406.6	1417.2	1460.1
12°	1836.2	1829.7	1792.9	1729.5	1646.1	1559.5	1482.6	1416.4	1393.1	1404.5	1449.1
12.5°	1839.5	1832.9	1794.5	1729.1	1642.5	1552.1	1472.4	1403.7	1380.0	1391.9	1438.1
13°	1842.8	1835.8	1796.2	1728.3	1638.4	1544.8	1461.8	1391.1	1366.5	1378.4	1426.6
13.5°	1845.2	1838.3	1797.4	1727.1	1633.9	1537.0	1451.1	1378.4	1353.0	1365.3	1415.2
14°	1847.7	1840.7	1798.6	1725.8	1629.4	1529.2	1440.1	1365.3	1339.6	1352.2	1403.3
14.5°	1850.1	1842.8	1799.4	1724.6	1624.9	1521.5	1429.5	1352.6	1326.1	1339.1	1391.5
15°	1851.7	1844.4	1799.8	1723.0	1620.0	1512.9	1418.4	1339.1	1312.2	1325.7	1379.6
15.5°	1853.4	1846.0	1800.2	1720.9	1615.1	1504.7	1407.4	1326.5	1298.7	1312.6	1367.8
16°	1854.6	1847.2	1799.8	1718.9	1609.8	1496.1	1396.0	1313.4	1284.8	1299.1	1355.9
16.5°	1855.8	1848.1	1799.4	1716.4	1604.8	1487.5	1384.5	1300.3	1271.3	1286.0	1344.0
17°	1856.2	1848.5	1799.0	1714.0	1599.1	1478.9	1373.1	1286.8	1257.4	1272.1	1331.4
17.5°	1856.7	1848.5	1798.2	1711.1	1593.4	1470.0	1361.2	1273.7	1243.5	1259.0	1319.5
18°	1857.1	1848.9	1797.0	1708.3	1587.7	1461.0	1349.8	1260.7	1229.6	1244.7	1307.3
18.5°	1856.7	1848.5	1795.7	1705.0	1581.5	1452.0	1337.9	1247.2	1215.7	1231.6	1294.6
19°	1856.2	1847.7	1794.1	1701.3	1575.0	1442.6	1326.1	1233.7	1201.8	1218.1	1282.3
19.5°	1855.4	1846.8	1792.1	1697.6	1568.9	1433.2	1314.2	1220.6	1188.3	1204.7	1270.1
20°	1854.2	1845.6	1790.0	1694.0	1562.3	1423.8	1302.4	1207.1	1174.4	1190.8	1257.0
20.5°	1853.0	1844.4	1787.6	1689.9	1555.8	1413.9	1290.1	1193.6	1160.1	1176.9	1244.3
21°	1850.9	1842.3	1784.7	1685.8	1548.8	1404.5	1277.8	1179.7	1146.2	1163.4	1232.0

