

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: P775931

Luminaire Tested: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775931  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B029)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL51525CSD-HCD41TRH-2500lm-3000K  
Description: 4 INCH ROUND SHALLOW-WIDE HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

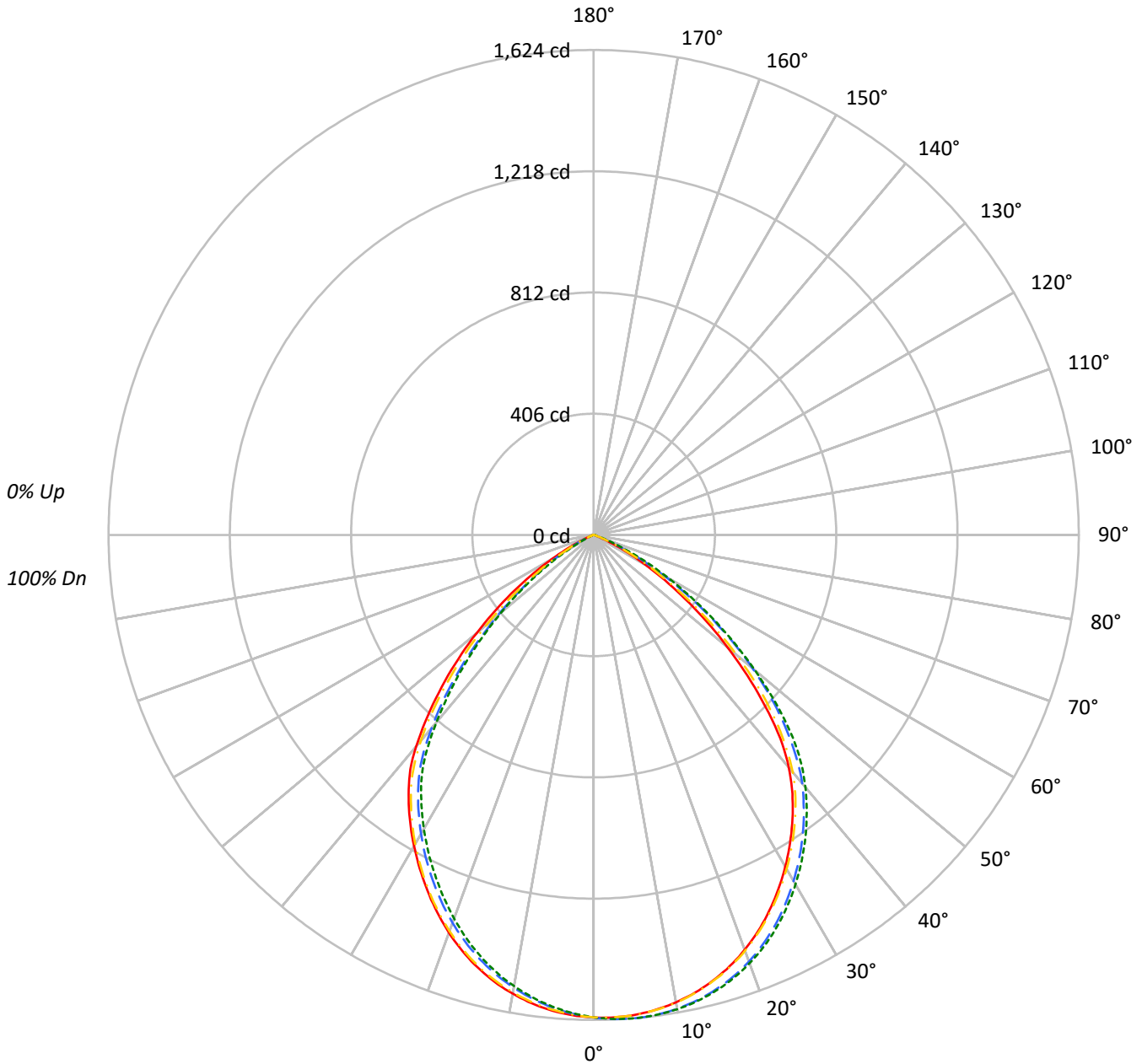
Lumens per Lamp: N/A  
Luminaire Lumens: 2890.5 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.22  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 25  
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



TEST NUMBER: P775931  
CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P775931

CATALOG NUMBER: HCDJBLS1525CSD-HCD41TRH-2500lm-3000K

**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	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	112	109	105	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90								
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80								
3	97	89	83	77	95	87	82	77	85	80	76	82	78	74	80	76	73	71								
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63								
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57								
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51								
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46								
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42								
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38								
10	60	49	42	37	59	48	41	37	47	41	37	46	41	36	46	40	36	35								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	203348	203348	203348	203348
5°	203758	205186	201977	200259
10°	203073	206114	199380	196032
15°	201284	205922	195434	190379
20°	198010	204452	189801	183051
25°	192987	201277	182684	174450
30°	186415	196355	174819	165198
35°	178170	189907	165910	154418
40°	166980	181157	151717	134550
45°	144839	165520	127913	107962
50°	114555	137756	100184	79000
55°	82280	106459	70366	50136
60°	50315	72565	40297	24062
65°	21113	38772	15068	7147
70°	4710	11370	4379	3091
75°	3258	4182	3015	2042
80°	2319	3189	2174	1449
85°	722	2888	289	289

