

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: P776424

Luminaire Tested: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776424
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B018)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K
Description: 6 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: 3629.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.19 / 1.3
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

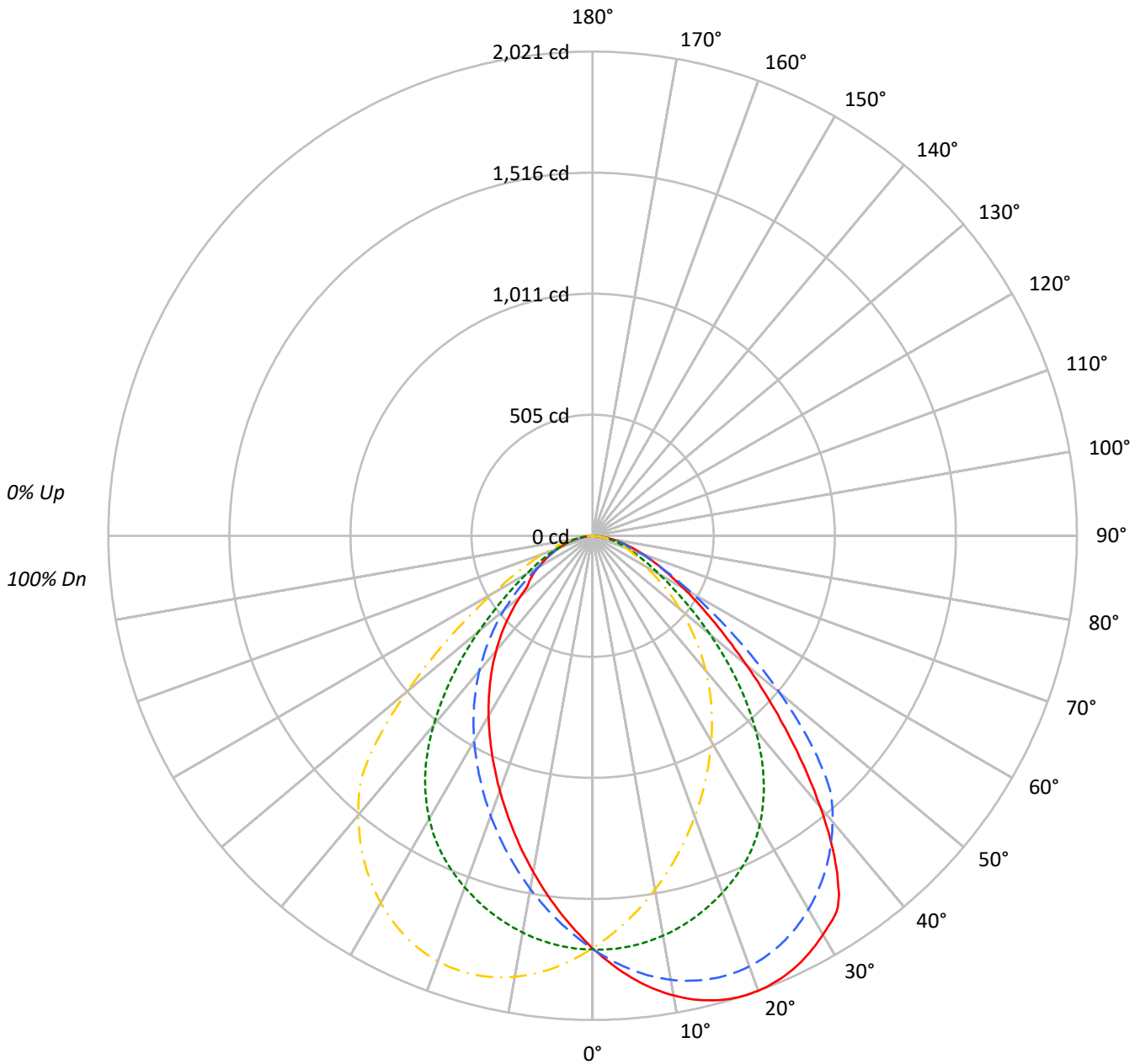
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100															
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87															
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76				76															
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66															
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				58															
5	81	69	61	55	79	68	60	55	66	59	54	64	58	54	62	57	53	51				51															
6	75	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	45				45															
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41				41															
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				37															
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33															
10	57	45	38	33	56	45	37	33	44	37	32	43	37	32	42	36	32	31				31															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	74245	74245	74245	74245
5°	80009	74403	68093	74123
10°	85193	74083	62314	73528
15°	89448	73490	56859	72652
20°	92600	72618	51867	71551
25°	94610	71445	47326	70125
30°	95595	69295	43159	67813
35°	93969	65412	39179	64056
40°	83167	59459	35179	58015
45°	69274	51665	30987	50167
50°	56038	42829	26304	41489
55°	45392	34275	23893	33472
60°	37872	27797	22441	27513
65°	32214	23137	20467	23300
70°	28022	19827	18845	20192
75°	24437	17151	17085	17767
80°	20084	14703	14307	15422
85°	12943	11313	7904	12548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 81708 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.9	4.5
10°-20°	462.4	12.7
20°-30°	685.9	18.9
30°-40°	783.8	21.6
40°-50°	681.4	18.8
50°-60°	443.4	12.2
60°-70°	252.6	7.0
70°-80°	126.5	3.5
80°-90°	30.0	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1311.1	36.1
0°-40°	2095.0	57.7
0°-60°	3219.8	88.7
0°-90°	3629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1724	1724	1724	1724	1724	
5°	1851	1722	1576	1715	1851	180
15°	2007	1649	1276	1630	2007	568
25°	1992	1504	996	1476	1992	917
35°	1788	1244	745	1219	1788	1097
45°	1138	848	509	824	1138	879
55°	605	457	318	446	605	550
65°	316	227	201	229	316	317
75°	147	103	103	107	147	156
85°	26	23	16	25	26	34
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°	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4
0.5°	1735.0	1735.0	1735.0	1733.0	1728.1	1724.4	1711.7	1706.8	1706.8	1708.8	1714.2
1°	1748.5	1747.7	1744.4	1738.3	1728.1	1719.1	1701.9	1693.7	1692.5	1695.3	1703.9
1.5°	1762.4	1760.8	1754.2	1743.6	1728.1	1713.3	1691.2	1680.6	1677.7	1681.8	1693.3
2°	1775.9	1773.5	1763.7	1748.5	1727.7	1707.6	1681.0	1667.1	1663.4	1668.7	1682.6
