

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: P776521

Luminaire Tested: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776521
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-3000K
Description: 8 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3501.1 lumens
Efficiency: N/A
Efficacy: 90.9 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

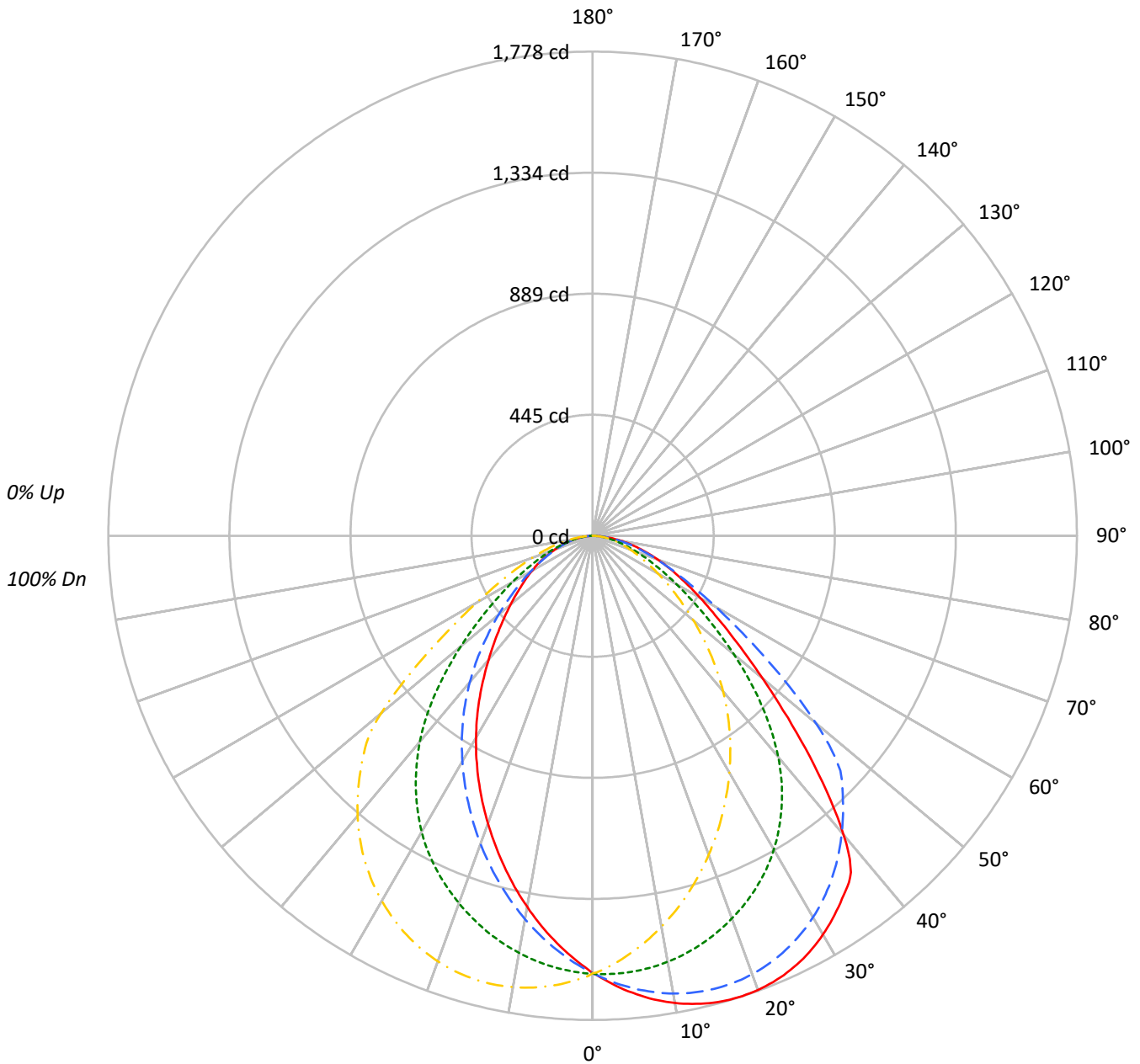
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					70					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°	38524	38524	38524	38524
5°	40553	38700	36146	38293
10°	42415	38680	33688	37869
15°	44001	38493	31179	37318
20°	45288	38161	28684	36633
25°	46253	37672	26201	35839
30°	46823	36833	23704	34743
35°	47084	35425	21132	33124
40°	44899	33155	18581	30876
45°	37509	29696	16413	27610
50°	30418	25281	14653	23542
55°	25208	20740	13315	19565
60°	21840	17020	12311	16305
65°	19558	14207	11342	13742
70°	17800	11989	10257	11631
75°	16204	10080	9320	9820
80°	14540	8327	8161	8050
85°	11830	6465	5282	5915

