

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: P776023

Luminaire Tested: HCDJBL51525CSD-HCD4TSQMW-2500lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776023
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-4000K
Description: 4 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

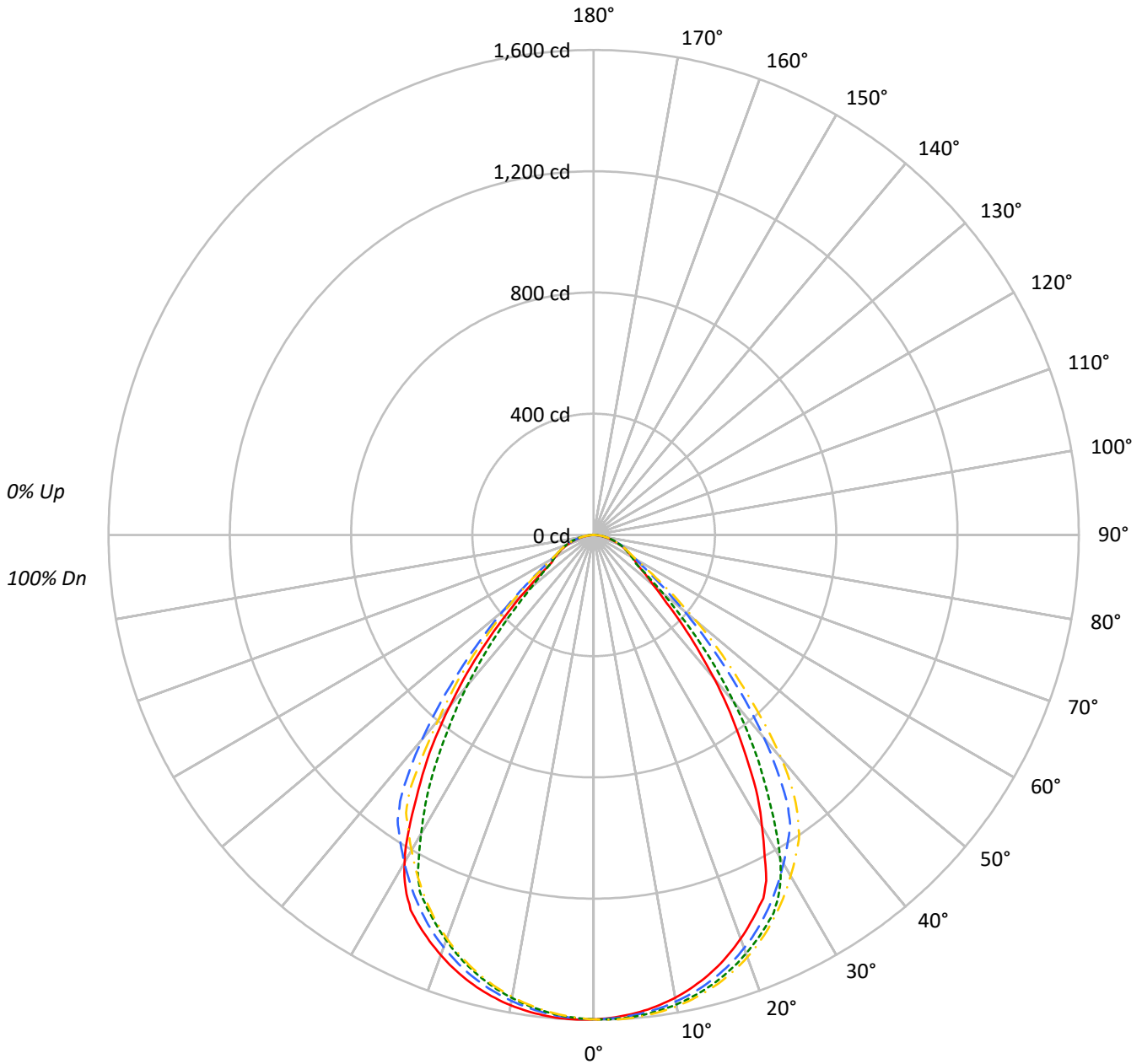
Lumens per Lamp: N/A
Luminaire Lumens: 2642.8 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.13 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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: P776023
CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P776023

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-4000K

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°	157960	157960	157960	157960
5°	157124	158206	158355	157194
10°	155569	157867	158148	155719
15°	153013	156737	157177	153299
20°	149101	154581	155149	149658
25°	144330	151627	152063	144908
30°	126745	140327	142415	129872
35°	103976	117611	120157	107934
40°	79753	92746	95533	83688
45°	56067	67306	70004	59688
50°	39658	45055	47362	41072
55°	31381	30984	32828	32035
60°	29415	28506	29020	29356
65°	27715	27364	27551	28370
70°	25576	26241	25952	27483
75°	23028	24861	23907	26504
80°	18215	22996	20719	24874
85°	8959	18712	12362	21888

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 94676 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.9	5.7
10°-20°	426.9	16.2
20°-30°	622.2	23.5
30°-40°	625.8	23.7
40°-50°	410.3	15.5
50°-60°	198.8	7.5
60°-70°	120.9	4.6
70°-80°	69.6	2.6
80°-90°	17.5	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°	1199.9	45.4
0°-40°	1825.8	69.1
0°-60°	2434.9	92.1
0°-90°	2642.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2642.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1598	1598	1598	1598	1598	
5°	1584	1594	1596	1584	1584	150
15°	1495	1532	1536	1498	1495	421
25°	1323	1390	1394	1329	1323	596
35°	862	975	996	894	862	537
45°	401	482	501	427	401	316
55°	182	180	190	186	182	170
65°	118	117	118	121	118	117
75°	60	65	63	69	60	64
85°	8	16	11	19	8	12
90°	0	0	0	0	0	



