

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: P776021

Luminaire Tested: HCDJBL51525CSD-HCD4TSQMW-2500lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776021
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: HCDJBL1525CSD-HCD4TSQMW-2500lm-3000K
Description: 4 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

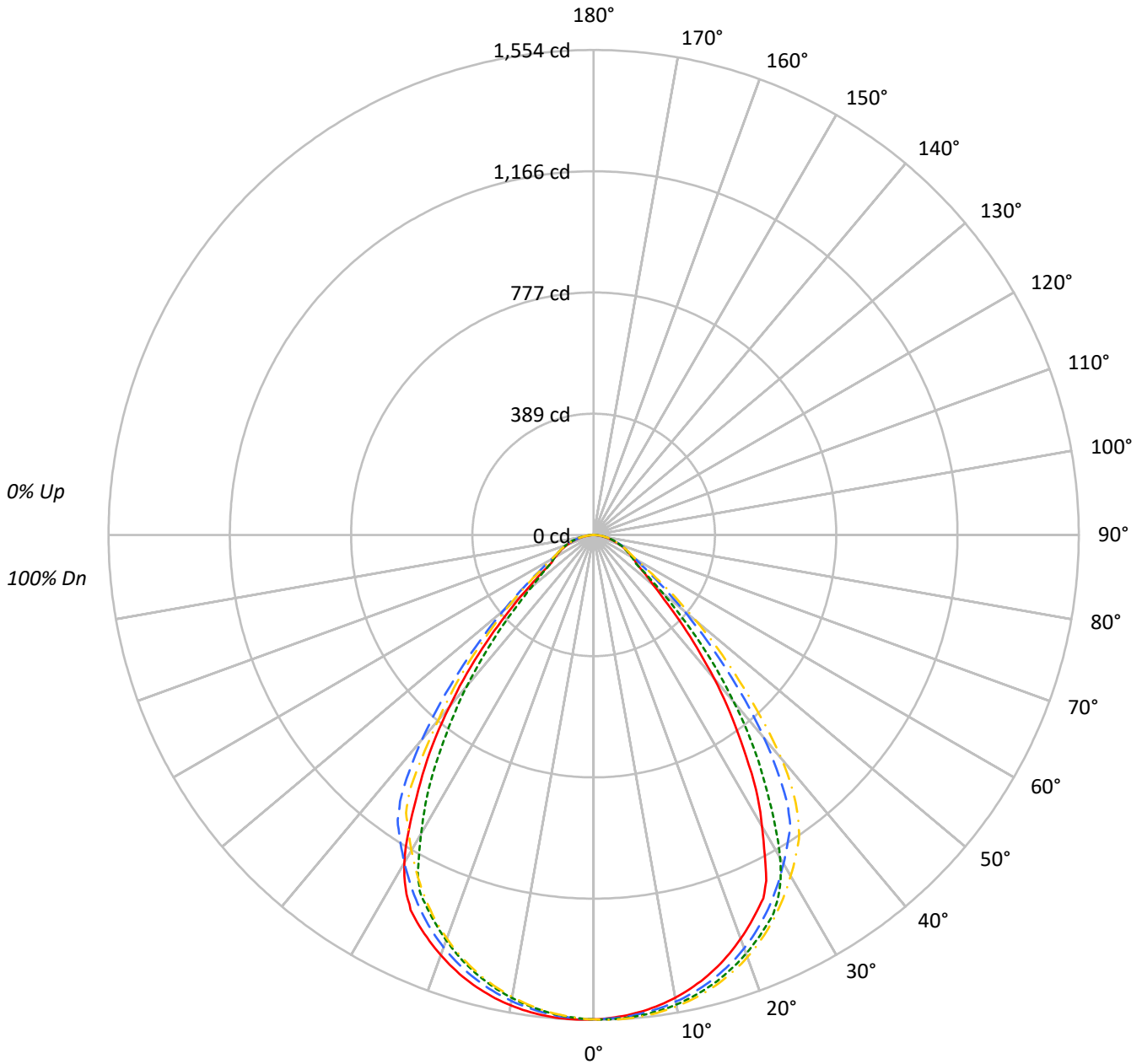
Lumens per Lamp: N/A
Luminaire Lumens: 2567.1 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.13 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25
Input Voltage (V): NR
Input Current (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



TEST NUMBER: P776021
CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-3000K

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	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°	153433	153433	153433	153433
5°	152620	153672	153820	152699
10°	151113	153341	153622	151263
15°	148633	152245	152675	148909
20°	144830	150153	150700	145377
25°	140197	147286	147711	140764
30°	123115	136309	138341	126163
35°	101008	114245	116718	104845
40°	77469	90088	92798	81288
45°	54460	65377	68005	57982
50°	38520	43763	46008	39888
55°	30484	30105	31898	31122
60°	28565	27696	28190	28526
65°	26920	26569	26756	27551
70°	24854	25489	25200	26703
75°	22379	24136	23219	25740
80°	17702	22370	20093	24191
85°	8732	18259	12021	21321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 91964 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.5	5.7
10°-20°	414.6	16.2
20°-30°	604.4	23.5
30°-40°	607.9	23.7
40°-50°	398.6	15.5
50°-60°	193.1	7.5
60°-70°	117.4	4.6
70°-80°	67.6	2.6
80°-90°	17.0	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°	1165.6	45.4
0°-40°	1773.5	69.1
0°-60°	2365.2	92.1
0°-90°	2567.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2567.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1552	1552	1552	1552	1552	
5°	1538	1549	1550	1539	1538	146
15°	1452	1488	1492	1455	1452	409
25°	1286	1350	1354	1291	1286	579
35°	837	947	967	869	837	522
45°	390	468	486	415	390	307
55°	177	175	185	181	177	165
65°	115	114	114	118	115	114
75°	59	63	61	67	59	62
85°	8	16	11	19	8	11
90°	0	0	0	0	0	