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43972 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.5	4.3
10°-20°	428.5	12.2
20°-30°	633.9	18.1
30°-40°	730.5	20.9
40°-50°	665.1	19.0
50°-60°	455.5	13.0
60°-70°	267.4	7.6
70°-80°	134.8	3.9
80°-90°	33.7	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°	1213.9	34.7
0°-40°	1944.4	55.5
0°-60°	3065.1	87.5
0°-90°	3501.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3501.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1607	1607	1607	1607	1607	
5°	1685	1608	1502	1591	1685	163
15°	1772	1551	1256	1503	1772	502
25°	1748	1424	990	1355	1748	806
35°	1608	1210	722	1132	1608	1001
45°	1106	876	484	814	1106	854
55°	603	496	318	468	603	547
65°	345	250	200	242	345	344
75°	175	109	101	106	175	186
85°	43	24	19	22	43	50
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°	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6
0.5°	1612.8	1613.2	1613.2	1611.3	1609.3	1606.6	1604.2	1594.8	1594.5	1595.2	1598.8
1°	1621.8	1621.5	1619.9	1615.6	1609.7	1603.5	1598.4	1586.2	1584.7	1586.2	1591.3
1.5°	1630.5	1630.1	1626.2	1619.1	1610.5	1600.3	1592.1	1577.6	1575.3	1576.8	1583.9
2°	1638.7	1638.3	1632.8	1623.0	1610.5	1596.8	1585.5	1568.6	1565.1	1567.1	1576.1
2.5°	1647.3	1646.1	1639.1	1626.5	1610.5	1593.3	1578.8	1559.6	1554.9	1557.7	1568.2
3°	1655.1	1653.5	1645.3	1630.1	1610.5	1589.8	1572.2	1549.9	1544.8	1547.9	1560.0
3.5°	1662.9	1661.0	1651.2	1633.2	1610.1	1585.8	1565.1	1540.5	1534.2	1537.7	1551.8
4°	1670.8	1668.4	1656.7	1635.9	1609.7	1581.5	1557.7	1531.1	1523.6	1527.5	1543.2
4.5°	1677.8	1675.5	1661.8	1638.7	1608.9	1577.6	1550.6	1521.3	1512.7	1517.0	1534.6
5°	1684.8	1682.1	1667.2	1641.4	1607.8	1572.9	1542.8	1510.7	1501.7	1506.4	1525.6
5.5°	1691.9	1688.8	1672.3	1643.8	1606.6	1568.6	1535.0	1500.9	1490.4	1495.9	1516.6
6°	1698.5	1695.0	1677.0	1645.7	1605.4	1563.5	1527.2	1490.4	1479.0	1484.9	1507.6
6.5°	1704.8	1700.9	1681.3	1647.7	1603.8	1558.9	1518.9	1480.2	1468.1	1473.9	1498.6
7°	1711.1	1707.1	1685.6	1649.2	1602.3	1553.4	1510.7	1469.2	1455.9	1462.6	1488.8
7.5°	1716.9	1712.6	1689.9	1651.2	1600.3	1548.3	1502.1	1458.3	1444.6	1451.6	1479.4
8°	1722.4	1718.1	1693.8	1652.4	1598.4	1542.8	1493.5	1447.3	1432.5	1439.9	1469.6
8.5°	1727.5	1723.2	1697.4	1653.5	1596.4	1536.9	1484.5	1436.4	1420.3	1428.6	1459.9
9°	1732.6	1727.9	1700.5	1654.3	1594.1	1531.5	1475.9	1425.4	1408.2	1416.4	1449.7
9.5°	1737.7	1732.6	1704.0	1655.1	1591.3	1525.2	1466.9	1414.1	1396.1	1405.1	1439.9
10°	1742.0	1736.9	1706.8	1655.5	1588.6	1518.9	1457.5	1402.3	1383.6	1392.9	1429.7
10.5°	1746.3	1740.8	1709.5	1655.9	1585.5	1512.7	1448.1	1391.0	1371.4	1380.8	1419.2
11°	1750.6	1744.7	1711.8	1655.9	1582.3	1506.0	1438.3	1379.3	1358.9	1369.1	1408.6
11.5°	1754.1	1748.2	1714.2	1655.9	1579.2	1499.4	1428.9	1367.5	1346.4	1356.6	1397.6
12°	1757.6	1751.4	1716.1	1655.5	1575.7	1492.7	1419.2	1355.8	1333.5	1344.4	1387.1
12.5°	1760.7	1754.5	1717.7	1655.1	1572.2	1485.7	1409.4	1343.6	1321.0	1332.3	1376.5
13°	1763.9	1757.2	1719.3	1654.3	1568.2	1478.6	1399.2	1331.5	1308.0	1319.4	1365.6
13.5°	1766.2	1759.6	1720.4	1653.1	1563.9	1471.2	1389.0	1319.4	1295.1	1306.9	1354.6
14°	1768.6	1761.9	1721.6	1652.0	1559.6	1463.8	1378.5	1306.9	1282.2	1294.3	1343.3
14.5°	1770.9	1763.9	1722.4	1650.8	1555.3	1456.3	1368.3	1294.7	1269.3	1281.8	1331.9
15°	1772.5	1765.4	1722.8	1649.2	1550.6	1448.1	1357.7	1281.8	1256.0	1268.9	1320.6
15.5°	1774.1	1767.0	1723.2	1647.3	1545.9	1440.3	1347.2	1269.7	1243.1	1256.4	1309.2
16°	1775.2	1768.2	1722.8	1645.3	1540.9	1432.1	1336.2	1257.2	1229.8	1243.5	1297.9
16.5°	1776.4	1769.0	1722.4	1643.0	1536.2	1423.9	1325.3	1244.7	1216.9	1231.0	1286.5
17°	1776.8	1769.4	1722.0	1640.6	1530.7	1415.6	1314.3	1231.7	1203.6	1217.7	1274.4
17.5°	1777.2	1769.4	1721.2	1637.9	1525.2	1407.0	1303.0	1219.2	1190.3	1205.1	1263.0
18°	1777.6	1769.7	1720.1	1635.1	1519.7	1398.4	1292.0	1206.7	1177.0	1191.4	1251.3
18.5°	1777.2	1769.4	1718.9	1632.0	1513.9	1389.8	1280.7	1193.8	1163.7	1178.9	1239.2
19°	1776.8	1768.6	1717.3	1628.5	1507.6	1380.8	1269.3	1180.9	1150.4	1166.0	1227.4
19.5°	1776.0	1767.8	1715.4	1625.0	1501.7	1371.8	1258.0	1168.4	1137.4	1153.1	1215.7
20°	1774.8	1766.6	1713.4	1621.5	1495.5	1362.8	1246.6	1155.4	1124.1	1139.8	1203.2
20.5°	1773.7	1765.4	1711.1	1617.5	1489.2	1353.4	1234.9	1142.5	1110.4	1126.5	1191.0
21°	1771.7	1763.5	1708.3	1613.6	1482.6	1344.4	1223.1	1129.2	1097.1	1113.6	1179.3



