

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: P776525

Luminaire Tested: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776525
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B024-HCD8TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K
Description: 8 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2815.9 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.28
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')

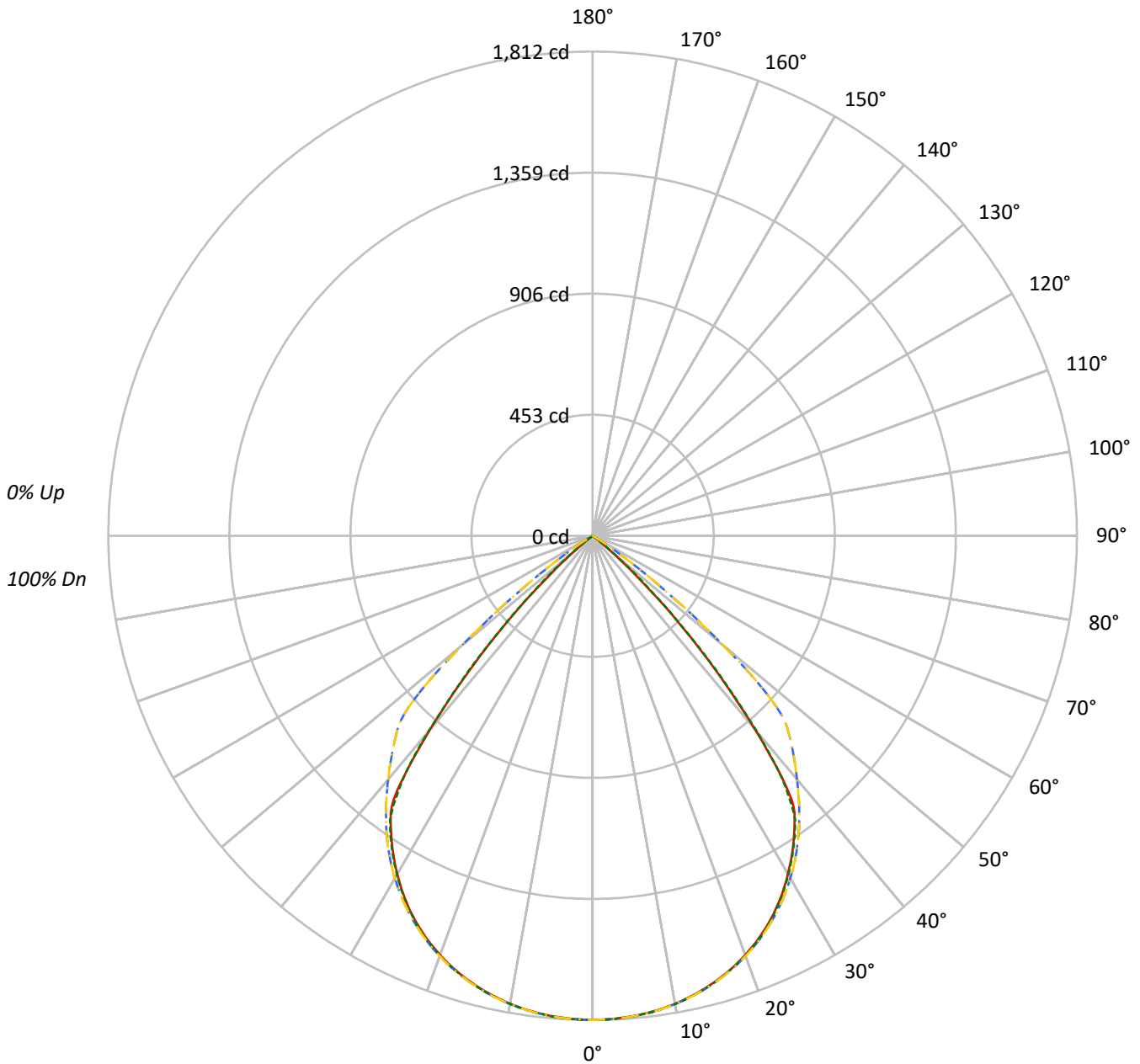
CIE Type: Direct

Input Watts (W): 38.5
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: P776525
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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					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					100			
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84					84			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	77	76					76			
4	93	85	78	73	91	84	78	73	81	76	72	79	75	71	77	74	70	69					69			
5	88	78	71	66	86	77	71	66	75	70	65	73	68	65	72	67	64	62					62			
6	82	72	65	60	81	71	64	60	69	64	59	68	63	59	67	62	58	57					57			
7	77	66	59	55	76	66	59	54	64	58	54	63	58	54	62	57	53	52					52			
8	72	62	55	50	71	61	54	50	60	54	50	59	53	49	58	53	49	47					47			
9	68	57	50	46	67	57	50	46	56	50	45	55	49	45	54	49	45	44					44			
10	64	53	47	42	63	53	46	42	52	46	42	51	46	42	50	45	42	40					40			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	43449	43449	43449	43449
5°	43403	43430	43403	43430
10°	43296	43325	43296	43325
15°	43048	43085	43048	43085
20°	42604	42642	42604	42642
25°	41808	41858	41808	41858
30°	40469	40552	40469	40552
35°	38560	38672	38560	38672
40°	29555	29809	29555	29809
45°	14656	15033	14656	15033
50°	3223	3924	3223	3924
55°	50	63	50	63
60°	38	58	38	58
65°	45	45	45	45
70°	28	28	28	28
75°	37	37	37	37
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 35104 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.4	6.1
10°-20°	489.5	17.4
20°-30°	728.8	25.9
30°-40°	824.4	29.3
40°-50°	526.1	18.7
50°-60°	74.6	2.7
60°-70°	0.8	0.0
70°-80°	0.3	0.0
80°-90°	0.0	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°	1389.6	49.4
0°-40°	2214.0	78.6