2.5°	1789.0	1785.3	1773.5	1753.4	1727.2	1701.5	1670.8	1653.6	1648.7	1654.8	1671.6
3°	1802.1	1797.6	1782.5	1757.9	1726.4	1695.7	1659.7	1640.1	1634.4	1641.3	1660.6
3.5°	1814.8	1809.5	1791.1	1762.4	1725.6	1689.6	1649.1	1626.6	1619.6	1627.4	1649.5
4°	1827.1	1820.9	1800.1	1766.5	1724.0	1682.6	1638.1	1613.1	1605.3	1613.9	1638.5
4.5°	1839.3	1832.0	1808.2	1770.6	1722.7	1676.5	1627.4	1598.8	1590.2	1599.6	1627.4
5°	1851.2	1843.0	1816.4	1774.7	1721.5	1669.6	1616.4	1585.3	1575.5	1585.7	1616.0
5.5°	1862.2	1853.7	1824.6	1778.0	1719.5	1662.6	1604.9	1571.4	1560.7	1571.8	1604.5
6°	1873.3	1863.9	1832.0	1781.2	1717.4	1655.2	1593.5	1557.5	1546.0	1557.5	1592.6
6.5°	1884.3	1873.7	1839.3	1784.5	1715.4	1648.3	1582.4	1543.6	1530.9	1543.6	1581.2
7°	1894.6	1883.5	1846.3	1787.4	1712.9	1641.3	1571.0	1529.2	1515.7	1529.2	1569.3
7.5°	1904.4	1892.5	1853.2	1790.2	1710.5	1633.1	1559.1	1514.9	1500.6	1514.9	1557.5
8°	1913.8	1901.5	1859.4	1792.7	1707.6	1625.8	1547.2	1501.0	1485.9	1500.6	1545.6
8.5°	1923.2	1909.7	1865.5	1794.7	1704.7	1617.6	1535.8	1486.7	1470.7	1486.7	1533.3
9°	1932.2	1918.3	1871.2	1796.4	1701.5	1609.8	1523.9	1472.8	1455.2	1472.0	1521.5
9.5°	1940.8	1926.1	1876.6	1798.0	1698.2	1602.1	1512.1	1458.1	1440.5	1457.6	1509.2
10°	1948.6	1933.4	1881.9	1799.7	1694.5	1593.5	1499.8	1443.7	1425.3	1443.3	1496.9
10.5°	1956.3	1940.8	1886.8	1800.9	1691.2	1585.3	1487.5	1429.4	1410.6	1429.0	1484.6
11°	1963.7	1947.3	1890.9	1801.7	1687.2	1576.7	1475.2	1415.1	1395.5	1414.3	1472.4
11.5°	1970.7	1953.5	1895.4	1802.5	1683.1	1567.7	1463.0	1401.2	1379.9	1400.4	1460.1
12°	1977.2	1959.6	1899.1	1802.5	1678.6	1558.7	1450.7	1386.0	1365.2	1385.6	1447.4
12.5°	1983.3	1964.9	1902.3	1802.9	1674.1	1549.7	1438.4	1372.1	1350.5	1371.3	1435.1
13°	1988.7	1970.3	1905.6	1802.5	1669.6	1541.1	1425.7	1357.8	1335.3	1356.6	1422.5
13.5°	1994.0	1974.8	1908.5	1802.1	1664.2	1531.7	1413.0	1343.5	1320.2	1342.7	1409.8
14°	1998.5	1979.3	1910.9	1801.7	1659.3	1522.3	1400.8	1329.2	1305.5	1328.0	1397.1
14.5°	2003.0	1982.9	1913.0	1800.9	1654.0	1512.9	1387.7	1314.5	1290.3	1313.6	1384.4
15°	2006.7	1986.6	1914.6	1799.7	1648.7	1503.1	1375.0	1300.1	1275.6	1299.3	1371.7
15.5°	2010.3	1989.5	1916.2	1798.0	1643.0	1493.6	1362.3	1286.2	1260.9	1285.4	1358.6
16°	2013.2	1992.3	1917.1	1796.4	1637.2	1483.8	1349.6	1271.9	1246.1	1270.7	1346.0
16.5°	2015.7	1994.4	1917.9	1794.3	1631.5	1474.0	1337.0	1257.6	1231.8	1256.8	1333.3
17°	2017.7	1996.0	1918.3	1791.9	1625.0	1463.8	1323.9	1243.3	1217.1	1242.5	1320.6
17.5°	2019.3	1997.3	1918.3	1789.4	1618.8	1454.0	1311.2	1229.4	1202.8	1228.1	1307.5
18°	2020.6	1998.1	1917.9	1787.0	1612.3	1444.1	1298.5	1215.0	1188.0	1214.2	1294.4
18.5°	2021.4	1998.9	1917.1	1783.7	1605.7	1433.5	1285.4	1201.1	1174.1	1200.3	1281.7
19°	2021.4	1998.9	1915.8	1780.4	1598.8	1422.9	1272.7	1187.2	1160.2	1186.4	1269.0
19.5°	2021.4	1998.5	1914.6	1777.2	1592.2	1412.6	1259.6	1173.3	1145.9	1172.5	1256.4
20°	2021.0	1997.7	1912.6	1773.1	1584.9	1402.4	1246.5	1159.4	1132.0	1158.6	1243.3
20.5°	2019.8	1996.4	1910.5	1769.4	1577.9	1391.8	1233.9	1145.5	1117.7	1145.1	1230.2
21°	2018.5	1994.8	1907.7	1764.9	1570.1	1380.7	1220.8	1132.0	1104.2	1131.2	1217.5



