

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: P776395

Luminaire Tested: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776395
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B013)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K
Description: 6 INCH ROUND MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

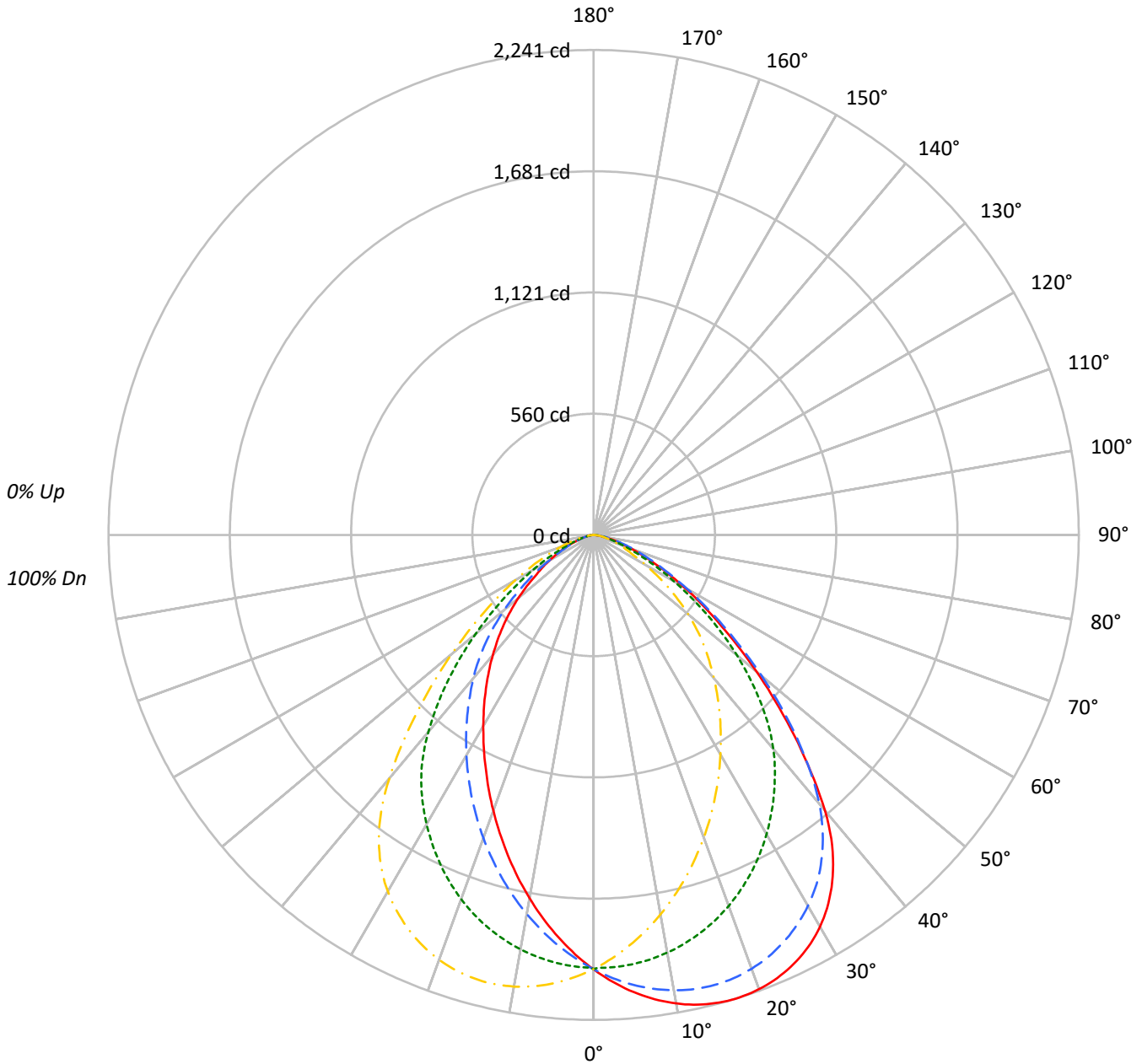
Lumens per Lamp: N/A
Luminaire Lumens: 3943.7 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.23
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89		
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77		
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68		
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60		
5	82	70	63	57	80	69	62	56	67	61	56	66	60	55	64	59	55	53		
6	76	64	56	51	74	63	56	50	62	55	50	60	54	49	58	53	49	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42		
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35		
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	109969	109969	109969	109969
5°	116723	109646	102740	109223
10°	122393	109100	94910	108242
15°	126964	108026	86913	106675
20°	130305	106433	79060	104437
25°	132274	104105	71526	101431
30°	132324	101047	64548	97692
35°	128874	97246	58062	92983
40°	118880	92366	51840	85002
45°	101522	84412	45540	73698
50°	83656	73635	38771	60766
55°	67114	60691	31406	47482
60°	52737	47014	25930	35611
65°	40095	34465	20275	25450
70°	29604	24187	15083	17535
75°	20969	16839	11226	11544
80°	13196	11996	7987	7261
85°	4340	9435	4088	3648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 104383 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	4.8
10°-20°	532.0	13.5
20°-30°	777.6	19.7
30°-40°	873.9	22.2
40°-50°	753.8	19.1
50°-60°	484.1	12.3
60°-70°	234.8	6.0
70°-80°	84.1	2.1
80°-90°	14.5	0.4
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°	1498.5	38.0
0°-40°	2372.4	60.2
0°-60°	3610.3	91.5
0°-90°	3943.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3943.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2006	2006	2006	2006	2006	
5°	2121	1992	1867	1985	2121	205
15°	2237	1903	1531	1880	2237	633
25°	2187	1721	1182	1677	2187	1006
35°	1926	1453	868	1389	1926	1194
45°	1310	1089	587	951	1310	1010
55°	702	635	329	497	702	634
65°	309	266	156	196	309	313
75°	99	80	53	54	99	109
85°	7	15	6	6	7	13
90°	0	1	0	0	0	