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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°	1765.1	1756.4	1698.9	1599.9	1462.2	1315.5	1187.5	1090.9	1057.2	1074.4	1142.5
23°	1762.3	1753.7	1695.4	1594.8	1454.8	1305.7	1175.8	1077.6	1043.9	1061.1	1130.4
23.5°	1759.2	1750.6	1691.5	1589.8	1447.3	1295.9	1164.1	1064.3	1030.6	1048.2	1118.3
24°	1755.7	1747.1	1687.6	1584.7	1439.9	1285.7	1151.9	1051.4	1017.3	1034.9	1105.8
24.5°	1752.1	1743.1	1682.9	1579.2	1432.1	1275.6	1139.8	1038.5	1003.6	1022.0	1093.2
25°	1748.2	1739.2	1678.2	1573.3	1423.9	1265.4	1127.7	1025.5	990.3	1008.7	1081.1
25.5°	1743.5	1734.9	1673.1	1567.1	1415.6	1254.4	1115.5	1012.6	977.4	995.4	1069.0
26°	1738.8	1730.2	1668.4	1561.2	1407.4	1243.9	1103.4	999.3	963.7	982.5	1056.1
26.5°	1734.1	1725.1	1662.9	1554.5	1398.8	1233.3	1091.3	986.0	950.0	969.2	1043.9
27°	1729.1	1720.1	1657.1	1548.3	1389.8	1222.4	1078.8	972.7	936.7	956.3	1031.4
27.5°	1723.6	1714.6	1651.2	1541.2	1380.4	1211.4	1066.6	959.8	923.8	942.6	1018.9
28°	1717.3	1708.7	1644.9	1533.8	1371.0	1200.0	1054.1	946.9	910.1	929.7	1006.4
28.5°	1711.4	1702.4	1638.7	1526.4	1361.3	1188.7	1042.0	933.6	896.4	916.4	994.2
29°	1704.8	1695.8	1632.0	1518.9	1351.5	1177.0	1029.5	920.3	883.1	903.1	981.3
29.5°	1698.1	1689.1	1625.4	1511.1	1340.9	1165.6	1016.9	907.4	869.8	889.8	968.8
30°	1691.1	1682.5	1617.9	1502.9	1330.3	1153.5	1004.4	893.7	856.1	876.5	956.3
30.5°	1684.1	1675.1	1610.5	1494.3	1319.4	1141.4	992.3	880.8	842.4	863.2	943.8
31°	1676.2	1667.6	1603.1	1485.3	1308.4	1128.8	979.4	867.1	829.1	850.2	931.2
31.5°	1668.4	1659.8	1595.2	1476.3	1297.1	1116.7	966.5	854.2	815.8	836.9	918.7
32°	1660.6	1652.0	1587.0	1466.5	1285.3	1104.2	953.9	840.9	802.5	823.6	906.2
32.5°	1652.0	1643.4	1578.4	1456.7	1273.2	1090.9	941.0	827.6	788.8	810.3	893.7
33°	1643.8	1635.1	1569.8	1446.9	1261.1	1078.0	928.5	813.9	775.9	797.0	881.2
33.5°	1635.1	1626.2	1560.8	1436.4	1249.0	1065.1	915.6	801.3	762.2	784.1	868.6
34°	1626.2	1617.5	1552.2	1425.8	1236.0	1052.1	902.7	787.6	748.5	770.8	855.3
34.5°	1617.2	1608.2	1542.4	1414.9	1223.1	1038.8	889.8	774.3	735.2	757.5	842.8
35°	1608.5	1598.8	1533.0	1403.5	1210.2	1025.5	876.9	761.0	721.9	744.6	830.3
35.5°	1599.9	1589.4	1522.9	1391.4	1196.5	1011.8	863.5	748.1	708.6	731.3	817.4
36°	1591.7	1579.6	1513.1	1379.6	1182.8	998.9	850.6	734.8	695.3	718.0	804.5
36.5°	1582.3	1570.2	1502.9	1367.1	1168.4	985.2	837.7	721.1	682.0	704.7	791.6
37°	1571.4	1560.8	1491.9	1354.6	1154.3	971.2	824.4	707.8	669.1	691.4	778.6
37.5°	1557.7	1551.4	1481.4	1342.1	1139.4	957.1	810.7	694.9	656.2	678.5	765.7
38°	1537.7	1542.4	1470.0	1328.8	1123.7	943.4	797.8	681.6	643.3	665.6	752.8
38.5°	1517.0	1531.9	1458.7	1315.1	1108.5	929.3	784.5	668.3	630.7	652.3	739.9
39°	1491.9	1520.1	1447.3	1300.6	1092.4	915.2	771.2	655.4	618.2	639.7	727.0
39.5°	1464.2	1503.3	1435.6	1286.5	1076.4	900.7	757.9	642.5	605.7	626.8	713.7
40°	1434.4	1484.9	1423.5	1271.7	1059.2	886.2	744.6	629.6	593.6	614.3	700.8
40.5°	1401.9	1461.4	1411.7	1256.0	1042.4	872.2	731.3	616.7	581.8	601.8	687.9
41°	1371.0	1437.2	1399.2	1239.6	1025.1	857.3	717.6	604.5	570.1	590.0	674.6
41.5°	1337.4	1406.6	1386.7	1223.1	1007.5	842.8	704.3	592.0	558.7	577.5	661.3
42°	1305.3	1378.9	1373.8	1205.5	989.5	827.9	691.0	579.9	547.4	565.8	648.3
42.5°	1271.7	1346.8	1360.9	1187.5	971.2	813.5	677.7	567.7	536.4	554.0	635.4