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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°	2011.2	1987.0	1897.8	1750.6	1546.8	1348.4	1182.3	1091.5	1062.9	1091.1	1178.6
23°	2008.3	1983.8	1893.7	1745.2	1539.1	1337.4	1169.2	1078.0	1049.4	1077.6	1165.9
23.5°	2004.6	1980.1	1889.2	1739.9	1530.5	1326.3	1156.5	1064.5	1035.9	1064.5	1153.3
24°	2000.5	1975.6	1884.7	1733.8	1521.9	1314.9	1143.4	1051.4	1022.8	1051.0	1140.2
24.5°	1996.0	1971.1	1879.4	1728.1	1513.3	1303.8	1130.8	1038.3	1009.7	1037.5	1127.5
25°	1991.5	1966.2	1874.1	1721.5	1503.9	1292.0	1118.1	1024.8	996.2	1024.4	1114.4
25.5°	1986.2	1960.4	1868.4	1715.0	1494.9	1280.9	1105.0	1011.7	983.1	1011.7	1102.1
26°	1980.5	1955.1	1862.2	1707.6	1485.1	1269.0	1092.3	998.6	970.0	998.2	1089.0
26.5°	1974.3	1948.6	1855.7	1700.7	1475.2	1257.2	1079.6	985.9	956.9	985.5	1076.4
27°	1968.2	1942.4	1849.2	1693.3	1465.0	1245.3	1066.9	972.9	944.2	972.4	1063.7
27.5°	1961.7	1935.5	1841.8	1685.1	1454.0	1233.5	1053.9	959.8	931.5	959.8	1051.4
28°	1954.3	1928.5	1834.0	1676.5	1442.5	1221.2	1041.2	946.7	918.4	946.7	1038.7
28.5°	1946.9	1920.7	1826.7	1667.9	1431.5	1208.5	1028.9	934.0	905.8	934.0	1026.0
29°	1939.2	1912.6	1818.5	1658.5	1419.2	1195.8	1015.8	921.3	893.5	921.3	1013.4
29.5°	1931.0	1904.4	1809.9	1648.7	1406.9	1183.1	1003.5	908.6	880.8	909.0	1000.7
30°	1922.8	1895.8	1801.3	1638.5	1393.8	1169.6	990.4	896.3	868.1	895.9	988.0
30.5°	1914.2	1886.8	1792.3	1627.8	1380.7	1156.1	977.8	883.3	855.4	883.7	975.7
31°	1906.0	1877.8	1782.9	1616.8	1367.2	1143.0	965.1	870.6	843.2	871.4	963.0
31.5°	1897.8	1868.4	1773.1	1604.5	1353.3	1129.1	952.4	858.7	830.9	858.7	950.4
32°	1889.7	1858.6	1763.2	1592.2	1339.0	1115.2	939.7	846.0	818.6	846.4	937.7
32.5°	1879.8	1849.2	1752.6	1579.1	1323.9	1101.3	927.0	833.3	806.3	834.2	925.4
33°	1868.8	1839.3	1742.4	1565.6	1308.3	1087.0	914.4	821.5	794.1	821.9	912.7
33.5°	1855.3	1829.9	1731.7	1551.7	1293.2	1072.7	901.7	809.2	781.8	810.0	900.0
34°	1834.4	1820.1	1720.7	1537.4	1277.2	1057.9	888.6	796.9	769.9	797.3	887.3
34.5°	1816.0	1809.5	1708.8	1521.9	1261.3	1043.2	875.9	784.3	757.7	785.5	874.7
35°	1787.8	1796.8	1697.0	1505.9	1244.5	1028.1	863.2	772.4	745.4	773.2	862.4
35.5°	1761.6	1782.5	1684.7	1489.6	1227.7	1013.4	850.9	760.1	733.5	761.3	849.7
36°	1736.2	1762.4	1672.0	1472.4	1210.1	998.2	837.8	748.3	721.7	749.5	837.0
36.5°	1703.5	1742.8	1658.9	1455.2	1192.1	983.1	824.8	736.0	709.4	737.2	823.9
37°	1676.9	1717.0	1645.4	1437.2	1174.1	967.5	812.1	723.7	697.5	724.9	811.7
37.5°	1644.6	1689.6	1631.5	1418.0	1155.7	952.0	799.0	711.8	685.7	713.1	798.6
38°	1611.1	1666.7	1617.6	1398.3	1136.1	936.4	786.3	699.6	673.8	701.2	785.9
38.5°	1580.8	1634.4	1602.9	1378.7	1117.7	920.9	773.2	687.7	661.9	689.3	773.2
39°	1544.8	1607.0	1588.6	1358.6	1098.0	905.3	760.1	675.8	649.7	677.5	760.9
39.5°	1513.7	1577.5	1573.0	1337.4	1078.4	889.4	747.0	663.6	637.8	665.6	747.8
40°	1479.7	1543.6	1557.5	1315.3	1057.9	873.0	733.9	651.7	625.9	653.8	734.8
40.5°	1442.1	1516.6	1541.5	1293.2	1037.9	857.1	721.3	639.8	614.5	641.9	722.1
41°	1411.4	1481.8	1526.8	1270.7	1017.4	841.1	707.8	628.0	602.6	630.0	709.8
41.5°	1374.2	1449.1	1510.4	1247.0	996.6	824.8	694.7	616.1	591.2	618.6	696.3
42°	1340.6	1418.4	1492.4	1222.8	975.7	808.8	682.0	604.2	579.3	606.7	683.6
42.5°	1307.1	1382.8	1473.2	1199.1	954.9	792.4	669.3	592.8	567.4	594.8	671.3
43°	1269.0	1352.9	1453.1	1174.5	933.6	776.5	656.2	580.9	555.6	583.4	658.7
43.5°	1239.6	1319.0	1427.0	1149.2	912.3	760.1	642.7	569.1	544.1	571.5	645.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1137.7	1217.5	1341.9	1073.1	848.5	711.0	604.2	533.9	508.9	536.7	607.9
45.5°	1101.7	1187.2	1313.6	1046.9	826.8	695.1	591.6	522.0	497.5	525.3	595.2
46°	1074.3	1154.5	1281.3	1021.1	805.9	678.7	578.5	510.6	485.6	513.4	582.6
46.5°	1039.1	1119.7	1248.6	994.5	784.7	662.8	565.8	498.7	473.7	502.0	569.5
47°	1010.1	1091.5	1218.3	967.9	763.4	646.8	552.7	486.8	462.3	490.1	557.2
47.5°	980.2	1056.3	1183.1	941.8	742.1	630.8	540.0	475.4	450.8	479.1	544.5
48°	946.7	1028.9	1151.2	915.6	721.3	615.3	527.7	463.5	439.4	467.2	531.8
48.5°	922.5	997.8	1118.5	889.0	700.4	598.9	515.1	452.1	427.9	455.7	519.2
49°	888.6	965.9	1083.3	862.8	679.5	583.4	502.0	440.2	416.1	444.3	506.9
49.5°	865.7	939.7	1052.6	836.2	659.5	567.8	489.7	428.7	404.6	432.8	494.2
50°	836.6	906.2	1018.3	810.0	639.4	552.7	477.0	417.3	392.7	421.4	481.9
50.5°	810.0	882.4	985.5	783.8	618.6	537.2	464.7	405.4	381.3	409.9	469.7
51°	786.7	851.3	953.6	757.7	598.9	522.0	452.5	394.4	370.2	398.5	457.0
51.5°	756.8	826.8	919.7	732.3	580.1	507.7	440.2	382.5	358.4	387.0	445.1
52°	738.0	801.0	890.6	706.9	561.3	492.6	427.9	371.1	347.7	376.0	432.8
52.5°	710.2	773.2	858.7	682.0	542.1	478.2	416.5	359.6	342.4	364.5	421.0
53°	691.0	751.1	828.4	657.4	524.5	463.9	404.2	350.6	337.5	355.1	409.1
53.5°	668.5	721.7	798.6	633.3	506.5	449.6	392.3	341.6	332.6	345.7	397.2
54°	646.0	702.0	767.9	609.6	489.7	436.1	380.9	333.0	328.1	336.3	385.8
54.5°	627.6	675.4	741.3	586.7	472.9	422.2	369.4	324.0	323.2	326.9	374.7
55°	604.7	655.0	711.8	564.6	456.6	409.1	358.0	315.4	318.3	317.5	363.3
55.5°	589.1	632.9	686.5	543.3	441.0	396.4	346.9	310.5	313.0	312.6	352.2
56°	566.2	610.4	658.7	522.4	425.5	383.3	335.9	305.6	307.6	308.1	341.6
56.5°	551.9	591.6	634.1	502.4	411.2	371.1	324.4	300.3	302.3	302.7	331.0
57°	532.7	568.2	609.6	483.2	396.8	358.8	313.4	295.4	296.6	297.8	320.3
57.5°	517.5	551.9	584.6	464.3	383.3	347.7	303.6	290.1	290.9	292.5	309.3
58°	501.2	529.8	562.1	446.7	370.2	336.3	292.9	284.7	285.1	287.2	299.5
58.5°	484.8	514.7	539.2	429.6	357.6	324.8	282.7	279.4	279.0	281.9	288.8
59°	470.5	494.2	518.7	413.6	345.7	313.8	272.9	274.1	272.9	276.6	279.0
59.5°	454.1	479.9	497.1	397.7	334.2	303.6	263.1	268.4	266.7	270.8	269.6
60°	439.8	461.5	477.8	382.9	322.8	293.7	253.6	263.1	260.6	265.1	260.2
60.5°	425.1	447.6	458.2	368.6	310.9	283.9	244.6	256.9	254.5	259.4	251.2
61°	411.2	430.4	440.6	354.7	300.3	274.5	236.5	251.6	248.3	253.6	242.6
61.5°	398.1	416.5	422.2	341.6	290.1	265.1	231.1	245.5	241.8	247.9	234.8
62°	385.4	401.3	406.7	328.9	280.2	256.5	226.6	239.7	235.6	241.8	229.1
62.5°	372.3	388.2	389.5	317.1	270.4	247.9	221.7	234.0	229.5	236.1	224.6
63°	360.8	373.9	374.7	305.6	261.4	239.7	216.8	227.9	223.4	229.9	219.7
63.5°	348.6	361.6	359.6	294.1	252.4	231.6	212.3	222.1	217.6	224.2	215.2
64°	337.9	348.1	345.7	283.5	243.8	223.8	207.4	216.4	211.9	218.1	210.7
64.5°	326.1	336.7	331.8	273.3	235.2	216.4	202.5	210.7	206.2	212.7	205.8
65°	316.2	324.4	319.1	263.5	227.1	209.1	197.6	205.0	200.9	207.0	201.3
65.5°	305.6	313.8	306.8	254.5	219.3	202.1	193.1	199.6	195.6	201.3	196.4
66°	295.8	301.9	295.0	245.1	211.5	195.1	187.8	194.3	190.2	195.6	191.5