TEST NUMBER: P776023

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1
0.5°	1597.8	1597.3	1597.5	1597.5	1598.6	1598.8	1599.3	1599.6	1599.1	1598.1	1597.3
1°	1597.0	1596.5	1597.3	1597.8	1598.8	1599.3	1599.8	1600.1	1599.3	1598.1	1597.0
1.5°	1595.8	1595.8	1597.0	1597.8	1598.8	1599.6	1600.3	1600.3	1599.6	1598.1	1596.5
2°	1594.5	1594.7	1596.5	1597.8	1598.8	1599.6	1600.3	1600.3	1599.6	1597.8	1595.8
2.5°	1593.2	1593.7	1595.8	1597.3	1598.6	1599.6	1600.3	1600.3	1599.6	1597.5	1595.0
3°	1591.4	1592.2	1594.7	1596.8	1597.8	1599.3	1600.1	1600.3	1599.1	1597.0	1594.0
3.5°	1589.9	1590.7	1593.7	1596.3	1597.3	1598.8	1599.8	1599.8	1598.6	1596.3	1592.7
4°	1588.1	1589.2	1592.5	1595.5	1596.5	1598.3	1599.3	1599.6	1598.1	1595.3	1591.7
4.5°	1585.8	1587.1	1590.9	1594.5	1595.8	1597.3	1598.8	1598.8	1597.3	1594.2	1590.2
5°	1583.6	1585.1	1589.2	1593.2	1594.5	1596.5	1597.8	1597.8	1596.0	1593.0	1588.1
5.5°	1581.3	1582.8	1587.4	1592.0	1593.2	1595.3	1596.8	1596.8	1595.0	1591.7	1586.4
6°	1578.7	1580.5	1585.6	1590.4	1591.7	1593.7	1595.5	1595.5	1593.5	1589.9	1584.3
6.5°	1575.9	1578.0	1583.6	1588.9	1589.9	1592.5	1594.0	1594.0	1591.7	1588.1	1582.0
7°	1572.6	1574.9	1581.3	1587.1	1587.9	1590.7	1592.5	1592.5	1590.2	1586.4	1579.5
7.5°	1569.3	1571.9	1578.7	1585.1	1585.8	1588.9	1590.7	1590.4	1588.1	1584.1	1576.9
8°	1566.0	1568.8	1575.7	1582.8	1583.6	1586.9	1588.6	1588.4	1586.1	1581.8	1574.1
8.5°	1562.2	1565.0	1573.1	1580.5	1581.3	1584.6	1586.4	1586.4	1583.8	1579.2	1571.1
9°	1558.4	1561.4	1570.1	1578.0	1578.7	1582.3	1584.1	1584.1	1581.3	1576.7	1568.0
9.5°	1554.3	1557.6	1566.8	1574.9	1575.9	1579.7	1581.5	1581.3	1578.5	1573.6	1564.7
10°	1550.0	1553.8	1563.2	1572.1	1572.9	1576.7	1579.0	1578.7	1575.7	1570.6	1561.2
10.5°	1545.4	1549.5	1559.6	1568.8	1569.6	1573.6	1575.9	1575.7	1572.6	1567.5	1557.4
11°	1540.8	1544.9	1555.8	1565.5	1566.3	1570.3	1572.9	1572.6	1569.6	1564.0	1553.3
11.5°	1536.0	1540.3	1551.8	1561.9	1562.4	1567.0	1569.6	1569.1	1566.0	1560.4	1549.2
12°	1530.7	1535.5	1547.4	1558.1	1558.6	1563.7	1566.3	1565.5	1562.2	1556.6	1544.9
12.5°	1525.3	1530.4	1542.9	1554.1	1554.6	1559.9	1562.4	1561.7	1558.4	1552.5	1540.3
13°	1519.7	1525.3	1538.3	1550.2	1550.5	1555.6	1558.6	1557.9	1554.3	1548.5	1535.7
13.5°	1514.1	1519.7	1533.7	1545.7	1546.2	1551.8	1554.6	1553.5	1550.0	1543.9	1530.7
14°	1508.3	1513.9	1528.4	1541.3	1541.6	1547.2	1550.2	1549.2	1545.4	1539.0	1525.6
14.5°	1501.9	1507.8	1523.3	1536.5	1536.8	1542.4	1545.7	1544.9	1540.8	1534.2	1520.2
15°	1495.3	1501.7	1517.7	1531.7	1531.7	1537.8	1541.1	1539.8	1536.0	1529.4	1514.6
15.5°	1488.4	1495.3	1512.1	1526.6	1526.6	1532.9	1536.2	1535.0	1530.7	1524.0	1508.8
16°	1481.6	1488.7	1506.0	1521.2	1521.0	1527.3	1531.2	1529.6	1525.3	1518.7	1502.9
16.5°	1474.2	1481.8	1499.9	1515.4	1515.1	1522.0	1525.8	1524.3	1519.7	1512.8	1496.6
17°	1466.8	1474.7	1493.8	1509.8	1509.3	1516.2	1520.2	1519.0	1514.1	1507.0	1490.2
17.5°	1458.9	1467.3	1487.2	1503.9	1503.2	1510.6	1514.4	1513.1	1507.8	1500.9	1483.6
18°	1451.3	1459.9	1480.3	1497.6	1496.8	1504.5	1508.3	1506.7	1501.4	1494.5	1476.7
18.5°	1442.9	1451.8	1473.4	1491.2	1490.5	1497.8	1502.2	1500.4	1495.3	1488.2	1469.6
19°	1434.8	1443.9	1466.1	1484.9	1483.6	1491.0	1495.8	1493.8	1488.7	1481.3	1462.5
19.5°	1426.1	1435.5	1458.7	1477.8	1476.7	1484.9	1489.2	1486.9	1482.1	1474.2	1455.1
20°	1417.5	1427.4	1451.0	1470.6	1469.6	1477.5	1482.1	1480.3	1475.0	1467.1	1447.2
20.5°	1408.8	1418.7	1442.9	1463.3	1462.2	1470.4	1475.2	1472.9	1467.6	1459.7	1439.1
21°	1399.9	1409.8	1434.8	1455.9	1454.6	1463.0	1467.8	1465.5	1460.2	1452.3	1431.2