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 165520 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.3	5.3
10°-20°	428.4	14.8
20°-30°	622.5	21.5
30°-40°	697.4	24.1
40°-50°	587.2	20.3
50°-60°	316.1	10.9
60°-70°	77.9	2.7
70°-80°	7.4	0.3
80°-90°	1.3	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1203.2	41.6
0°-40°	1900.6	65.8
0°-60°	2803.9	97.0
0°-90°	2890.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2890.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1616	1616	1616	1616	1616	
5°	1613	1624	1599	1585	1613	153
15°	1545	1580	1500	1461	1545	435
25°	1390	1450	1316	1256	1390	639
35°	1160	1236	1080	1005	1160	723
45°	814	930	719	607	814	622
55°	375	485	321	228	375	338
65°	71	130	51	24	71	80
75°	7	9	6	4	7	8
85°	0	2	0	0	0	1
90°	0	0	0	0	0	



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL5125CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8
0.5°	1616.8	1617.8	1618.3	1617.8	1617.3	1616.3	1615.8	1615.3	1615.3	1615.3	1614.8
1°	1617.1	1619.0	1619.8	1619.5	1618.8	1617.8	1616.3	1615.1	1614.3	1613.6	1612.6
1.5°	1617.3	1619.8	1621.3	1621.0	1620.3	1618.8	1616.8	1614.8	1613.1	1611.6	1610.4
2°	1617.3	1620.5	1622.2	1622.2	1621.5	1619.5	1616.8	1614.1	1611.9	1609.6	1607.9
2.5°	1617.1	1621.0	1623.2	1623.2	1622.5	1620.0	1616.8	1613.1	1610.1	1607.4	1605.0
3°	1616.6	1621.3	1623.7	1624.0	1623.2	1620.5	1616.3	1612.1	1608.4	1605.0	1602.2
3.5°	1615.8	1621.3	1624.2	1624.7	1623.7	1620.5	1615.8	1610.9	1606.2	1602.0	1599.0
4°	1615.1	1621.0	1624.5	1625.0	1624.2	1620.5	1615.3	1609.4	1604.0	1599.3	1595.8
4.5°	1614.1	1620.5	1624.5	1625.2	1624.5	1620.3	1614.3	1607.7	1601.5	1596.3	1592.1
5°	1612.9	1620.0	1624.2	1625.5	1624.2	1619.8	1613.1	1605.7	1598.8	1592.8	1588.4
5.5°	1611.4	1619.3	1623.7	1625.2	1624.2	1619.0	1611.9	1603.7	1595.8	1589.4	1584.7
6°	1609.6	1618.3	1623.5	1624.7	1623.7	1618.3	1610.1	1601.2	1592.8	1585.7	1580.5
6.5°	1607.7	1617.1	1622.5	1624.0	1623.0	1617.1	1608.4	1598.8	1589.4	1581.7	1576.0
7°	1605.9	1615.6	1621.5	1623.2	1622.2	1615.8	1606.4	1596.1	1585.9	1577.8	1571.4
7.5°	1603.5	1614.1	1620.3	1622.2	1621.0	1614.3	1604.5	1593.1	1582.2	1573.3	1566.7
8°	1601.0	1612.4	1618.8	1621.0	1619.8	1612.6	1602.0	1589.9	1578.3	1568.6	1561.7
8.5°	1598.3	1610.1	1617.3	1619.5	1618.3	1610.9	1599.3	1586.4	1573.8	1563.7	1556.5
9°	1595.6	1607.9	1615.6	1617.8	1616.6	1608.7	1596.6	1582.7	1569.6	1558.8	1551.1
9.5°	1592.4	1605.4	1613.4	1616.1	1614.8	1606.4	1593.6	1579.0	1564.9	1553.8	1545.7
10°	1589.1	1603.0	1611.1	1613.8	1612.9	1604.0	1590.4	1575.1	1560.2	1548.4	1540.0
10.5°	1585.7	1600.0	1608.7	1611.6	1610.4	1601.2	1586.9	1570.6	1555.0	1542.7	1533.8
11°	1582.0	1597.0	1605.9	1609.2	1607.9	1598.3	1583.2	1566.2	1549.9	1537.0	1527.6
11.5°	1578.0	1593.6	1603.2	1606.4	1605.2	1595.1	1579.5	1561.5	1544.4	1530.8	1521.4
12°	1574.1	1590.1	1600.0	1603.5	1602.5	1591.6	1575.6	1556.8	1538.7	1524.7	1514.8
12.5°	1569.6	1586.4	1596.6	1600.3	1599.3	1588.2	1571.1	1551.3	1532.8	1518.5	1507.9
13°	1565.2	1582.5	1593.1	1597.0	1596.1	1584.4	1566.7	1546.2	1526.6	1511.8	1501.2
13.5°	1560.2	1578.3	1589.1	1593.3	1592.4	1580.5	1562.0	1540.7	1520.5	1504.6	1493.8
14°	1555.3	1573.8	1585.4	1589.6	1588.6	1576.5	1557.3	1535.0	1513.5	1497.7	1486.4
14.5°	1550.1	1569.4	1581.2	1585.4	1584.7	1572.1	1552.1	1528.9	1506.9	1490.3	1478.9
15°	1544.9	1564.7	1576.8	1581.2	1580.5	1567.4	1546.9	1522.4	1500.0	1483.1	1471.3
15.5°	1539.2	1559.5	1572.1	1576.8	1576.0	1562.7	1541.2	1516.0	1492.5	1475.0	1462.9
16°	1533.3	1554.3	1567.4	1572.3	1571.4	1557.5	1535.8	1509.6	1485.1	1467.1	1454.7
16.5°	1527.1	1548.9	1562.2	1567.4	1566.7	1552.3	1529.6	1502.4	1477.2	1459.2	1446.3
17°	1521.0	1542.9	1557.0	1562.2	1561.7	1546.9	1523.4	1495.3	1469.6	1450.8	1437.9
17.5°	1514.3	1537.3	1551.3	1556.8	1556.3	1541.2	1517.0	1488.1	1461.2	1442.1	1428.8
18°	1507.6	1531.1	1545.7	1551.1	1550.8	1535.3	1510.3	1480.7	1452.8	1433.2	1419.9
18.5°	1500.7	1524.7	1539.7	1545.2	1545.2	1529.4	1503.7	1472.8	1444.1	1424.1	1410.5
19°	1493.5	1518.0	1533.3	1539.2	1539.2	1522.9	1496.5	1464.9	1435.2	1414.7	1401.4
19.5°	1486.1	1511.1	1526.9	1532.8	1533.1	1516.5	1489.3	1456.5	1426.3	1405.6	1391.5
20°	1478.5	1503.9	1520.2	1526.1	1526.6	1509.6	1481.7	1448.1	1417.2	1396.2	1381.9
20.5°	1470.5	1496.7	1513.0	1519.5	1520.0	1502.7	1474.3	1439.4	1407.8	1386.1	1372.0
21°	1462.4	1489.1	1505.9	1512.6	1513.0	1495.3	1466.3	1430.8	1397.9	1376.2	1361.8