TEST NUMBER: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	266.3	271.2	261.4	219.3	189.8	175.9	173.1	178.4	174.7	179.6	176.7
68°	257.3	261.0	250.8	211.1	182.9	169.8	168.1	173.5	169.8	174.7	171.8
68.5°	248.3	251.6	241.4	203.3	176.3	164.1	163.2	168.6	164.5	169.4	166.9
69°	239.3	242.6	231.1	195.6	170.2	158.3	158.3	163.2	159.6	164.5	161.6
69.5°	230.7	233.2	222.1	188.2	163.2	153.0	153.4	158.3	154.6	159.1	156.7
70°	222.6	224.6	213.6	181.2	157.5	147.3	148.5	153.4	149.7	154.2	151.8
70.5°	214.0	215.6	204.6	173.9	151.4	142.4	144.0	148.5	144.8	149.3	147.3
71°	205.8	207.4	196.4	167.3	145.6	137.1	139.1	143.6	140.3	144.4	142.4
71.5°	198.0	199.2	188.2	160.8	139.9	132.1	134.2	139.1	135.4	139.5	137.5
72°	190.2	191.1	180.0	154.2	134.2	127.2	129.7	134.2	130.5	134.6	132.6
72.5°	182.5	183.3	172.2	148.1	128.9	122.3	125.2	129.3	126.0	129.7	128.0
73°	174.7	175.1	164.9	142.4	123.5	117.8	120.7	124.4	121.1	124.8	123.5
73.5°	167.3	167.7	157.5	136.2	118.2	113.7	116.2	119.9	116.6	120.3	118.6
74°	160.0	160.4	150.1	130.5	112.9	109.2	111.7	115.0	112.1	115.4	114.1
74.5°	152.6	153.0	143.6	124.8	108.0	105.5	107.2	110.5	107.2	110.9	109.6
75°	146.9	146.9	137.1	119.0	103.1	101.9	102.7	105.5	102.7	106.0	105.1
75.5°	139.9	139.9	130.5	113.7	98.6	98.2	98.2	101.0	98.2	101.5	100.6
76°	133.0	133.0	124.0	108.4	93.7	94.5	94.1	96.1	93.7	97.0	96.1
76.5°	125.6	126.0	117.4	103.1	89.2	90.4	89.6	91.6	89.2	92.0	91.6
77°	118.6	119.0	110.9	97.8	84.7	86.7	85.1	87.1	84.7	87.5	87.1
77.5°	112.5	112.9	104.7	92.5	80.2	82.6	80.6	82.6	80.2	83.0	82.6
78°	106.0	106.4	99.0	87.5	75.7	79.0	76.5	77.7	75.3	78.5	78.5
78.5°	99.4	100.2	92.9	82.6	71.6	74.9	72.0	73.2	70.8	74.0	74.0
79°	93.3	93.7	87.1	77.7	67.5	70.8	67.9	68.7	66.3	69.1	69.5
79.5°	87.1	88.0	81.4	73.2	63.4	67.1	63.8	64.2	62.2	64.6	65.0
80°	81.0	81.8	75.7	68.3	59.3	63.0	59.7	59.7	57.7	60.1	61.0
80.5°	75.3	76.1	70.4	63.8	55.2	59.3	55.6	54.8	53.2	55.6	56.9
81°	69.5	70.4	65.0	59.3	51.5	55.2	51.5	50.7	49.1	51.1	52.4
81.5°	63.8	64.6	59.7	54.8	47.9	51.5	47.5	45.8	44.6	46.6	48.3
82°	58.1	58.9	54.8	50.7	43.8	47.9	43.4	41.7	40.5	42.5	44.6
82.5°	52.8	53.6	49.9	46.6	40.5	44.2	39.7	37.6	36.0	38.5	40.5
83°	47.5	48.3	45.4	42.5	36.8	40.5	36.0	33.5	31.9	34.0	37.2
83.5°	41.7	42.5	40.5	38.5	33.5	36.8	32.3	29.9	27.8	29.9	33.5
84°	36.4	37.2	36.4	34.4	29.9	33.1	29.0	25.8	23.7	25.8	30.3
84.5°	31.1	32.3	32.3	30.7	26.6	29.5	25.4	21.7	19.6	21.7	26.6
85°	26.2	27.4	28.6	27.0	22.9	25.8	21.7	18.4	16.0	18.0	23.3
85.5°	20.9	22.5	24.5	23.3	19.6	22.1	18.4	15.5	13.5	15.1	20.0
86°	17.2	18.8	20.9	19.6	16.8	18.8	15.1	13.1	11.5	12.7	16.8
86.5°	14.3	15.5	17.2	16.4	13.5	15.1	11.9	10.6	9.4	10.2	13.9
87°	11.9	12.7	13.9	12.7	10.6	11.9	9.0	8.2	7.0	8.2	11.0
87.5°	9.0	9.4	10.6	9.4	7.8	8.6	5.7	5.3	4.9	5.7	7.8
88°	6.5	6.5	7.4	6.1	4.9	5.3	2.9	2.9	2.9	3.3	4.9
88.5°	3.7	3.7	4.1	2.9	2.0	2.5	0.8	0.8	1.2	1.2	2.0



