

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: P776020

Luminaire Tested: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776020  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2310613A001)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K  
Description: 4 INCH SQUARE MEDIUM MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

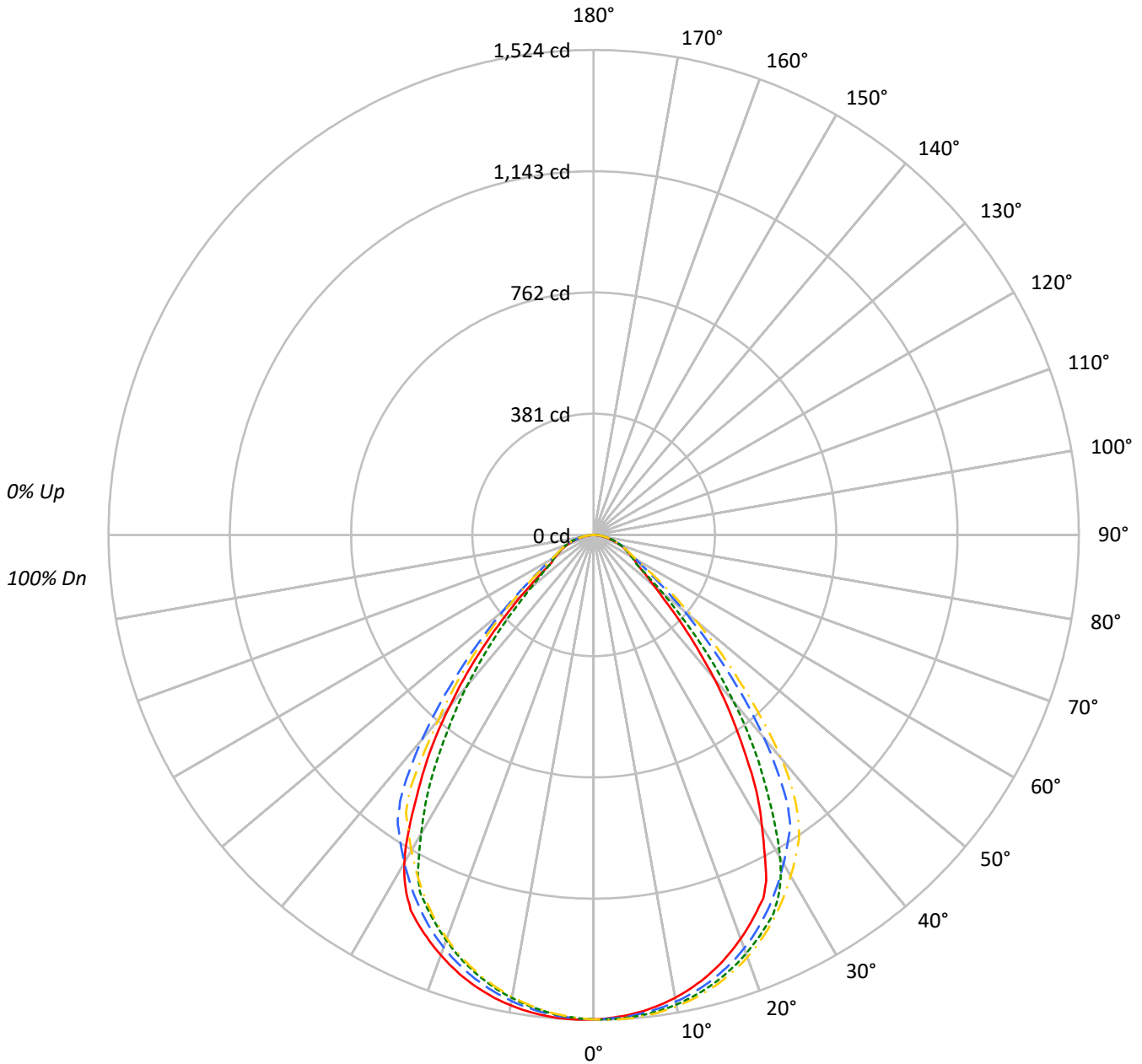
Lumens per Lamp: N/A  
Luminaire Lumens: 2517.5 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 1.13 / 1.17  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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: P776020  
CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K

### Luminous Intensity Polar Plot





TEST NUMBER: P776020

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TSQMW-2500lm-2700K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89		
2	104	97	92	88	101	96	91	86	92	88	85	89	86	83	86	83	81	79		
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70		
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63		
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	58	57		
6	79	67	60	55	77	67	59	54	65	59	54	63	58	53	62	57	53	51		
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47		
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43		
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39		
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	41	38	36		

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

	0°	90°	180°	270°
0°	150467	150467	150467	150467
5°	149673	150705	150854	149742
10°	148192	150380	150651	148342
15°	145757	149308	149728	146034
20°	142032	147260	147796	142569
25°	137492	144439	144865	138038
30°	120741	133673	135670	123720
35°	99053	112037	114462	102818
40°	75972	88346	91004	79714
45°	53411	64119	66691	56864
50°	37782	42918	45116	39119
55°	29899	29519	31277	30519
60°	28012	27162	27636	27972
65°	26405	26078	26241	27037
70°	24362	24998	24709	26183
75°	21921	23678	22761	25243
80°	17361	21915	19695	23736
85°	8506	17805	11795	20867