0°-60°	2814.7	100.0
0°-90°	2815.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2815.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1812	1812	1812	1812	1812	
5°	1803	1804	1803	1804	1803	171
15°	1734	1736	1734	1736	1734	489
25°	1580	1582	1580	1582	1580	726
35°	1317	1321	1317	1321	1317	799
45°	432	443	432	443	432	345
55°	1	2	1	2	1	11
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P776525

CATALOG NUMBER: HCDJBLS3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0
0.5°	1811.2	1811.6	1812.0	1812.4	1812.4	1812.4	1812.0	1811.6	1811.2	1811.6	1812.0
1°	1810.9	1811.2	1811.6	1812.0	1812.0	1812.0	1811.6	1811.2	1810.9	1811.2	1811.6
1.5°	1810.5	1810.9	1811.2	1811.6	1811.6	1811.6	1811.2	1810.9	1810.5	1810.9	1811.2
2°	1810.1	1810.1	1810.9	1811.2	1810.9	1811.2	1810.9	1810.1	1810.1	1810.1	1810.9
2.5°	1809.3	1809.7	1810.1	1810.5	1810.5	1810.5	1810.1	1809.7	1809.3	1809.7	1810.1
3°	1808.5	1808.5	1809.3	1809.7	1809.3	1809.7	1809.3	1808.5	1808.5	1808.5	1809.3
3.5°	1807.4	1807.8	1808.2	1808.5	1808.5	1808.5	1808.2	1807.8	1807.4	1807.8	1808.2
4°	1806.2	1806.6	1807.0	1807.4	1807.0	1807.4	1807.0	1806.6	1806.2	1806.6	1807.0
4.5°	1804.7	1805.1	1805.5	1805.9	1805.9	1805.9	1805.5	1805.1	1804.7	1805.1	1805.5
5°	1803.2	1803.6	1804.3	1804.3	1804.3	1804.3	1804.3	1803.6	1803.2	1803.6	1804.3
5.5°	1801.6	1802.0	1802.4	1802.8	1802.4	1802.8	1802.4	1802.0	1801.6	1802.0	1802.4
6°	1799.7	1800.1	1800.5	1800.9	1800.9	1800.9	1800.5	1800.1	1799.7	1800.1	1800.5
6.5°	1797.8	1798.2	1798.6	1799.0	1798.6	1799.0	1798.6	1798.2	1797.8	1798.2	1798.6
7°	1795.5	1795.9	1796.7	1796.7	1796.7	1796.7	1796.7	1795.9	1795.5	1795.9	1796.7
7.5°	1793.2	1793.6	1794.0	1794.3	1794.0	1794.3	1794.0	1793.6	1793.2	1793.6	1794.0
8°	1790.5	1790.9	1791.7	1791.7	1791.7	1791.7	1791.7	1790.9	1790.5	1790.9	1791.7
8.5°	1787.8	1788.2	1789.0	1789.0	1788.6	1789.0	1789.0	1788.2	1787.8	1788.2	1789.0
9°	1784.8	1785.1	1785.9	1786.3	1785.9	1786.3	1785.9	1785.1	1784.8	1785.1	1785.9
9.5°	1781.7	1782.1	1782.8	1783.2	1782.5	1783.2	1782.8	1782.1	1781.7	1782.1	1782.8
10°	1778.2	1779.0	1779.8	1779.8	1779.4	1779.8	1779.8	1779.0	1778.2	1779.0	1779.8
10.5°	1774.8	1775.5	1776.3	1776.3	1775.9	1776.3	1776.3	1775.5	1774.8	1775.5	1776.3