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CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0
0.5°	2020.9	2019.4	2016.3	2011.7	2001.0	1998.3	1996.7	1996.0	1995.2	1995.6	1997.9
1°	2032.8	2030.9	2025.2	2016.3	2001.0	1993.7	1987.5	1984.1	1981.8	1982.9	1987.9
1.5°	2045.1	2042.4	2033.6	2020.9	2001.0	1987.9	1977.9	1971.4	1968.3	1970.3	1978.3
2°	2057.0	2053.6	2042.0	2025.5	2000.6	1982.5	1968.3	1958.7	1954.9	1958.0	1967.9
2.5°	2068.5	2063.9	2050.5	2029.4	1999.8	1976.8	1958.0	1945.7	1940.7	1944.5	1957.6
3°	2079.7	2074.3	2057.8	2033.2	1998.7	1971.0	1948.0	1932.6	1926.1	1931.1	1946.8
3.5°	2090.4	2084.3	2065.8	2037.1	1997.5	1964.9	1937.2	1918.8	1911.9	1917.7	1936.5
4°	2100.8	2094.6	2072.8	2040.1	1996.0	1958.3	1926.5	1905.0	1896.9	1903.8	1925.3
4.5°	2111.1	2103.5	2080.0	2043.2	1994.4	1951.4	1915.4	1891.2	1881.9	1890.0	1914.2
5°	2121.1	2113.1	2086.6	2045.9	1992.5	1944.9	1904.2	1877.0	1867.0	1875.4	1902.7
5.5°	2130.3	2121.5	2093.1	2048.6	1990.2	1937.2	1892.7	1862.8	1851.6	1861.2	1891.2
6°	2139.6	2130.0	2099.2	2050.9	1987.9	1929.9	1881.2	1847.8	1835.5	1846.6	1879.3
6.5°	2148.0	2138.0	2105.0	2052.8	1985.2	1922.6	1868.9	1833.2	1820.1	1831.7	1867.4
7°	2156.4	2145.7	2110.4	2054.7	1982.2	1914.6	1857.0	1818.2	1804.0	1817.1	1855.1
7.5°	2164.5	2153.0	2115.8	2055.9	1979.1	1906.5	1844.7	1802.9	1787.9	1802.1	1842.8
8°	2171.8	2160.3	2120.4	2057.0	1975.6	1898.5	1832.0	1787.9	1771.4	1786.4	1830.1
8.5°	2179.1	2167.2	2125.0	2058.2	1972.2	1890.0	1819.0	1771.8	1755.3	1771.0	1817.5
9°	2186.0	2173.3	2129.2	2058.6	1968.3	1881.2	1806.3	1756.4	1738.4	1755.6	1804.8
9.5°	2192.5	2179.5	2133.0	2059.3	1964.1	1872.4	1793.3	1740.7	1721.5	1739.5	1791.3
10°	2198.7	2185.2	2136.5	2059.3	1959.9	1863.1	1780.2	1724.9	1705.0	1723.8	1778.7
10.5°	2204.4	2190.6	2139.9	2058.9	1955.3	1853.9	1766.8	1708.8	1688.5	1708.0	1765.2
11°	2209.8	2195.2	2143.0	2058.6	1950.7	1844.3	1753.0	1692.3	1670.8	1691.9	1751.8
11.5°	2214.4	2199.8	2145.3	2057.8	1945.3	1834.3	1739.1	1676.2	1653.5	1675.8	1738.0
12°	2219.0	2203.7	2147.6	2056.6	1940.3	1824.7	1725.3	1659.7	1636.6	1659.7	1724.5
12.5°	2223.3	2207.5	2149.5	2055.5	1934.5	1814.4	1711.5	1643.2	1619.4	1642.8	1710.7
13°	2226.7	2210.6	2151.1	2053.9	1929.2	1804.4	1697.3	1626.6	1601.7	1626.6	1696.5
13.5°	2230.2	2213.7	2152.2	2051.6	1923.0	1794.0	1683.1	1610.1	1584.4	1610.1	1682.7
14°	2232.8	2216.0	2153.0	2049.7	1916.9	1783.3	1668.5	1592.9	1566.8	1593.6	1668.5
14.5°	2235.2	2218.3	2153.0	2047.0	1910.4	1772.5	1653.9	1576.0	1549.5	1576.4	1653.9
15°	2237.1	2219.8	2153.4	2044.0	1903.4	1761.4	1639.3	1559.1	1531.4	1559.8	1639.3
15.5°	2238.6	2220.9	2153.0	2040.9	1896.9	1750.3	1624.3	1542.6	1514.2	1543.3	1624.7
16°	2239.8	2222.1	2152.2	2037.8	1889.6	1739.1	1609.8	1525.3	1496.5	1526.4	1610.1
16.5°	2240.5	2222.1	2151.5	2034.0	1882.3	1727.2	1594.4	1508.0	1478.8	1509.6	1595.5
17°	2240.9	2222.1	2149.9	2029.8	1874.7	1715.7	1579.8	1491.1	1461.2	1492.7	1580.6
17.5°	2240.5	2222.1	2148.0	2025.2	1867.0	1703.8	1564.5	1473.8	1443.1	1475.4	1565.6
18°	2240.1	2221.3	2146.1	2020.9	1858.9	1691.9	1549.1	1456.6	1425.9	1458.9	1550.6
18.5°	2239.0	2220.2	2143.0	2015.6	1850.5	1679.6	1533.7	1439.7	1408.2	1441.6	1535.3
19°	2237.8	2218.6	2140.3	2010.6	1841.6	1667.3	1518.4	1422.4	1390.5	1424.3	1520.3
19.5°	2235.9	2216.7	2136.9	2004.8	1833.2	1655.1	1503.4	1405.1	1372.9	1407.8	1505.3
20°	2233.6	2214.4	2133.4	1998.7	1824.4	1642.4	1488.1	1388.2	1355.2	1390.9	1490.0
20.5°	2230.9	2211.3	2129.2	1992.5	1814.8	1629.7	1471.9	1371.3	1338.3	1373.6	1474.6
21°	2227.9	2208.3	2125.0	1986.0	1805.2	1616.7	1456.2	1354.1	1320.3	1356.8	1458.9