TEST NUMBER: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-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: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1724.4	1724.4	1724.4	1724.4	1724.4	1724.4
0.5°	1721.5	1727.7	1734.2	1731.3	1733.0	1735.0
1°	1715.4	1726.8	1738.7	1741.2	1745.2	1748.5
1.5°	1709.2	1726.0	1743.6	1750.2	1757.9	1762.4
2°	1702.7	1725.2	1747.7	1759.2	1770.2	1775.9
2.5°	1696.6	1724.0	1751.8	1768.2	1782.1	1789.0
3°	1689.6	1722.3	1755.5	1776.7	1793.9	1802.1
3.5°	1682.6	1720.7	1759.2	1785.3	1805.8	1814.8
4°	1675.7	1719.1	1762.4	1793.5	1816.8	1827.1
4.5°	1668.3	1717.0	1766.1	1801.3	1827.9	1839.3
5°	1661.0	1715.0	1769.0	1809.1	1838.5	1851.2
5.5°	1653.6	1712.1	1771.8	1816.4	1849.2	1862.2
6°	1645.8	1709.7	1774.3	1823.8	1859.0	1873.3
6.5°	1638.1	1706.8	1776.3	1830.3	1868.4	1884.3
7°	1630.3	1703.9	1778.8	1836.9	1877.8	1894.6
7.5°	1622.1	1700.7	1780.4	1843.0	1886.8	1904.4
8°	1613.9	1697.4	1782.1	1849.2	1895.4	1913.8
8.5°	1605.7	1693.7	1783.3	1854.5	1903.6	1923.2
9°	1597.1	1690.0	1784.5	1859.8	1911.3	1932.2
9.5°	1588.6	1685.9	1785.3	1864.7	1919.1	1940.8
10°	1580.0	1681.8	1785.7	1869.6	1926.1	1948.6
10.5°	1571.0	1677.3	1786.2	1873.7	1932.6	1956.3
11°	1562.0	1672.8	1786.2	1877.8	1939.2	1963.7
11.5°	1553.0	1668.3	1785.7	1881.1	1945.3	1970.7
12°	1544.0	1663.0	1785.3	1884.3	1950.6	1977.2
12.5°	1534.6	1658.1	1784.9	1887.6	1955.9	1983.3
13°	1525.1	1652.8	1783.7	1890.1	1960.8	1988.7
13.5°	1515.3	1647.5	1782.5	1892.5	1965.3	1994.0
14°	1505.5	1641.7	1780.8	1894.6	1969.0	1998.5
14.5°	1495.7	1636.0	1779.2	1895.8	1972.7	2003.0
15°	1485.9	1629.9	1777.2	1897.4	1976.0	2006.7
15.5°	1476.1	1623.7	1775.1	1898.2	1978.4	2010.3
16°	1466.2	1617.6	1772.2	1898.7	1980.9	2013.2
16.5°	1456.0	1611.1	1769.4	1898.7	1982.5	2015.7
17°	1445.4	1604.5	1766.5	1898.2	1983.8	2017.7
17.5°	1435.1	1597.6	1763.2	1897.8	1985.0	2019.3
18°	1424.9	1590.6	1759.6	1897.0	1985.4	2020.6
18.5°	1414.3	1583.6	1755.5	1895.8	1985.4	2021.4
19°	1404.0	1576.3	1751.8	1893.7	1985.4	2021.4
19.5°	1393.0	1568.9	1747.3	1891.7	1984.6	2021.4
20°	1382.4	1561.6	1742.8	1889.7	1983.3	2021.0
20.5°	1371.7	1553.8	1737.9	1886.8	1981.7	2019.8
21°	1360.7	1545.6	1733.0	1883.5	1979.7	2018.5