11°	1770.9	1771.7	1772.9	1772.5	1772.1	1772.5	1772.9	1771.7	1770.9	1771.7	1772.9
11.5°	1767.1	1767.9	1769.0	1768.6	1768.2	1768.6	1769.0	1767.9	1767.1	1767.9	1769.0
12°	1762.9	1763.6	1764.8	1764.8	1764.0	1764.8	1764.8	1763.6	1762.9	1763.6	1764.8
12.5°	1758.7	1759.4	1760.6	1760.6	1759.8	1760.6	1760.6	1759.4	1758.7	1759.4	1760.6
13°	1754.0	1755.2	1756.4	1756.4	1755.6	1756.4	1756.4	1755.2	1754.0	1755.2	1756.4
13.5°	1749.4	1750.6	1751.7	1751.7	1751.0	1751.7	1751.7	1750.6	1749.4	1750.6	1751.7
14°	1744.5	1745.6	1746.8	1746.8	1746.0	1746.8	1746.8	1745.6	1744.5	1745.6	1746.8
14.5°	1739.5	1740.6	1741.8	1741.8	1741.0	1741.8	1741.8	1740.6	1739.5	1740.6	1741.8
15°	1734.1	1735.2	1736.8	1736.4	1735.6	1736.4	1736.8	1735.2	1734.1	1735.2	1736.8
15.5°	1728.7	1729.9	1731.4	1731.0	1730.3	1731.0	1731.4	1729.9	1728.7	1729.9	1731.4
16°	1723.0	1724.1	1725.6	1725.6	1724.5	1725.6	1725.6	1724.1	1723.0	1724.1	1725.6
16.5°	1717.2	1718.4	1719.9	1719.9	1718.7	1719.9	1719.9	1718.4	1717.2	1718.4	1719.9
17°	1710.7	1712.2	1714.1	1713.7	1712.6	1713.7	1714.1	1712.2	1710.7	1712.2	1714.1
17.5°	1704.5	1706.1	1707.6	1707.6	1706.5	1707.6	1707.6	1706.1	1704.5	1706.1	1707.6
18°	1698.0	1699.5	1701.5	1701.1	1699.5	1701.1	1701.5	1699.5	1698.0	1699.5	1701.5
18.5°	1691.1	1693.0	1694.6	1694.2	1692.6	1694.2	1694.6	1693.0	1691.1	1693.0	1694.6
19°	1684.2	1686.1	1687.6	1687.3	1685.7	1687.3	1687.6	1686.1	1684.2	1686.1	1687.6
19.5°	1676.9	1678.8	1680.7	1680.4	1678.8	1680.4	1680.7	1678.8	1676.9	1678.8	1680.7
20°	1669.6	1671.5	1673.4	1673.1	1671.1	1673.1	1673.4	1671.5	1669.6	1671.5	1673.4
20.5°	1661.5	1663.9	1666.2	1665.4	1663.5	1665.4	1666.2	1663.9	1661.5	1663.9	1666.2
21°	1653.5	1656.2	1658.5	1657.7	1655.4	1657.7	1658.5	1656.2	1653.5	1656.2	1658.5



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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°	1628.2	1631.2	1633.9	1632.8	1630.1	1632.8	1633.9	1631.2	1628.2	1631.2	1633.9
23°	1618.9	1622.4	1625.5	1623.9	1620.9	1623.9	1625.5	1622.4	1618.9	1622.4	1625.5
23.5°	1609.7	1613.6	1616.6	1614.7	1611.7	1614.7	1616.6	1613.6	1609.7	1613.6	1616.6
24°	1600.5	1604.0	1607.4	1605.5	1602.1	1605.5	1607.4	1604.0	1600.5	1604.0	1607.4