43°	1238.4	1317.0	1348.3	1168.7	952.8	798.6	664.4	556.0	525.5	542.7	622.5
43.5°	1204.4	1283.8	1335.0	1150.7	934.0	783.3	651.1	543.9	514.5	531.0	609.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1106.1	1187.1	1296.7	1089.3	875.7	738.7	611.2	510.2	484.0	498.5	570.9
45.5°	1072.1	1153.9	1283.8	1068.6	856.1	723.5	597.9	499.3	473.8	487.9	558.4
46°	1042.4	1122.6	1268.9	1047.1	836.6	708.6	584.6	488.3	464.4	477.4	545.4
46.5°	1009.1	1088.9	1253.7	1024.8	816.6	693.3	571.7	477.8	454.7	467.2	532.9
47°	981.3	1059.2	1231.7	1002.1	796.6	678.5	558.4	467.6	445.3	457.4	520.8
47.5°	948.5	1026.3	1211.0	978.6	776.3	663.2	545.4	457.8	436.3	447.6	508.7
48°	922.6	997.8	1184.4	954.7	757.1	648.3	532.5	447.2	427.3	438.2	496.9
48.5°	891.7	964.9	1159.4	930.8	736.8	633.5	519.6	437.4	418.3	428.8	484.8
49°	867.5	938.3	1129.2	907.0	716.8	618.6	507.1	428.1	409.7	419.4	473.1
49.5°	838.1	907.4	1101.1	882.7	697.3	603.7	494.6	418.7	401.5	410.5	461.7
50°	815.4	881.9	1069.0	858.5	677.7	588.9	482.1	409.3	392.8	401.5	450.4
50.5°	788.0	853.4	1038.1	833.4	657.3	574.0	469.9	400.3	384.6	392.8	439.0
51°	766.9	827.9	1006.0	808.4	638.6	559.5	458.2	391.3	377.2	384.6	428.1
51.5°	741.5	801.3	975.1	783.7	619.4	545.4	446.4	382.3	369.4	376.0	417.5
52°	721.1	777.9	942.2	759.5	600.6	531.0	434.7	374.1	361.5	367.8	406.9
52.5°	698.4	753.6	912.1	735.2	581.8	516.5	423.4	365.5	353.7	360.0	396.4
53°	679.3	730.5	880.4	710.6	564.2	502.4	412.4	357.2	346.3	351.8	386.2
53.5°	658.1	707.8	850.6	686.3	546.2	488.7	401.5	349.0	339.2	344.3	376.0
54°	639.3	685.5	819.7	662.4	529.0	475.0	390.5	341.6	332.2	336.9	366.6
54.5°	620.6	665.2	790.8	639.3	511.8	461.3	379.9	334.2	325.5	329.8	356.8
55°	603.0	643.7	762.6	616.3	496.1	448.0	369.8	326.3	318.5	322.4	347.5
55.5°	586.1	626.8	734.0	594.4	479.7	434.7	359.6	318.9	311.8	315.4	338.1
56°	568.9	605.3	707.8	572.8	464.1	421.8	349.4	311.5	304.8	308.3	329.5
56.5°	554.0	590.0	680.8	552.1	448.8	409.3	340.0	304.0	298.9	301.3	320.8
57°	536.8	570.1	656.6	531.7	434.3	396.8	330.6	297.8	292.7	294.6	312.2
57.5°	523.9	556.0	630.7	512.6	419.8	384.6	321.6	291.1	286.4	288.0	303.6
58°	507.9	537.6	607.7	493.4	406.1	372.9	312.2	284.5	280.2	281.3	295.0
58.5°	496.1	523.1	585.0	475.8	392.8	361.1	303.2	277.8	273.9	275.1	286.8
59°	480.5	507.1	562.7	458.6	379.5	349.8	293.8	271.2	268.0	268.8	278.6
59.5°	469.9	493.0	542.3	442.1	367.0	339.2	285.2	264.9	262.2	262.5	270.8
60°	455.4	478.1	521.2	426.1	354.9	328.7	276.6	258.6	256.7	256.7	262.9
60.5°	443.7	463.3	503.2	410.8	342.8	318.1	268.8	252.4	250.8	250.8	255.5
61°	431.2	450.8	482.8	396.0	331.8	307.5	260.6	246.1	245.3	244.9	248.1
61.5°	419.4	435.9	466.4	382.3	320.8	297.0	252.4	240.2	239.9	239.5	241.0
62°	408.1	424.5	448.8	369.0	309.5	286.8	244.9	234.8	234.4	233.6	233.6
62.5°	396.8	411.2	431.6	356.1	298.5	277.4	237.5	228.9	228.5	228.1	226.9
63°	385.8	399.5	416.7	343.5	288.8	267.6	230.1	223.4	222.6	222.6	220.3
63.5°	375.2	387.4	401.1	331.8	278.6	258.6	222.6	217.9	217.2	217.2	213.6
64°	365.1	375.2	387.0	319.7	269.2	249.6	215.6	212.5	211.3	211.7	207.4
64.5°	354.5	364.7	372.9	308.7	259.8	241.0	208.9	207.0	205.4	205.8	201.1
65°	344.7	353.3	358.8	298.2	250.4	232.4	202.3	201.5	199.9	200.3	194.9
65.5°	334.9	343.2	346.7	287.6	241.4	224.2	196.0	195.6	194.5	194.9	189.0
66°	325.2	332.6	333.8	277.4	232.8	216.0	189.8	190.2	189.0	189.8	183.1