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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°	2216.0	2196.4	2109.6	1964.1	1775.6	1577.1	1409.7	1303.4	1268.5	1306.1	1412.4
23°	2211.0	2191.4	2103.5	1956.4	1765.2	1563.7	1393.6	1286.1	1250.8	1289.2	1396.7
23.5°	2206.0	2186.0	2097.3	1948.4	1754.5	1550.2	1377.9	1269.6	1233.9	1272.3	1380.9
24°	2199.8	2180.3	2090.4	1939.5	1743.7	1536.4	1362.1	1252.3	1216.6	1255.4	1365.6
24.5°	2193.7	2174.1	2083.5	1931.1	1732.6	1523.0	1346.0	1235.8	1199.3	1238.5	1349.8
25°	2186.8	2167.6	2075.8	1921.9	1721.1	1509.2	1329.9	1218.5	1182.5	1222.0	1334.1
25.5°	2179.5	2160.3	2068.1	1912.7	1710.0	1495.0	1314.5	1202.4	1165.9	1205.5	1318.4
26°	2172.2	2153.0	2060.1	1902.7	1698.1	1480.8	1298.8	1185.5	1149.4	1189.0	1302.2
26.5°	2163.7	2144.9	2051.3	1893.1	1686.2	1466.6	1282.7	1169.0	1132.5	1172.1	1286.5
27°	2155.3	2136.5	2042.0	1882.3	1674.3	1452.3	1266.5	1152.5	1116.0	1156.0	1270.8
27.5°	2146.1	2127.7	2032.8	1872.0	1661.6	1437.8	1250.8	1136.8	1099.5	1139.5	1255.0
28°	2136.5	2118.1	2022.8	1860.8	1648.9	1423.2	1235.1	1120.3	1083.4	1123.3	1239.3
28.5°	2126.1	2108.5	2012.5	1849.7	1636.2	1408.6	1219.3	1104.1	1067.3	1107.2	1223.5
29°	2115.0	2098.1	2001.7	1837.8	1623.2	1394.0	1203.2	1087.6	1051.5	1091.1	1207.4
29.5°	2103.1	2087.0	1991.0	1826.3	1610.1	1379.0	1187.4	1072.3	1035.4	1074.6	1191.7
30°	2090.4	2075.4	1979.5	1814.4	1596.3	1364.4	1171.3	1056.1	1019.7	1058.8	1175.5
30.5°	2077.4	2063.2	1967.6	1801.3	1582.9	1349.5	1156.0	1040.4	1003.9	1042.7	1159.8
31°	2063.9	2050.1	1955.3	1788.7	1569.4	1334.1	1140.2	1025.1	988.6	1027.0	1144.1
31.5°	2049.3	2036.3	1942.6	1775.6	1554.9	1319.1	1124.5	1009.3	972.8	1011.2	1127.9
32°	2034.7	2021.7	1929.2	1762.2	1541.0	1304.2	1108.7	994.0	957.9	995.5	1112.6
32.5°	2018.6	2006.3	1915.0	1748.3	1526.8	1288.8	1093.0	978.6	942.5	980.1	1096.8
33°	2001.0	1990.6	1900.4	1734.5	1512.2	1273.1	1077.3	963.6	927.5	964.8	1080.3
33.5°	1982.5	1974.1	1885.0	1720.3	1498.0	1257.7	1061.9	948.7	912.6	949.0	1064.6
34°	1964.9	1957.2	1868.9	1705.3	1483.1	1242.3	1046.2	933.3	897.6	934.4	1049.2
34.5°	1945.3	1938.8	1852.0	1690.0	1468.1	1227.0	1030.8	918.3	882.2	919.1	1033.5
35°	1925.7	1920.0	1834.7	1674.6	1453.1	1211.6	1015.5	903.4	867.6	903.7	1017.8
35.5°	1904.6	1900.8	1816.7	1658.5	1438.1	1195.9	1000.1	888.8	853.1	889.1	1002.0
36°	1881.9	1880.0	1798.3	1642.0	1422.8	1180.5	985.1	874.2	838.9	874.2	986.7
36.5°	1858.9	1858.9	1779.1	1624.3	1406.7	1164.8	969.8	859.2	823.9	859.2	970.9
37°	1834.3	1836.6	1759.1	1606.7	1391.3	1149.4	954.4	844.6	809.7	844.2	955.6
37.5°	1809.0	1813.2	1738.4	1587.9	1375.2	1133.3	939.4	830.4	795.1	829.6	939.8
38°	1782.5	1789.4	1716.9	1569.1	1358.7	1117.6	924.1	815.8	780.9	815.1	924.5
38.5°	1754.1	1764.5	1694.6	1549.5	1342.2	1102.2	909.1	801.6	767.1	800.5	909.1
39°	1725.3	1738.4	1671.6	1529.1	1325.7	1086.1	894.5	787.0	752.9	785.9	894.1
39.5°	1694.2	1710.0	1647.8	1508.0	1308.4	1070.7	879.5	773.2	738.7	771.3	879.2
40°	1661.2	1680.4	1622.4	1486.1	1290.7	1054.6	864.2	759.0	724.4	757.1	863.8
40.5°	1627.0	1650.1	1595.5	1463.9	1272.3	1038.9	849.6	744.8	710.6	742.9	848.8
41°	1592.5	1618.6	1567.9	1440.4	1253.9	1023.5	834.6	730.6	696.8	728.3	834.2
41.5°	1557.5	1584.8	1539.5	1416.6	1234.7	1007.8	820.0	716.4	682.6	714.5	818.9
42°	1521.1	1551.4	1510.7	1392.1	1215.5	992.0	805.1	702.6	669.2	700.3	803.5
42.5°	1485.7	1517.6	1481.1	1367.5	1195.1	975.9	790.9	688.7	655.3	686.4	787.8