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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°	1371.4	1382.4	1409.1	1432.0	1431.5	1439.9	1444.4	1442.7	1437.1	1428.4	1405.5
23°	1361.8	1373.0	1399.7	1424.1	1423.1	1431.7	1436.3	1434.5	1428.9	1420.0	1396.4
23.5°	1352.1	1363.0	1390.3	1415.7	1414.7	1423.6	1427.9	1426.1	1421.0	1411.4	1386.9
24°	1341.7	1353.1	1380.8	1407.0	1406.3	1415.2	1419.3	1417.7	1412.6	1402.7	1377.5
24.5°	1332.8	1343.5	1371.2	1398.4	1397.6	1406.5	1410.1	1409.1	1403.7	1394.1	1367.9
25°	1323.4	1333.3	1361.0	1389.2	1390.3	1397.9	1400.9	1400.2	1394.3	1385.2	1357.7
25.5°	1308.1	1323.1	1350.8	1380.1	1380.1	1389.0	1391.8	1391.5	1385.7	1376.0	1347.8
26°	1291.3	1313.2	1340.4	1370.9	1366.3	1379.6	1382.1	1382.4	1377.0	1366.6	1337.1
26.5°	1275.5	1303.8	1330.0	1361.5	1354.6	1370.7	1372.5	1372.7	1361.5	1356.9	1326.7
27°	1251.9	1291.8	1319.3	1351.6	1341.2	1362.3	1362.5	1363.0	1349.6	1346.8	1316.0
27.5°	1227.0	1273.5	1308.4	1342.9	1325.9	1350.6	1352.6	1354.1	1336.3	1337.6	1305.0
28°	1202.3	1258.8	1297.2	1333.3	1308.9	1336.6	1341.9	1341.4	1321.1	1326.2	1293.9
28.5°	1178.4	1238.7	1286.0	1318.8	1291.3	1324.9	1331.8	1326.7	1304.8	1311.2	1282.9
29°	1155.2	1214.8	1274.8	1305.8	1272.2	1310.4	1321.3	1315.0	1287.0	1298.7	1271.2
29.5°	1132.9	1190.6	1263.6	1292.8	1251.9	1294.6	1310.6	1300.7	1268.2	1285.0	1260.0
30°	1110.5	1166.4	1251.9	1277.8	1229.5	1278.1	1299.7	1284.7	1247.8	1269.4	1248.3
30.5°	1088.6	1142.8	1240.4	1261.6	1205.6	1260.5	1289.0	1268.2	1226.2	1252.7	1236.6
31°	1066.7	1119.6	1228.7	1243.8	1180.9	1241.2	1278.1	1250.6	1202.8	1235.4	1224.9
31.5°	1044.3	1097.8	1216.8	1225.7	1155.0	1221.9	1266.9	1231.5	1177.4	1216.5	1213.2
32°	1019.9	1075.6	1205.3	1206.1	1128.8	1200.5	1255.5	1211.2	1151.2	1197.0	1201.3
32.5°	996.3	1054.3	1193.1	1185.5	1102.1	1177.1	1244.3	1190.1	1125.0	1175.3	1189.1
33°	970.6	1032.1	1181.9	1162.6	1075.6	1153.0	1232.6	1166.9	1098.8	1153.0	1177.1
33.5°	943.6	1010.0	1171.0	1140.2	1049.7	1127.8	1221.6	1142.8	1071.8	1128.8	1165.2
34°	915.4	986.4	1159.8	1115.8	1024.3	1102.1	1210.7	1117.6	1045.4	1104.1	1154.7
34.5°	888.9	962.4	1142.0	1090.1	999.3	1076.4	1196.4	1091.7	1020.2	1078.7	1141.3
35°	861.7	937.5	1121.9	1064.4	974.7	1050.7	1178.1	1065.2	995.8	1052.2	1121.2
35.5°	836.0	911.3	1104.6	1039.0	950.2	1025.3	1162.1	1040.3	971.9	1026.8	1102.8
36°	810.6	884.4	1082.8	1013.8	925.8	1000.6	1146.1	1014.8	947.2	1001.9	1086.1
36.5°	786.7	857.7	1057.8	988.9	900.9	975.9	1126.8	989.9	922.0	976.9	1063.7
37°	762.5	831.5	1032.4	963.7	875.5	951.5	1106.9	965.2	898.1	952.5	1038.5
37.5°	739.1	807.3	1005.9	939.8	849.5	928.1	1085.8	941.6	872.4	929.1	1013.1
38°	715.7	781.9	980.0	915.9	823.1	903.4	1063.4	917.4	846.2	905.2	987.1
38.5°	692.1	758.5	953.8	892.2	796.9	879.5	1040.8	894.3	819.2	882.1	960.2
39°	667.7	735.3	928.1	868.6	771.2	855.4	1015.9	869.6	792.8	858.4	934.0
39.5°	643.0	712.7	902.2	844.4	745.0	830.2	990.2	845.2	766.9	834.8	906.7
40°	618.1	688.8	875.2	820.8	718.8	805.3	963.2	819.8	740.4	810.3	879.5
40.5°	593.6	666.4	848.2	796.4	693.6	779.8	935.5	794.6	715.0	785.2	851.6
41°	569.7	643.0	820.8	771.4	669.7	754.1	906.2	768.6	689.8	760.0	824.1
41.5°	546.8	619.8	793.8	746.8	645.0	729.5	876.5	743.2	666.1	735.1	796.6
42°	524.0	596.2	766.1	721.8	621.1	705.0	846.5	718.0	641.7	710.4	768.9
42.5°	502.6	573.0	738.4	697.4	597.2	680.6	816.7	692.8	618.1	686.5	741.7