TEST NUMBER: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	297.4	302.1	298.9	248.9	208.2	192.5	171.8	174.5	172.9	174.1	166.7
68°	288.8	292.7	288.0	240.2	200.3	185.5	166.3	169.4	167.5	169.0	161.6
68.5°	279.8	283.3	277.8	231.6	192.9	178.4	160.8	164.7	162.4	163.9	156.1
69°	271.2	274.3	267.2	223.0	185.5	171.4	155.3	159.6	156.9	158.9	151.0
69.5°	262.9	265.3	257.5	214.8	178.0	164.3	150.3	154.6	151.8	154.2	146.3
70°	253.9	256.3	248.1	206.6	171.0	157.7	145.2	149.9	146.3	149.1	141.3
70.5°	245.7	247.3	238.7	198.8	163.9	151.4	140.5	145.2	141.6	144.4	136.6
71°	237.5	238.7	229.7	191.3	157.3	145.6	135.4	140.1	136.2	139.3	131.9
71.5°	229.3	230.5	220.7	183.9	150.6	139.3	130.7	135.4	131.5	134.2	127.2
72°	221.5	222.2	212.1	176.5	144.4	133.0	126.0	130.3	126.8	129.5	122.9
72.5°	213.6	214.0	203.9	169.0	138.1	127.6	121.3	125.6	122.5	124.8	118.6
73°	205.8	206.2	195.6	162.4	131.9	121.7	117.0	120.9	118.2	120.5	114.3
73.5°	197.6	198.0	187.4	155.3	126.0	116.2	112.7	116.6	113.5	115.8	109.9
74°	190.2	190.2	179.6	148.7	120.1	110.7	108.4	112.3	109.2	111.5	105.6
74.5°	182.7	182.3	171.8	142.0	114.6	105.6	104.1	107.6	104.9	106.8	101.3
75°	174.9	174.9	164.3	136.2	108.8	100.6	100.2	103.7	100.6	102.5	97.0
75.5°	167.9	167.5	156.9	129.9	103.3	95.5	95.9	99.0	96.3	98.2	93.1
76°	160.4	160.0	149.9	124.0	98.2	90.8	92.0	94.7	92.0	93.9	88.8
76.5°	153.0	152.6	142.8	117.8	93.1	86.1	88.0	90.4	88.0	89.6	84.5
77°	145.9	145.6	136.2	111.9	88.0	81.4	84.1	86.1	83.7	85.3	81.0
77.5°	139.3	138.5	129.5	106.0	83.0	77.1	79.8	81.8	79.8	81.0	76.7
78°	132.6	131.9	122.9	100.2	78.3	72.8	75.9	77.5	75.5	76.7	72.8
78.5°	125.6	125.2	116.2	94.7	73.6	68.5	72.0	73.6	71.6	72.8	68.9
79°	118.9	118.2	109.6	89.2	69.3	64.6	68.5	69.3	67.3	68.5	65.0
79.5°	111.9	111.5	102.9	83.7	64.6	60.6	64.6	65.0	63.4	64.6	61.0
80°	105.3	104.9	96.6	78.6	60.3	56.7	60.6	60.6	59.1	60.6	57.1
80.5°	98.6	98.2	90.4	73.2	56.0	53.2	57.1	56.3	55.2	56.3	53.2
81°	92.3	92.0	84.5	68.5	52.0	49.7	53.2	52.0	51.3	52.4	49.7
81.5°	85.7	85.3	78.6	63.4	48.1	46.2	49.3	47.7	47.0	48.1	45.8
82°	79.4	79.4	72.8	58.7	44.2	42.6	45.4	43.8	43.0	44.2	42.3
82.5°	73.2	73.2	66.9	54.0	40.3	39.5	41.9	39.5	39.1	40.3	38.3
83°	66.9	66.9	61.4	49.3	37.2	36.4	38.0	35.6	34.8	36.0	34.8
83.5°	60.6	61.0	55.6	44.6	33.6	33.3	34.4	31.3	30.9	32.1	31.3
84°	54.8	55.2	50.1	40.7	30.1	30.1	30.9	27.4	27.0	28.2	27.8
84.5°	48.9	49.3	45.0	36.4	26.6	27.0	27.8	23.5	23.1	24.3	24.7
85°	43.0	43.4	39.9	32.5	23.5	23.9	24.3	19.2	19.2	20.0	21.1
85.5°	37.2	37.6	35.2	28.2	20.0	20.7	20.7	15.7	15.3	16.4	18.0
86°	31.3	32.1	30.5	24.7	16.8	18.0	17.6	12.5	12.1	12.9	14.9
86.5°	25.4	26.6	26.2	20.7	14.1	14.9	14.5	9.8	9.4	10.2	11.7
87°	20.0	21.5	21.5	17.2	11.3	11.7	11.3	7.0	7.0	7.8	9.0
87.5°	16.0	17.2	17.2	13.3	8.6	9.0	8.6	4.7	4.7	5.1	5.9
88°	12.9	13.3	13.3	10.2	5.9	6.3	5.5	2.3	2.3	2.7	3.1
88.5°	9.8	10.2	10.2	7.0	3.5	3.1	2.7	0.8	0.8	0.8	0.8