TEST NUMBER: P775931

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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°	1436.7	1465.1	1482.7	1489.8	1491.1	1472.3	1441.1	1403.1	1368.3	1345.0	1330.5
23°	1428.1	1456.5	1474.5	1481.7	1483.4	1464.1	1432.5	1393.7	1358.1	1334.7	1319.8
23.5°	1418.7	1447.8	1466.1	1473.8	1475.2	1456.0	1423.4	1383.8	1347.5	1323.8	1308.7
24°	1409.3	1438.9	1457.5	1465.1	1466.8	1447.3	1414.2	1374.2	1337.1	1312.9	1297.6
24.5°	1399.6	1429.5	1448.6	1456.5	1458.2	1438.4	1404.8	1363.8	1326.5	1302.0	1286.5
25°	1389.8	1420.4	1439.4	1447.6	1449.5	1429.5	1395.4	1353.9	1315.6	1291.2	1275.4
25.5°	1379.9	1411.0	1430.3	1438.7	1440.9	1420.6	1385.8	1343.6	1304.8	1279.6	1264.0
26°	1369.7	1401.1	1420.6	1429.3	1431.5	1411.0	1376.2	1333.2	1294.1	1268.2	1252.4
26.5°	1359.4	1391.2	1411.3	1419.9	1421.9	1401.4	1366.0	1322.3	1282.8	1256.6	1240.8
27°	1349.2	1381.1	1401.4	1410.3	1412.5	1391.5	1355.9	1311.9	1271.4	1245.2	1228.9
27.5°	1338.4	1370.7	1391.2	1400.6	1402.6	1381.6	1345.3	1301.1	1260.3	1233.6	1217.1
28°	1327.5	1360.4	1380.9	1390.5	1392.7	1371.2	1335.2	1290.2	1248.9	1221.8	1205.2
28.5°	1316.6	1350.0	1370.5	1380.1	1382.6	1361.3	1324.5	1278.8	1237.3	1210.1	1192.8
29°	1305.5	1339.1	1359.9	1369.7	1372.2	1351.0	1313.7	1267.7	1226.0	1198.3	1180.7
29.5°	1294.1	1328.2	1349.2	1359.4	1361.8	1340.3	1302.5	1256.6	1214.3	1185.9	1168.6
30°	1282.8	1316.9	1338.1	1348.3	1351.2	1329.2	1291.9	1245.5	1203.0	1174.1	1156.0
30.5°	1271.4	1305.8	1327.2	1337.9	1340.3	1318.4	1280.6	1233.9	1190.9	1162.0	1143.4
31°	1259.6	1294.6	1315.9	1326.8	1329.5	1307.5	1269.2	1222.2	1179.0	1149.6	1130.6
31.5°	1247.9	1282.8	1304.8	1315.4	1318.1	1296.1	1257.6	1210.6	1167.1	1137.3	1117.7
32°	1235.8	1271.2	1292.9	1303.8	1306.7	1284.5	1246.5	1199.3	1155.3	1124.7	1104.6
32.5°	1224.0	1259.3	1281.5	1292.7	1295.4	1273.1	1234.6	1187.4	1143.2	1111.8	1091.3
33°	1211.1	1247.2	1269.7	1281.0	1283.8	1261.8	1223.0	1175.8	1130.6	1099.0	1078.2
33.5°	1199.0	1235.3	1257.6	1269.2	1271.9	1249.7	1211.1	1163.2	1118.0	1085.9	1064.4
34°	1185.9	1223.0	1245.2	1257.3	1260.3	1238.1	1199.0	1151.1	1105.4	1073.0	1050.8
34.5°	1173.3	1210.1	1233.4	1245.2	1247.9	1226.0	1186.9	1138.5	1092.8	1059.4	1037.2
35°	1159.7	1197.0	1220.8	1233.1	1236.1	1213.6	1174.3	1125.9	1079.9	1046.1	1022.9
35.5°	1147.4	1184.4	1207.9	1220.3	1223.7	1201.0	1161.5	1113.3	1066.8	1032.5	1008.3
36°	1133.8	1171.3	1194.8	1207.9	1211.1	1188.4	1148.9	1100.4	1053.5	1018.7	994.2
36.5°	1120.5	1158.0	1182.2	1194.8	1198.0	1175.5	1135.8	1087.6	1040.2	1004.3	978.6
37°	1106.1	1144.4	1168.9	1181.5	1184.7	1162.2	1122.4	1074.0	1026.3	989.0	961.6
37.5°	1093.0	1130.8	1155.5	1168.4	1171.6	1149.1	1109.3	1060.4	1012.0	972.2	943.6
38°	1078.0	1117.2	1141.7	1155.0	1158.5	1135.8	1095.5	1046.6	996.4	954.7	924.5
38.5°	1063.1	1103.4	1128.4	1141.2	1144.9	1121.9	1081.4	1032.0	979.9	936.6	904.8
39°	1047.6	1088.6	1114.8	1127.6	1131.3	1108.1	1067.3	1016.2	962.3	917.9	884.8
39.5°	1032.7	1073.5	1100.4	1113.8	1117.5	1093.5	1052.5	999.1	943.8	898.1	864.7
40°	1016.4	1058.4	1085.6	1099.0	1102.7	1079.2	1036.5	981.8	923.5	878.1	844.5
40.5°	999.4	1042.6	1070.3	1084.1	1088.1	1063.6	1019.4	963.3	903.5	857.6	823.2
41°	981.8	1026.1	1054.5	1069.1	1073.0	1048.3	1001.9	944.5	883.5	836.6	802.2
41.5°	963.6	1008.3	1037.2	1052.5	1057.5	1032.0	984.1	925.8	863.3	816.3	781.7
42°	944.8	990.2	1019.4	1035.5	1041.4	1015.0	965.3	906.5	842.5	793.8	759.7
42.5°	924.8	971.5	1001.1	1017.9	1024.6	996.9	946.5	886.5	821.7	772.3	738.2
43°	903.5	952.0	982.6	999.4	1007.3	978.1	927.2	865.5	801.5	751.1	716.0
43.5°	881.5	931.9	963.8	980.6	988.8	959.1	907.5	845.0	781.2	729.8	694.8