TEST NUMBER: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1327.5	1521.1	1716.2	1872.1	1971.1	2011.2
23°	1316.5	1512.5	1710.1	1867.6	1967.4	2008.3
23.5°	1305.0	1503.9	1703.5	1862.7	1963.3	2004.6
24°	1294.0	1494.9	1697.0	1857.3	1958.8	2000.5
24.5°	1282.1	1485.5	1690.0	1852.0	1953.9	1996.0
25°	1270.7	1476.1	1683.1	1845.9	1948.6	1991.5
25.5°	1259.2	1466.2	1675.3	1839.7	1942.8	1986.2
26°	1247.4	1456.4	1667.9	1832.8	1936.7	1980.5
26.5°	1235.5	1446.2	1659.7	1826.2	1930.2	1974.3
27°	1223.6	1435.6	1651.6	1818.9	1924.0	1968.2
27.5°	1211.4	1424.1	1642.6	1811.1	1916.7	1961.7
28°	1198.7	1413.0	1633.6	1803.3	1909.3	1954.3
28.5°	1186.4	1401.2	1624.1	1795.2	1901.1	1946.9
29°	1173.7	1388.9	1613.9	1786.6	1893.3	1939.2
29.5°	1160.6	1376.6	1603.7	1778.0	1884.7	1931.0
30°	1147.1	1364.0	1592.6	1768.6	1876.2	1922.8
30.5°	1134.0	1350.5	1581.2	1759.2	1866.7	1914.2
31°	1120.5	1337.4	1569.3	1749.3	1857.3	1906.0
31.5°	1107.0	1323.5	1557.1	1739.5	1847.9	1897.8
32°	1093.5	1309.5	1544.4	1728.9	1837.7	1889.7
32.5°	1079.2	1294.8	1530.9	1718.2	1827.9	1879.8
33°	1065.3	1280.5	1517.4	1707.6	1817.7	1868.8
33.5°	1051.4	1265.8	1503.1	1696.6	1807.4	1855.3
34°	1037.1	1250.2	1488.3	1685.1	1798.0	1834.4
34.5°	1022.4	1234.7	1473.6	1673.2	1787.8	1816.0
35°	1008.0	1218.7	1458.1	1661.0	1775.5	1787.8
35.5°	993.7	1201.5	1441.7	1648.7	1762.4	1761.6
36°	978.6	1184.8	1425.3	1635.6	1744.8	1736.2
36.5°	963.9	1166.8	1408.5	1622.5	1723.6	1703.5
37°	949.1	1148.8	1390.5	1609.0	1703.1	1676.9
37.5°	934.0	1129.9	1372.1	1595.1	1674.5	1644.6
38°	918.9	1110.7	1352.5	1580.8	1650.3	1611.1
38.5°	902.5	1091.5	1332.0	1565.6	1622.9	1580.8
39°	886.9	1071.9	1311.6	1551.3	1591.4	1544.8
39.5°	871.4	1052.2	1289.9	1536.6	1566.9	1513.7
40°	855.4	1032.2	1267.0	1521.1	1534.6	1479.7
40.5°	839.5	1011.7	1244.1	1504.7	1503.5	1442.1
41°	823.1	990.9	1220.8	1489.6	1474.8	1411.4
41.5°	807.2	971.2	1197.5	1474.0	1440.9	1374.2
42°	791.2	950.4	1173.3	1457.6	1410.6	1340.6
42.5°	774.8	929.1	1149.2	1440.9	1378.3	1307.1
43°	758.9	908.2	1124.2	1422.9	1343.9	1269.0
43.5°	742.5	887.3	1099.3	1403.2	1314.9	1239.6