TEST NUMBER: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

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: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6
0.5°	1602.7	1607.8	1611.7	1616.0	1611.3	1612.8
1°	1598.0	1606.6	1614.0	1621.5	1619.1	1621.8
1.5°	1593.3	1605.0	1616.4	1626.5	1626.5	1630.5
2°	1588.2	1603.8	1618.3	1631.6	1634.0	1638.7
2.5°	1583.1	1601.9	1620.3	1636.7	1641.4	1647.3
3°	1577.6	1600.3	1621.8	1641.0	1648.8	1655.1
3.5°	1572.2	1598.0	1623.0	1645.7	1655.5	1662.9
4°	1566.7	1596.0	1624.2	1650.0	1662.1	1670.8
4.5°	1560.8	1593.7	1625.4	1653.9	1668.4	1677.8
5°	1554.5	1590.9	1626.2	1657.5	1674.7	1684.8
5.5°	1548.7	1588.2	1626.9	1661.0	1680.1	1691.9
6°	1542.4	1585.5	1627.3	1664.5	1686.0	1698.5
6.5°	1535.8	1582.3	1627.3	1667.6	1691.5	1704.8
7°	1529.1	1578.8	1627.3	1670.8	1696.6	1711.1
7.5°	1522.1	1575.7	1627.3	1673.1	1701.7	1716.9
8°	1515.0	1571.8	1626.9	1675.5	1706.4	1722.4
8.5°	1508.0	1568.2	1626.5	1677.8	1710.7	1727.5
9°	1500.9	1563.9	1625.4	1679.8	1715.0	1732.6
9.5°	1493.5	1560.0	1624.6	1681.3	1718.9	1737.7
10°	1485.7	1555.3	1623.4	1682.9	1722.4	1742.0
10.5°	1478.2	1551.0	1622.2	1684.1	1725.9	1746.3
11°	1470.4	1546.3	1620.7	1685.2	1729.1	1750.6
11.5°	1462.2	1541.6	1618.7	1686.0	1731.8	1754.1
12°	1454.0	1536.5	1616.8	1686.8	1734.5	1757.6
12.5°	1445.8	1531.5	1614.8	1687.2	1736.9	1760.7
13°	1437.6	1526.0	1612.1	1687.2	1738.8	1763.9
13.5°	1428.9	1520.5	1609.7	1686.8	1740.8	1766.2
14°	1420.3	1515.0	1607.0	1686.4	1742.4	1768.6
14.5°	1411.3	1509.2	1603.8	1686.0	1743.5	1770.9
15°	1402.3	1503.3	1600.7	1684.8	1744.3	1772.5
15.5°	1393.3	1497.0	1597.2	1683.7	1745.1	1774.1
16°	1384.3	1490.8	1593.7	1682.5	1745.9	1775.2
16.5°	1374.9	1484.5	1590.2	1680.9	1745.9	1776.4
17°	1365.6	1477.9	1586.2	1679.0	1745.9	1776.8
17.5°	1355.8	1471.2	1581.9	1677.0	1745.5	1777.2
18°	1346.4	1464.2	1577.6	1674.7	1744.7	1777.6
18.5°	1336.6	1457.1	1573.3	1671.9	1743.9	1777.2
19°	1326.8	1450.1	1568.6	1669.2	1742.8	1776.8
19.5°	1317.0	1443.0	1563.5	1666.1	1741.2	1776.0
20°	1306.9	1435.6	1558.9	1662.9	1739.2	1774.8
20.5°	1296.7	1428.2	1553.4	1659.4	1737.3	1773.7
21°	1286.5	1420.3	1547.9	1655.1	1734.9	1771.7