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	813.8	870.2	905.3	922.6	930.0	897.8	846.0	782.7	718.7	665.4	628.8
45.5°	790.4	849.2	885.7	902.8	908.2	876.6	824.7	762.0	698.5	644.4	606.8
46°	766.9	827.4	865.2	882.5	886.7	854.6	803.2	741.0	677.2	623.1	584.6
46.5°	743.9	804.7	844.7	861.8	864.5	832.6	781.5	720.0	656.5	602.1	563.1
47°	720.7	782.7	824.2	841.0	841.5	809.9	759.0	698.5	635.7	581.1	541.3
47.5°	697.7	760.2	802.5	819.8	818.8	786.9	736.8	677.5	615.0	561.3	519.8
48°	674.5	737.7	781.2	798.3	795.3	763.9	714.3	656.5	593.7	540.1	498.8
48.5°	651.8	715.0	759.7	776.5	772.3	740.7	691.8	635.5	573.2	519.6	478.6
49°	629.5	692.5	738.7	754.8	749.1	717.5	669.1	613.7	552.7	499.1	457.6
49.5°	606.8	669.3	716.5	732.8	726.4	694.3	646.6	593.0	532.4	479.3	437.6
50°	585.1	646.6	694.5	710.1	703.6	670.8	623.6	571.2	511.7	459.5	417.5
50.5°	562.3	624.1	672.3	687.3	681.9	647.6	600.9	550.2	491.4	439.8	398.3
51°	540.8	601.9	650.3	665.1	658.4	624.8	578.1	528.5	471.7	420.5	379.2
51.5°	519.1	579.1	627.6	642.1	636.2	602.8	556.2	508.2	452.1	401.5	361.2
52°	498.1	557.6	606.1	620.4	614.5	580.6	533.9	487.2	432.6	382.5	342.9
52.5°	476.6	535.9	583.3	597.4	593.2	557.6	512.2	466.2	413.1	363.7	325.4
53°	455.8	514.1	560.8	575.2	570.5	535.6	490.2	445.5	394.1	345.4	307.6
53.5°	435.1	492.4	538.1	552.0	548.5	514.1	469.2	425.7	375.3	327.6	290.8
54°	414.8	471.2	516.1	530.2	527.0	492.7	447.4	405.4	357.0	309.8	274.5
54.5°	394.6	450.7	494.1	508.0	506.7	471.4	427.2	385.2	338.5	292.5	258.4
55°	375.0	429.9	472.4	486.7	485.2	450.2	406.7	365.9	320.7	276.0	243.4
55.5°	355.3	409.4	450.7	464.5	464.0	429.9	386.9	346.9	302.9	259.4	229.3
56°	336.8	389.4	428.9	444.2	443.2	409.1	367.1	327.9	285.6	243.6	214.9
56.5°	317.7	369.9	407.9	423.0	423.5	389.1	347.6	309.1	268.6	228.8	200.6
57°	299.9	350.3	386.2	402.2	402.7	369.4	328.8	291.3	252.0	214.2	186.5
57.5°	281.9	331.1	365.9	381.2	382.7	350.3	310.6	273.8	235.7	199.4	172.2
58°	264.6	312.5	345.9	362.2	363.4	331.6	292.8	256.2	220.4	184.8	159.6
58.5°	247.8	294.5	326.1	342.2	343.7	313.3	275.5	239.7	205.1	170.0	147.5
59°	231.5	276.0	306.6	322.7	324.9	295.5	258.2	224.1	189.7	156.6	135.6
59.5°	215.7	258.4	287.6	303.2	306.6	278.0	241.6	208.3	174.4	144.0	124.3
60°	199.9	241.4	269.1	285.4	288.3	260.7	226.6	192.7	160.1	131.7	113.7
60.5°	184.8	224.3	251.0	267.1	270.5	244.4	211.5	177.1	146.5	120.1	103.0
61°	170.2	207.8	233.5	248.8	253.0	229.0	196.4	163.1	133.4	108.7	93.1
61.5°	156.4	192.2	216.9	231.7	236.7	214.0	181.3	149.7	120.8	98.3	84.0
62°	143.1	176.9	200.6	214.9	220.6	198.6	166.3	136.6	109.0	88.2	75.4
62.5°	129.7	162.1	184.6	198.4	204.6	183.6	152.7	124.3	97.1	78.8	67.0
63°	116.9	147.5	169.2	182.6	188.5	168.3	139.6	111.9	86.5	69.7	58.8
63.5°	104.3	133.7	154.7	166.8	172.5	154.7	127.2	100.8	76.3	61.5	51.6
64°	91.9	120.1	140.6	152.2	157.6	141.3	115.1	90.4	67.0	53.6	45.0
64.5°	81.3	107.0	127.2	137.9	143.5	128.2	104.3	80.5	58.6	46.4	38.5
65°	70.9	94.6	114.4	124.5	130.2	116.1	93.4	71.2	50.6	40.0	33.1
65.5°	60.5	84.0	102.0	111.7	117.1	104.3	83.5	62.5	43.0	34.1	29.2
66°	50.2	74.1	90.4	99.1	104.5	92.9	73.6	54.6	36.6	28.9	25.2





TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	25.9	45.0	62.0	68.7	71.4	62.8	49.2	34.1	24.0	19.0	13.3
68°	20.8	37.8	52.4	59.5	61.8	54.1	42.0	28.9	20.5	15.6	11.6
68.5°	17.0	31.4	43.0	50.2	52.9	46.2	35.6	25.7	17.0	12.4	10.6
69°	14.8	25.9	35.6	40.8	44.5	39.0	30.1	22.7	13.6	11.1	9.9
69.5°	13.6	21.5	29.2	33.8	37.1	32.6	26.4	19.5	12.6	10.4	9.1
70°	12.8	17.8	23.7	27.9	30.9	28.7	23.0	16.3	11.9	9.6	8.6
70.5°	12.1	14.8	19.0	22.7	27.2	24.7	19.5	13.3	11.1	9.1	8.2
71°	11.4	12.6	15.6	18.5	23.5	20.8	16.1	12.1	10.4	8.6	7.4
71.5°	10.6	11.6	13.1	15.3	19.8	16.8	12.6	11.4	9.6	7.9	6.9
72°	9.9	10.9	11.6	12.8	16.1	12.8	11.6	10.6	9.1	7.4	6.7
72.5°	9.4	10.1	10.6	11.6	12.4	11.6	10.9	9.9	8.4	6.9	6.2
73°	8.9	9.4	9.9	10.9	11.4	10.9	10.1	9.4	7.9	6.4	5.7
73.5°	8.2	8.9	9.4	10.1	10.6	10.1	9.4	8.6	7.4	6.2	5.4
74°	7.7	8.4	8.9	9.4	9.9	9.4	8.9	8.2	6.9	5.7	4.9
74.5°	7.2	7.7	8.2	8.9	9.4	8.9	8.2	7.7	6.4	5.2	4.7
75°	6.7	7.2	7.7	8.2	8.6	8.2	7.7	7.2	6.2	4.9	4.2
75.5°	6.2	6.7	7.2	7.7	8.2	7.7	7.2	6.7	5.7	4.7	4.0
76°	5.9	6.4	6.7	7.2	7.7	7.2	6.7	6.2	5.2	4.2	3.7
76.5°	5.4	5.9	6.2	6.7	7.2	6.7	6.2	5.7	4.9	4.0	3.5
77°	5.2	5.4	5.9	6.2	6.7	6.2	5.9	5.4	4.7	3.7	3.2
77.5°	4.7	5.2	5.4	5.9	6.2	5.9	5.4	4.9	4.2	3.5	3.0
78°	4.4	4.9	5.2	5.4	5.7	5.4	4.9	4.7	4.0	3.2	2.7
78.5°	4.2	4.4	4.7	5.2	5.4	5.2	4.7	4.2	3.7	3.0	2.5
79°	3.7	4.2	4.4	4.7	4.9	4.7	4.4	4.0	3.5	2.7	2.2
79.5°	3.5	4.0	4.2	4.4	4.7	4.4	4.0	3.7	3.2	2.5	2.2
80°	3.2	3.5	3.7	4.2	4.4	4.2	3.7	3.5	3.0	2.2	2.0
80.5°	3.0	3.2	3.5	4.0	4.0	4.0	3.5	3.2	2.7	2.0	1.7
81°	2.7	3.0	3.2	3.7	3.7	3.5	3.2	3.0	2.5	1.7	1.5
81.5°	2.5	2.7	3.0	3.5	3.5	3.2	3.0	2.7	2.2	1.5	1.5
82°	2.0	2.5	2.7	3.2	3.2	3.0	2.7	2.5	2.0	1.2	1.2
82.5°	1.7	2.2	2.7	3.0	3.0	3.0	2.5	2.2	1.5	1.0	1.2
83°	1.5	2.0	2.5	2.7	2.7	2.7	2.5	2.0	1.2	1.0	1.0
83.5°	1.0	1.7	2.2	2.5	2.5	2.5	2.2	1.7	1.0	0.7	1.0
84°	0.7	1.5	2.0	2.2	2.5	2.2	2.0	1.5	0.7	0.5	0.7
84.5°	0.5	1.2	1.7	2.0	2.2	2.0	1.7	1.2	0.5	0.5	0.5
85°	0.5	1.0	1.7	2.0	2.0	2.0	1.7	1.0	0.2	0.5	0.5
85.5°	0.2	1.0	1.5	1.7	1.7	1.7	1.5	1.0	0.2	0.2	0.2
86°	0.2	0.7	1.5	1.5	1.7	1.5	1.2	0.7	0.2	0.2	0.2
86.5°	0.2	0.7	1.2	1.5	1.5	1.5	1.2	0.7	0.2	0.2	0.0
87°	0.2	0.7	1.0	1.2	1.2	1.2	1.0	0.5	0.0	0.0	0.0
87.5°	0.0	0.5	1.0	1.0	1.2	1.0	0.7	0.5	0.0	0.0	0.0
88°	0.0	0.2	0.7	1.0	1.0	1.0	0.7	0.2	0.0	0.0	0.0
88.5°	0.0	0.2	0.5	0.7	0.7	0.7	0.5	0.2	0.0	0.0	0.0