43°	1450.4	1483.4	1450.8	1342.2	1174.0	959.4	776.3	674.9	641.5	672.6	771.7
43.5°	1414.7	1449.3	1419.7	1316.4	1153.3	942.5	762.1	661.1	628.1	658.8	755.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1309.5	1346.4	1328.0	1237.7	1088.8	889.9	719.5	620.0	587.4	617.7	706.4
45.5°	1276.1	1312.6	1296.1	1210.9	1066.1	871.5	705.3	606.6	574.0	604.3	689.5
46°	1242.0	1278.4	1264.6	1184.4	1044.2	853.4	690.7	592.8	560.5	590.5	672.6
46.5°	1206.6	1243.9	1233.1	1156.7	1021.6	835.0	676.1	579.3	546.7	576.6	656.5
47°	1174.0	1210.1	1201.7	1129.5	998.9	816.6	660.7	565.9	533.6	562.4	639.6
47.5°	1139.5	1176.7	1169.4	1101.5	976.3	797.8	645.7	552.5	520.2	548.6	622.3
48°	1107.2	1143.7	1137.9	1074.2	954.0	779.3	630.8	539.4	507.2	534.4	605.4
48.5°	1075.7	1111.4	1106.4	1046.2	931.0	760.9	615.4	525.6	493.7	520.2	588.9
49°	1043.1	1079.2	1075.0	1018.9	908.3	742.1	600.1	512.1	480.3	506.0	572.0
49.5°	1012.4	1046.9	1044.6	990.9	885.3	723.3	584.7	499.1	467.2	491.8	555.1
50°	980.9	1015.1	1012.8	962.9	863.4	704.5	569.7	486.0	454.6	478.0	538.2
50.5°	949.4	984.0	982.8	934.8	840.0	685.3	554.0	472.2	441.5	463.4	522.1
51°	920.6	953.3	952.9	908.0	816.6	666.1	538.2	458.4	428.1	448.8	505.2
51.5°	891.1	923.3	923.3	880.7	793.9	648.0	522.9	445.3	415.4	435.0	489.5
52°	861.5	893.8	894.1	853.8	771.3	629.2	507.5	432.3	402.7	420.8	473.0
52.5°	834.6	864.6	865.3	826.2	747.9	610.4	491.8	418.5	389.7	406.9	456.9
53°	805.8	836.6	836.9	800.1	724.8	591.6	476.8	405.0	377.0	392.7	440.7
53.5°	779.3	808.5	809.3	774.0	702.2	573.2	461.5	392.0	364.0	378.9	425.0
54°	752.1	780.9	782.0	748.2	679.9	554.8	445.7	378.5	351.7	365.1	409.3
54.5°	726.0	754.4	755.9	722.5	657.3	536.7	430.8	365.1	339.0	351.7	393.9
55°	702.2	728.3	729.1	697.2	635.0	519.1	415.8	352.4	328.6	339.0	378.5
55.5°	676.8	702.9	703.7	672.6	612.7	500.6	400.8	339.4	318.6	325.9	364.0
56°	653.8	678.0	678.8	648.4	590.8	482.6	385.8	327.5	308.3	313.3	349.0
56.5°	629.6	653.8	654.2	624.2	569.7	465.3	371.2	315.6	297.9	300.6	335.2
57°	607.4	630.0	630.4	600.8	548.6	447.6	357.0	303.7	290.6	287.9	321.3
57.5°	585.5	607.0	606.6	578.2	527.9	430.0	342.8	291.8	281.8	275.7	307.1
58°	563.6	584.7	583.9	555.9	506.8	413.5	329.4	284.9	272.6	264.1	293.3
58.5°	542.9	562.8	562.1	534.4	486.8	396.6	315.6	276.8	263.4	254.2	279.5
59°	521.7	541.3	540.6	512.9	467.2	380.1	302.1	268.0	254.2	246.5	266.4
59.5°	501.8	521.4	519.8	492.2	447.6	364.0	288.7	258.8	245.3	238.4	253.8
60°	481.0	501.0	499.1	472.2	428.8	348.2	275.3	249.9	236.5	230.3	241.5
60.5°	461.5	481.0	479.1	452.3	410.0	332.9	262.6	240.7	227.7	221.9	230.0
61°	443.0	461.5	459.9	433.4	392.4	317.9	250.3	231.9	219.2	213.5	218.8
61.5°	424.6	443.0	441.1	414.6	375.1	302.5	239.2	223.1	211.2	205.4	207.7
62°	406.6	424.6	423.5	396.6	358.2	287.6	228.0	214.6	203.1	197.3	197.7
62.5°	388.9	406.9	405.8	379.3	342.5	274.1	217.3	206.5	195.0	189.7	187.7
63°	372.4	389.7	388.5	362.4	326.7	260.3	206.9	198.5	187.0	182.0	178.1
63.5°	355.9	373.2	372.0	345.9	311.0	247.2	198.5	190.8	179.3	174.7	169.3
64°	339.4	356.7	355.9	329.4	295.2	234.6	191.2	183.1	171.6	167.4	160.9
64.5°	323.6	341.7	340.5	314.0	279.9	222.3	183.9	175.8	163.9	160.1	152.8
65°	309.1	326.3	325.2	299.1	265.7	210.8	176.6	168.5	156.3	152.8	145.5
65.5°	294.8	311.7	310.6	284.9	252.2	199.3	169.7	161.6	149.3	145.9	138.6
66°	280.3	297.1	296.4	271.0	238.8	188.1	162.4	154.3	142.4	139.0	132.5