43°	481.5	549.9	710.4	673.3	573.3	656.5	788.0	668.9	594.9	662.6	715.2
43.5°	460.9	527.5	682.7	650.1	549.9	633.1	759.2	645.3	571.0	639.7	687.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	401.1	464.4	603.6	581.7	481.5	564.6	677.3	576.1	500.8	572.5	609.7
45.5°	382.5	444.6	578.4	559.8	459.1	541.2	652.1	554.0	478.7	551.4	584.5
46°	364.7	425.0	554.7	537.9	437.7	519.4	627.5	531.1	456.6	529.0	560.6
46.5°	347.7	405.9	531.8	516.3	416.6	498.0	602.3	508.7	435.4	507.2	536.9
47°	331.2	387.4	509.7	495.0	396.8	476.1	578.4	486.3	415.1	485.8	514.5
47.5°	316.4	369.3	488.1	473.8	377.4	455.3	554.5	464.4	395.5	464.9	492.4
48°	302.7	352.0	466.5	453.0	358.9	434.7	530.3	443.8	376.4	444.3	470.5
48.5°	290.2	335.2	445.6	432.1	341.6	414.1	507.7	423.5	358.6	424.5	449.4
49°	278.8	319.5	425.8	412.5	324.5	394.7	484.0	403.9	340.8	405.2	429.1
49.5°	267.8	305.0	406.4	393.7	308.5	375.2	461.4	384.1	324.3	386.9	409.5
50°	257.9	291.0	387.4	375.4	293.0	357.1	439.8	366.0	308.0	368.5	390.7
50.5°	249.0	278.3	368.8	357.6	278.0	339.0	418.4	347.7	292.5	351.3	371.9
51°	240.6	266.8	351.3	341.1	264.0	322.3	398.3	330.6	278.0	334.5	354.6
51.5°	232.5	256.1	334.5	324.3	251.3	306.2	378.7	314.4	264.5	318.7	337.8
52°	224.8	246.7	318.4	308.8	239.1	291.0	360.2	299.1	251.8	303.4	321.7
52.5°	217.2	237.6	303.7	293.3	228.9	276.0	341.6	283.3	239.6	288.2	306.5
53°	210.1	229.2	289.2	278.5	218.7	262.0	324.8	268.8	228.7	274.4	291.7
53.5°	202.5	221.3	275.7	264.0	208.6	248.5	308.0	255.6	219.0	260.7	278.0
54°	195.3	213.9	262.5	250.8	198.4	236.0	292.5	242.9	209.6	247.7	264.8
54.5°	188.5	206.5	250.5	238.1	188.5	225.9	277.2	230.7	199.9	235.5	252.8
55°	182.1	199.4	239.1	226.1	179.8	215.4	263.5	220.5	190.5	225.6	241.4
55.5°	176.5	192.3	228.4	215.4	173.0	205.3	249.5	210.6	181.9	215.7	230.2
56°	172.4	185.4	218.2	205.0	167.6	194.8	236.5	200.7	174.5	205.8	221.0
56.5°	169.4	178.6	208.8	195.6	164.3	184.7	226.1	190.8	168.4	196.1	211.6
57°	166.6	172.7	200.2	186.7	161.3	176.0	215.4	181.9	164.3	186.2	202.2
57.5°	163.5	167.4	191.8	178.3	158.5	168.4	205.0	173.7	161.3	177.8	193.0
58°	160.7	163.8	184.4	170.4	155.7	162.3	194.6	166.9	158.5	170.2	185.7
58.5°	157.9	160.7	177.8	164.1	152.9	158.5	183.9	161.0	155.7	164.1	178.6
59°	154.9	157.7	171.4	160.0	149.8	155.2	176.0	157.2	152.6	159.2	171.9
59.5°	151.8	154.9	165.8	156.7	147.0	152.4	168.9	153.9	149.8	155.9	166.1
60°	148.8	152.1	160.5	153.6	144.2	149.6	162.5	151.1	146.8	152.9	160.5
60.5°	145.5	149.0	155.7	150.8	141.4	146.5	156.9	148.0	144.0	150.1	155.4
61°	142.7	146.0	151.1	147.8	138.6	143.7	152.1	145.2	140.9	147.3	150.8
61.5°	139.6	142.9	146.8	144.7	135.8	140.9	147.3	142.4	137.9	144.2	146.5
62°	136.6	139.9	142.9	141.9	133.3	138.1	142.9	139.4	135.1	141.4	142.4
62.5°	133.3	136.6	138.9	139.1	130.5	135.3	138.9	136.3	132.3	138.4	138.4
63°	130.5	133.5	135.3	136.3	127.7	132.3	135.1	133.5	129.2	135.3	134.8
63.5°	127.4	130.5	131.8	133.3	124.9	129.5	131.5	130.5	126.4	132.5	131.5
64°	124.4	127.4	128.7	130.5	122.3	126.7	127.9	127.4	123.6	129.5	128.2
64.5°	121.3	124.6	125.6	127.7	119.5	123.9	124.9	124.6	120.6	126.4	125.1
65°	118.5	121.3	122.8	124.9	117.0	121.3	122.1	121.6	117.8	123.6	122.1
65.5°	115.5	118.3	120.1	122.1	114.2	118.5	119.0	118.8	115.0	120.6	119.3
66°	112.4	115.5	117.0	119.3	111.7	115.7	116.2	115.7	112.2	117.8	116.5