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**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	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1615.8	1615.8	1615.8	1615.8	1615.8	1615.8
0.5°	1613.8	1613.1	1613.1	1614.1	1615.1	1616.8
1°	1611.6	1610.9	1611.4	1612.9	1614.8	1617.1
1.5°	1609.2	1608.4	1609.2	1611.4	1614.3	1617.3
2°	1606.4	1605.7	1606.9	1609.9	1613.4	1617.3
2.5°	1603.7	1603.0	1604.5	1607.9	1612.4	1617.1
3°	1600.5	1599.8	1602.0	1605.9	1611.1	1616.6
3.5°	1597.0	1596.6	1599.0	1603.7	1609.6	1615.8
4°	1593.6	1592.8	1596.1	1601.2	1607.9	1615.1
4.5°	1589.9	1589.1	1592.6	1598.5	1606.2	1614.1
5°	1585.9	1585.2	1589.1	1595.8	1604.2	1612.9
5.5°	1581.7	1581.0	1585.4	1592.8	1601.7	1611.4
6°	1577.3	1576.8	1581.5	1589.6	1599.3	1609.6
6.5°	1572.8	1572.3	1577.3	1586.2	1596.6	1607.7
7°	1568.1	1567.4	1572.8	1582.2	1593.8	1605.9
7.5°	1563.2	1562.5	1568.4	1578.3	1590.6	1603.5
8°	1558.0	1557.0	1563.4	1574.1	1587.7	1601.0
8.5°	1552.6	1551.8	1558.5	1569.9	1584.2	1598.3
9°	1547.1	1546.2	1553.1	1565.4	1580.5	1595.6
9.5°	1541.5	1540.2	1547.6	1560.5	1576.3	1592.4
10°	1535.5	1534.0	1542.0	1555.5	1572.3	1589.1
10.5°	1529.4	1527.9	1536.0	1550.6	1568.1	1585.7
11°	1522.9	1521.4	1530.1	1545.4	1563.7	1582.0
11.5°	1516.3	1514.8	1523.7	1539.7	1559.0	1578.0
12°	1509.6	1507.9	1517.2	1533.8	1554.1	1574.1
12.5°	1502.4	1500.4	1510.3	1527.6	1548.6	1569.6
13°	1495.3	1493.3	1503.2	1521.7	1543.4	1565.2
13.5°	1487.8	1485.6	1496.0	1515.0	1538.0	1560.2
14°	1480.2	1477.7	1488.6	1508.4	1532.3	1555.3
14.5°	1472.3	1469.8	1480.7	1501.4	1526.1	1550.1
15°	1464.1	1461.2	1472.8	1494.5	1520.0	1544.9
15.5°	1456.0	1452.5	1464.4	1487.1	1513.3	1539.2
16°	1447.3	1443.9	1456.2	1479.4	1506.6	1533.3
16.5°	1438.4	1435.0	1447.3	1471.8	1500.0	1527.1
17°	1429.5	1425.8	1438.7	1463.9	1493.0	1521.0
17.5°	1420.4	1416.4	1429.5	1455.7	1485.4	1514.3
18°	1411.3	1406.8	1420.4	1447.1	1478.0	1507.6
18.5°	1401.6	1396.9	1410.8	1438.4	1470.1	1500.7
19°	1392.0	1387.0	1401.1	1429.5	1462.1	1493.5
19.5°	1381.9	1377.2	1391.5	1420.6	1454.0	1486.1
20°	1371.7	1366.8	1381.6	1411.3	1445.6	1478.5
20.5°	1361.6	1356.2	1371.5	1401.9	1436.9	1470.5
21°	1351.2	1345.5	1360.9	1392.2	1428.1	1462.4

TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1319.1	1312.9	1329.5	1362.3	1400.6	1436.7
23°	1308.0	1301.8	1318.4	1352.2	1391.0	1428.1
23.5°	1297.1	1290.7	1307.7	1341.8	1381.4	1418.7
24°	1285.7	1279.3	1296.6	1331.0	1371.2	1409.3
24.5°	1274.4	1268.0	1285.5	1320.3	1361.3	1399.6
25°	1263.0	1256.3	1273.9	1309.5	1351.0	1389.8
25.5°	1251.2	1244.7	1262.8	1298.6	1340.6	1379.9
26°	1239.5	1233.4	1251.2	1287.5	1330.2	1369.7
26.5°	1227.7	1221.5	1239.8	1276.4	1319.6	1359.4
27°	1215.8	1209.9	1228.2	1265.0	1308.7	1349.2
27.5°	1204.0	1197.8	1216.6	1253.6	1297.8	1338.4
28°	1191.9	1185.7	1204.7	1242.0	1286.5	1327.5
28.5°	1179.5	1173.6	1192.6	1230.4	1275.4	1316.6
29°	1167.6	1161.7	1181.0	1218.5	1263.8	1305.5
29.5°	1155.3	1149.4	1168.9	1206.7	1252.4	1294.1
30°	1142.7	1136.8	1156.8	1194.8	1240.8	1282.8
30.5°	1129.8	1124.2	1144.4	1182.5	1228.7	1271.4
31°	1117.0	1111.6	1131.6	1170.4	1216.6	1259.6
31.5°	1104.1	1098.7	1119.0	1157.8	1204.7	1247.9
32°	1090.8	1085.9	1106.4	1145.2	1192.4	1235.8
32.5°	1078.0	1072.8	1093.5	1132.3	1180.0	1224.0
33°	1064.6	1059.4	1080.4	1119.7	1166.9	1211.1
33.5°	1051.3	1046.6	1067.6	1106.6	1154.1	1199.0
34°	1037.7	1033.0	1054.5	1093.5	1141.2	1185.9
34.5°	1023.9	1019.2	1040.7	1079.9	1127.6	1173.3
35°	1009.5	1005.1	1026.8	1066.8	1114.5	1159.7
35.5°	995.4	990.7	1013.0	1053.0	1100.9	1147.4
36°	980.9	975.2	998.6	1039.2	1087.3	1133.8
36.5°	964.3	958.9	983.1	1024.1	1073.5	1120.5
37°	946.5	940.8	965.8	1009.3	1058.7	1106.1
37.5°	928.2	921.6	947.8	992.7	1043.6	1093.0
38°	908.7	901.8	928.5	975.2	1028.3	1078.0
38.5°	889.0	881.5	908.7	956.9	1012.5	1063.1
39°	868.7	861.3	888.7	938.4	995.7	1047.6
39.5°	847.9	840.5	868.2	919.6	977.9	1032.7
40°	826.4	819.0	847.9	899.8	958.9	1016.4
40.5°	805.7	797.5	826.9	879.8	940.1	999.4
41°	783.7	776.3	806.7	859.5	920.6	981.8
41.5°	762.2	755.0	785.7	838.5	900.8	963.6
42°	740.2	734.0	764.9	817.5	880.8	944.8
42.5°	718.7	712.5	744.2	796.5	859.5	924.8
43°	696.2	691.0	723.7	774.8	838.3	903.5
43.5°	674.7	670.0	702.7	752.8	816.3	881.5



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBLS1525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	609.8	606.6	638.9	687.3	749.4	813.8
45.5°	588.3	585.6	617.7	664.6	726.6	790.4
46°	567.0	564.6	595.7	643.6	703.6	766.9
46.5°	546.3	543.5	573.7	621.4	679.9	743.9
47°	524.8	522.8	552.9	599.4	656.7	720.7
47.5°	504.3	502.3	531.2	576.9	633.5	697.7
48°	484.3	482.0	510.7	555.7	610.5	674.5
48.5°	464.0	462.0	489.7	533.2	587.0	651.8
49°	444.0	442.5	468.9	512.2	564.6	629.5
49.5°	424.0	422.7	448.9	490.4	542.1	606.8
50°	404.7	403.5	428.7	469.2	519.3	585.1
50.5°	385.4	384.2	408.7	446.7	497.1	562.3
51°	366.9	365.7	388.6	427.2	475.6	540.8
51.5°	348.9	347.4	369.6	406.2	454.4	519.1
52°	330.3	329.3	350.6	385.9	433.6	498.1
52.5°	312.8	311.8	332.1	364.7	412.9	476.6
53°	295.5	294.3	313.5	346.1	392.6	455.8
53.5°	278.7	277.2	295.2	326.9	373.1	435.1
54°	262.4	260.7	277.5	307.4	353.6	414.8
54.5°	246.3	244.6	260.7	289.1	335.0	394.6
55°	232.0	228.5	243.9	271.3	316.5	375.0
55.5°	217.4	213.2	227.1	254.0	298.5	355.3
56°	203.1	197.9	211.2	237.2	280.9	336.8
56.5°	188.5	183.3	195.7	220.6	264.1	317.7
57°	173.9	169.2	180.9	204.8	247.3	299.9
57.5°	161.1	155.4	166.3	190.0	231.0	281.9
58°	148.7	142.3	152.2	175.4	215.2	264.6
58.5°	136.6	129.7	139.1	161.6	200.1	247.8
59°	125.5	117.9	126.3	148.0	185.3	231.5
59.5°	114.1	106.5	114.4	135.4	171.0	215.7
60°	103.5	95.6	103.0	123.5	157.1	199.9
60.5°	93.4	85.5	92.2	111.7	143.8	184.8
61°	84.3	76.8	83.3	100.6	130.9	170.2
61.5°	74.9	68.2	74.6	90.4	118.8	156.4
62°	66.5	59.8	66.0	82.0	107.5	143.1
62.5°	58.8	51.1	57.3	73.4	96.1	129.7
63°	51.6	44.2	48.7	65.0	85.5	116.9
63.5°	44.5	38.3	42.0	56.6	76.6	104.3
64°	38.3	32.6	36.1	48.2	67.9	91.9
64.5°	32.6	28.2	31.1	41.5	59.3	81.3
65°	29.2	24.0	26.7	35.6	50.6	70.9
65.5°	25.7	20.5	23.0	30.1	43.5	60.5
66°	22.2	17.3	19.5	25.4	36.8	50.2