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 135°  
 Vertical Angle: 45°  
 Luminance: 90189 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.7	5.7
10°-20°	406.6	16.2
20°-30°	592.7	23.5
30°-40°	596.2	23.7
40°-50°	390.9	15.5
50°-60°	189.4	7.5
60°-70°	115.1	4.6
70°-80°	66.3	2.6
80°-90°	16.6	0.7
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°	1143.1	45.4
0°-40°	1739.2	69.1
0°-60°	2319.5	92.1
0°-90°	2517.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2517.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1522	1522	1522	1522	1522	
5°	1508	1519	1520	1509	1508	143
15°	1424	1459	1463	1427	1424	401
25°	1261	1324	1328	1266	1261	568
35°	821	928	949	852	821	512
45°	382	459	477	407	382	301
55°	174	171	182	177	174	162
65°	113	112	112	116	113	112
75°	57	62	60	66	57	61
85°	8	16	10	18	8	11
90°	0	0	0	0	0	



TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3
0.5°	1522.1	1521.6	1521.8	1521.8	1522.8	1523.1	1523.5	1523.8	1523.3	1522.3	1521.6
1°	1521.4	1520.9	1521.6	1522.1	1523.1	1523.5	1524.0	1524.3	1523.5	1522.3	1521.4
1.5°	1520.2	1520.2	1521.4	1522.1	1523.1	1523.8	1524.5	1524.5	1523.8	1522.3	1520.9
2°	1518.9	1519.2	1520.9	1522.1	1523.1	1523.8	1524.5	1524.5	1523.8	1522.1	1520.2
2.5°	1517.7	1518.2	1520.2	1521.6	1522.8	1523.8	1524.5	1524.5	1523.8	1521.8	1519.4
3°	1516.0	1516.8	1519.2	1521.1	1522.1	1523.5	1524.3	1524.5	1523.3	1521.4	1518.5
3.5°	1514.6	1515.3	1518.2	1520.6	1521.6	1523.1	1524.0	1524.0	1522.8	1520.6	1517.2
4°	1512.9	1513.9	1517.0	1519.9	1520.9	1522.6	1523.5	1523.8	1522.3	1519.7	1516.3
4.5°	1510.7	1511.9	1515.5	1518.9	1520.2	1521.6	1523.1	1523.1	1521.6	1518.7	1514.8
5°	1508.5	1510.0	1513.9	1517.7	1518.9	1520.9	1522.1	1522.1	1520.4	1517.5	1512.9
5.5°	1506.3	1507.8	1512.2	1516.5	1517.7	1519.7	1521.1	1521.1	1519.4	1516.3	1511.2
6°	1503.9	1505.6	1510.5	1515.1	1516.3	1518.2	1519.9	1519.9	1518.0	1514.6	1509.2
6.5°	1501.3	1503.2	1508.5	1513.6	1514.6	1517.0	1518.5	1518.5	1516.3	1512.9	1507.1
7°	1498.1	1500.3	1506.3	1511.9	1512.6	1515.3	1517.0	1517.0	1514.8	1511.2	1504.6
7.5°	1495.0	1497.4	1503.9	1510.0	1510.7	1513.6	1515.3	1515.1	1512.9	1509.0	1502.2
8°	1491.8	1494.5	1501.0	1507.8	1508.5	1511.7	1513.4	1513.1	1510.9	1506.8	1499.6
8.5°	1488.2	1490.8	1498.6	1505.6	1506.3	1509.5	1511.2	1511.2	1508.8	1504.4	1496.7
9°	1484.5	1487.4	1495.7	1503.2	1503.9	1507.3	1509.0	1509.0	1506.3	1502.0	1493.7
9.5°	1480.7	1483.8	1492.5	1500.3	1501.3	1504.9	1506.6	1506.3	1503.7	1499.1	1490.6
10°	1476.5	1480.2	1489.1	1497.6	1498.3	1502.0	1504.2	1503.9	1501.0	1496.2	1487.2
10.5°	1472.2	1476.1	1485.7	1494.5	1495.2	1499.1	1501.3	1501.0	1498.1	1493.3	1483.6
11°	1467.8	1471.7	1482.1	1491.3	1492.0	1495.9	1498.3	1498.1	1495.2	1489.9	1479.7
11.5°	1463.2	1467.3	1478.2	1487.9	1488.4	1492.8	1495.2	1494.7	1491.8	1486.5	1475.8
12°	1458.1	1462.7	1474.1	1484.3	1484.8	1489.6	1492.0	1491.3	1488.2	1482.8	1471.7
12.5°	1453.0	1457.9	1469.8	1480.4	1480.9	1486.0	1488.4	1487.7	1484.5	1479.0	1467.3
13°	1447.7	1453.0	1465.4	1476.8	1477.0	1481.9	1484.8	1484.1	1480.7	1475.1	1463.0
13.5°	1442.4	1447.7	1461.0	1472.4	1472.9	1478.2	1480.9	1479.9	1476.5	1470.7	1458.1
14°	1436.8	1442.1	1455.9	1468.3	1468.5	1473.9	1476.8	1475.8	1472.2	1466.1	1453.3
14.5°	1430.7	1436.3	1451.1	1463.7	1463.9	1469.3	1472.4	1471.7	1467.8	1461.5	1448.2
15°	1424.4	1430.5	1445.8	1459.1	1459.1	1464.9	1468.1	1466.8	1463.2	1456.9	1442.9
15.5°	1417.9	1424.4	1440.4	1454.2	1454.2	1460.3	1463.5	1462.2	1458.1	1451.8	1437.3
16°	1411.4	1418.1	1434.6	1449.2	1448.9	1455.0	1458.6	1457.2	1453.0	1446.7	1431.7
16.5°	1404.3	1411.6	1428.8	1443.6	1443.3	1449.9	1453.5	1452.1	1447.7	1441.2	1425.7
17°	1397.3	1404.8	1423.0	1438.3	1437.8	1444.3	1448.2	1447.0	1442.4	1435.6	1419.6
17.5°	1389.8	1397.8	1416.7	1432.7	1432.0	1439.0	1442.6	1441.4	1436.3	1429.8	1413.3
18°	1382.5	1390.8	1410.2	1426.6	1425.9	1433.2	1436.8	1435.3	1430.3	1423.7	1406.8
18.5°	1374.5	1383.0	1403.6	1420.6	1419.8	1426.9	1431.0	1429.3	1424.4	1417.7	1400.0
19°	1366.8	1375.5	1396.6	1414.5	1413.3	1420.3	1424.9	1423.0	1418.1	1411.1	1393.2
19.5°	1358.5	1367.5	1389.6	1407.7	1406.8	1414.5	1418.6	1416.5	1411.8	1404.3	1386.2
20°	1350.3	1359.8	1382.3	1400.9	1400.0	1407.5	1411.8	1410.2	1405.1	1397.6	1378.7
20.5°	1342.1	1351.5	1374.5	1393.9	1392.9	1400.7	1405.3	1403.1	1398.0	1390.5	1370.9
21°	1333.6	1343.0	1366.8	1386.9	1385.7	1393.7	1398.3	1396.1	1391.0	1383.5	1363.4

TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1306.4	1316.9	1342.3	1364.1	1363.6	1371.6	1376.0	1374.3	1369.0	1360.7	1338.9
23°	1297.2	1307.9	1333.3	1356.6	1355.6	1363.9	1368.2	1366.5	1361.2	1352.7	1330.2
23.5°	1288.0	1298.5	1324.4	1348.6	1347.6	1356.1	1360.2	1358.5	1353.7	1344.5	1321.2
24°	1278.1	1289.0	1315.4	1340.4	1339.6	1348.1	1352.0	1350.5	1345.7	1336.3	1312.3
24.5°	1269.6	1279.8	1306.2	1332.1	1331.4	1339.9	1343.3	1342.3	1337.2	1328.0	1303.1
25°	1260.7	1270.1	1296.5	1323.4	1324.4	1331.6	1334.6	1333.8	1328.3	1319.5	1293.4
25.5°	1246.1	1260.4	1286.8	1314.7	1314.7	1323.2	1325.8	1325.6	1320.0	1310.8	1283.9
26°	1230.1	1251.0	1276.9	1306.0	1301.6	1314.2	1316.6	1316.9	1311.8	1301.8	1273.7
26.5°	1215.1	1242.0	1267.0	1297.0	1290.5	1305.7	1307.4	1307.7	1297.0	1292.6	1263.8
27°	1192.6	1230.6	1256.8	1287.6	1277.6	1297.7	1298.0	1298.5	1285.6	1282.9	1253.6
27.5°	1168.8	1213.2	1246.4	1279.3	1263.1	1286.6	1288.5	1290.0	1273.0	1274.2	1243.2
28°	1145.3	1199.1	1235.7	1270.1	1246.8	1273.3	1278.3	1277.9	1258.5	1263.3	1232.5
28.5°	1122.5	1180.0	1225.0	1256.3	1230.1	1262.1	1268.7	1263.8	1243.0	1249.0	1222.1
29°	1100.5	1157.2	1214.4	1243.9	1212.0	1248.3	1258.7	1252.7	1226.0	1237.2	1211.0
29.5°	1079.2	1134.2	1203.7	1231.6	1192.6	1233.3	1248.5	1239.1	1208.1	1224.1	1200.3
30°	1057.9	1111.2	1192.6	1217.3	1171.2	1217.5	1238.1	1223.8	1188.7	1209.3	1189.2
30.5°	1037.0	1088.6	1181.7	1201.8	1148.5	1200.8	1227.9	1208.1	1168.1	1193.3	1178.0
31°	1016.2	1066.6	1170.5	1184.8	1125.0	1182.4	1217.5	1191.4	1145.8	1176.8	1166.9
31.5°	994.9	1045.7	1159.1	1167.6	1100.3	1164.0	1206.9	1173.2	1121.6	1158.9	1155.7
32°	971.6	1024.7	1148.2	1149.0	1075.3	1143.6	1196.0	1153.8	1096.6	1140.2	1144.4
32.5°	949.1	1004.3	1136.6	1129.3	1049.9	1121.3	1185.3	1133.7	1071.7	1119.6	1132.7
33°	924.6	983.2	1125.9	1107.5	1024.7	1098.3	1174.2	1111.6	1046.7	1098.3	1121.3
33.5°	898.9	962.1	1115.5	1086.2	999.9	1074.3	1163.7	1088.6	1021.0	1075.3	1109.9
34°	872.0	939.6	1104.9	1062.9	975.7	1049.9	1153.3	1064.6	995.8	1051.8	1100.0
34.5°	846.8	916.8	1087.9	1038.5	952.0	1025.4	1139.8	1039.9	971.8	1027.6	1087.2
35°	820.9	893.1	1068.8	1014.0	928.5	1000.9	1122.3	1014.7	948.6	1002.4	1068.0
35.5°	796.4	868.1	1052.3	989.8	905.2	976.7	1107.0	991.0	925.8	978.1	1050.6
36°	772.2	842.5	1031.4	965.8	882.0	953.2	1091.8	966.8	902.3	954.4	1034.6
36.5°	749.4	817.0	1007.7	942.0	858.2	929.7	1073.4	943.0	878.3	930.7	1013.3
37°	726.4	792.1	983.5	918.1	834.0	906.4	1054.5	919.5	855.5	907.4	989.3
37.5°	704.1	769.0	958.3	895.3	809.3	884.1	1034.4	897.0	831.1	885.1	965.1
38°	681.8	744.8	933.6	872.5	784.1	860.6	1013.0	874.0	806.1	862.3	940.3
38.5°	659.3	722.5	908.6	850.0	759.1	837.9	991.5	851.9	780.4	840.3	914.7
39°	636.0	700.5	884.1	827.4	734.6	814.8	967.7	828.4	755.2	817.7	889.7
39.5°	612.5	678.9	859.4	804.4	709.7	790.8	943.3	805.1	730.5	795.2	863.8
40°	588.8	656.1	833.7	781.9	684.7	767.1	917.6	780.9	705.3	771.9	837.9
40.5°	565.5	634.8	808.1	758.6	660.7	742.9	891.2	756.9	681.1	748.0	811.2
41°	542.7	612.5	781.9	734.9	638.0	718.4	863.3	732.2	657.1	724.0	785.0
41.5°	520.9	590.5	756.2	711.4	614.5	694.9	834.9	708.0	634.6	700.2	758.9
42°	499.1	567.9	729.8	687.6	591.7	671.6	806.4	684.0	611.3	676.7	732.5
42.5°	478.8	545.9	703.4	664.4	568.9	648.4	778.0	660.0	588.8	654.0	706.5
43°	458.7	523.8	676.7	641.4	546.1	625.4	750.6	637.2	566.7	631.2	681.3
43.5°	439.0	502.5	650.3	619.3	523.8	603.1	723.2	614.7	544.0	609.4	654.4



TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	382.1	442.4	575.0	554.1	458.7	537.9	645.2	548.8	477.1	545.4	580.8
45.5°	364.4	423.5	551.0	533.3	437.3	515.6	621.2	527.7	456.0	525.3	556.8
46°	347.4	404.9	528.4	512.5	417.0	494.8	597.7	505.9	434.9	504.0	534.0
46.5°	331.2	386.7	506.6	491.9	396.9	474.4	573.8	484.6	414.8	483.1	511.5
47°	315.5	369.0	485.6	471.5	378.0	453.6	551.0	463.3	395.4	462.8	490.2
47.5°	301.4	351.8	465.0	451.4	359.6	433.7	528.2	442.4	376.8	442.9	469.1
48°	288.3	335.3	444.4	431.5	341.9	414.1	505.2	422.8	358.6	423.3	448.2
48.5°	276.5	319.3	424.5	411.7	325.4	394.5	483.6	403.4	341.6	404.4	428.1
49°	265.6	304.3	405.6	393.0	309.2	376.0	461.1	384.8	324.7	386.0	408.8
49.5°	255.1	290.5	387.2	375.1	293.9	357.4	439.5	365.9	308.9	368.5	390.1
50°	245.7	277.2	369.0	357.6	279.1	340.2	418.9	348.7	293.4	351.1	372.2
50.5°	237.2	265.1	351.3	340.7	264.8	323.0	398.6	331.2	278.6	334.6	354.2
51°	229.2	254.2	334.6	324.9	251.5	307.0	379.4	315.0	264.8	318.6	337.8
51.5°	221.5	244.0	318.6	308.9	239.4	291.7	360.8	299.5	252.0	303.6	321.8
52°	214.2	235.0	303.4	294.1	227.8	277.2	343.1	284.9	239.9	289.1	306.5
52.5°	206.9	226.3	289.3	279.4	218.1	262.9	325.4	269.9	228.2	274.5	292.0
53°	200.1	218.3	275.5	265.3	208.4	249.6	309.4	256.1	217.8	261.4	277.9
53.5°	192.9	210.8	262.6	251.5	198.7	236.7	293.4	243.5	208.6	248.4	264.8
54°	186.1	203.8	250.0	238.9	189.0	224.8	278.6	231.4	199.7	236.0	252.2
54.5°	179.5	196.7	238.7	226.8	179.5	215.2	264.1	219.8	190.4	224.4	240.8
55°	173.5	190.0	227.8	215.4	171.3	205.2	251.0	210.1	181.5	214.9	229.9
55.5°	168.2	183.2	217.6	205.2	164.8	195.5	237.7	200.6	173.2	205.5	219.3
56°	164.3	176.6	207.9	195.3	159.7	185.6	225.3	191.2	166.2	196.0	210.6
56.5°	161.4	170.1	198.9	186.3	156.5	175.9	215.4	181.7	160.4	186.8	201.6
57°	158.7	164.5	190.7	177.8	153.6	167.7	205.2	173.2	156.5	177.4	192.6
57.5°	155.8	159.4	182.7	169.8	150.9	160.4	195.3	165.5	153.6	169.4	183.9
58°	153.1	156.0	175.7	162.3	148.3	154.6	185.4	158.9	150.9	162.1	176.9
58.5°	150.5	153.1	169.4	156.3	145.6	150.9	175.2	153.4	148.3	156.3	170.1
59°	147.6	150.2	163.3	152.4	142.7	147.8	167.7	149.7	145.4	151.7	163.8
59.5°	144.6	147.6	158.0	149.3	140.0	145.1	160.9	146.6	142.7	148.5	158.2
60°	141.7	144.9	152.9	146.3	137.4	142.5	154.8	143.9	139.8	145.6	152.9
60.5°	138.6	142.0	148.3	143.7	134.7	139.6	149.5	141.0	137.1	143.0	148.0
61°	135.9	139.1	143.9	140.8	132.1	136.9	144.9	138.3	134.2	140.3	143.7
61.5°	133.0	136.2	139.8	137.9	129.4	134.2	140.3	135.7	131.3	137.4	139.6
62°	130.1	133.3	136.2	135.2	127.0	131.6	136.2	132.8	128.7	134.7	135.7
62.5°	127.0	130.1	132.3	132.5	124.3	128.9	132.3	129.9	126.0	131.8	131.8
63°	124.3	127.2	128.9	129.9	121.6	126.0	128.7	127.2	123.1	128.9	128.4
63.5°	121.4	124.3	125.5	127.0	119.0	123.3	125.3	124.3	120.4	126.2	125.3
64°	118.5	121.4	122.6	124.3	116.5	120.7	121.9	121.4	117.8	123.3	122.1
64.5°	115.6	118.7	119.7	121.6	113.9	118.0	119.0	118.7	114.8	120.4	119.2
65°	112.9	115.6	117.0	119.0	111.5	115.6	116.3	115.8	112.2	117.8	116.3
65.5°	110.0	112.7	114.4	116.3	108.8	112.9	113.4	113.2	109.5	114.8	113.6
66°	107.1	110.0	111.5	113.6	106.4	110.2	110.7	110.2	106.9	112.2	111.0





TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	98.6	101.3	103.2	105.6	98.9	102.5	102.7	102.0	98.9	103.9	103.0
68°	95.9	98.4	100.6	103.0	96.4	99.8	99.8	99.3	96.2	101.3	100.3
68.5°	93.0	95.5	97.6	100.3	93.8	97.4	97.2	96.7	93.5	98.4	97.6
69°	90.4	92.8	95.0	97.6	91.3	94.7	94.5	94.0	90.9	95.7	94.7
69.5°	87.0	89.9	92.1	95.2	88.9	92.1	91.8	91.1	88.2	93.0	92.1
70°	84.3	88.0	89.4	92.6	86.5	89.6	88.9	88.4	85.5	90.4	89.4
70.5°	81.9	85.0	86.5	89.9	84.1	87.2	86.3	85.8	83.1	87.7	86.7
71°	79.2	82.1	83.8	87.7	81.7	84.6	83.6	83.1	80.4	85.0	84.1
71.5°	76.8	79.0	81.2	85.0	79.2	81.9	80.9	80.4	77.8	82.1	81.4
72°	73.9	76.1	78.5	82.6	76.8	79.5	78.3	77.8	75.1	79.5	78.7
72.5°	71.2	73.2	75.8	80.0	74.4	77.0	75.6	75.1	72.7	76.8	76.1
73°	68.3	70.5	73.2	77.5	71.7	74.6	72.9	72.4	70.0	74.1	73.4
73.5°	65.7	67.6	70.5	74.9	69.3	72.0	70.5	69.8	67.4	71.5	70.7
74°	62.8	64.9	67.8	72.4	67.1	69.5	67.8	67.1	64.9	68.8	68.1
74.5°	60.1	62.0	64.9	69.8	64.7	67.1	65.2	64.5	62.3	66.1	65.7
75°	57.4	59.1	62.3	67.4	62.0	64.5	62.8	61.8	59.6	63.5	63.0
75.5°	54.8	56.5	59.6	64.7	59.6	62.0	60.1	59.1	57.2	60.8	60.3
76°	51.9	53.5	56.9	62.3	57.2	59.6	57.4	56.5	54.5	58.2	57.7
76.5°	49.2	50.9	54.3	59.8	55.0	57.2	55.0	53.8	52.1	55.7	55.0
77°	46.5	48.0	51.6	57.2	52.6	54.8	52.6	51.1	49.4	53.1	52.3
77.5°	43.9	45.3	48.9	54.8	50.2	52.3	50.2	48.5	47.0	50.4	49.9
78°	41.2	42.4	46.5	52.1	47.7	49.7	47.5	45.8	44.6	47.7	47.2
78.5°	38.5	39.7	43.9	49.7	45.3	47.2	45.1	43.1	41.9	45.1	44.6
79°	35.9	36.8	41.4	47.0	43.1	44.8	42.6	40.5	39.5	42.4	42.2
79.5°	33.2	34.2	38.8	44.6	40.7	42.4	40.2	37.8	37.1	40.0	39.7
80°	30.5	31.5	36.3	42.2	38.5	40.0	37.8	35.4	34.6	37.3	37.3
80.5°	28.1	28.8	33.9	39.5	36.1	37.6	35.6	32.7	32.2	34.6	34.6
81°	25.4	25.9	31.5	37.1	33.9	35.1	33.2	30.3	29.8	32.0	32.5
81.5°	22.8	23.3	29.1	34.6	31.5	33.0	31.0	28.1	27.4	29.6	30.0
82°	20.1	20.8	26.7	32.2	29.3	30.5	28.6	25.7	24.7	26.9	27.6
82.5°	17.7	18.4	24.5	30.0	27.1	28.3	26.4	23.5	22.3	24.2	25.4
83°	15.0	16.2	22.3	27.6	25.0	25.9	24.2	21.3	20.1	22.0	23.3
83.5°	12.4	13.8	20.1	25.4	22.5	23.7	22.3	19.1	17.7	19.6	21.3
84°	9.9	11.9	17.9	23.0	20.4	21.3	20.1	17.0	15.3	17.2	19.4
84.5°	8.7	9.9	16.0	20.8	18.2	19.1	18.2	15.0	12.8	15.0	17.4
85°	7.5	8.5	14.1	18.4	15.7	17.0	16.0	12.8	10.4	12.6	15.5
85.5°	6.1	7.0	11.9	16.2	13.6	14.5	14.1	10.9	8.7	10.7	13.3
86°	4.8	5.8	9.9	13.8	11.4	12.4	12.1	9.4	7.3	9.2	11.6
86.5°	3.6	4.6	8.2	11.6	9.2	10.2	10.2	8.0	6.3	8.0	9.7
87°	2.7	3.1	6.3	9.4	7.0	8.0	8.2	6.5	5.3	6.8	7.8
87.5°	1.5	1.9	4.6	7.3	4.8	5.8	6.3	5.1	4.1	5.3	5.8
88°	0.5	0.7	2.7	5.3	2.9	3.6	4.4	3.9	3.1	4.1	4.1
88.5°	0.0	0.2	1.0	3.1	1.0	1.7	2.4	2.4	2.2	2.9	2.2



TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2



TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1522.3	1522.3	1522.3	1522.3	1522.3	1522.3
0.5°	1520.6	1521.8	1521.8	1522.1	1522.3	1522.1
1°	1520.2	1521.1	1520.9	1521.1	1521.6	1521.4
1.5°	1519.2	1520.2	1519.7	1519.9	1520.4	1520.2
2°	1518.2	1519.2	1518.5	1518.5	1518.9	1518.9
2.5°	1517.0	1518.0	1517.0	1517.0	1517.5	1517.7
3°	1515.5	1516.5	1515.3	1515.3	1515.8	1516.0
3.5°	1513.9	1515.1	1513.9	1513.6	1514.1	1514.6
4°	1512.2	1513.1	1511.9	1511.7	1512.2	1512.9
4.5°	1510.2	1511.4	1509.7	1509.5	1510.0	1510.7
5°	1508.0	1509.2	1507.3	1507.3	1507.8	1508.5
5.5°	1505.9	1507.1	1504.9	1504.6	1505.4	1506.3
6°	1503.4	1504.4	1502.2	1502.0	1502.7	1503.9
6.5°	1500.8	1501.7	1499.6	1499.3	1499.8	1501.3
7°	1497.9	1498.8	1496.4	1496.2	1496.9	1498.1
7.5°	1494.7	1495.9	1493.3	1493.0	1493.5	1495.0
8°	1491.6	1492.5	1489.9	1489.6	1490.4	1491.8
8.5°	1488.2	1489.1	1486.2	1486.0	1486.7	1488.2
9°	1484.8	1485.5	1482.6	1482.1	1482.8	1484.5
9.5°	1480.9	1481.6	1478.7	1478.2	1479.0	1480.7
10°	1476.8	1478.0	1474.6	1473.9	1474.8	1476.5
10.5°	1472.7	1473.9	1470.2	1469.8	1470.2	1472.2
11°	1468.3	1469.3	1465.9	1465.2	1465.9	1467.8
11.5°	1463.9	1464.7	1461.0	1460.3	1461.3	1463.2
12°	1459.1	1460.1	1456.2	1455.5	1456.2	1458.1
12.5°	1454.2	1455.0	1451.1	1450.4	1450.9	1453.0
13°	1449.2	1449.9	1445.8	1445.0	1445.8	1447.7
13.5°	1443.6	1444.6	1440.4	1439.7	1440.2	1442.4
14°	1438.3	1439.0	1434.6	1433.9	1434.6	1436.8
14.5°	1432.4	1433.2	1428.8	1427.8	1428.3	1430.7
15°	1426.6	1427.1	1422.8	1421.8	1422.0	1424.4
15.5°	1420.3	1420.8	1416.2	1415.5	1415.5	1417.9
16°	1414.0	1414.5	1409.7	1408.9	1409.2	1411.4
16.5°	1407.2	1408.0	1403.1	1402.2	1402.4	1404.3
17°	1400.5	1400.9	1396.3	1395.4	1395.4	1397.3
17.5°	1393.4	1393.9	1389.1	1388.1	1387.9	1389.8
18°	1386.4	1386.4	1381.8	1380.8	1380.6	1382.5
18.5°	1378.7	1378.9	1374.0	1373.6	1372.8	1374.5
19°	1371.1	1371.4	1366.3	1365.6	1364.8	1366.8
19.5°	1363.4	1363.4	1358.3	1357.8	1356.8	1358.5
20°	1355.2	1355.4	1350.1	1349.6	1348.4	1350.3
20.5°	1346.9	1347.2	1341.8	1340.9	1339.9	1342.1
21°	1338.4	1338.7	1333.1	1332.6	1331.2	1333.6



TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1312.0	1312.5	1306.2	1305.0	1304.0	1306.4
23°	1302.8	1303.3	1297.0	1295.8	1294.8	1297.2
23.5°	1293.9	1293.9	1287.8	1285.6	1285.4	1288.0
24°	1284.4	1284.6	1278.1	1275.9	1275.7	1278.1
24.5°	1274.7	1275.0	1268.2	1265.7	1265.7	1269.6
25°	1264.8	1265.7	1258.5	1255.6	1255.6	1260.7
25.5°	1255.1	1257.3	1248.3	1244.7	1245.9	1246.1
26°	1245.4	1245.9	1238.1	1234.7	1235.5	1230.1
26.5°	1236.7	1228.7	1228.2	1223.3	1226.5	1215.1
27°	1226.7	1215.3	1219.2	1212.9	1216.8	1192.6
27.5°	1211.0	1196.4	1208.6	1201.5	1201.5	1168.8
28°	1195.2	1173.7	1192.6	1190.4	1185.8	1145.3
28.5°	1180.2	1150.7	1177.1	1179.0	1170.0	1122.5
29°	1159.4	1128.1	1162.0	1167.9	1148.5	1100.5
29.5°	1136.8	1105.6	1140.7	1155.7	1125.7	1079.2
30°	1114.3	1084.0	1118.9	1144.6	1102.2	1057.9
30.5°	1092.3	1061.7	1095.7	1133.0	1080.1	1037.0
31°	1070.7	1040.4	1074.1	1121.3	1058.1	1016.2
31.5°	1048.6	1018.8	1051.8	1109.5	1036.5	994.9
32°	1027.3	997.0	1030.7	1097.6	1015.9	971.6
32.5°	1006.0	974.3	1009.9	1086.0	996.1	949.1
33°	984.9	951.2	988.8	1074.8	975.5	924.6
33.5°	963.4	927.3	967.7	1064.9	955.6	898.9
34°	940.8	902.5	946.9	1054.0	934.5	872.0
34.5°	918.3	877.6	924.8	1036.0	913.0	846.8
35°	895.3	852.1	902.3	1014.7	889.7	820.9
35.5°	871.3	826.7	879.5	998.7	866.9	796.4
36°	847.1	802.5	855.5	975.7	842.2	772.2
36.5°	822.3	778.0	832.0	947.1	818.2	749.4
37°	798.1	755.0	807.8	918.5	793.0	726.4
37.5°	774.1	731.7	784.1	890.2	769.5	704.1
38°	750.9	709.0	760.1	862.1	746.3	681.8
38.5°	728.3	686.4	737.8	835.2	724.0	659.3
39°	705.3	664.4	715.0	809.0	702.2	636.0
39.5°	683.3	641.1	693.9	783.8	680.8	612.5
40°	661.7	617.8	672.1	759.6	660.0	588.8
40.5°	640.6	595.3	650.6	736.3	639.2	565.5
41°	618.3	572.3	629.2	713.6	618.1	542.7
41.5°	596.5	549.8	608.2	690.8	596.3	520.9
42°	574.5	527.7	586.4	668.5	574.7	499.1
42.5°	553.2	506.4	564.5	646.9	553.4	478.8
43°	531.4	485.3	543.2	624.6	531.8	458.7
43.5°	509.8	465.0	521.7	601.9	510.8	439.0

TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	449.7	406.8	460.8	533.8	451.2	382.1
45.5°	431.3	388.4	442.2	512.2	432.7	364.4
46°	412.1	370.2	423.5	491.4	414.3	347.4
46.5°	394.0	352.5	404.9	470.8	396.4	331.2
47°	376.3	335.8	387.2	451.4	378.9	315.5
47.5°	359.1	319.3	369.0	433.0	362.0	301.4
48°	341.9	304.8	351.8	415.5	345.3	288.3
48.5°	325.9	290.3	335.6	398.8	329.3	276.5
49°	309.9	277.4	319.8	382.1	314.0	265.6
49.5°	295.4	265.6	304.8	366.3	299.7	255.1
50°	280.8	254.4	290.5	350.8	286.4	245.7
50.5°	268.0	244.2	277.4	335.8	273.8	237.2
51°	255.9	235.3	264.8	321.3	262.4	229.2
51.5°	244.7	226.8	253.9	307.0	251.7	221.5
52°	234.5	219.0	244.0	293.4	242.1	214.2
52.5°	225.3	211.5	234.3	280.3	233.1	206.9
53°	216.9	204.3	225.6	268.0	224.6	200.1
53.5°	209.6	197.2	217.3	256.1	216.6	192.9
54°	202.6	190.2	209.3	245.0	209.1	186.1
54.5°	195.5	183.7	202.6	234.3	201.8	179.5
55°	188.3	177.1	195.3	224.4	195.3	173.5
55.5°	181.2	170.8	188.3	214.9	188.3	168.2
56°	174.9	165.5	181.7	206.2	181.7	164.3
56.5°	168.4	161.1	175.2	198.0	175.2	161.4
57°	162.6	157.7	168.9	190.0	169.1	158.7
57.5°	157.5	155.1	163.1	182.7	163.5	155.8
58°	153.1	152.2	158.2	175.9	158.9	153.1
58.5°	150.0	149.5	154.3	169.6	155.3	150.5
59°	147.3	146.8	151.4	163.8	152.6	147.6
59.5°	144.6	144.4	148.5	158.0	149.7	144.6
60°	142.0	141.5	145.9	153.1	147.1	141.7
60.5°	139.3	139.1	143.2	148.5	143.9	138.6
61°	136.4	136.4	140.3	144.2	141.3	135.9
61.5°	133.7	133.7	137.6	140.0	138.3	133.0
62°	131.1	131.1	135.0	136.2	135.4	130.1
62.5°	128.4	128.4	132.1	132.5	132.3	127.0
63°	125.8	126.0	129.4	129.1	129.4	124.3
63.5°	123.1	123.3	126.7	126.0	126.5	121.4
64°	120.4	120.9	124.1	122.8	123.6	118.5
64.5°	117.8	118.2	121.1	120.2	120.7	115.6
65°	115.3	115.6	118.7	117.5	117.8	112.9
65.5°	112.7	113.2	116.1	114.6	114.8	110.0
66°	110.0	110.5	113.2	111.9	111.9	107.1