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3
0.5°	1552.1	1551.6	1551.8	1551.8	1552.8	1553.0	1553.5	1553.8	1553.3	1552.3	1551.6
1°	1551.3	1550.8	1551.6	1552.1	1553.0	1553.5	1554.0	1554.3	1553.5	1552.3	1551.3
1.5°	1550.1	1550.1	1551.3	1552.1	1553.0	1553.8	1554.5	1554.5	1553.8	1552.3	1550.8
2°	1548.8	1549.1	1550.8	1552.1	1553.0	1553.8	1554.5	1554.5	1553.8	1552.1	1550.1
2.5°	1547.6	1548.1	1550.1	1551.6	1552.8	1553.8	1554.5	1554.5	1553.8	1551.8	1549.3
3°	1545.9	1546.6	1549.1	1551.1	1552.1	1553.5	1554.3	1554.5	1553.3	1551.3	1548.4
3.5°	1544.4	1545.1	1548.1	1550.6	1551.6	1553.0	1554.0	1554.0	1552.8	1550.6	1547.1
4°	1542.7	1543.7	1546.9	1549.8	1550.8	1552.6	1553.5	1553.8	1552.3	1549.6	1546.1
4.5°	1540.4	1541.7	1545.4	1548.8	1550.1	1551.6	1553.0	1553.0	1551.6	1548.6	1544.6
5°	1538.2	1539.7	1543.7	1547.6	1548.8	1550.8	1552.1	1552.1	1550.3	1547.4	1542.7
5.5°	1536.0	1537.5	1541.9	1546.4	1547.6	1549.6	1551.1	1551.1	1549.3	1546.1	1540.9
6°	1533.5	1535.3	1540.2	1544.9	1546.1	1548.1	1549.8	1549.8	1547.9	1544.4	1539.0
6.5°	1530.8	1532.8	1538.2	1543.4	1544.4	1546.9	1548.4	1548.4	1546.1	1542.7	1536.7
7°	1527.6	1529.8	1536.0	1541.7	1542.4	1545.1	1546.9	1546.9	1544.6	1540.9	1534.3
7.5°	1524.4	1526.9	1533.5	1539.7	1540.4	1543.4	1545.1	1544.9	1542.7	1538.7	1531.8
8°	1521.2	1523.9	1530.6	1537.5	1538.2	1541.4	1543.2	1542.9	1540.7	1536.5	1529.1
8.5°	1517.5	1520.2	1528.1	1535.3	1536.0	1539.2	1540.9	1540.9	1538.5	1534.0	1526.1
9°	1513.8	1516.7	1525.1	1532.8	1533.5	1537.0	1538.7	1538.7	1536.0	1531.6	1523.2
9.5°	1509.8	1513.0	1521.9	1529.8	1530.8	1534.5	1536.2	1536.0	1533.3	1528.6	1519.9
10°	1505.6	1509.3	1518.5	1527.1	1527.8	1531.6	1533.8	1533.5	1530.6	1525.6	1516.5
10.5°	1501.2	1505.1	1515.0	1523.9	1524.6	1528.6	1530.8	1530.6	1527.6	1522.7	1512.8
11°	1496.7	1500.7	1511.3	1520.7	1521.4	1525.4	1527.8	1527.6	1524.6	1519.2	1508.8
11.5°	1492.0	1496.2	1507.3	1517.2	1517.7	1522.2	1524.6	1524.1	1521.2	1515.7	1504.9
12°	1486.8	1491.5	1503.1	1513.5	1514.0	1519.0	1521.4	1520.7	1517.5	1512.0	1500.7
12.5°	1481.6	1486.6	1498.7	1509.6	1510.1	1515.2	1517.7	1517.0	1513.8	1508.1	1496.2
13°	1476.2	1481.6	1494.2	1505.9	1506.1	1511.0	1514.0	1513.3	1509.8	1504.1	1491.8
13.5°	1470.8	1476.2	1489.8	1501.4	1501.9	1507.3	1510.1	1509.1	1505.6	1499.7	1486.8
14°	1465.1	1470.5	1484.6	1497.2	1497.5	1502.9	1505.9	1504.9	1501.2	1495.0	1481.9
14.5°	1458.9	1464.6	1479.7	1492.5	1492.8	1498.2	1501.4	1500.7	1496.7	1490.3	1476.7
15°	1452.5	1458.7	1474.2	1487.8	1487.8	1493.8	1497.0	1495.7	1492.0	1485.6	1471.3
15.5°	1445.8	1452.5	1468.8	1482.9	1482.9	1489.1	1492.3	1491.0	1486.8	1480.4	1465.6
16°	1439.2	1446.1	1462.9	1477.7	1477.4	1483.6	1487.3	1485.8	1481.6	1475.2	1459.9
16.5°	1432.0	1439.4	1456.9	1472.0	1471.8	1478.4	1482.1	1480.7	1476.2	1469.5	1453.7
17°	1424.8	1432.5	1451.0	1466.6	1466.1	1472.8	1476.7	1475.5	1470.8	1463.9	1447.6
17.5°	1417.2	1425.3	1444.6	1460.9	1460.2	1467.3	1471.0	1469.8	1464.6	1457.9	1441.1
18°	1409.8	1418.2	1437.9	1454.7	1454.0	1461.4	1465.1	1463.6	1458.4	1451.8	1434.5
18.5°	1401.6	1410.2	1431.2	1448.5	1447.8	1455.0	1459.2	1457.4	1452.5	1445.6	1427.5
19°	1393.7	1402.6	1424.1	1442.4	1441.1	1448.3	1453.0	1451.0	1446.1	1438.9	1420.6
19.5°	1385.3	1394.4	1416.9	1435.4	1434.5	1442.4	1446.6	1444.3	1439.6	1432.0	1413.5
20°	1376.9	1386.5	1409.5	1428.5	1427.5	1435.2	1439.6	1437.9	1432.7	1425.1	1405.8
20.5°	1368.5	1378.1	1401.6	1421.4	1420.4	1428.3	1433.0	1430.8	1425.6	1417.9	1397.9
21°	1359.8	1369.5	1393.7	1414.2	1413.0	1421.1	1425.8	1423.6	1418.4	1410.7	1390.2