TEST NUMBER: P776395

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	241.5	257.6	256.8	232.3	202.3	158.9	142.8	134.8	122.5	119.4	115.9
68°	229.2	245.3	244.6	220.0	191.2	150.1	136.7	128.6	116.3	113.3	111.0
68.5°	217.7	233.4	232.3	208.5	180.1	141.7	130.5	122.5	110.6	107.5	106.0
69°	206.2	222.3	220.8	197.3	170.1	134.0	124.8	116.7	104.8	101.7	101.0
69.5°	195.0	211.2	210.0	186.6	160.1	126.3	119.4	111.0	99.4	96.4	96.4
70°	184.7	200.0	198.9	176.2	150.9	119.4	114.0	105.6	94.1	91.0	91.4
70.5°	174.7	190.0	188.9	166.6	141.7	112.9	109.0	100.6	89.5	86.0	86.8
71°	164.7	180.1	178.9	157.0	133.6	106.7	104.0	95.6	84.5	81.4	82.5
71.5°	155.1	170.8	169.3	148.2	125.5	100.6	99.0	90.6	79.9	76.8	78.3
72°	146.3	161.2	160.1	139.7	117.9	95.2	94.1	86.0	75.6	72.6	73.7
72.5°	136.7	152.4	151.3	132.5	110.6	89.8	89.8	81.8	71.4	68.7	69.9
73°	129.0	143.6	142.4	124.8	103.7	84.8	85.2	77.6	67.6	64.5	66.0
73.5°	121.3	137.4	135.1	117.5	97.1	80.2	81.0	73.3	63.7	61.0	62.2
74°	113.6	129.4	127.5	109.8	91.0	76.0	76.8	69.5	59.9	57.2	58.4
74.5°	106.0	121.7	120.2	102.1	85.2	71.8	72.9	65.6	56.4	53.7	54.9
75°	99.0	114.0	112.5	95.6	79.5	68.0	68.7	61.8	53.0	50.7	51.4
75.5°	91.8	106.3	105.2	89.5	74.1	64.5	65.3	58.4	49.9	47.2	48.4
76°	85.2	99.4	98.3	83.3	69.1	61.0	61.8	54.9	46.5	44.2	45.3
76.5°	79.1	92.9	91.8	77.6	64.5	57.6	58.4	51.8	43.4	41.1	42.2
77°	72.9	86.8	85.6	72.2	59.9	54.5	54.9	48.4	40.7	38.4	39.5
77.5°	67.2	81.0	79.5	67.2	55.7	51.4	51.8	45.3	38.0	35.7	36.9
78°	61.8	75.2	73.7	62.2	51.4	48.4	48.8	42.2	35.3	33.0	34.2
78.5°	56.4	69.9	68.3	57.2	47.6	45.7	45.7	39.2	32.6	30.7	31.9
79°	51.4	64.9	63.0	53.0	44.2	43.0	42.6	36.5	30.3	28.4	29.6
79.5°	46.5	59.9	58.0	48.8	40.7	40.3	39.9	33.8	28.0	25.7	27.3
80°	41.8	55.3	53.4	44.5	38.0	37.6	37.2	31.5	25.3	23.4	24.6
80.5°	37.6	50.7	49.1	41.1	34.9	35.3	34.6	28.8	23.0	21.1	22.3
81°	33.4	46.5	44.9	37.6	32.6	33.0	32.2	26.1	21.1	19.2	20.3
81.5°	29.2	42.2	40.7	34.2	29.9	30.7	29.6	23.4	18.8	17.3	18.4
82°	25.3	38.4	36.9	31.1	27.6	28.0	27.3	21.1	16.9	15.4	16.5
82.5°	21.9	34.6	33.4	28.4	25.0	25.7	24.6	19.2	15.0	13.4	14.6
83°	18.4	31.1	29.9	25.7	22.7	23.4	22.3	16.9	13.1	11.5	13.1
83.5°	15.0	27.6	26.9	23.0	20.7	21.5	20.0	15.0	11.5	10.0	11.5
84°	12.3	24.2	23.8	20.3	18.4	19.6	18.0	13.1	10.0	8.1	10.0
84.5°	9.6	21.1	21.1	18.0	16.9	17.7	16.1	11.1	8.1	6.9	8.4
85°	6.9	18.0	18.4	16.1	15.0	15.7	14.2	9.6	6.5	5.4	7.3
85.5°	4.2	15.0	15.7	13.8	13.1	13.8	12.3	8.1	5.4	4.6	5.8
86°	3.1	13.1	13.8	12.3	11.5	12.3	10.7	6.9	4.2	3.8	4.6
86.5°	2.3	10.7	11.9	10.4	10.0	10.4	9.2	5.8	3.5	3.1	3.5
87°	1.9	8.4	9.6	8.4	8.4	8.8	7.7	4.6	2.7	2.3	2.3
87.5°	1.2	6.5	7.7	6.9	6.9	7.3	6.1	3.8	1.9	1.5	1.2
88°	0.8	4.6	5.8	5.4	5.8	5.8	5.0	2.7	1.2	0.8	0.4
88.5°	0.4	2.7	3.8	3.8	4.6	4.2	3.5	1.9	0.8	0.4	0.0