TEST NUMBER: P776020

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	102.2	103.0	105.4	103.9	103.2	98.6
68°	99.6	100.6	102.7	101.0	100.3	95.9
68.5°	97.2	97.9	100.1	98.1	97.4	93.0
69°	94.5	95.5	97.4	95.5	94.7	90.4
69.5°	91.8	93.0	94.7	92.6	91.8	87.0
70°	89.4	90.6	92.1	89.9	88.9	84.3
70.5°	86.7	87.7	89.6	87.5	86.3	81.9
71°	84.3	85.3	88.0	84.8	83.3	79.2
71.5°	81.7	83.1	85.3	81.9	80.7	76.8
72°	79.2	80.7	82.4	79.2	78.0	73.9
72.5°	76.6	78.3	79.7	76.6	75.1	71.2
73°	74.1	76.1	77.0	73.9	72.2	68.3
73.5°	71.7	73.4	74.4	71.0	69.5	65.7
74°	69.1	71.0	72.0	68.3	66.6	62.8
74.5°	66.6	68.6	69.3	65.7	63.7	60.1
75°	64.0	66.1	66.6	63.0	61.1	57.4
75.5°	61.5	63.7	64.2	60.3	58.2	54.8
76°	58.9	61.3	61.5	57.4	55.5	51.9
76.5°	56.5	58.6	59.1	54.8	52.6	49.2
77°	54.0	56.2	56.5	52.3	49.7	46.5
77.5°	51.4	53.8	54.0	49.7	47.0	43.9
78°	48.9	51.4	51.4	47.0	44.1	41.2
78.5°	46.3	48.9	48.9	44.3	41.4	38.5
79°	43.9	46.5	46.3	41.9	38.5	35.9
79.5°	41.4	44.1	43.9	39.3	35.9	33.2
80°	38.8	41.7	41.2	36.8	33.0	30.5
80.5°	36.3	39.3	38.8	34.4	30.3	28.1
81°	33.9	37.1	36.3	32.0	27.6	25.4
81.5°	31.7	34.6	33.9	29.6	25.2	22.8
82°	29.3	32.2	31.5	27.1	22.5	20.1
82.5°	26.9	30.0	29.1	25.0	20.4	17.7
83°	24.7	27.6	26.7	22.8	17.9	15.0
83.5°	22.3	25.2	24.2	20.6	15.7	12.4
84°	20.1	23.0	21.8	18.4	13.6	9.9
84.5°	17.7	20.8	19.6	16.5	11.6	8.7
85°	15.5	18.4	17.2	14.3	9.9	7.5
85.5°	13.1	16.2	14.8	12.4	8.5	6.1
86°	10.9	13.8	12.4	10.2	7.0	4.8
86.5°	8.5	11.6	10.2	8.2	5.6	3.6
87°	6.3	9.2	8.0	6.3	4.1	2.7
87.5°	4.1	7.3	6.1	4.6	2.7	1.5
88°	2.2	5.1	4.1	2.7	1.2	0.5
88.5°	0.7	2.9	2.2	0.7	0.5	0.0



TEST NUMBER: P776020  
CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-2700K

**CANDELA DISTRIBUTION (continued):**

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



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Scaled Data Report





21.5°	1324.6	1334.3	1358.8	1379.6	1378.4	1386.4	1391.3	1389.1	1384.0	1375.7	1355.6
22°	1315.4	1325.6	1350.5	1371.9	1371.1	1378.9	1383.7	1381.8	1376.7	1368.5	1347.2



44°	419.9	481.2	624.1	596.5	501.5	580.8	695.9	592.4	520.9	587.1	629.0
44.5°	400.8	461.8	599.4	575.0	480.0	559.2	670.7	571.1	499.1	566.7	604.3



66.5°	104.4	107.1	108.8	111.0	103.7	107.6	108.1	107.6	104.2	109.5	108.3
67°	101.5	104.2	106.1	108.3	101.3	104.9	105.4	104.9	101.5	106.6	105.6



89°	0.0	0.2	0.2	1.2	0.2	0.5	1.0	1.2	1.2	1.7	1.0
89.5°	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.7	0.2



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21.5°	1330.0	1330.2	1324.4	1323.4	1322.2	1324.6
22°	1321.2	1321.2	1315.4	1314.4	1313.2	1315.4



44°	489.4	445.1	501.1	578.8	489.9	419.9
44.5°	469.8	425.7	481.2	556.3	470.5	400.8

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66.5°	107.3	108.1	110.7	109.3	109.0	104.4
67°	104.9	105.6	108.1	106.6	106.1	101.5

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89°	0.2	1.0	0.5	0.2	0.2	0.0
89.5°	0.0	0.2	0.2	0.2	0.2	0.0

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Scaled Data Report



(END OF REPORT)