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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°	1332.2	1342.8	1368.7	1391.0	1390.5	1398.6	1403.1	1401.4	1395.9	1387.5	1365.3
23°	1322.8	1333.7	1359.6	1383.3	1382.3	1390.7	1395.2	1393.4	1388.0	1379.4	1356.4
23.5°	1313.4	1324.0	1350.5	1375.2	1374.2	1382.8	1387.0	1385.3	1380.3	1371.0	1347.2
24°	1303.3	1314.4	1341.3	1366.8	1366.0	1374.7	1378.6	1377.1	1372.2	1362.6	1338.1
24.5°	1294.6	1305.0	1331.9	1358.4	1357.6	1366.3	1369.7	1368.7	1363.5	1354.2	1328.7
25°	1285.5	1295.1	1322.0	1349.5	1350.5	1357.9	1360.8	1360.1	1354.4	1345.5	1318.8
25.5°	1270.7	1285.2	1312.2	1340.6	1340.6	1349.2	1351.9	1351.7	1346.0	1336.6	1309.2
26°	1254.3	1275.6	1302.0	1331.7	1327.2	1340.1	1342.5	1342.8	1337.6	1327.5	1298.8
26.5°	1239.0	1266.5	1291.9	1322.5	1315.9	1331.4	1333.2	1333.4	1322.5	1318.1	1288.7
27°	1216.1	1254.8	1281.5	1312.9	1302.8	1323.3	1323.5	1324.0	1310.9	1308.2	1278.3
27.5°	1191.8	1237.1	1270.9	1304.5	1287.9	1311.9	1313.9	1315.4	1298.1	1299.3	1267.7
28°	1167.9	1222.7	1260.0	1295.1	1271.4	1298.3	1303.5	1303.0	1283.3	1288.2	1256.8
28.5°	1144.7	1203.2	1249.2	1281.0	1254.3	1287.0	1293.6	1288.7	1267.4	1273.6	1246.2
29°	1122.2	1180.0	1238.3	1268.4	1235.8	1272.9	1283.5	1277.3	1250.1	1261.5	1234.8
29.5°	1100.4	1156.5	1227.4	1255.8	1216.1	1257.6	1273.1	1263.5	1231.9	1248.2	1224.0
30°	1078.7	1133.0	1216.1	1241.3	1194.3	1241.5	1262.5	1247.9	1212.1	1233.1	1212.6
30.5°	1057.4	1110.1	1204.9	1225.4	1171.1	1224.5	1252.1	1231.9	1191.1	1216.8	1201.2
31°	1036.2	1087.6	1193.6	1208.1	1147.1	1205.7	1241.5	1214.8	1168.4	1200.0	1189.9
31.5°	1014.4	1066.3	1182.0	1190.6	1121.9	1186.9	1230.6	1196.3	1143.7	1181.7	1178.5
32°	990.7	1044.8	1170.8	1171.6	1096.5	1166.1	1219.5	1176.5	1118.2	1162.7	1166.9
32.5°	967.8	1024.1	1159.0	1151.6	1070.5	1143.4	1208.6	1156.0	1092.8	1141.7	1155.0
33°	942.8	1002.6	1148.1	1129.3	1044.8	1119.9	1197.3	1133.5	1067.3	1119.9	1143.4
33.5°	916.6	981.1	1137.5	1107.6	1019.6	1095.5	1186.7	1110.1	1041.1	1096.5	1131.8
34°	889.2	958.1	1126.6	1083.9	994.9	1070.5	1176.0	1085.6	1015.4	1072.5	1121.7
34.5°	863.5	934.9	1109.3	1058.9	970.7	1045.6	1162.2	1060.4	991.0	1047.8	1108.6
35°	837.1	910.7	1089.8	1034.0	946.8	1020.6	1144.4	1034.7	967.3	1022.1	1089.1
35.5°	812.1	885.2	1073.0	1009.3	923.0	995.9	1128.8	1010.5	944.0	997.4	1071.3
36°	787.4	859.0	1051.8	984.8	899.3	972.0	1113.3	985.8	920.1	973.2	1055.0
36.5°	764.2	833.1	1027.5	960.6	875.1	948.0	1094.5	961.6	895.6	949.0	1033.2
37°	740.7	807.7	1002.8	936.1	850.4	924.3	1075.2	937.6	872.4	925.3	1008.8
37.5°	718.0	784.2	977.1	912.9	825.2	901.5	1054.7	914.6	847.4	902.5	984.1
38°	695.2	759.5	951.9	889.7	799.5	877.6	1033.0	891.2	822.0	879.3	958.9
38.5°	672.3	736.7	926.5	866.7	774.1	854.3	1011.0	868.7	795.8	856.8	932.7
39°	648.5	714.3	901.5	843.7	749.1	830.9	986.8	844.7	770.1	833.8	907.2
39.5°	624.6	692.3	876.3	820.3	723.7	806.4	961.8	821.0	744.9	810.9	880.8
40°	600.4	669.1	850.1	797.3	698.2	782.2	935.6	796.3	719.2	787.1	854.3
40.5°	576.6	647.3	824.0	773.6	673.7	757.5	908.7	771.8	694.5	762.7	827.2
41°	553.4	624.6	797.3	749.3	650.5	732.5	880.3	746.6	670.0	738.2	800.5
41.5°	531.2	602.1	771.1	725.4	626.6	708.6	851.4	721.9	647.1	714.0	773.8
42°	509.0	579.1	744.2	701.2	603.3	684.9	822.2	697.5	623.3	690.1	746.9
42.5°	488.2	556.6	717.2	677.5	580.1	661.1	793.3	673.0	600.4	666.8	720.4
43°	467.7	534.2	690.1	654.0	556.9	637.7	765.4	649.8	577.9	643.6	694.7
43.5°	447.7	512.4	663.1	631.5	534.2	614.9	737.5	626.8	554.7	621.4	667.3