TEST NUMBER: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1255.6	1396.9	1530.7	1642.6	1726.3	1765.1
23°	1245.0	1388.6	1524.8	1637.9	1722.8	1762.3
23.5°	1234.5	1380.4	1518.5	1632.8	1719.3	1759.2
24°	1223.9	1372.2	1512.3	1627.7	1715.4	1755.7
24.5°	1213.0	1363.6	1505.6	1622.2	1711.1	1752.1
25°	1202.4	1354.6	1499.0	1616.8	1706.4	1748.2
25.5°	1191.4	1345.6	1491.9	1610.9	1701.3	1743.5
26°	1180.5	1336.6	1484.9	1604.6	1696.6	1738.8
26.5°	1169.1	1327.2	1477.5	1598.4	1691.1	1734.1
27°	1158.2	1317.8	1470.0	1591.7	1685.2	1729.1
27.5°	1146.8	1308.0	1462.2	1585.1	1679.4	1723.6
28°	1135.5	1297.9	1454.0	1578.0	1673.1	1717.3
28.5°	1123.4	1287.7	1445.8	1571.0	1666.5	1711.4
29°	1112.0	1277.1	1437.2	1563.5	1659.8	1704.8
29.5°	1099.9	1266.2	1428.6	1556.1	1652.4	1698.1
30°	1087.8	1254.8	1419.2	1548.3	1645.3	1691.1
30.5°	1075.6	1243.5	1409.4	1540.5	1637.9	1684.1
31°	1063.1	1232.1	1400.0	1531.9	1630.1	1676.2
31.5°	1051.0	1220.0	1389.8	1523.6	1621.8	1668.4
32°	1038.5	1207.9	1379.3	1515.0	1613.6	1660.6
32.5°	1025.5	1195.7	1368.3	1506.0	1605.0	1652.0
33°	1013.0	1183.2	1357.3	1497.0	1596.0	1643.8
33.5°	999.7	1170.7	1346.0	1487.2	1587.0	1635.1
34°	986.4	1157.4	1334.3	1477.9	1578.0	1626.2
34.5°	973.5	1144.9	1322.1	1468.1	1568.6	1617.2
35°	961.0	1131.6	1310.0	1457.9	1558.9	1608.5
35.5°	947.3	1118.3	1297.5	1447.7	1549.1	1599.9
36°	934.0	1104.2	1285.0	1437.2	1539.3	1591.7
36.5°	920.7	1090.5	1271.7	1426.2	1529.1	1582.3
37°	907.8	1076.4	1258.3	1414.9	1518.9	1571.4
37.5°	894.1	1061.9	1244.7	1403.5	1508.8	1557.7
38°	880.8	1047.1	1230.6	1391.8	1499.0	1537.7
38.5°	867.1	1032.2	1216.1	1379.6	1489.2	1517.0
39°	854.2	1017.3	1201.6	1367.5	1479.8	1491.9
39.5°	839.7	1002.5	1186.0	1355.0	1468.5	1464.2
40°	826.4	986.4	1170.7	1342.1	1456.7	1434.4
40.5°	812.7	970.4	1154.7	1329.2	1438.3	1401.9
41°	799.0	954.3	1137.8	1316.3	1420.3	1371.0
41.5°	785.3	937.9	1120.6	1302.6	1396.9	1337.4
42°	771.6	921.1	1103.4	1288.9	1372.6	1305.3
42.5°	757.9	903.9	1085.4	1275.2	1344.0	1271.7
43°	744.2	886.2	1066.6	1261.5	1317.4	1238.4
43.5°	730.1	868.6	1047.1	1247.0	1286.9	1204.4

TEST NUMBER: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	688.3	814.2	984.8	1202.8	1197.3	1106.1
45.5°	673.8	795.5	963.3	1187.5	1166.0	1072.1
46°	659.7	777.5	940.6	1173.1	1135.9	1042.4
46.5°	645.6	759.1	918.3	1157.4	1105.0	1009.1
47°	631.5	740.3	895.2	1142.5	1075.2	981.3
47.5°	617.8	721.9	872.5	1125.7	1043.9	948.5
48°	603.4	703.5	849.5	1108.5	1015.0	922.6
48.5°	589.7	685.1	826.0	1089.3	984.8	891.7
49°	575.6	667.1	802.9	1064.7	957.1	867.5
49.5°	561.9	649.5	780.2	1041.2	928.1	838.1
50°	548.2	631.1	757.1	1013.4	901.9	815.4
50.5°	534.1	613.5	734.0	985.2	873.3	788.0
51°	520.8	595.9	711.0	955.9	847.5	766.9
51.5°	507.1	579.1	688.6	925.4	821.7	741.5
52°	493.8	561.9	666.7	894.5	797.8	721.1
52.5°	480.5	545.4	645.2	865.5	772.4	698.4
53°	467.2	529.4	623.3	835.4	748.1	679.3
53.5°	454.7	513.7	602.6	806.0	726.2	658.1
54°	441.8	497.7	582.6	776.7	703.1	639.3
54.5°	429.2	482.8	563.0	748.9	682.4	620.6
55°	416.7	468.0	544.3	721.9	659.3	603.0
55.5°	404.6	453.9	525.5	694.5	640.9	586.1
56°	392.5	439.8	507.5	669.1	619.0	568.9
56.5°	381.1	426.1	490.7	643.7	602.2	554.0
57°	369.4	412.4	473.8	619.8	581.0	536.8
57.5°	358.0	399.5	457.8	596.3	565.4	523.9
58°	347.1	387.0	442.1	574.0	546.2	507.9
58.5°	336.9	374.8	427.7	552.5	531.0	496.1
59°	326.7	363.1	413.6	531.0	514.1	480.5
59.5°	316.5	351.4	399.9	512.2	498.5	469.9
60°	306.4	340.0	386.2	492.6	483.6	455.4
60.5°	295.8	328.7	373.7	474.2	468.8	443.7
61°	286.0	318.1	361.1	456.2	455.4	431.2
61.5°	277.0	307.9	349.4	439.4	440.6	419.4
62°	267.6	297.8	338.1	423.4	428.8	408.1
62.5°	258.6	287.6	327.1	408.1	415.1	396.8
63°	249.6	278.2	315.8	393.2	403.0	385.8
63.5°	241.4	268.8	305.6	379.1	390.9	375.2
64°	233.2	259.4	295.4	364.7	378.4	365.1
64.5°	225.0	250.4	285.6	352.1	367.4	354.5
65°	216.8	242.2	275.9	339.2	355.7	344.7
65.5°	208.9	233.2	266.5	327.5	345.5	334.9
66°	201.5	225.0	257.5	315.4	334.5	325.2