TEST NUMBER: P776023

CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	103.5	106.3	108.4	110.9	103.8	107.6	107.8	107.1	103.8	109.1	108.1
68°	100.7	103.3	105.6	108.1	101.2	104.8	104.8	104.3	101.0	106.3	105.3
68.5°	97.7	100.2	102.5	105.3	98.4	102.2	102.0	101.5	98.2	103.3	102.5
69°	94.9	97.4	99.7	102.5	95.9	99.4	99.2	98.7	95.4	100.5	99.4
69.5°	91.3	94.4	96.7	100.0	93.3	96.7	96.4	95.6	92.6	97.7	96.7
70°	88.5	92.3	93.9	97.2	90.8	94.1	93.3	92.8	89.8	94.9	93.9
70.5°	86.0	89.3	90.8	94.4	88.3	91.6	90.5	90.0	87.2	92.1	91.1
71°	83.2	86.2	88.0	92.1	85.7	88.8	87.7	87.2	84.4	89.3	88.3
71.5°	80.6	82.9	85.2	89.3	83.2	86.0	85.0	84.4	81.6	86.2	85.5
72°	77.6	79.9	82.4	86.7	80.6	83.4	82.2	81.6	78.8	83.4	82.7
72.5°	74.8	76.8	79.6	83.9	78.1	80.9	79.4	78.8	76.3	80.6	79.9
73°	71.7	74.0	76.8	81.4	75.3	78.3	76.6	76.0	73.5	77.8	77.1
73.5°	68.9	71.0	74.0	78.6	72.7	75.5	74.0	73.3	70.7	75.0	74.3
74°	65.9	68.2	71.2	76.0	70.5	73.0	71.2	70.5	68.2	72.2	71.5
74.5°	63.1	65.1	68.2	73.3	67.9	70.5	68.4	67.7	65.4	69.4	68.9
75°	60.3	62.1	65.4	70.7	65.1	67.7	65.9	64.9	62.6	66.6	66.1
75.5°	57.5	59.3	62.6	67.9	62.6	65.1	63.1	62.1	60.0	63.8	63.3
76°	54.4	56.2	59.8	65.4	60.0	62.6	60.3	59.3	57.2	61.0	60.5
76.5°	51.6	53.4	57.0	62.8	57.7	60.0	57.7	56.5	54.7	58.5	57.7
77°	48.8	50.4	54.2	60.0	55.2	57.5	55.2	53.7	51.9	55.7	54.9
77.5°	46.0	47.6	51.4	57.5	52.6	54.9	52.6	50.9	49.3	52.9	52.4
78°	43.2	44.5	48.8	54.7	50.1	52.1	49.9	48.1	46.8	50.1	49.6
78.5°	40.4	41.7	46.0	52.1	47.6	49.6	47.3	45.3	44.0	47.3	46.8
79°	37.6	38.7	43.5	49.3	45.3	47.1	44.8	42.5	41.5	44.5	44.3
79.5°	34.8	35.9	40.7	46.8	42.7	44.5	42.2	39.7	38.9	42.0	41.7
80°	32.0	33.1	38.2	44.3	40.4	42.0	39.7	37.1	36.4	39.2	39.2
80.5°	29.5	30.3	35.6	41.5	37.9	39.4	37.4	34.3	33.8	36.4	36.4
81°	26.7	27.2	33.1	38.9	35.6	36.9	34.8	31.8	31.3	33.6	34.1
81.5°	23.9	24.4	30.5	36.4	33.1	34.6	32.6	29.5	28.7	31.0	31.5
82°	21.1	21.9	28.0	33.8	30.8	32.0	30.0	27.0	25.9	28.2	29.0
82.5°	18.6	19.3	25.7	31.5	28.5	29.8	27.7	24.7	23.4	25.4	26.7
83°	15.8	17.0	23.4	29.0	26.2	27.2	25.4	22.4	21.1	23.1	24.4
83.5°	13.0	14.5	21.1	26.7	23.7	24.9	23.4	20.1	18.6	20.6	22.4
84°	10.4	12.5	18.8	24.2	21.4	22.4	21.1	17.8	16.0	18.1	20.3
84.5°	9.2	10.4	16.8	21.9	19.1	20.1	19.1	15.8	13.5	15.8	18.3
85°	7.9	8.9	14.8	19.3	16.5	17.8	16.8	13.5	10.9	13.2	16.3
85.5°	6.4	7.4	12.5	17.0	14.2	15.3	14.8	11.4	9.2	11.2	14.0
86°	5.1	6.1	10.4	14.5	12.0	13.0	12.7	9.9	7.6	9.7	12.2
86.5°	3.8	4.8	8.6	12.2	9.7	10.7	10.7	8.4	6.6	8.4	10.2
87°	2.8	3.3	6.6	9.9	7.4	8.4	8.6	6.9	5.6	7.1	8.1
87.5°	1.5	2.0	4.8	7.6	5.1	6.1	6.6	5.3	4.3	5.6	6.1
88°	0.5	0.8	2.8	5.6	3.1	3.8	4.6	4.1	3.3	4.3	4.3
88.5°	0.0	0.3	1.0	3.3	1.0	1.8	2.5	2.5	2.3	3.1	2.3