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CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	389.6	451.1	586.3	565.0	467.7	548.5	657.9	559.6	486.5	556.1	592.2
45.5°	371.6	431.9	561.8	543.8	446.0	525.8	633.5	538.1	465.0	535.6	567.8
46°	354.3	412.8	538.8	522.5	425.2	504.5	609.5	515.9	443.5	513.9	544.5
46.5°	337.7	394.3	516.6	501.5	404.7	483.8	585.0	494.1	423.0	492.6	521.6
47°	321.7	376.3	495.1	480.8	385.4	462.5	561.8	472.4	403.2	471.9	499.8
47.5°	307.3	358.7	474.1	460.3	366.6	442.2	538.6	451.1	384.2	451.6	478.3
48°	294.0	341.9	453.1	440.0	348.6	422.2	515.1	431.1	365.7	431.6	457.1
48.5°	281.9	325.6	432.9	419.8	331.8	402.2	493.1	411.4	348.4	412.4	436.6
49°	270.8	310.3	413.6	400.7	315.3	383.4	470.2	392.3	331.1	393.6	416.8
49.5°	260.2	296.2	394.8	382.5	299.7	364.4	448.2	373.1	315.0	375.8	397.8
50°	250.5	282.6	376.3	364.7	284.6	346.9	427.2	355.5	299.2	358.0	379.5
50.5°	241.9	270.3	358.2	347.4	270.0	329.3	406.4	337.7	284.1	341.2	361.2
51°	233.7	259.2	341.2	331.3	256.5	313.0	386.9	321.2	270.0	324.9	344.4
51.5°	225.8	248.8	324.9	315.0	244.1	297.5	367.9	305.4	256.9	309.6	328.1
52°	218.4	239.7	309.3	299.9	232.2	282.6	349.8	290.5	244.6	294.7	312.5
52.5°	211.0	230.8	295.0	284.9	222.4	268.1	331.8	275.2	232.7	279.9	297.7
53°	204.1	222.6	280.9	270.5	212.5	254.5	315.5	261.1	222.1	266.6	283.4
53.5°	196.7	214.9	267.8	256.5	202.6	241.4	299.2	248.3	212.7	253.2	270.0
54°	189.7	207.8	255.0	243.6	192.7	229.3	284.1	235.9	203.6	240.6	257.2
54.5°	183.1	200.6	243.4	231.3	183.1	219.4	269.3	224.1	194.2	228.8	245.6
55°	176.9	193.7	232.2	219.6	174.7	209.3	256.0	214.2	185.1	219.1	234.5
55.5°	171.5	186.8	221.9	209.3	168.0	199.4	242.4	204.6	176.7	209.5	223.6
56°	167.5	180.1	212.0	199.1	162.8	189.3	229.8	194.9	169.5	199.9	214.7
56.5°	164.5	173.4	202.8	190.0	159.6	179.4	219.6	185.3	163.6	190.5	205.6
57°	161.8	167.8	194.4	181.3	156.6	171.0	209.3	176.7	159.6	180.9	196.4
57.5°	158.9	162.6	186.3	173.2	153.9	163.6	199.1	168.7	156.6	172.7	187.5
58°	156.1	159.1	179.1	165.5	151.2	157.6	189.0	162.1	153.9	165.3	180.4
58.5°	153.4	156.1	172.7	159.4	148.5	153.9	178.6	156.4	151.2	159.4	173.4
59°	150.5	153.2	166.5	155.4	145.5	150.7	171.0	152.7	148.2	154.7	167.0
59.5°	147.5	150.5	161.1	152.2	142.8	148.0	164.1	149.5	145.5	151.5	161.3
60°	144.5	147.7	155.9	149.2	140.1	145.3	157.9	146.8	142.6	148.5	155.9
60.5°	141.3	144.8	151.2	146.5	137.4	142.3	152.4	143.8	139.8	145.8	151.0
61°	138.6	141.8	146.8	143.5	134.7	139.6	147.7	141.1	136.9	143.1	146.5
61.5°	135.6	138.9	142.6	140.6	131.9	136.9	143.1	138.4	133.9	140.1	142.3
62°	132.7	135.9	138.9	137.9	129.5	134.2	138.9	135.4	131.2	137.4	138.4
62.5°	129.5	132.7	134.9	135.1	126.7	131.4	134.9	132.4	128.5	134.4	134.4
63°	126.7	129.7	131.4	132.4	124.0	128.5	131.2	129.7	125.5	131.4	130.9
63.5°	123.8	126.7	128.0	129.5	121.3	125.8	127.7	126.7	122.8	128.7	127.7
64°	120.8	123.8	125.0	126.7	118.8	123.0	124.3	123.8	120.1	125.8	124.5
64.5°	117.8	121.1	122.0	124.0	116.1	120.3	121.3	121.1	117.1	122.8	121.6
65°	115.1	117.8	119.3	121.3	113.6	117.8	118.6	118.1	114.4	120.1	118.6
65.5°	112.2	114.9	116.6	118.6	110.9	115.1	115.6	115.4	111.7	117.1	115.9
66°	109.2	112.2	113.6	115.9	108.5	112.4	112.9	112.4	109.0	114.4	113.2