TEST NUMBER: P776395
CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

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	0.4	0.8	0.8	0.4	0.0	0.0	0.0	0.0



TEST NUMBER: P776395

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0
0.5°	2001.3	2000.2	2007.5	2014.0	2019.4	2020.9
1°	1996.0	1999.8	2011.7	2022.8	2030.9	2032.8
1.5°	1990.2	1998.7	2015.6	2030.5	2041.7	2045.1
2°	1984.1	1997.5	2019.4	2038.6	2052.4	2057.0
2.5°	1977.9	1996.0	2022.5	2046.3	2062.4	2068.5
3°	1971.8	1994.4	2025.5	2053.2	2072.8	2079.7
3.5°	1964.9	1992.5	2028.6	2060.1	2082.0	2090.4
4°	1958.0	1990.2	2030.9	2066.6	2091.6	2100.8
4.5°	1950.7	1987.5	2033.2	2072.8	2100.4	2111.1
5°	1943.4	1984.8	2035.1	2078.9	2109.2	2121.1
5.5°	1936.1	1982.2	2037.1	2084.3	2117.7	2130.3
6°	1928.0	1979.1	2038.6	2089.6	2125.4	2139.6
6.5°	1920.3	1975.6	2039.4	2094.6	2133.0	2148.0
7°	1912.3	1971.8	2040.1	2099.2	2139.9	2156.4
7.5°	1903.8	1967.9	2040.9	2103.5	2146.9	2164.5
8°	1895.4	1963.7	2040.9	2107.3	2153.4	2171.8
8.5°	1886.6	1959.1	2040.9	2110.8	2159.5	2179.1
9°	1877.7	1954.9	2040.5	2113.8	2165.3	2186.0
9.5°	1868.5	1949.5	2039.7	2116.9	2170.7	2192.5
10°	1859.3	1944.5	2038.6	2119.2	2175.6	2198.7
10.5°	1850.1	1939.5	2037.4	2121.1	2180.3	2204.4
11°	1840.1	1933.8	2035.5	2123.0	2184.5	2209.8
11.5°	1830.5	1927.6	2033.6	2124.2	2187.9	2214.4
12°	1820.1	1921.5	2031.3	2125.4	2191.4	2219.0
12.5°	1809.8	1915.0	2028.6	2125.7	2194.5	2223.3
13°	1799.4	1908.4	2025.9	2126.1	2196.8	2226.7
13.5°	1789.0	1901.9	2022.5	2125.7	2198.7	2230.2
14°	1778.3	1894.6	2019.0	2125.4	2200.6	2232.8
14.5°	1767.2	1887.3	2015.2	2124.2	2201.8	2235.2
15°	1756.0	1879.6	2010.6	2123.0	2202.5	2237.1
15.5°	1744.9	1871.6	2006.0	2121.1	2202.9	2238.6
16°	1733.4	1863.9	2001.3	2119.2	2202.9	2239.8
16.5°	1721.9	1855.5	1996.4	2116.5	2202.5	2240.5
17°	1710.0	1847.0	1990.6	2113.8	2201.8	2240.9
17.5°	1698.1	1838.2	1984.8	2110.4	2200.6	2240.5
18°	1685.8	1829.0	1978.7	2106.9	2199.1	2240.1
18.5°	1673.5	1819.8	1972.2	2102.7	2196.8	2239.0
19°	1661.2	1810.2	1965.3	2098.5	2194.5	2237.8
19.5°	1648.5	1800.6	1958.3	2093.5	2191.4	2235.9
20°	1635.9	1790.2	1950.7	2088.5	2188.3	2233.6
20.5°	1623.2	1780.2	1943.0	2082.7	2184.5	2230.9
21°	1609.8	1769.8	1934.9	2077.0	2180.3	2227.9