TEST NUMBER: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	694.3	823.9	1022.8	1329.2	1217.5	1137.7
45.5°	677.9	803.1	997.4	1298.1	1181.9	1101.7
46°	661.5	782.2	971.2	1269.5	1153.7	1074.3
46.5°	645.6	761.3	945.4	1239.6	1120.5	1039.1
47°	630.0	740.9	919.7	1205.6	1090.3	1010.1
47.5°	614.5	719.6	893.5	1175.4	1060.0	980.2
48°	598.5	699.2	867.7	1142.2	1026.0	946.7
48.5°	583.0	679.1	842.3	1108.3	1000.7	922.5
49°	567.8	658.7	816.6	1077.6	967.9	888.6
49.5°	553.1	639.0	790.8	1042.8	941.8	865.7
50°	537.6	619.4	765.4	1010.5	913.9	836.6
50.5°	522.0	599.7	740.1	979.0	882.8	810.0
51°	507.7	580.9	715.1	945.9	859.1	786.7
51.5°	493.4	562.1	691.0	916.0	828.0	756.8
52°	479.1	544.5	667.3	883.7	806.3	738.0
52.5°	464.3	526.9	643.5	853.0	779.8	710.2
53°	450.8	509.3	619.8	824.3	754.4	691.0
53.5°	437.3	492.6	598.1	793.3	731.5	668.5
54°	423.8	476.6	576.0	765.8	704.1	646.0
54.5°	411.2	461.5	555.2	736.8	684.8	627.6
55°	398.1	445.9	534.7	710.2	658.3	604.7
55.5°	385.8	431.2	515.5	684.0	639.8	589.1
56°	373.9	416.9	496.7	657.0	616.1	566.2
56.5°	362.1	403.8	478.7	633.7	596.9	551.9
57°	351.4	390.3	461.1	608.7	576.8	532.7
57.5°	340.4	377.2	444.7	586.2	556.0	517.5
58°	329.7	364.9	428.7	562.5	538.8	501.2
58.5°	319.1	353.1	413.2	541.7	518.3	484.8
59°	308.1	341.6	398.9	520.8	503.2	470.5
59.5°	298.2	330.1	385.0	500.3	484.0	454.1
60°	288.8	319.5	371.5	481.1	470.1	439.8
60.5°	279.8	308.9	358.4	461.9	451.7	425.1
61°	270.8	298.6	345.7	444.7	438.6	411.2
61.5°	262.2	289.2	333.8	426.7	421.8	398.1
62°	253.6	279.8	322.4	411.2	409.1	385.4
62.5°	245.5	270.4	311.3	395.2	393.6	372.3
63°	237.7	261.4	300.7	380.1	381.3	360.8
63.5°	229.9	252.8	290.1	365.3	367.4	348.6
64°	222.6	244.6	279.8	351.8	355.5	337.9
64.5°	215.6	236.5	270.4	337.9	342.0	326.1
65°	208.6	228.7	261.0	325.2	331.4	316.2
65.5°	201.7	220.9	252.0	313.0	318.7	305.6
66°	195.1	213.6	243.0	301.1	308.9	295.8