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	100.6	103.3	105.2	107.7	100.8	104.5	104.8	104.0	100.8	106.0	105.0
68°	97.8	100.3	102.5	105.0	98.3	101.8	101.8	101.3	98.1	103.3	102.3
68.5°	94.9	97.3	99.6	102.3	95.6	99.3	99.1	98.6	95.4	100.3	99.6
69°	92.2	94.6	96.8	99.6	93.1	96.6	96.4	95.9	92.6	97.6	96.6
69.5°	88.7	91.7	93.9	97.1	90.7	93.9	93.6	92.9	89.9	94.9	93.9
70°	86.0	89.7	91.2	94.4	88.2	91.4	90.7	90.2	87.2	92.2	91.2
70.5°	83.5	86.7	88.2	91.7	85.7	88.9	88.0	87.5	84.7	89.4	88.4
71°	80.8	83.8	85.5	89.4	83.3	86.2	85.2	84.7	82.0	86.7	85.7
71.5°	78.3	80.5	82.8	86.7	80.8	83.5	82.5	82.0	79.3	83.8	83.0
72°	75.4	77.6	80.0	84.2	78.3	81.0	79.8	79.3	76.6	81.0	80.3
72.5°	72.6	74.6	77.3	81.5	75.8	78.6	77.1	76.6	74.1	78.3	77.6
73°	69.7	71.9	74.6	79.1	73.1	76.1	74.4	73.9	71.4	75.6	74.9
73.5°	67.0	68.9	71.9	76.3	70.7	73.4	71.9	71.2	68.7	72.9	72.1
74°	64.0	66.2	69.2	73.9	68.4	70.9	69.2	68.4	66.2	70.2	69.4
74.5°	61.3	63.2	66.2	71.2	66.0	68.4	66.5	65.7	63.5	67.4	67.0
75°	58.6	60.3	63.5	68.7	63.2	65.7	64.0	63.0	60.8	64.7	64.2
75.5°	55.8	57.6	60.8	66.0	60.8	63.2	61.3	60.3	58.3	62.0	61.5
76°	52.9	54.6	58.1	63.5	58.3	60.8	58.6	57.6	55.6	59.3	58.8
76.5°	50.2	51.9	55.3	61.0	56.1	58.3	56.1	54.8	53.1	56.8	56.1
77°	47.4	48.9	52.6	58.3	53.6	55.8	53.6	52.1	50.4	54.1	53.4
77.5°	44.7	46.2	49.9	55.8	51.1	53.4	51.1	49.4	47.9	51.4	50.9
78°	42.0	43.2	47.4	53.1	48.7	50.6	48.4	46.7	45.5	48.7	48.2
78.5°	39.3	40.5	44.7	50.6	46.2	48.2	46.0	44.0	42.7	46.0	45.5
79°	36.6	37.6	42.2	47.9	44.0	45.7	43.5	41.3	40.3	43.2	43.0
79.5°	33.8	34.8	39.5	45.5	41.5	43.2	41.0	38.5	37.8	40.8	40.5
80°	31.1	32.1	37.1	43.0	39.3	40.8	38.5	36.1	35.3	38.0	38.0
80.5°	28.7	29.4	34.6	40.3	36.8	38.3	36.3	33.4	32.9	35.3	35.3
81°	25.9	26.4	32.1	37.8	34.6	35.8	33.8	30.9	30.4	32.6	33.1
81.5°	23.2	23.7	29.6	35.3	32.1	33.6	31.6	28.7	27.9	30.1	30.6
82°	20.5	21.2	27.2	32.9	29.9	31.1	29.2	26.2	25.2	27.4	28.2
82.5°	18.0	18.8	25.0	30.6	27.7	28.9	26.9	24.0	22.7	24.7	25.9
83°	15.3	16.6	22.7	28.2	25.4	26.4	24.7	21.7	20.5	22.5	23.7
83.5°	12.6	14.1	20.5	25.9	23.0	24.2	22.7	19.5	18.0	20.0	21.7
84°	10.1	12.1	18.3	23.5	20.8	21.7	20.5	17.3	15.6	17.5	19.8
84.5°	8.9	10.1	16.3	21.2	18.5	19.5	18.5	15.3	13.1	15.3	17.8
85°	7.7	8.6	14.3	18.8	16.1	17.3	16.3	13.1	10.6	12.8	15.8
85.5°	6.2	7.2	12.1	16.6	13.8	14.8	14.3	11.1	8.9	10.9	13.6
86°	4.9	5.9	10.1	14.1	11.6	12.6	12.4	9.6	7.4	9.4	11.9
86.5°	3.7	4.7	8.4	11.9	9.4	10.4	10.4	8.2	6.4	8.2	9.9
87°	2.7	3.2	6.4	9.6	7.2	8.2	8.4	6.7	5.4	6.9	7.9
87.5°	1.5	2.0	4.7	7.4	4.9	5.9	6.4	5.2	4.2	5.4	5.9
88°	0.5	0.7	2.7	5.4	3.0	3.7	4.4	4.0	3.2	4.2	4.2
88.5°	0.0	0.2	1.0	3.2	1.0	1.7	2.5	2.5	2.2	3.0	2.2