TEST NUMBER: P776395

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1570.2	1736.4	1908.8	2057.0	2165.3	2216.0
23°	1556.4	1725.3	1899.2	2049.3	2159.5	2211.0
23.5°	1543.3	1713.8	1889.6	2041.7	2153.4	2206.0
24°	1529.1	1701.9	1879.6	2033.6	2146.5	2199.8
24.5°	1514.9	1690.0	1869.3	2024.8	2139.2	2193.7
25°	1501.1	1676.9	1858.5	2015.6	2131.5	2186.8
25.5°	1487.3	1664.7	1847.8	2006.0	2123.0	2179.5
26°	1473.1	1652.0	1836.6	1996.4	2115.0	2172.2
26.5°	1458.1	1639.7	1825.5	1986.0	2105.8	2163.7
27°	1443.9	1625.9	1813.6	1975.2	2096.6	2155.3
27.5°	1429.3	1612.1	1801.3	1964.5	2086.6	2146.1
28°	1414.7	1599.4	1788.7	1953.0	2075.8	2136.5
28.5°	1399.8	1585.6	1776.0	1941.1	2064.7	2126.1
29°	1384.8	1571.7	1762.9	1928.8	2053.2	2115.0
29.5°	1370.2	1557.9	1749.1	1915.7	2040.5	2103.1
30°	1354.8	1543.3	1736.1	1902.3	2027.5	2090.4
30.5°	1339.5	1529.1	1721.5	1888.1	2013.2	2077.4
31°	1324.5	1514.2	1707.7	1873.5	1998.7	2063.9
31.5°	1309.1	1500.3	1692.7	1857.8	1982.9	2049.3
32°	1293.8	1484.2	1677.3	1841.6	1967.2	2034.7
32.5°	1278.4	1469.2	1661.2	1825.1	1950.7	2018.6
33°	1262.7	1453.5	1644.3	1807.5	1933.8	2001.0
33.5°	1247.3	1438.5	1627.8	1789.4	1915.7	1982.5
34°	1231.6	1422.4	1609.4	1769.8	1895.8	1964.9
34.5°	1216.2	1405.9	1590.6	1749.9	1875.0	1945.3
35°	1200.1	1389.4	1571.4	1729.5	1853.9	1925.7
35.5°	1184.8	1371.7	1551.4	1708.4	1832.4	1904.6
36°	1169.0	1353.3	1531.1	1686.2	1809.8	1881.9
36.5°	1152.9	1335.3	1509.9	1663.1	1786.0	1858.9
37°	1136.8	1316.1	1487.3	1638.5	1760.6	1834.3
37.5°	1120.3	1295.3	1464.6	1613.2	1734.1	1809.0
38°	1104.1	1275.0	1439.7	1587.1	1706.1	1782.5
38.5°	1087.6	1254.2	1415.5	1559.5	1677.3	1754.1
39°	1070.7	1232.8	1389.0	1530.3	1647.0	1725.3
39.5°	1053.1	1210.1	1363.7	1499.6	1614.7	1694.2
40°	1035.0	1187.8	1336.0	1468.1	1581.0	1661.2
40.5°	1015.8	1164.8	1309.1	1437.8	1547.2	1627.0
41°	997.0	1141.8	1281.9	1405.5	1512.6	1592.5
41.5°	977.4	1119.1	1254.2	1373.6	1477.7	1557.5
42°	957.5	1094.9	1227.0	1341.8	1442.0	1521.1
42.5°	938.3	1071.1	1199.0	1309.9	1407.8	1485.7
43°	918.3	1047.3	1170.2	1277.3	1373.6	1450.4
43.5°	898.4	1023.9	1142.1	1245.0	1338.7	1414.7



TEST NUMBER: P776395

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	838.1	950.6	1056.5	1149.4	1237.0	1309.5
45.5°	818.1	927.2	1028.1	1118.3	1204.0	1276.1
46°	797.8	902.6	999.7	1086.5	1170.6	1242.0
46.5°	777.8	879.2	972.1	1056.5	1138.7	1206.6
47°	757.1	855.0	944.4	1026.2	1106.1	1174.0
47.5°	736.3	830.4	915.6	996.6	1073.8	1139.5
48°	716.4	806.6	888.4	967.1	1042.3	1107.2
48.5°	696.4	782.8	861.9	939.1	1012.0	1075.7
49°	675.7	760.2	835.8	910.3	981.3	1043.1
49.5°	656.1	736.0	809.3	882.2	952.1	1012.4
50°	636.1	712.5	782.8	855.0	921.8	980.9
50.5°	616.2	689.1	758.6	827.7	893.8	949.4
51°	596.6	666.5	733.3	801.6	865.3	920.6
51.5°	578.2	643.4	709.5	775.5	837.3	891.1
52°	557.8	621.9	686.1	750.6	810.4	861.5
52.5°	538.6	600.4	662.6	726.0	784.0	834.6
53°	519.8	578.2	639.6	701.4	757.8	805.8
53.5°	501.4	557.1	617.3	678.0	732.9	779.3
54°	482.6	537.1	595.8	654.2	707.6	752.1
54.5°	464.9	516.7	574.3	632.3	683.8	726.0
55°	446.9	496.8	553.6	609.7	660.3	702.2
55.5°	428.8	478.0	533.6	588.5	637.3	676.8
56°	411.6	459.2	513.3	567.4	615.0	653.8
56.5°	394.7	440.7	494.1	547.1	592.4	629.6
57°	378.2	423.1	474.9	526.7	571.3	607.4
57.5°	362.0	405.4	456.9	507.2	550.5	585.5
58°	346.3	388.5	438.8	488.7	530.6	563.6
58.5°	331.7	371.6	420.8	469.9	510.6	542.9
59°	316.7	355.9	404.6	451.9	491.4	521.7
59.5°	301.8	340.1	387.0	434.2	473.4	501.8
60°	287.2	324.8	371.6	417.3	454.9	481.0
60.5°	273.7	310.2	355.9	400.4	438.0	461.5
61°	260.7	295.6	340.5	383.9	420.0	443.0
61.5°	247.6	281.8	325.9	368.9	403.5	424.6
62°	235.0	268.4	311.7	353.6	387.4	406.6
62.5°	223.1	255.3	297.5	338.6	371.2	388.9
63°	211.5	242.3	284.1	324.0	355.5	372.4
63.5°	200.4	230.0	270.7	310.6	340.1	355.9
64°	189.7	218.4	258.0	296.8	325.2	339.4
64.5°	179.7	206.9	246.1	283.7	311.4	323.6
65°	170.1	196.2	234.2	270.7	297.1	309.1
65.5°	160.5	185.8	222.7	258.8	283.7	294.8
66°	151.6	175.4	211.2	246.9	270.3	280.3