TEST NUMBER: P776023
CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.3	0.3	0.0	0.0	0.0	0.3	0.3	0.0	0.3	0.3



TEST NUMBER: P776023

CATALOG NUMBER: HCDJBL5125CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1598.1	1598.1	1598.1	1598.1	1598.1	1598.1
0.5°	1596.3	1597.5	1597.5	1597.8	1598.1	1597.8
1°	1595.8	1596.8	1596.5	1596.8	1597.3	1597.0
1.5°	1594.7	1595.8	1595.3	1595.5	1596.0	1595.8
2°	1593.7	1594.7	1594.0	1594.0	1594.5	1594.5
2.5°	1592.5	1593.5	1592.5	1592.5	1593.0	1593.2
3°	1590.9	1592.0	1590.7	1590.7	1591.2	1591.4
3.5°	1589.2	1590.4	1589.2	1588.9	1589.4	1589.9
4°	1587.4	1588.4	1587.1	1586.9	1587.4	1588.1
4.5°	1585.3	1586.6	1584.8	1584.6	1585.1	1585.8
5°	1583.0	1584.3	1582.3	1582.3	1582.8	1583.6
5.5°	1580.8	1582.0	1579.7	1579.5	1580.3	1581.3
6°	1578.2	1579.2	1576.9	1576.7	1577.5	1578.7
6.5°	1575.4	1576.4	1574.1	1573.9	1574.4	1575.9
7°	1572.4	1573.4	1570.8	1570.6	1571.3	1572.6
7.5°	1569.1	1570.3	1567.5	1567.3	1567.8	1569.3
8°	1565.8	1566.8	1564.0	1563.7	1564.5	1566.0
8.5°	1562.2	1563.2	1560.2	1559.9	1560.7	1562.2
9°	1558.6	1559.4	1556.3	1555.8	1556.6	1558.4
9.5°	1554.6	1555.3	1552.3	1551.8	1552.5	1554.3
10°	1550.2	1551.5	1547.9	1547.2	1548.2	1550.0
10.5°	1545.9	1547.2	1543.4	1542.9	1543.4	1545.4
11°	1541.3	1542.4	1538.8	1538.0	1538.8	1540.8
11.5°	1536.8	1537.5	1533.7	1532.9	1534.0	1536.0
12°	1531.7	1532.7	1528.6	1527.9	1528.6	1530.7
12.5°	1526.6	1527.3	1523.3	1522.5	1523.0	1525.3
13°	1521.2	1522.0	1517.7	1516.9	1517.7	1519.7
13.5°	1515.4	1516.4	1512.1	1511.3	1511.8	1514.1
14°	1509.8	1510.6	1506.0	1505.2	1506.0	1508.3
14.5°	1503.7	1504.5	1499.9	1498.9	1499.4	1501.9
15°	1497.6	1498.1	1493.5	1492.5	1492.8	1495.3
15.5°	1491.0	1491.5	1486.7	1485.9	1485.9	1488.4
16°	1484.4	1484.9	1479.8	1479.0	1479.3	1481.6
16.5°	1477.2	1478.0	1472.9	1471.9	1472.2	1474.2
17°	1470.1	1470.6	1465.8	1464.8	1464.8	1466.8
17.5°	1462.7	1463.3	1458.2	1457.1	1456.9	1458.9
18°	1455.4	1455.4	1450.5	1449.5	1449.3	1451.3
18.5°	1447.2	1447.5	1442.4	1441.9	1441.1	1442.9
19°	1439.3	1439.6	1434.3	1433.5	1432.7	1434.8
19.5°	1431.2	1431.2	1425.9	1425.4	1424.3	1426.1
20°	1422.6	1422.8	1417.2	1416.7	1415.4	1417.5
20.5°	1413.9	1414.2	1408.6	1407.6	1406.5	1408.8
21°	1405.0	1405.3	1399.4	1398.9	1397.4	1399.9