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1552.3	1552.3	1552.3	1552.3	1552.3	1552.3
0.5°	1550.6	1551.8	1551.8	1552.1	1552.3	1552.1
1°	1550.1	1551.1	1550.8	1551.1	1551.6	1551.3
1.5°	1549.1	1550.1	1549.6	1549.8	1550.3	1550.1
2°	1548.1	1549.1	1548.4	1548.4	1548.8	1548.8
2.5°	1546.9	1547.9	1546.9	1546.9	1547.4	1547.6
3°	1545.4	1546.4	1545.1	1545.1	1545.6	1545.9
3.5°	1543.7	1544.9	1543.7	1543.4	1543.9	1544.4
4°	1541.9	1542.9	1541.7	1541.4	1541.9	1542.7
4.5°	1540.0	1541.2	1539.5	1539.2	1539.7	1540.4
5°	1537.7	1539.0	1537.0	1537.0	1537.5	1538.2
5.5°	1535.5	1536.7	1534.5	1534.3	1535.0	1536.0
6°	1533.0	1534.0	1531.8	1531.6	1532.3	1533.5
6.5°	1530.3	1531.3	1529.1	1528.8	1529.3	1530.8
7°	1527.4	1528.3	1525.9	1525.6	1526.4	1527.6
7.5°	1524.1	1525.4	1522.7	1522.4	1522.9	1524.4
8°	1520.9	1521.9	1519.2	1519.0	1519.7	1521.2
8.5°	1517.5	1518.5	1515.5	1515.2	1516.0	1517.5
9°	1514.0	1514.8	1511.8	1511.3	1512.0	1513.8
9.5°	1510.1	1510.8	1507.8	1507.3	1508.1	1509.8
10°	1505.9	1507.1	1503.6	1502.9	1503.9	1505.6
10.5°	1501.7	1502.9	1499.2	1498.7	1499.2	1501.2
11°	1497.2	1498.2	1494.7	1494.0	1494.7	1496.7
11.5°	1492.8	1493.5	1489.8	1489.1	1490.0	1492.0
12°	1487.8	1488.8	1484.9	1484.1	1484.9	1486.8
12.5°	1482.9	1483.6	1479.7	1478.9	1479.4	1481.6
13°	1477.7	1478.4	1474.2	1473.5	1474.2	1476.2
13.5°	1472.0	1473.0	1468.8	1468.1	1468.6	1470.8
14°	1466.6	1467.3	1462.9	1462.1	1462.9	1465.1
14.5°	1460.6	1461.4	1456.9	1456.0	1456.4	1458.9
15°	1454.7	1455.2	1450.8	1449.8	1450.0	1452.5
15.5°	1448.3	1448.8	1444.1	1443.4	1443.4	1445.8
16°	1441.9	1442.4	1437.4	1436.7	1436.9	1439.2
16.5°	1435.0	1435.7	1430.8	1429.8	1430.0	1432.0
17°	1428.0	1428.5	1423.8	1422.8	1422.8	1424.8
17.5°	1420.9	1421.4	1416.4	1415.4	1415.2	1417.2
18°	1413.7	1413.7	1409.0	1408.0	1407.8	1409.8
18.5°	1405.8	1406.0	1401.1	1400.6	1399.9	1401.6
19°	1398.1	1398.4	1393.2	1392.5	1391.7	1393.7
19.5°	1390.2	1390.2	1385.0	1384.5	1383.6	1385.3
20°	1381.8	1382.1	1376.6	1376.1	1374.9	1376.9
20.5°	1373.4	1373.7	1368.2	1367.3	1366.3	1368.5
21°	1364.8	1365.0	1359.3	1358.9	1357.4	1359.8