24.5°	1590.5	1594.4	1598.2	1595.9	1592.5	1595.9	1598.2	1594.4	1590.5	1594.4	1598.2
25°	1580.2	1584.8	1588.6	1585.9	1582.1	1585.9	1588.6	1584.8	1580.2	1584.8	1588.6
25.5°	1569.4	1574.8	1579.0	1576.0	1571.7	1576.0	1579.0	1574.8	1569.4	1574.8	1579.0
26°	1559.1	1564.4	1569.0	1565.6	1561.4	1565.6	1569.0	1564.4	1559.1	1564.4	1569.0
26.5°	1547.6	1553.7	1558.7	1554.8	1550.2	1554.8	1558.7	1553.7	1547.6	1553.7	1558.7
27°	1536.4	1542.6	1548.3	1543.7	1538.7	1543.7	1548.3	1542.6	1536.4	1542.6	1548.3
27.5°	1524.9	1531.4	1537.6	1532.6	1527.2	1532.6	1537.6	1531.4	1524.9	1531.4	1537.6
28°	1512.6	1519.9	1526.4	1521.1	1515.3	1521.1	1526.4	1519.9	1512.6	1519.9	1526.4
28.5°	1500.3	1508.0	1515.3	1509.6	1503.0	1509.6	1515.3	1508.0	1500.3	1508.0	1515.3
29°	1487.7	1495.7	1503.8	1497.3	1490.7	1497.3	1503.8	1495.7	1487.7	1495.7	1503.8
29.5°	1475.0	1483.5	1491.9	1485.0	1477.7	1485.0	1491.9	1483.5	1475.0	1483.5	1491.9
30°	1461.6	1470.8	1480.0	1472.7	1464.6	1472.7	1480.0	1470.8	1461.6	1470.8	1480.0
30.5°	1448.1	1458.1	1467.7	1459.7	1451.6	1459.7	1467.7	1458.1	1448.1	1458.1	1467.7
31°	1434.7	1444.7	1455.1	1446.6	1438.2	1446.6	1455.1	1444.7	1434.7	1444.7	1455.1
31.5°	1420.9	1431.6	1442.4	1433.6	1424.0	1433.6	1442.4	1431.6	1420.9	1431.6	1442.4
32°	1407.1	1418.2	1429.3	1420.1	1410.1	1420.1	1429.3	1418.2	1407.1	1418.2	1429.3
32.5°	1392.9	1404.4	1415.9	1406.3	1395.9	1406.3	1415.9	1404.4	1392.9	1404.4	1415.9
33°	1378.3	1390.6	1402.5	1392.5	1381.7	1392.5	1402.5	1390.6	1378.3	1390.6	1402.5
33.5°	1363.3	1376.4	1388.3	1378.7	1367.2	1378.7	1388.3	1376.4	1363.3	1376.4	1388.3
34°	1348.0	1362.6	1374.1	1364.5	1352.2	1364.5	1374.1	1362.6	1348.0	1362.6	1374.1
34.5°	1332.6	1348.0	1359.9	1349.9	1336.8	1349.9	1359.9	1348.0	1332.6	1348.0	1359.9
35°	1317.3	1333.4	1344.9	1335.3	1321.1	1335.3	1344.9	1333.4	1317.3	1333.4	1344.9
35.5°	1301.1	1318.8	1330.3	1320.7	1305.0	1320.7	1330.3	1318.8	1301.1	1318.8	1330.3
36°	1285.0	1303.8	1315.3	1305.7	1279.3	1305.7	1315.3	1303.8	1285.0	1303.8	1315.3
36.5°	1265.8	1288.1	1300.0	1290.4	1250.9	1290.4	1300.0	1288.1	1265.8	1288.1	1300.0
37°	1239.3	1272.4	1284.6	1275.0	1217.5	1275.0	1284.6	1272.4	1239.3	1272.4	1284.6