TEST NUMBER: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	176.3	192.3	218.5	268.4	276.6	266.3
68°	170.6	185.3	210.3	258.1	267.1	257.3
68.5°	164.9	178.8	202.9	248.3	257.3	248.3
69°	159.1	172.6	195.6	238.9	247.9	239.3
69.5°	153.8	166.5	188.2	229.5	238.9	230.7
70°	148.5	160.4	181.2	220.5	229.5	222.6
70.5°	143.2	154.2	174.3	211.9	220.9	214.0
71°	138.3	148.1	167.7	203.3	212.3	205.8
71.5°	133.4	142.8	161.2	195.1	204.1	198.0
72°	128.5	137.5	154.6	187.0	196.0	190.2
72.5°	123.5	132.1	148.5	179.6	187.8	182.5
73°	119.0	127.2	142.8	171.8	180.4	174.7
73.5°	114.5	121.9	137.1	164.1	172.2	167.3
74°	110.5	116.6	131.3	157.1	164.9	160.0
74.5°	106.0	111.7	125.6	149.7	157.5	152.6
75°	102.3	106.8	119.9	143.2	150.1	146.9
75.5°	98.6	101.9	114.5	136.6	143.6	139.9
76°	94.9	97.0	108.8	130.1	136.6	133.0
76.5°	90.8	92.5	103.9	123.5	130.1	125.6
77°	87.1	88.0	98.6	117.0	123.1	118.6
77.5°	83.0	83.5	93.7	110.9	116.6	112.5
78°	79.0	79.0	88.8	104.7	110.0	106.0
78.5°	75.3	74.9	83.5	98.6	103.9	99.4
79°	71.2	70.4	79.0	92.5	97.4	93.3
79.5°	67.1	66.3	74.0	86.7	91.2	87.1
80°	63.4	62.2	69.5	81.0	85.1	81.0
80.5°	59.3	58.1	65.0	75.7	79.4	75.3
81°	55.2	54.4	60.5	70.4	73.2	69.5
81.5°	51.5	50.3	56.0	65.0	67.5	63.8
82°	47.9	46.6	51.5	59.7	61.8	58.1
82.5°	44.2	43.0	47.5	54.8	56.5	52.8
83°	40.5	39.3	43.4	49.9	51.1	47.5
83.5°	36.8	35.6	39.3	45.4	45.4	41.7
84°	33.1	32.3	35.2	40.9	40.1	36.4
84.5°	29.5	28.6	31.5	36.4	35.2	31.1
85°	25.8	25.4	27.4	32.3	30.7	26.2
85.5°	22.1	22.1	23.7	28.2	26.2	20.9
86°	18.4	18.8	20.0	24.5	22.1	17.2
86.5°	15.1	15.5	16.4	20.5	18.4	14.3
87°	11.9	12.3	13.1	16.8	15.1	11.9
87.5°	8.6	9.4	9.8	13.5	11.9	9.0
88°	5.3	6.1	6.5	10.2	8.6	6.5
88.5°	2.5	3.3	2.9	7.0	5.7	3.7



TEST NUMBER: P776424

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-HCD6TSQLWW-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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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°	2016.5	1992.3	1904.8	1760.4	1562.8	1369.7	1208.1	1118.5	1090.3	1117.7	1204.4
22°	2014.0	1989.9	1901.5	1755.5	1555.0	1359.5	1195.0	1105.0	1076.8	1104.2	1191.7



44°	1202.8	1283.4	1401.6	1124.6	891.0	743.8	630.0	557.2	532.7	559.7	632.9
44.5°	1170.9	1253.1	1373.4	1098.4	869.8	727.4	617.3	545.3	520.8	548.2	620.2



66.5°	285.6	292.1	283.1	236.1	204.1	188.6	182.9	189.0	184.9	190.2	186.6
67°	276.1	281.1	272.1	227.5	196.8	182.1	178.0	183.7	179.6	184.9	181.6



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

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21.5°	1349.6	1537.8	1727.2	1880.2	1977.2	2016.5
22°	1338.6	1529.6	1721.9	1876.6	1974.3	2014.0



44°	726.2	866.5	1073.5	1379.5	1279.7	1202.8
44.5°	710.6	845.6	1048.1	1353.3	1249.0	1170.9



66.5°	188.6	206.2	234.8	290.1	297.0	285.6
67°	182.5	199.2	226.2	278.6	287.6	276.1

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89°	0.4	0.8	0.8	3.7	2.5	1.2
89.5°	0.0	0.0	0.0	0.8	0.4	0.0

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Peachtree City, GA 30269

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(END OF REPORT)