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1337.9	1338.3	1331.9	1330.7	1329.7	1332.2
23°	1328.5	1329.0	1322.5	1321.3	1320.3	1322.8
23.5°	1319.3	1319.3	1313.1	1310.9	1310.7	1313.4
24°	1309.7	1309.9	1303.3	1301.0	1300.8	1303.3
24.5°	1299.8	1300.1	1293.1	1290.7	1290.7	1294.6
25°	1289.7	1290.7	1283.3	1280.3	1280.3	1285.5
25.5°	1279.8	1282.0	1272.9	1269.2	1270.4	1270.7
26°	1269.9	1270.4	1262.5	1259.0	1259.8	1254.3
26.5°	1261.0	1252.9	1252.4	1247.4	1250.6	1239.0
27°	1250.9	1239.3	1243.2	1236.8	1240.8	1216.1
27.5°	1234.8	1220.0	1232.4	1225.2	1225.2	1191.8
28°	1218.8	1196.8	1216.1	1213.8	1209.1	1167.9
28.5°	1203.5	1173.3	1200.2	1202.2	1193.1	1144.7
29°	1182.2	1150.3	1184.9	1190.9	1171.1	1122.2
29.5°	1159.2	1127.4	1163.2	1178.5	1147.9	1100.4
30°	1136.3	1105.4	1140.9	1167.1	1123.9	1078.7
30.5°	1113.8	1082.6	1117.2	1155.3	1101.4	1057.4
31°	1091.8	1060.9	1095.2	1143.4	1078.9	1036.2
31.5°	1069.3	1038.9	1072.5	1131.3	1056.9	1014.4
32°	1047.6	1016.7	1051.0	1119.2	1035.9	990.7
32.5°	1025.8	993.4	1029.8	1107.3	1015.7	967.8
33°	1004.3	970.0	1008.3	1096.0	994.7	942.8
33.5°	982.3	945.5	986.8	1085.8	974.4	916.6
34°	959.4	920.3	965.5	1074.7	952.9	889.2
34.5°	936.4	894.9	943.0	1056.4	930.9	863.5
35°	912.9	868.9	920.1	1034.7	907.2	837.1
35.5°	888.4	843.0	896.8	1018.4	884.0	812.1
36°	863.7	818.3	872.4	994.9	858.8	787.4
36.5°	838.5	793.3	848.4	965.8	834.3	764.2
37°	813.8	769.9	823.7	936.6	808.6	740.7
37.5°	789.4	746.1	799.5	907.7	784.7	718.0
38°	765.7	722.9	775.0	879.1	761.0	695.2
38.5°	742.7	699.9	752.3	851.6	738.2	672.3
39°	719.2	677.5	729.1	824.9	716.0	648.5
39.5°	696.7	653.7	707.6	799.3	694.3	624.6
40°	674.7	630.0	685.4	774.5	673.0	600.4
40.5°	653.2	607.0	663.4	750.8	651.8	576.6
41°	630.5	583.6	641.6	727.6	630.3	553.4
41.5°	608.3	560.6	620.1	704.4	608.0	531.2
42°	585.8	538.1	597.9	681.7	586.0	509.0
42.5°	564.0	516.4	575.7	659.7	564.3	488.2
43°	541.8	494.9	553.9	636.9	542.3	467.7
43.5°	519.8	474.1	531.9	613.7	520.8	447.7

TEST NUMBER: P776021

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	458.6	414.8	469.9	544.3	460.0	389.6
45.5°	439.8	396.0	450.9	522.3	441.3	371.6
46°	420.3	377.5	431.9	501.0	422.5	354.3
46.5°	401.7	359.5	412.8	480.0	404.2	337.7
47°	383.7	342.4	394.8	460.3	386.4	321.7
47.5°	366.1	325.6	376.3	441.5	369.1	307.3
48°	348.6	310.8	358.7	423.7	352.1	294.0
48.5°	332.3	296.0	342.2	406.7	335.8	281.9
49°	316.0	282.9	326.1	389.6	320.2	270.8
49.5°	301.2	270.8	310.8	373.6	305.6	260.2
50°	286.3	259.4	296.2	357.7	292.0	250.5
50.5°	273.3	249.0	282.9	342.4	279.2	241.9
51°	260.9	239.9	270.0	327.6	267.6	233.7
51.5°	249.5	231.3	258.9	313.0	256.7	225.8
52°	239.2	223.3	248.8	299.2	246.8	218.4
52.5°	229.8	215.7	238.9	285.9	237.7	211.0
53°	221.1	208.3	230.0	273.3	229.0	204.1
53.5°	213.7	201.1	221.6	261.1	220.9	196.7
54°	206.5	193.9	213.5	249.8	213.2	189.7
54.5°	199.4	187.3	206.5	238.9	205.8	183.1
55°	192.0	180.6	199.1	228.8	199.1	176.9
55.5°	184.8	174.2	192.0	219.1	192.0	171.5
56°	178.4	168.7	185.3	210.3	185.3	167.5
56.5°	171.7	164.3	178.6	201.9	178.6	164.5
57°	165.8	160.8	172.2	193.7	172.5	161.8
57.5°	160.6	158.1	166.3	186.3	166.8	158.9
58°	156.1	155.2	161.3	179.4	162.1	156.1
58.5°	152.9	152.4	157.4	172.9	158.4	153.4
59°	150.2	149.7	154.4	167.0	155.7	150.5
59.5°	147.5	147.3	151.5	161.1	152.7	147.5
60°	144.8	144.3	148.7	156.1	150.0	144.5
60.5°	142.1	141.8	146.0	151.5	146.8	141.3
61°	139.1	139.1	143.1	147.0	144.0	138.6
61.5°	136.4	136.4	140.3	142.8	141.1	135.6
62°	133.7	133.7	137.6	138.9	138.1	132.7
62.5°	130.9	130.9	134.7	135.1	134.9	129.5
63°	128.2	128.5	131.9	131.7	131.9	126.7
63.5°	125.5	125.8	129.2	128.5	129.0	123.8
64°	122.8	123.3	126.5	125.3	126.0	120.8
64.5°	120.1	120.6	123.5	122.5	123.0	117.8
65°	117.6	117.8	121.1	119.8	120.1	115.1
65.5°	114.9	115.4	118.3	116.9	117.1	112.2
66°	112.2	112.7	115.4	114.1	114.1	109.2