TEST NUMBER: P776023

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1377.3	1377.8	1371.2	1369.9	1368.9	1371.4
23°	1367.6	1368.1	1361.5	1360.2	1359.2	1361.8
23.5°	1358.2	1358.2	1351.8	1349.6	1349.3	1352.1
24°	1348.3	1348.5	1341.7	1339.4	1339.1	1341.7
24.5°	1338.1	1338.4	1331.2	1328.7	1328.7	1332.8
25°	1327.7	1328.7	1321.1	1318.0	1318.0	1323.4
25.5°	1317.5	1319.8	1310.4	1306.6	1307.8	1308.1
26°	1307.3	1307.8	1299.7	1296.1	1296.9	1291.3
26.5°	1298.2	1289.8	1289.3	1284.2	1287.5	1275.5
27°	1287.8	1275.8	1279.9	1273.3	1277.3	1251.9
27.5°	1271.2	1256.0	1268.7	1261.3	1261.3	1227.0
28°	1254.7	1232.1	1251.9	1249.6	1244.8	1202.3
28.5°	1238.9	1207.9	1235.6	1237.6	1228.2	1178.4
29°	1217.0	1184.2	1219.8	1225.9	1205.6	1155.2
29.5°	1193.4	1160.6	1197.5	1213.2	1181.7	1132.9
30°	1169.7	1137.9	1174.6	1201.5	1157.0	1110.5
30.5°	1146.6	1114.5	1150.2	1189.3	1133.9	1088.6
31°	1124.0	1092.2	1127.5	1177.1	1110.7	1066.7
31.5°	1100.8	1069.5	1104.1	1164.7	1088.1	1044.3
32°	1078.4	1046.6	1082.0	1152.2	1066.5	1019.9
32.5°	1056.0	1022.7	1060.1	1140.0	1045.6	996.3
33°	1033.9	998.6	1038.0	1128.3	1024.0	970.6
33.5°	1011.3	973.4	1015.9	1117.9	1003.1	943.6
34°	987.6	947.4	994.0	1106.4	981.0	915.4
34.5°	964.0	921.2	970.8	1087.6	958.4	888.9
35°	939.8	894.5	947.2	1065.2	934.0	861.7
35.5°	914.6	867.8	923.3	1048.4	910.0	836.0
36°	889.2	842.4	898.1	1024.3	884.1	810.6
36.5°	863.3	816.7	873.4	994.2	858.9	786.7
37°	837.8	792.5	848.0	964.2	832.5	762.5
37.5°	812.6	768.1	823.1	934.5	807.8	739.1
38°	788.2	744.2	797.9	905.0	783.4	715.7
38.5°	764.6	720.6	774.5	876.7	760.0	692.1
39°	740.4	697.4	750.6	849.3	737.1	667.7
39.5°	717.3	673.0	728.4	822.8	714.7	643.0
40°	694.6	648.6	705.6	797.4	692.8	618.1
40.5°	672.5	624.9	682.9	773.0	671.0	593.6
41°	649.1	600.8	660.5	749.0	648.8	569.7
41.5°	626.2	577.1	638.4	725.1	625.9	546.8
42°	603.1	554.0	615.5	701.7	603.3	524.0
42.5°	580.7	531.6	592.6	679.1	580.9	502.6
43°	557.8	509.5	570.2	655.7	558.3	481.5
43.5°	535.1	488.1	547.6	631.8	536.2	460.9

TEST NUMBER: P776023

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	472.1	427.0	483.8	560.3	473.6	401.1
45.5°	452.7	407.7	464.2	537.7	454.3	382.5
46°	432.6	388.6	444.6	515.8	434.9	364.7
46.5°	413.6	370.1	425.0	494.2	416.1	347.7
47°	395.0	352.5	406.4	473.8	397.8	331.2
47.5°	376.9	335.2	387.4	454.5	380.0	316.4
48°	358.9	320.0	369.3	436.2	362.4	302.7
48.5°	342.1	304.7	352.3	418.7	345.7	290.2
49°	325.3	291.2	335.7	401.1	329.6	278.8
49.5°	310.0	278.8	320.0	384.6	314.6	267.8
50°	294.8	267.1	305.0	368.3	300.6	257.9
50.5°	281.3	256.4	291.2	352.5	287.4	249.0
51°	268.6	247.0	278.0	337.3	275.5	240.6
51.5°	256.9	238.1	266.6	322.3	264.3	232.5
52°	246.2	229.9	256.1	308.0	254.1	224.8
52.5°	236.5	222.0	246.0	294.3	244.7	217.2
53°	227.6	214.4	236.8	281.3	235.8	210.1
53.5°	220.0	207.0	228.1	268.8	227.4	202.5
54°	212.6	199.7	219.8	257.1	219.5	195.3
54.5°	205.3	192.8	212.6	246.0	211.9	188.5
55°	197.6	185.9	205.0	235.5	205.0	182.1
55.5°	190.3	179.3	197.6	225.6	197.6	176.5
56°	183.6	173.7	190.8	216.4	190.8	172.4
56.5°	176.8	169.1	183.9	207.8	183.9	169.4
57°	170.7	165.6	177.3	199.4	177.5	166.6
57.5°	165.3	162.8	171.2	191.8	171.7	163.5
58°	160.7	159.7	166.1	184.7	166.9	160.7
58.5°	157.4	156.9	162.0	178.0	163.0	157.9
59°	154.6	154.1	159.0	171.9	160.2	154.9
59.5°	151.8	151.6	155.9	165.8	157.2	151.8
60°	149.0	148.5	153.1	160.7	154.4	148.8
60.5°	146.2	146.0	150.3	155.9	151.1	145.5
61°	143.2	143.2	147.3	151.3	148.3	142.7
61.5°	140.4	140.4	144.5	147.0	145.2	139.6
62°	137.6	137.6	141.7	142.9	142.2	136.6
62.5°	134.8	134.8	138.6	139.1	138.9	133.3
63°	132.0	132.3	135.8	135.6	135.8	130.5
63.5°	129.2	129.5	133.0	132.3	132.8	127.4
64°	126.4	126.9	130.2	129.0	129.7	124.4
64.5°	123.6	124.1	127.2	126.2	126.7	121.3
65°	121.1	121.3	124.6	123.4	123.6	118.5
65.5°	118.3	118.8	121.8	120.3	120.6	115.5
66°	115.5	116.0	118.8	117.5	117.5	112.4