TEST NUMBER: P776395

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	127.5	147.4	180.8	213.5	233.8	241.5
68°	120.2	139.4	170.8	202.7	222.7	229.2
68.5°	112.9	131.7	161.6	192.7	211.5	217.7
69°	106.7	124.4	152.8	182.7	201.2	206.2
69.5°	100.2	117.1	144.4	173.5	190.4	195.0
70°	94.4	109.4	136.7	164.3	180.8	184.7
70.5°	88.7	102.1	129.0	155.5	171.2	174.7
71°	83.7	96.0	121.7	147.0	162.4	164.7
71.5°	78.3	89.8	114.4	139.0	153.2	155.1
72°	73.7	83.7	106.7	131.7	144.7	146.3
72.5°	69.1	78.3	100.2	124.4	136.3	136.7
73°	64.9	72.9	93.7	117.1	129.0	129.0
73.5°	60.7	68.3	87.9	109.8	121.7	121.3
74°	56.8	63.3	82.2	102.5	114.0	113.6
74.5°	53.0	58.7	76.8	96.0	106.7	106.0
75°	49.5	54.5	71.0	89.8	100.2	99.0
75.5°	46.5	50.3	66.0	83.7	93.7	91.8
76°	43.4	46.5	61.0	77.9	87.1	85.2
76.5°	40.7	42.6	56.4	72.2	81.0	79.1
77°	38.0	39.5	52.2	66.8	75.6	72.9
77.5°	35.3	36.5	48.0	61.8	70.3	67.2
78°	33.0	33.4	44.2	57.2	64.9	61.8
78.5°	30.7	30.7	40.3	52.6	59.9	56.4
79°	28.8	28.0	36.9	48.0	54.9	51.4
79.5°	26.5	25.3	33.8	43.8	50.3	46.5
80°	24.2	23.0	30.3	39.9	46.1	41.8
80.5°	22.3	21.1	27.6	36.1	41.8	37.6
81°	20.3	18.8	24.6	32.6	37.6	33.4
81.5°	18.4	16.9	22.3	29.2	33.8	29.2
82°	16.5	15.0	19.6	25.7	30.3	25.3
82.5°	15.0	13.4	17.3	23.0	26.9	21.9
83°	13.1	11.9	15.0	20.0	23.8	18.4
83.5°	11.5	10.0	13.1	17.3	20.7	15.0
84°	10.0	8.4	11.1	15.0	18.0	12.3
84.5°	8.4	6.9	9.2	12.7	15.4	9.6
85°	6.9	5.8	7.3	10.7	13.4	6.9
85.5°	5.4	4.2	5.8	8.4	11.1	4.2
86°	4.2	3.1	4.2	6.1	8.8	3.1
86.5°	3.1	1.9	2.7	4.2	6.9	2.3
87°	1.5	0.8	1.2	2.7	4.6	1.9
87.5°	0.8	0.4	0.4	1.2	2.7	1.2
88°	0.0	0.0	0.0	0.0	1.2	0.8
88.5°	0.0	0.0	0.0	0.0	0.0	0.4



TEST NUMBER: P776395

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRH-HCD6TRLWW-4000lm-2700K

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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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°	2224.4	2204.8	2120.4	1979.1	1795.6	1603.6	1440.8	1337.2	1303.0	1339.5	1443.5
22°	2220.6	2200.6	2115.0	1971.8	1786.0	1590.6	1425.1	1319.9	1285.3	1323.0	1427.8



44°	1379.8	1415.1	1389.0	1290.3	1131.8	925.2	747.9	647.3	614.3	645.0	739.0
44.5°	1345.2	1380.6	1359.1	1264.2	1110.3	908.0	733.7	633.5	600.4	631.2	722.9



66.5°	266.4	283.7	282.9	257.2	226.1	178.1	155.5	147.4	135.1	132.1	126.7
67°	253.8	270.7	269.1	244.6	214.2	168.2	149.0	141.3	128.6	125.9	121.3



89°	0.0	1.2	2.3	2.3	3.1	3.1	2.3	1.2	0.0	0.0	0.0
89.5°	0.0	0.4	0.8	1.2	1.9	1.9	1.2	0.4	0.0	0.0	0.0

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21.5°	1597.1	1758.3	1926.5	2070.5	2176.0	2224.4
22°	1583.3	1748.3	1917.7	2063.9	2170.7	2220.6



44°	878.0	999.7	1113.7	1212.8	1304.2	1379.8
44.5°	858.0	975.1	1085.3	1180.9	1270.8	1345.2

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66.5°	142.8	165.9	200.8	235.3	258.0	266.4
67°	134.8	156.3	190.4	223.8	245.7	253.8

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

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Scaled Data Report



(END OF REPORT)