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	104.3	105.0	107.5	106.0	105.2	100.6
68°	101.5	102.5	104.8	103.0	102.3	97.8
68.5°	99.1	99.8	102.0	100.1	99.3	94.9
69°	96.4	97.3	99.3	97.3	96.6	92.2
69.5°	93.6	94.9	96.6	94.4	93.6	88.7
70°	91.2	92.4	93.9	91.7	90.7	86.0
70.5°	88.4	89.4	91.4	89.2	88.0	83.5
71°	86.0	87.0	89.7	86.5	85.0	80.8
71.5°	83.3	84.7	87.0	83.5	82.3	78.3
72°	80.8	82.3	84.0	80.8	79.6	75.4
72.5°	78.1	79.8	81.3	78.1	76.6	72.6
73°	75.6	77.6	78.6	75.4	73.6	69.7
73.5°	73.1	74.9	75.8	72.4	70.9	67.0
74°	70.4	72.4	73.4	69.7	67.9	64.0
74.5°	67.9	69.9	70.7	67.0	65.0	61.3
75°	65.2	67.4	67.9	64.2	62.3	58.6
75.5°	62.8	65.0	65.5	61.5	59.3	55.8
76°	60.0	62.5	62.8	58.6	56.6	52.9
76.5°	57.6	59.8	60.3	55.8	53.6	50.2
77°	55.1	57.3	57.6	53.4	50.6	47.4
77.5°	52.4	54.8	55.1	50.6	47.9	44.7
78°	49.9	52.4	52.4	47.9	45.0	42.0
78.5°	47.2	49.9	49.9	45.2	42.2	39.3
79°	44.7	47.4	47.2	42.7	39.3	36.6
79.5°	42.2	45.0	44.7	40.0	36.6	33.8
80°	39.5	42.5	42.0	37.6	33.6	31.1
80.5°	37.1	40.0	39.5	35.1	30.9	28.7
81°	34.6	37.8	37.1	32.6	28.2	25.9
81.5°	32.4	35.3	34.6	30.1	25.7	23.2
82°	29.9	32.9	32.1	27.7	23.0	20.5
82.5°	27.4	30.6	29.6	25.4	20.8	18.0
83°	25.2	28.2	27.2	23.2	18.3	15.3
83.5°	22.7	25.7	24.7	21.0	16.1	12.6
84°	20.5	23.5	22.2	18.8	13.8	10.1
84.5°	18.0	21.2	20.0	16.8	11.9	8.9
85°	15.8	18.8	17.5	14.6	10.1	7.7
85.5°	13.3	16.6	15.1	12.6	8.6	6.2
86°	11.1	14.1	12.6	10.4	7.2	4.9
86.5°	8.6	11.9	10.4	8.4	5.7	3.7
87°	6.4	9.4	8.2	6.4	4.2	2.7
87.5°	4.2	7.4	6.2	4.7	2.7	1.5
88°	2.2	5.2	4.2	2.7	1.2	0.5
88.5°	0.7	3.0	2.2	0.7	0.5	0.0



TEST NUMBER: P776021

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-3000K

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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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report





21.5°	1350.7	1360.6	1385.5	1406.8	1405.6	1413.7	1418.6	1416.4	1411.2	1402.8	1382.3
22°	1341.3	1351.7	1377.1	1398.9	1398.1	1406.0	1411.0	1409.0	1403.8	1395.4	1373.7



44°	428.2	490.7	636.4	608.3	511.4	592.2	709.6	604.1	531.2	598.6	641.4
44.5°	408.6	470.9	611.2	586.3	489.4	570.2	683.9	582.3	509.0	577.9	616.2



66.5°	106.5	109.2	110.9	113.2	105.7	109.7	110.2	109.7	106.2	111.7	110.4
67°	103.5	106.2	108.2	110.4	103.3	107.0	107.5	107.0	103.5	108.7	107.7



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°	1356.1	1356.4	1350.5	1349.5	1348.2	1350.7
22°	1347.2	1347.2	1341.3	1340.3	1339.1	1341.3



44°	499.1	453.9	510.9	590.2	499.6	428.2
44.5°	479.1	434.1	490.7	567.3	479.8	408.6



66.5°	109.4	110.2	112.9	111.4	111.2	106.5
67°	107.0	107.7	110.2	108.7	108.2	103.5

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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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(END OF REPORT)