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	12.1	11.6	12.6	15.1	21.5	25.9
68°	10.9	10.9	11.4	13.1	18.0	20.8
68.5°	10.1	10.1	10.6	11.6	15.1	17.0
69°	9.6	9.4	9.9	10.9	13.1	14.8
69.5°	8.9	8.9	9.4	10.1	11.9	13.6
70°	8.4	8.4	8.9	9.6	11.1	12.8
70.5°	7.9	7.9	8.2	8.9	10.4	12.1
71°	7.2	7.2	7.7	8.4	9.6	11.4
71.5°	6.7	6.7	7.2	7.9	9.1	10.6
72°	6.4	6.4	6.7	7.4	8.6	9.9
72.5°	5.9	5.9	6.2	6.9	7.9	9.4
73°	5.4	5.4	5.7	6.4	7.4	8.9
73.5°	5.2	5.2	5.4	5.9	6.9	8.2
74°	4.7	4.7	4.9	5.4	6.4	7.7
74.5°	4.4	4.4	4.7	5.2	5.9	7.2
75°	4.2	4.2	4.4	4.9	5.7	6.7
75.5°	4.0	4.0	4.2	4.4	5.2	6.2
76°	3.7	3.7	3.7	4.2	4.9	5.9
76.5°	3.5	3.5	3.5	4.0	4.4	5.4
77°	3.2	3.2	3.2	3.7	4.2	5.2
77.5°	3.0	3.0	3.0	3.5	4.0	4.7
78°	2.7	2.7	3.0	3.2	3.7	4.4
78.5°	2.5	2.5	2.7	3.0	3.2	4.2
79°	2.2	2.2	2.5	2.7	3.0	3.7
79.5°	2.2	2.2	2.2	2.5	2.7	3.5
80°	2.0	2.0	2.0	2.2	2.5	3.2
80.5°	1.7	1.7	2.0	2.0	2.2	3.0
81°	1.7	1.7	1.7	1.7	2.0	2.7
81.5°	1.5	1.5	1.5	1.7	1.7	2.5
82°	1.2	1.2	1.5	1.5	1.5	2.0
82.5°	1.2	1.2	1.2	1.2	1.2	1.7
83°	1.0	1.0	1.0	1.2	1.0	1.5
83.5°	1.0	0.7	1.0	1.0	1.0	1.0
84°	0.7	0.7	0.7	1.0	0.7	0.7
84.5°	0.5	0.5	0.5	0.7	0.7	0.5
85°	0.5	0.2	0.5	0.5	0.5	0.5
85.5°	0.2	0.2	0.2	0.5	0.5	0.2
86°	0.0	0.0	0.0	0.2	0.2	0.2
86.5°	0.0	0.0	0.0	0.0	0.2	0.2
87°	0.0	0.0	0.0	0.0	0.0	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.2	0.0	0.0	0.0	0.0
88.5°	0.2	0.2	0.2	0.0	0.0	0.0



TEST NUMBER: P775931

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRH-2500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.2	0.0



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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - 135°-315°

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Scaled Data Report





21.5°	1454.0	1481.4	1498.5	1504.9	1506.1	1487.8	1457.9	1421.6	1388.3	1365.8	1351.5
22°	1445.6	1473.3	1490.8	1497.5	1498.5	1480.2	1449.5	1412.2	1378.4	1355.7	1341.1



44°	859.3	911.7	944.8	961.6	969.7	939.1	887.5	824.7	760.2	707.9	672.3
44.5°	837.1	891.2	925.3	942.1	950.5	918.6	866.7	804.0	739.5	686.8	650.3



66.5°	39.8	64.5	81.0	87.5	92.9	82.3	64.7	46.9	30.9	25.4	21.2
67°	32.1	54.6	71.4	78.1	81.8	72.1	56.6	40.0	27.4	22.2	17.3



89°	0.0	0.0	0.5	0.5	0.7	0.5	0.2	0.0	0.0	0.0	0.2
89.5°	0.0	0.0	0.2	0.2	0.5	0.2	0.2	0.0	0.0	0.0	0.2



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21.5°	1340.3	1334.9	1350.5	1382.6	1419.2	1454.0
22°	1329.7	1323.8	1340.1	1372.5	1409.8	1445.6



44°	653.0	649.0	681.4	731.1	794.6	859.3
44.5°	631.5	627.6	659.7	708.6	772.6	837.1



66.5°	19.0	15.1	16.6	21.2	31.1	39.8
67°	15.6	12.8	14.3	17.8	25.9	32.1

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89°	0.2	0.2	0.0	0.2	0.0	0.0
89.5°	0.2	0.0	0.0	0.2	0.0	0.0

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(END OF REPORT)