37.5°	1199.0	1256.6	1268.9	1258.9	1185.2	1258.9	1268.9	1256.6	1199.0	1256.6	1268.9
38°	1155.3	1240.9	1253.2	1240.9	1148.4	1240.9	1253.2	1240.9	1155.3	1240.9	1253.2
38.5°	1103.5	1224.0	1237.4	1215.2	1106.2	1215.2	1237.4	1224.0	1103.5	1224.0	1237.4
39°	1050.9	1201.7	1222.1	1185.2	1059.0	1185.2	1222.1	1201.7	1050.9	1201.7	1222.1
39.5°	997.5	1171.4	1206.0	1154.1	1006.4	1154.1	1206.0	1171.4	997.5	1171.4	1206.0
40°	944.2	1132.3	1189.8	1120.4	952.3	1120.4	1189.8	1132.3	944.2	1132.3	1189.8
40.5°	890.5	1086.6	1174.5	1082.4	897.0	1082.4	1174.5	1086.6	890.5	1086.6	1174.5
41°	836.0	1037.1	1158.7	1040.1	844.0	1040.1	1158.7	1037.1	836.0	1037.1	1158.7
41.5°	783.4	987.2	1143.4	993.7	791.8	993.7	1143.4	987.2	783.4	987.2	1143.4
42°	730.0	936.9	1128.0	943.4	740.8	943.4	1128.0	936.9	730.0	936.9	1128.0
42.5°	678.6	887.0	1112.7	892.4	690.1	892.4	1112.7	887.0	678.6	887.0	1112.7
43°	627.2	836.0	1097.3	840.6	638.7	840.6	1097.3	836.0	627.2	836.0	1097.3
43.5°	576.9	784.9	1081.6	790.7	587.6	790.7	1081.6	784.9	576.9	784.9	1081.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	432.2	635.2	1035.2	644.8	443.3	644.8	1035.2	635.2	432.2	635.2	1035.2
45.5°	386.5	587.2	1019.4	596.1	398.8	596.1	1019.4	587.2	386.5	587.2	1019.4
46°	343.5	540.0	999.1	548.9	356.2	548.9	999.1	540.0	343.5	540.0	999.1
46.5°	301.7	493.2	975.3	502.4	314.7	502.4	975.3	493.2	301.7	493.2	975.3
47°	260.2	447.1	941.9	456.7	278.3	456.7	941.9	447.1	260.2	447.1	941.9
47.5°	220.7	402.2	904.7	412.6	247.2	412.6	904.7	402.2	220.7	402.2	904.7
48°	186.2	360.0	859.8	370.0	216.5	370.0	859.8	360.0	186.2	360.0	859.8
48.5°	154.7	319.3	810.6	329.3	185.8	329.3	810.6	319.3	154.7	319.3	810.6
49°	130.5	279.0	755.0	290.6	155.1	290.6	755.0	279.0	130.5	279.0	755.0
49.5°	107.9	239.9	698.5	254.5	127.8	254.5	698.5	239.9	107.9	239.9	698.5
50°	86.4	203.0	640.2	223.0	105.2	223.0	640.2	203.0	86.4	203.0	640.2
50.5°	68.7	170.0	583.0	193.4	82.9	193.4	583.0	170.0	68.7	170.0	583.0
51°	51.4	142.0	527.4	165.0	62.9	165.0	527.4	142.0	51.4	142.0	527.4
51.5°	36.8	118.6	475.6	138.6	49.5	138.6	475.6	118.6	36.8	118.6	475.6
52°	22.3	96.3	424.9	114.4	39.5	114.4	424.9	96.3	22.3	96.3	424.9