TEST NUMBER: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	180.0	201.1	231.6	283.3	303.6	297.4
68°	173.3	194.1	223.0	272.3	294.2	288.8
68.5°	166.7	186.6	215.2	262.9	284.9	279.8
69°	160.4	179.6	207.4	253.2	275.1	271.2
69.5°	153.8	172.6	199.9	243.8	266.1	262.9
70°	147.9	165.9	192.5	234.8	257.1	253.9
70.5°	141.6	158.9	185.1	225.8	248.1	245.7
71°	135.8	152.6	177.6	217.2	239.9	237.5
71.5°	130.3	145.9	171.0	208.6	231.2	229.3
72°	124.8	140.5	163.9	200.3	222.6	221.5
72.5°	119.3	134.6	157.3	192.5	214.4	213.6
73°	113.9	128.7	150.6	184.3	206.2	205.8
73.5°	108.8	122.9	144.0	176.9	198.4	197.6
74°	103.7	117.0	138.1	169.4	190.6	190.2
74.5°	99.0	111.5	132.3	161.6	182.7	182.7
75°	94.3	106.0	126.4	154.6	174.9	174.9
75.5°	89.6	100.6	120.1	147.5	167.5	167.9
76°	84.9	95.5	114.3	139.3	160.4	160.4
76.5°	80.6	90.4	108.4	133.0	153.0	153.0
77°	76.7	85.7	102.9	126.8	145.6	145.9
77.5°	72.8	80.6	97.4	120.5	138.5	139.3
78°	68.5	75.9	92.0	113.9	131.9	132.6
78.5°	64.6	71.6	86.9	107.6	125.2	125.6
79°	61.0	66.9	81.4	101.3	118.6	118.9
79.5°	57.5	62.6	76.3	95.1	111.5	111.9
80°	54.0	58.3	71.2	88.8	104.9	105.3
80.5°	50.5	54.4	66.5	83.0	98.2	98.6
81°	47.0	50.1	61.8	77.1	92.0	92.3
81.5°	43.4	46.2	57.1	71.2	85.7	85.7
82°	40.3	42.6	52.4	65.3	79.0	79.4
82.5°	36.8	38.7	48.1	59.9	73.2	73.2
83°	33.6	35.2	43.8	54.4	66.9	66.9
83.5°	30.5	31.7	39.5	48.9	61.0	60.6
84°	27.4	28.2	35.2	43.8	54.8	54.8
84.5°	24.3	25.0	31.3	38.7	48.9	48.9
85°	21.1	21.5	27.4	34.0	43.4	43.0
85.5°	18.0	18.8	23.5	29.7	37.6	37.2
86°	14.9	15.7	20.0	25.0	32.1	31.3
86.5°	12.1	12.9	16.4	20.7	27.0	25.4
87°	9.0	10.2	13.3	16.8	22.3	20.0
87.5°	5.9	7.4	10.2	12.5	18.0	16.0
88°	3.1	4.7	7.0	9.4	14.1	12.9
88.5°	0.8	2.0	3.9	6.3	10.6	9.8



TEST NUMBER: P776521

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-HCD8TSQLWW-4000lm-3000K

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
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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°	1769.7	1761.5	1705.6	1609.3	1475.9	1334.6	1211.4	1116.3	1084.2	1100.7	1167.2
22°	1767.8	1759.2	1702.4	1604.6	1469.2	1325.3	1199.7	1103.4	1070.5	1087.8	1154.7



44°	1171.5	1251.7	1322.1	1130.8	914.8	768.5	637.8	532.9	504.4	520.0	596.3
44.5°	1137.8	1218.8	1309.2	1110.4	895.6	753.6	624.5	521.2	493.8	509.1	583.8



66.5°	316.2	322.0	321.6	267.6	224.6	207.8	183.5	185.1	183.5	184.3	177.6
67°	306.8	312.2	310.3	258.2	216.4	200.3	177.6	180.0	178.0	179.2	172.2



89°	6.7	6.7	6.7	3.9	1.2	0.8	0.8	0.4	0.0	0.4	0.4
89.5°	3.5	3.5	3.5	0.8	0.0	0.0	0.0	0.4	0.0	0.4	0.0

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21.5°	1276.3	1412.5	1542.4	1651.2	1732.6	1769.7
22°	1266.2	1404.7	1536.5	1647.3	1729.4	1767.8



44°	716.0	850.6	1027.1	1232.5	1258.3	1171.5
44.5°	702.3	832.6	1006.4	1217.7	1227.0	1137.8



66.5°	194.5	217.2	248.5	304.4	324.0	316.2
67°	187.0	209.3	239.9	293.5	314.2	306.8

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89°	0.0	0.4	0.8	3.1	7.0	6.7
89.5°	0.0	0.0	0.0	0.4	3.9	3.5

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Scaled Data Report



(END OF REPORT)