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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°	1844.0	1835.0	1774.9	1671.5	1527.6	1374.3	1240.6	1139.7	1104.5	1122.5	1193.6
23°	1841.1	1832.1	1771.2	1666.2	1519.8	1364.1	1228.4	1125.8	1090.6	1108.6	1180.9
23.5°	1837.8	1828.9	1767.1	1660.8	1512.1	1353.9	1216.1	1111.9	1076.7	1095.1	1168.3
24°	1834.2	1825.2	1763.0	1655.5	1504.3	1343.2	1203.4	1098.4	1062.8	1081.2	1155.2
24.5°	1830.5	1821.1	1758.1	1649.8	1496.1	1332.6	1190.8	1084.9	1048.5	1067.7	1142.1
25°	1826.4	1817.0	1753.2	1643.7	1487.5	1322.0	1178.1	1071.4	1034.6	1053.8	1129.4
25.5°	1821.5	1812.5	1747.9	1637.1	1478.9	1310.5	1165.4	1057.9	1021.1	1039.9	1116.8
26°	1816.6	1807.6	1743.0	1631.0	1470.4	1299.5	1152.7	1044.0	1006.8	1026.4	1103.3
26.5°	1811.7	1802.3	1737.3	1624.1	1461.4	1288.5	1140.1	1030.1	992.5	1012.5	1090.6
27°	1806.4	1797.0	1731.2	1617.5	1452.0	1277.0	1127.0	1016.2	978.6	999.0	1077.5
27.5°	1800.6	1791.2	1725.0	1610.2	1442.2	1265.6	1114.3	1002.7	965.1	984.7	1064.4
28°	1794.1	1785.1	1718.5	1602.4	1432.3	1253.7	1101.2	989.2	950.8	971.2	1051.4
28.5°	1788.0	1778.6	1711.9	1594.6	1422.1	1241.9	1088.6	975.3	936.5	957.3	1038.7
29°	1781.0	1771.6	1705.0	1586.9	1411.9	1229.6	1075.5	961.4	922.6	943.5	1025.2
29.5°	1774.1	1764.7	1698.0	1578.7	1400.9	1217.7	1062.4	947.9	908.7	929.6	1012.1
30°	1766.7	1757.7	1690.3	1570.1	1389.8	1205.1	1049.3	933.6	894.4	915.7	999.0
30.5°	1759.4	1750.0	1682.5	1561.1	1378.4	1192.4	1036.7	920.2	880.1	901.8	986.0
31°	1751.2	1742.2	1674.7	1551.7	1366.9	1179.3	1023.2	905.8	866.2	888.3	972.9
31.5°	1743.0	1734.0	1666.6	1542.3	1355.1	1166.6	1009.7	892.4	852.3	874.4	959.8
32°	1734.8	1725.8	1658.0	1532.1	1342.8	1153.6	996.6	878.5	838.4	860.5	946.7
32.5°	1725.8	1716.9	1649.0	1521.9	1330.2	1139.7	983.1	864.6	824.1	846.6	933.6
33°	1717.3	1708.3	1640.0	1511.6	1317.5	1126.2	970.0	850.2	810.6	832.7	920.6
33.5°	1708.3	1698.9	1630.6	1500.6	1304.8	1112.7	956.5	837.2	796.3	819.2	907.5
34°	1698.9	1689.9	1621.6	1489.6	1291.3	1099.2	943.0	822.9	782.0	805.3	893.6
34.5°	1689.5	1680.1	1611.4	1478.1	1277.8	1085.3	929.6	809.0	768.1	791.4	880.5
35°	1680.5	1670.3	1601.6	1466.3	1264.3	1071.4	916.1	795.1	754.2	777.9	867.4
35.5°	1671.5	1660.4	1590.9	1453.6	1250.0	1057.1	902.2	781.6	740.3	764.0	853.9
36°	1662.9	1650.2	1580.7	1441.3	1235.7	1043.6	888.7	767.7	726.4	750.1	840.4
36.5°	1653.1	1640.4	1570.1	1428.3	1220.6	1029.3	875.2	753.4	712.5	736.2	826.9
37°	1641.6	1630.6	1558.7	1415.2	1205.9	1014.6	861.3	739.5	699.0	722.3	813.5
37.5°	1627.3	1620.8	1547.6	1402.1	1190.3	999.9	847.0	726.0	685.5	708.8	800.0
38°	1606.5	1611.4	1535.8	1388.2	1174.0	985.6	833.5	712.1	672.0	695.3	786.5
38.5°	1584.8	1600.3	1523.9	1373.9	1158.1	970.8	819.6	698.2	658.9	681.4	773.0
39°	1558.7	1588.1	1512.1	1358.8	1141.3	956.1	805.7	684.7	645.9	668.3	759.5
39.5°	1529.6	1570.5	1499.8	1344.0	1124.5	941.0	791.8	671.2	632.8	654.9	745.6
40°	1498.6	1551.3	1487.1	1328.5	1106.6	925.9	777.9	657.7	620.1	641.8	732.1
40.5°	1464.6	1526.8	1474.9	1312.2	1089.0	911.2	764.0	644.2	607.8	628.7	718.6
41°	1432.3	1501.4	1461.8	1295.0	1071.0	895.6	749.7	631.6	595.6	616.4	704.7
41.5°	1397.2	1469.5	1448.7	1277.8	1052.6	880.5	735.8	618.5	583.7	603.4	690.8
42°	1363.7	1440.5	1435.2	1259.4	1033.8	865.0	721.9	605.8	571.9	591.1	677.3
42.5°	1328.5	1407.0	1421.7	1240.6	1014.6	849.8	708.0	593.1	560.4	578.8	663.8
43°	1293.8	1375.9	1408.6	1221.0	995.4	834.3	694.1	580.9	549.0	567.0	650.4
43.5°	1258.2	1341.2	1394.7	1202.2	975.7	818.4	680.2	568.2	537.5	554.7	636.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1155.6	1240.2	1354.7	1138.0	914.8	771.8	638.5	533.0	505.7	520.8	596.4
45.5°	1120.0	1205.5	1341.2	1116.4	894.4	755.8	624.6	521.6	495.0	509.7	583.3
46°	1089.0	1172.8	1325.7	1093.9	874.0	740.3	610.7	510.1	485.2	498.7	569.8
46.5°	1054.2	1137.6	1309.7	1070.6	853.1	724.3	597.2	499.1	475.0	488.1	556.8
47°	1025.2	1106.6	1286.8	1046.9	832.3	708.8	583.3	488.5	465.2	477.9	544.1
47.5°	990.9	1072.2	1265.2	1022.3	811.0	692.9	569.8	478.3	455.8	467.6	531.4
48°	963.9	1042.4	1237.4	997.4	791.0	677.3	556.3	467.2	446.4	457.8	519.1
48.5°	931.6	1008.0	1211.2	972.5	769.7	661.8	542.9	457.0	437.0	448.0	506.5
49°	906.3	980.2	1179.7	947.5	748.9	646.3	529.8	447.2	428.0	438.2	494.2
49.5°	875.6	947.9	1150.3	922.2	728.4	630.7	516.7	437.4	419.4	428.8	482.4
50°	851.9	921.4	1116.8	896.8	708.0	615.2	503.6	427.6	410.4	419.4	470.5
50.5°	823.3	891.5	1084.5	870.7	686.7	599.7	490.9	418.2	401.8	410.4	458.6
51°	801.2	865.0	1051.0	844.5	667.1	584.5	478.7	408.8	394.1	401.8	447.2
51.5°	774.6	837.2	1018.7	818.8	647.1	569.8	466.4	399.4	385.9	392.8	436.2
52°	753.4	812.6	984.3	793.4	627.5	554.7	454.1	390.8	377.7	384.2	425.1
52.5°	729.7	787.3	952.9	768.1	607.8	539.6	442.3	381.8	369.5	376.1	414.1
53°	709.6	763.2	919.7	742.3	589.5	524.9	430.8	373.2	361.8	367.5	403.5
53.5°	687.6	739.5	888.7	717.0	570.6	510.6	419.4	364.6	354.4	359.7	392.8
54°	667.9	716.2	856.4	692.1	552.7	496.3	408.0	356.9	347.0	352.0	383.0
54.5°	648.3	694.9	826.1	667.9	534.7	481.9	396.9	349.1	340.1	344.6	372.8
55°	629.9	672.4	796.7	643.8	518.3	468.0	386.3	340.9	332.7	336.8	363.0
55.5°	612.3	654.9	766.9	620.9	501.2	454.1	375.7	333.2	325.8	329.5	353.2
56°	594.4	632.4	739.5	598.4	484.8	440.7	365.0	325.4	318.4	322.1	344.2
56.5°	578.8	616.4	711.3	576.8	468.9	427.6	355.2	317.6	312.3	314.8	335.2
57°	560.8	595.6	685.9	555.5	453.7	414.5	345.4	311.1	305.8	307.8	326.2
57.5°	547.3	580.9	658.9	535.5	438.6	401.8	336.0	304.1	299.2	300.9	317.2
58°	530.6	561.7	634.8	515.5	424.3	389.6	326.2	297.2	292.7	293.9	308.2
58.5°	518.3	546.5	611.1	497.1	410.4	377.3	316.8	290.2	286.1	287.4	299.6
59°	502.0	529.8	587.8	479.1	396.5	365.4	307.0	283.3	280.0	280.8	291.0
59.5°	490.9	515.1	566.6	461.9	383.4	354.4	298.0	276.7	273.9	274.3	282.9
60°	475.8	499.5	544.5	445.2	370.8	343.4	289.0	270.2	268.2	268.2	274.7
60.5°	463.5	484.0	525.7	429.2	358.1	332.3	280.8	263.7	262.0	262.0	266.9
61°	450.5	470.9	504.4	413.7	346.6	321.3	272.2	257.1	256.3	255.9	259.2
61.5°	438.2	455.4	487.3	399.4	335.2	310.3	263.7	251.0	250.6	250.2	251.8
62°	426.4	443.5	468.9	385.5	323.3	299.6	255.9	245.3	244.9	244.0	244.0
62.5°	414.5	429.6	450.9	372.0	311.9	289.8	248.1	239.1	238.7	238.3	237.1
63°	403.1	417.4	435.3	358.9	301.7	279.6	240.4	233.4	232.6	232.6	230.1
63.5°	392.0	404.7	419.0	346.6	291.0	270.2	232.6	227.7	226.9	226.9	223.2
64°	381.4	392.0	404.3	334.0	281.2	260.8	225.2	222.0	220.7	221.1	216.7
64.5°	370.3	381.0	389.6	322.5	271.4	251.8	218.3	216.2	214.6	215.0	210.1
65°	360.1	369.1	374.8	311.5	261.6	242.8	211.3	210.5	208.9	209.3	203.6
65.5°	349.9	358.5	362.2	300.4	252.2	234.2	204.8	204.4	203.2	203.6	197.4
66°	339.7	347.5	348.7	289.8	243.2	225.6	198.3	198.7	197.4	198.3	191.3



TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	310.7	315.6	312.3	260.0	217.5	201.1	179.5	182.3	180.7	181.9	174.1
68°	301.7	305.8	300.9	251.0	209.3	193.8	173.7	177.0	175.0	176.6	168.8
68.5°	292.3	296.0	290.2	242.0	201.5	186.4	168.0	172.1	169.6	171.3	163.1
69°	283.3	286.6	279.2	233.0	193.8	179.0	162.3	166.8	163.9	166.0	157.8
69.5°	274.7	277.1	269.0	224.4	186.0	171.7	157.0	161.5	158.6	161.1	152.9
70°	265.3	267.7	259.2	215.8	178.6	164.7	151.7	156.6	152.9	155.7	147.6
70.5°	256.7	258.3	249.4	207.7	171.3	158.2	146.7	151.7	148.0	150.8	142.7
71°	248.1	249.4	240.0	199.9	164.3	152.1	141.4	146.3	142.3	145.5	137.8
71.5°	239.5	240.8	230.5	192.1	157.4	145.5	136.5	141.4	137.3	140.2	132.9
72°	231.4	232.2	221.6	184.4	150.8	139.0	131.6	136.1	132.4	135.3	128.4
72.5°	223.2	223.6	213.0	176.6	144.3	133.3	126.7	131.2	127.9	130.4	123.9
73°	215.0	215.4	204.4	169.6	137.8	127.1	122.2	126.3	123.4	125.9	119.4
73.5°	206.4	206.8	195.8	162.3	131.6	121.4	117.7	121.8	118.5	121.0	114.9
74°	198.7	198.7	187.6	155.3	125.5	115.7	113.2	117.3	114.0	116.5	110.4
74.5°	190.9	190.5	179.5	148.4	119.8	110.4	108.7	112.4	109.6	111.6	105.9
75°	182.7	182.7	171.7	142.3	113.6	105.1	104.6	108.3	105.1	107.1	101.4
75.5°	175.4	175.0	163.9	135.7	107.9	99.7	100.1	103.4	100.6	102.6	97.3
76°	167.6	167.2	156.6	129.6	102.6	94.8	96.1	98.9	96.1	98.1	92.8
76.5°	159.8	159.4	149.2	123.0	97.3	89.9	92.0	94.4	92.0	93.6	88.3
77°	152.5	152.1	142.3	116.9	92.0	85.0	87.9	89.9	87.5	89.1	84.6
77.5°	145.5	144.7	135.3	110.8	86.7	80.5	83.4	85.4	83.4	84.6	80.1
78°	138.6	137.8	128.4	104.6	81.8	76.0	79.3	80.9	78.9	80.1	76.0
78.5°	131.2	130.8	121.4	98.9	76.8	71.5	75.2	76.8	74.8	76.0	71.9
79°	124.3	123.4	114.5	93.2	72.4	67.4	71.5	72.4	70.3	71.5	67.9
79.5°	116.9	116.5	107.5	87.5	67.4	63.4	67.4	67.9	66.2	67.4	63.8
80°	110.0	109.6	101.0	82.2	63.0	59.3	63.4	63.4	61.7	63.4	59.7
80.5°	103.0	102.6	94.4	76.4	58.5	55.6	59.7	58.9	57.6	58.9	55.6
81°	96.5	96.1	88.3	71.5	54.4	51.9	55.6	54.4	53.5	54.8	51.9
81.5°	89.5	89.1	82.2	66.2	50.3	48.2	51.5	49.9	49.1	50.3	47.8
82°	83.0	83.0	76.0	61.3	46.2	44.6	47.4	45.8	45.0	46.2	44.1
82.5°	76.4	76.4	69.9	56.4	42.1	41.3	43.7	41.3	40.9	42.1	40.1
83°	69.9	69.9	64.2	51.5	38.8	38.0	39.7	37.2	36.4	37.6	36.4
83.5°	63.4	63.8	58.0	46.6	35.2	34.7	36.0	32.7	32.3	33.5	32.7
84°	57.2	57.6	52.3	42.5	31.5	31.5	32.3	28.6	28.2	29.4	29.0
84.5°	51.1	51.5	47.0	38.0	27.8	28.2	29.0	24.5	24.1	25.3	25.8
85°	45.0	45.4	41.7	33.9	24.5	24.9	25.3	20.0	20.0	20.8	22.1
85.5°	38.8	39.2	36.8	29.4	20.8	21.7	21.7	16.4	15.9	17.2	18.8
86°	32.7	33.5	31.9	25.8	17.6	18.8	18.4	13.1	12.7	13.5	15.5
86.5°	26.6	27.8	27.4	21.7	14.7	15.5	15.1	10.2	9.8	10.6	12.3
87°	20.8	22.5	22.5	18.0	11.9	12.3	11.9	7.4	7.4	8.2	9.4
87.5°	16.8	18.0	18.0	13.9	9.0	9.4	9.0	4.9	4.9	5.3	6.1
88°	13.5	13.9	13.9	10.6	6.1	6.5	5.7	2.5	2.5	2.9	3.3
88.5°	10.2	10.6	10.6	7.4	3.7	3.3	2.9	0.8	0.8	0.8	0.8



TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1678.4	1678.4	1678.4	1678.4	1678.4	1678.4
0.5°	1674.3	1679.7	1683.7	1688.2	1683.3	1685.0
1°	1669.4	1678.4	1686.2	1694.0	1691.5	1694.4
1.5°	1664.5	1676.8	1688.6	1699.3	1699.3	1703.4
2°	1659.2	1675.6	1690.7	1704.6	1707.0	1711.9
2.5°	1653.9	1673.5	1692.7	1709.9	1714.8	1720.9
3°	1648.2	1671.9	1694.4	1714.4	1722.6	1729.1
3.5°	1642.5	1669.4	1695.6	1719.3	1729.5	1737.3
4°	1636.7	1667.4	1696.8	1723.8	1736.5	1745.5
4.5°	1630.6	1664.9	1698.0	1727.9	1743.0	1752.8
5°	1624.1	1662.1	1698.9	1731.6	1749.6	1760.2
5.5°	1617.9	1659.2	1699.7	1735.2	1755.3	1767.5
6°	1611.4	1656.4	1700.1	1738.9	1761.4	1774.5
6.5°	1604.4	1653.1	1700.1	1742.2	1767.1	1781.0
7°	1597.5	1649.4	1700.1	1745.5	1772.4	1787.6
7.5°	1590.1	1646.1	1700.1	1747.9	1777.8	1793.7
8°	1582.8	1642.0	1699.7	1750.4	1782.7	1799.4
8.5°	1575.4	1638.4	1699.3	1752.8	1787.2	1804.7
9°	1568.1	1633.9	1698.0	1754.9	1791.7	1810.1
9.5°	1560.3	1629.8	1697.2	1756.5	1795.7	1815.4
10°	1552.1	1624.9	1696.0	1758.1	1799.4	1819.9
10.5°	1544.3	1620.4	1694.8	1759.4	1803.1	1824.4
11°	1536.2	1615.5	1693.1	1760.6	1806.4	1828.9
11.5°	1527.6	1610.6	1691.1	1761.4	1809.2	1832.5
12°	1519.0	1605.3	1689.1	1762.2	1812.1	1836.2
12.5°	1510.4	1599.9	1687.0	1762.6	1814.5	1839.5
13°	1501.8	1594.2	1684.1	1762.6	1816.6	1842.8
13.5°	1492.8	1588.5	1681.7	1762.2	1818.6	1845.2
14°	1483.8	1582.8	1678.8	1761.8	1820.3	1847.7
14.5°	1474.4	1576.6	1675.6	1761.4	1821.5	1850.1
15°	1465.0	1570.5	1672.3	1760.2	1822.3	1851.7
15.5°	1455.6	1564.0	1668.6	1759.0	1823.1	1853.4
16°	1446.2	1557.4	1664.9	1757.7	1823.9	1854.6
16.5°	1436.4	1550.9	1661.3	1756.1	1823.9	1855.8
17°	1426.6	1543.9	1657.2	1754.0	1823.9	1856.2
17.5°	1416.4	1537.0	1652.7	1752.0	1823.5	1856.7
18°	1406.6	1529.6	1648.2	1749.6	1822.7	1857.1
18.5°	1396.4	1522.3	1643.7	1746.7	1821.9	1856.7
19°	1386.2	1514.9	1638.8	1743.8	1820.7	1856.2
19.5°	1375.9	1507.6	1633.5	1740.6	1819.0	1855.4
20°	1365.3	1499.8	1628.6	1737.3	1817.0	1854.2
20.5°	1354.7	1492.0	1622.8	1733.6	1815.0	1853.0
21°	1344.0	1483.8	1617.1	1729.1	1812.5	1850.9

TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1311.8	1459.3	1599.1	1716.0	1803.5	1844.0
23°	1300.7	1450.7	1593.0	1711.1	1799.8	1841.1
23.5°	1289.7	1442.2	1586.5	1705.8	1796.2	1837.8
24°	1278.6	1433.6	1579.9	1700.5	1792.1	1834.2
24.5°	1267.2	1424.6	1573.0	1694.8	1787.6	1830.5
25°	1256.2	1415.2	1566.0	1689.1	1782.7	1826.4
25.5°	1244.7	1405.8	1558.7	1682.9	1777.3	1821.5
26°	1233.3	1396.4	1551.3	1676.4	1772.4	1816.6
26.5°	1221.4	1386.6	1543.5	1669.8	1766.7	1811.7
27°	1210.0	1376.8	1535.8	1662.9	1760.6	1806.4
27.5°	1198.1	1366.5	1527.6	1655.9	1754.5	1800.6
28°	1186.3	1355.9	1519.0	1648.6	1747.9	1794.1
28.5°	1173.6	1345.3	1510.4	1641.2	1741.0	1788.0
29°	1161.7	1334.2	1501.4	1633.5	1734.0	1781.0
29.5°	1149.1	1322.8	1492.4	1625.7	1726.3	1774.1
30°	1136.4	1310.9	1482.6	1617.5	1718.9	1766.7
30.5°	1123.7	1299.1	1472.4	1609.3	1711.1	1759.4
31°	1110.6	1287.2	1462.6	1600.3	1703.0	1751.2
31.5°	1098.0	1274.6	1452.0	1591.8	1694.4	1743.0
32°	1084.9	1261.9	1440.9	1582.8	1685.8	1734.8
32.5°	1071.4	1249.2	1429.5	1573.4	1676.8	1725.8
33°	1058.3	1236.1	1418.0	1564.0	1667.4	1717.3
33.5°	1044.4	1223.1	1406.2	1553.7	1658.0	1708.3
34°	1030.5	1209.2	1393.9	1543.9	1648.6	1698.9
34.5°	1017.0	1196.1	1381.2	1533.7	1638.8	1689.5
35°	1003.9	1182.2	1368.6	1523.1	1628.6	1680.5
35.5°	989.6	1168.3	1355.5	1512.5	1618.3	1671.5
36°	975.7	1153.6	1342.4	1501.4	1608.1	1662.9
36.5°	961.8	1139.3	1328.5	1490.0	1597.5	1653.1
37°	948.4	1124.5	1314.6	1478.1	1586.9	1641.6
37.5°	934.0	1109.4	1300.3	1466.3	1576.2	1627.3
38°	920.2	1093.9	1285.6	1454.0	1566.0	1606.5
38.5°	905.8	1078.3	1270.5	1441.3	1555.8	1584.8
39°	892.4	1062.8	1255.3	1428.7	1546.0	1558.7
39.5°	877.2	1047.3	1239.0	1415.6	1534.1	1529.6
40°	863.3	1030.5	1223.1	1402.1	1521.9	1498.6
40.5°	849.0	1013.8	1206.3	1388.6	1502.7	1464.6
41°	834.7	997.0	1188.7	1375.1	1483.8	1432.3
41.5°	820.4	979.8	1170.7	1360.8	1459.3	1397.2
42°	806.1	962.3	1152.7	1346.5	1434.0	1363.7
42.5°	791.8	944.3	1133.9	1332.2	1404.1	1328.5
43°	777.5	925.9	1114.3	1317.9	1376.3	1293.8
43.5°	762.8	907.5	1093.9	1302.8	1344.5	1258.2

TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	719.0	850.7	1028.9	1256.6	1250.8	1155.6
45.5°	703.9	831.0	1006.4	1240.6	1218.1	1120.0
46°	689.2	812.2	982.7	1225.5	1186.7	1089.0
46.5°	674.5	793.0	959.4	1209.2	1154.4	1054.2
47°	659.8	773.4	935.3	1193.6	1123.3	1025.2
47.5°	645.5	754.2	911.6	1176.0	1090.6	990.9
48°	630.3	735.0	887.4	1158.1	1060.4	963.9
48.5°	616.0	715.8	862.9	1138.0	1028.9	931.6
49°	601.3	697.0	838.8	1112.3	999.9	906.3
49.5°	587.0	678.6	815.1	1087.7	969.6	875.6
50°	572.7	659.4	791.0	1058.7	942.2	851.9
50.5°	558.0	641.0	766.9	1029.3	912.4	823.3
51°	544.1	622.6	742.7	998.6	885.4	801.2
51.5°	529.8	605.0	719.4	966.8	858.4	774.6
52°	515.9	587.0	696.6	934.5	833.5	753.4
52.5°	502.0	569.8	674.1	904.2	806.9	729.7
53°	488.1	553.1	651.2	872.7	781.6	709.6
53.5°	475.0	536.7	629.5	842.1	758.7	687.6
54°	461.5	520.0	608.7	811.4	734.6	667.9
54.5°	448.4	504.4	588.2	782.4	712.9	648.3
55°	435.3	488.9	568.6	754.2	688.8	629.9
55.5°	422.7	474.2	549.0	725.6	669.6	612.3
56°	410.0	459.5	530.2	699.0	646.7	594.4
56.5°	398.1	445.2	512.6	672.4	629.1	578.8
57°	385.9	430.8	495.0	647.5	607.0	560.8
57.5°	374.0	417.4	478.3	623.0	590.7	547.3
58°	362.6	404.3	461.9	599.7	570.6	530.6
58.5°	352.0	391.6	446.8	577.2	554.7	518.3
59°	341.3	379.3	432.1	554.7	537.1	502.0
59.5°	330.7	367.1	417.8	535.1	520.8	490.9
60°	320.1	355.2	403.5	514.6	505.2	475.8
60.5°	309.0	343.4	390.4	495.4	489.7	463.5
61°	298.8	332.3	377.3	476.6	475.8	450.5
61.5°	289.4	321.7	365.0	459.1	460.3	438.2
62°	279.6	311.1	353.2	442.3	448.0	426.4
62.5°	270.2	300.4	341.7	426.4	433.7	414.5
63°	260.8	290.6	329.9	410.8	421.0	403.1
63.5°	252.2	280.8	319.3	396.1	408.4	392.0
64°	243.6	271.0	308.6	381.0	395.3	381.4
64.5°	235.0	261.6	298.4	367.9	383.8	370.3
65°	226.5	253.0	288.2	354.4	371.6	360.1
65.5°	218.3	243.6	278.4	342.1	360.9	349.9
66°	210.5	235.0	269.0	329.5	349.5	339.7



TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	188.0	210.1	242.0	296.0	317.2	310.7
68°	181.1	202.8	233.0	284.5	307.4	301.7
68.5°	174.1	195.0	224.8	274.7	297.6	292.3
69°	167.6	187.6	216.7	264.5	287.4	283.3
69.5°	160.6	180.3	208.9	254.7	278.0	274.7
70°	154.5	173.3	201.1	245.3	268.6	265.3
70.5°	148.0	166.0	193.4	235.9	259.2	256.7
71°	141.8	159.4	185.6	226.9	250.6	248.1
71.5°	136.1	152.5	178.6	217.9	241.6	239.5
72°	130.4	146.7	171.3	209.3	232.6	231.4
72.5°	124.7	140.6	164.3	201.1	224.0	223.2
73°	119.0	134.5	157.4	192.5	215.4	215.0
73.5°	113.6	128.4	150.4	184.8	207.2	206.4
74°	108.3	122.2	144.3	177.0	199.1	198.7
74.5°	103.4	116.5	138.2	168.8	190.9	190.9
75°	98.5	110.8	132.0	161.5	182.7	182.7
75.5°	93.6	105.1	125.5	154.1	175.0	175.4
76°	88.7	99.7	119.4	145.5	167.6	167.6
76.5°	84.2	94.4	113.2	139.0	159.8	159.8
77°	80.1	89.5	107.5	132.4	152.1	152.5
77.5°	76.0	84.2	101.8	125.9	144.7	145.5
78°	71.5	79.3	96.1	119.0	137.8	138.6
78.5°	67.4	74.8	90.7	112.4	130.8	131.2
79°	63.8	69.9	85.0	105.9	123.9	124.3
79.5°	60.1	65.4	79.7	99.3	116.5	116.9
80°	56.4	60.9	74.4	92.8	109.6	110.0
80.5°	52.7	56.8	69.5	86.7	102.6	103.0
81°	49.1	52.3	64.6	80.5	96.1	96.5
81.5°	45.4	48.2	59.7	74.4	89.5	89.5
82°	42.1	44.6	54.8	68.3	82.6	83.0
82.5°	38.4	40.5	50.3	62.5	76.4	76.4
83°	35.2	36.8	45.8	56.8	69.9	69.9
83.5°	31.9	33.1	41.3	51.1	63.8	63.4
84°	28.6	29.4	36.8	45.8	57.2	57.2
84.5°	25.3	26.2	32.7	40.5	51.1	51.1
85°	22.1	22.5	28.6	35.6	45.4	45.0
85.5°	18.8	19.6	24.5	31.1	39.2	38.8
86°	15.5	16.4	20.8	26.2	33.5	32.7
86.5°	12.7	13.5	17.2	21.7	28.2	26.6
87°	9.4	10.6	13.9	17.6	23.3	20.8
87.5°	6.1	7.8	10.6	13.1	18.8	16.8
88°	3.3	4.9	7.4	9.8	14.7	13.5
88.5°	0.8	2.0	4.1	6.5	11.0	10.2