52.5°	8.1	77.5	376.1	92.5	29.6	92.5	376.1	77.5	8.1	77.5	376.1
53°	4.6	60.3	329.7	73.7	20.0	73.7	329.7	60.3	4.6	60.3	329.7
53.5°	3.5	44.5	288.6	56.0	11.5	56.0	288.6	44.5	3.5	44.5	288.6
54°	2.3	30.7	249.9	41.1	3.1	41.1	249.9	30.7	2.3	30.7	249.9
54.5°	1.2	16.9	213.8	30.7	1.5	30.7	213.8	16.9	1.2	16.9	213.8
55°	1.2	5.8	181.2	20.7	1.5	20.7	181.2	5.8	1.2	5.8	181.2
55.5°	1.2	3.5	150.1	12.7	1.5	12.7	150.1	3.5	1.2	3.5	150.1
56°	1.2	2.7	122.8	7.7	1.2	7.7	122.8	2.7	1.2	2.7	122.8
56.5°	1.2	1.5	101.3	3.1	1.2	3.1	101.3	1.5	1.2	1.5	101.3
57°	1.2	1.2	81.0	1.9	1.2	1.9	81.0	1.2	1.2	1.2	81.0
57.5°	1.2	1.2	62.9	1.2	1.2	1.2	62.9	1.2	1.2	1.2	62.9
58°	1.2	1.2	46.8	1.2	1.2	1.2	46.8	1.2	1.2	1.2	46.8
58.5°	0.8	0.8	33.8	1.2	1.2	1.2	33.8	0.8	0.8	0.8	33.8
59°	0.8	0.8	25.7	0.8	1.2	0.8	25.7	0.8	0.8	0.8	25.7
59.5°	0.8	0.8	18.8	0.8	1.2	0.8	18.8	0.8	0.8	0.8	18.8
60°	0.8	0.8	12.3	0.8	1.2	0.8	12.3	0.8	0.8	0.8	12.3
60.5°	0.8	0.8	7.3	0.8	0.8	0.8	7.3	0.8	0.8	0.8	7.3
61°	0.8	0.8	4.6	0.8	0.8	0.8	4.6	0.8	0.8	0.8	4.6
61.5°	0.8	0.8	2.7	0.8	0.8	0.8	2.7	0.8	0.8	0.8	2.7
62°	0.8	0.8	1.2	0.8	0.8	0.8	1.2	0.8	0.8	0.8	1.2
62.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
63°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
64°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
65.5°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P776525

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
77°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
77.5°	0.0	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.0	0.4	0.0
78°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776525
CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776525

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1812.0	1812.0	1812.0	1812.0	1812.0	1812.0
0.5°	1812.4	1812.4	1812.4	1812.0	1811.6	1811.2
1°	1812.0	1812.0	1812.0	1811.6	1811.2	1810.9
1.5°	1811.6	1811.6	1811.6	1811.2	1810.9	1810.5
2°	1811.2	1810.9	1811.2	1810.9	1810.1	1810.1
2.5°	1810.5	1810.5	1810.5	1810.1	1809.7	1809.3
3°	1809.7	1809.3	1809.7	1809.3	1808.5	1808.5
3.5°	1808.5	1808.5	1808.5	1808.2	1807.8	1807.4
4°	1807.4	1807.0	1807.4	1807.0	1806.6	1806.2
4.5°	1805.9	1805.9	1805.9	1805.5	1805.1	1804.7