TEST NUMBER: P776023

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	107.3	108.1	110.6	109.1	108.4	103.5
68°	104.5	105.6	107.8	106.1	105.3	100.7
68.5°	102.0	102.8	105.0	103.0	102.2	97.7
69°	99.2	100.2	102.2	100.2	99.4	94.9
69.5°	96.4	97.7	99.4	97.2	96.4	91.3
70°	93.9	95.1	96.7	94.4	93.3	88.5
70.5°	91.1	92.1	94.1	91.8	90.5	86.0
71°	88.5	89.5	92.3	89.0	87.5	83.2
71.5°	85.7	87.2	89.5	86.0	84.7	80.6
72°	83.2	84.7	86.5	83.2	81.9	77.6
72.5°	80.4	82.2	83.7	80.4	78.8	74.8
73°	77.8	79.9	80.9	77.6	75.8	71.7
73.5°	75.3	77.1	78.1	74.5	73.0	68.9
74°	72.5	74.5	75.5	71.7	69.9	65.9
74.5°	69.9	72.0	72.7	68.9	66.9	63.1
75°	67.1	69.4	69.9	66.1	64.1	60.3
75.5°	64.6	66.9	67.4	63.3	61.0	57.5
76°	61.8	64.3	64.6	60.3	58.2	54.4
76.5°	59.3	61.6	62.1	57.5	55.2	51.6
77°	56.7	59.0	59.3	54.9	52.1	48.8
77.5°	53.9	56.5	56.7	52.1	49.3	46.0
78°	51.4	53.9	53.9	49.3	46.3	43.2
78.5°	48.6	51.4	51.4	46.5	43.5	40.4
79°	46.0	48.8	48.6	44.0	40.4	37.6
79.5°	43.5	46.3	46.0	41.2	37.6	34.8
80°	40.7	43.7	43.2	38.7	34.6	32.0
80.5°	38.2	41.2	40.7	36.1	31.8	29.5
81°	35.6	38.9	38.2	33.6	29.0	26.7
81.5°	33.3	36.4	35.6	31.0	26.5	23.9
82°	30.8	33.8	33.1	28.5	23.7	21.1
82.5°	28.2	31.5	30.5	26.2	21.4	18.6
83°	25.9	29.0	28.0	23.9	18.8	15.8
83.5°	23.4	26.5	25.4	21.6	16.5	13.0
84°	21.1	24.2	22.9	19.3	14.2	10.4
84.5°	18.6	21.9	20.6	17.3	12.2	9.2
85°	16.3	19.3	18.1	15.0	10.4	7.9
85.5°	13.7	17.0	15.5	13.0	8.9	6.4
86°	11.4	14.5	13.0	10.7	7.4	5.1
86.5°	8.9	12.2	10.7	8.6	5.8	3.8
87°	6.6	9.7	8.4	6.6	4.3	2.8
87.5°	4.3	7.6	6.4	4.8	2.8	1.5
88°	2.3	5.3	4.3	2.8	1.3	0.5
88.5°	0.8	3.1	2.3	0.8	0.5	0.0



TEST NUMBER: P776023

CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.3	0.3	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



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Scaled Data Report





21.5°	1390.5	1400.7	1426.4	1448.2	1447.0	1455.4	1460.5	1458.2	1452.8	1444.2	1423.1
22°	1380.8	1391.5	1417.7	1440.1	1439.3	1447.5	1452.6	1450.5	1445.2	1436.5	1414.2



44°	440.8	505.1	655.2	626.2	526.5	609.7	730.5	621.9	546.8	616.3	660.3
44.5°	420.7	484.8	629.3	603.6	503.9	587.0	704.0	599.5	524.0	594.9	634.3



66.5°	109.6	112.4	114.2	116.5	108.9	112.9	113.4	112.9	109.4	115.0	113.7
67°	106.6	109.4	111.4	113.7	106.3	110.1	110.6	110.1	106.6	111.9	110.9



89°	0.0	0.3	0.3	1.3	0.3	0.5	1.0	1.3	1.3	1.8	1.0
89.5°	0.0	0.3	0.3	0.3	0.0	0.0	0.3	0.3	0.3	0.8	0.3

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21.5°	1396.1	1396.4	1390.3	1389.2	1388.0	1390.5
22°	1386.9	1386.9	1380.8	1379.8	1378.6	1380.8



44°	513.8	467.2	526.0	607.6	514.3	440.8
44.5°	493.2	446.9	505.1	584.0	493.9	420.7



66.5°	112.7	113.4	116.2	114.7	114.5	109.6
67°	110.1	110.9	113.4	111.9	111.4	106.6

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Scaled Data Report



89°	0.3	1.0	0.5	0.3	0.3	0.0
89.5°	0.0	0.3	0.3	0.3	0.3	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)