TEST NUMBER: P776524

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.4	0.4



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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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Scaled Data Report





21.5°	1848.9	1840.3	1781.8	1681.3	1541.9	1394.3	1265.6	1166.2	1132.7	1149.9	1219.4
22°	1846.8	1837.8	1778.6	1676.4	1534.9	1384.5	1253.3	1152.7	1118.4	1136.4	1206.3



44°	1223.9	1307.7	1381.2	1181.4	955.7	802.8	666.3	556.8	526.9	543.3	623.0
44.5°	1188.7	1273.3	1367.8	1160.1	935.7	787.3	652.4	544.5	515.9	531.8	609.9



66.5°	330.3	336.4	336.0	279.6	234.6	217.1	191.7	193.4	191.7	192.5	185.6
67°	320.5	326.2	324.2	269.8	226.1	209.3	185.6	188.0	186.0	187.2	179.9



89°	6.9	6.9	6.9	4.1	1.2	0.8	0.8	0.4	0.0	0.4	0.4
89.5°	3.7	3.7	3.7	0.8	0.0	0.0	0.0	0.4	0.0	0.4	0.0

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21.5°	1333.4	1475.7	1611.4	1725.0	1810.1	1848.9
22°	1322.8	1467.5	1605.3	1720.9	1806.8	1846.8



44°	748.1	888.7	1073.0	1287.6	1314.6	1223.9
44.5°	733.7	869.9	1051.4	1272.1	1281.9	1188.7



66.5°	203.2	226.9	259.6	318.0	338.5	330.3
67°	195.4	218.7	250.6	306.6	328.2	320.5

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89°	0.0	0.4	0.8	3.3	7.4	6.9
89.5°	0.0	0.0	0.0	0.4	4.1	3.7

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)