5°	1804.3	1804.3	1804.3	1804.3	1803.6	1803.2
5.5°	1802.8	1802.4	1802.8	1802.4	1802.0	1801.6
6°	1800.9	1800.9	1800.9	1800.5	1800.1	1799.7
6.5°	1799.0	1798.6	1799.0	1798.6	1798.2	1797.8
7°	1796.7	1796.7	1796.7	1796.7	1795.9	1795.5
7.5°	1794.3	1794.0	1794.3	1794.0	1793.6	1793.2
8°	1791.7	1791.7	1791.7	1791.7	1790.9	1790.5
8.5°	1789.0	1788.6	1789.0	1789.0	1788.2	1787.8
9°	1786.3	1785.9	1786.3	1785.9	1785.1	1784.8
9.5°	1783.2	1782.5	1783.2	1782.8	1782.1	1781.7
10°	1779.8	1779.4	1779.8	1779.8	1779.0	1778.2
10.5°	1776.3	1775.9	1776.3	1776.3	1775.5	1774.8
11°	1772.5	1772.1	1772.5	1772.9	1771.7	1770.9
11.5°	1768.6	1768.2	1768.6	1769.0	1767.9	1767.1
12°	1764.8	1764.0	1764.8	1764.8	1763.6	1762.9
12.5°	1760.6	1759.8	1760.6	1760.6	1759.4	1758.7
13°	1756.4	1755.6	1756.4	1756.4	1755.2	1754.0
13.5°	1751.7	1751.0	1751.7	1751.7	1750.6	1749.4
14°	1746.8	1746.0	1746.8	1746.8	1745.6	1744.5
14.5°	1741.8	1741.0	1741.8	1741.8	1740.6	1739.5
15°	1736.4	1735.6	1736.4	1736.8	1735.2	1734.1
15.5°	1731.0	1730.3	1731.0	1731.4	1729.9	1728.7
16°	1725.6	1724.5	1725.6	1725.6	1724.1	1723.0
16.5°	1719.9	1718.7	1719.9	1719.9	1718.4	1717.2
17°	1713.7	1712.6	1713.7	1714.1	1712.2	1710.7
17.5°	1707.6	1706.5	1707.6	1707.6	1706.1	1704.5
18°	1701.1	1699.5	1701.1	1701.5	1699.5	1698.0
18.5°	1694.2	1692.6	1694.2	1694.6	1693.0	1691.1
19°	1687.3	1685.7	1687.3	1687.6	1686.1	1684.2
19.5°	1680.4	1678.8	1680.4	1680.7	1678.8	1676.9
20°	1673.1	1671.1	1673.1	1673.4	1671.5	1669.6
20.5°	1665.4	1663.5	1665.4	1666.2	1663.9	1661.5
21°	1657.7	1655.4	1657.7	1658.5	1656.2	1653.5



TEST NUMBER: P776525

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1632.8	1630.1	1632.8	1633.9	1631.2	1628.2
23°	1623.9	1620.9	1623.9	1625.5	1622.4	1618.9
23.5°	1614.7	1611.7	1614.7	1616.6	1613.6	1609.7
24°	1605.5	1602.1	1605.5	1607.4	1604.0	1600.5
24.5°	1595.9	1592.5	1595.9	1598.2	1594.4	1590.5
25°	1585.9	1582.1	1585.9	1588.6	1584.8	1580.2
25.5°	1576.0	1571.7	1576.0	1579.0	1574.8	1569.4
26°	1565.6	1561.4	1565.6	1569.0	1564.4	1559.1
26.5°	1554.8	1550.2	1554.8	1558.7	1553.7	1547.6
27°	1543.7	1538.7	1543.7	1548.3	1542.6	1536.4
27.5°	1532.6	1527.2	1532.6	1537.6	1531.4	1524.9
28°	1521.1	1515.3	1521.1	1526.4	1519.9	1512.6
28.5°	1509.6	1503.0	1509.6	1515.3	1508.0	1500.3
29°	1497.3	1490.7	1497.3	1503.8	1495.7	1487.7
29.5°	1485.0	1477.7	1485.0	1491.9	1483.5	1475.0
30°	1472.7	1464.6	1472.7	1480.0	1470.8	1461.6
30.5°	1459.7	1451.6	1459.7	1467.7	1458.1	1448.1
31°	1446.6	1438.2	1446.6	1455.1	1444.7	1434.7
31.5°	1433.6	1424.0	1433.6	1442.4	1431.6	1420.9
32°	1420.1	1410.1	1420.1	1429.3	1418.2	1407.1
32.5°	1406.3	1395.9	1406.3	1415.9	1404.4	1392.9
33°	1392.5	1381.7	1392.5	1402.5	1390.6	1378.3
33.5°	1378.7	1367.2	1378.7	1388.3	1376.4	1363.3
34°	1364.5	1352.2	1364.5	1374.1	1362.6	1348.0
34.5°	1349.9	1336.8	1349.9	1359.9	1348.0	1332.6
35°	1335.3	1321.1	1335.3	1344.9	1333.4	1317.3
35.5°	1320.7	1305.0	1320.7	1330.3	1318.8	1301.1
36°	1305.7	1279.3	1305.7	1315.3	1303.8	1285.0
36.5°	1290.4	1250.9	1290.4	1300.0	1288.1	1265.8
37°	1275.0	1217.5	1275.0	1284.6	1272.4	1239.3
37.5°	1258.9	1185.2	1258.9	1268.9	1256.6	1199.0
38°	1240.9	1148.4	1240.9	1253.2	1240.9	1155.3
38.5°	1215.2	1106.2	1215.2	1237.4	1224.0	1103.5
39°	1185.2	1059.0	1185.2	1222.1	1201.7	1050.9
39.5°	1154.1	1006.4	1154.1	1206.0	1171.4	997.5
40°	1120.4	952.3	1120.4	1189.8	1132.3	944.2
40.5°	1082.4	897.0	1082.4	1174.5	1086.6	890.5
41°	1040.1	844.0	1040.1	1158.7	1037.1	836.0
41.5°	993.7	791.8	993.7	1143.4	987.2	783.4
42°	943.4	740.8	943.4	1128.0	936.9	730.0
42.5°	892.4	690.1	892.4	1112.7	887.0	678.6
43°	840.6	638.7	840.6	1097.3	836.0	627.2
43.5°	790.7	587.6	790.7	1081.6	784.9	576.9



TEST NUMBER: P776525

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	644.8	443.3	644.8	1035.2	635.2	432.2
45.5°	596.1	398.8	596.1	1019.4	587.2	386.5
46°	548.9	356.2	548.9	999.1	540.0	343.5
46.5°	502.4	314.7	502.4	975.3	493.2	301.7
47°	456.7	278.3	456.7	941.9	447.1	260.2
47.5°	412.6	247.2	412.6	904.7	402.2	220.7
48°	370.0	216.5	370.0	859.8	360.0	186.2
48.5°	329.3	185.8	329.3	810.6	319.3	154.7
49°	290.6	155.1	290.6	755.0	279.0	130.5
49.5°	254.5	127.8	254.5	698.5	239.9	107.9
50°	223.0	105.2	223.0	640.2	203.0	86.4
50.5°	193.4	82.9	193.4	583.0	170.0	68.7
51°	165.0	62.9	165.0	527.4	142.0	51.4
51.5°	138.6	49.5	138.6	475.6	118.6	36.8
52°	114.4	39.5	114.4	424.9	96.3	22.3
52.5°	92.5	29.6	92.5	376.1	77.5	8.1
53°	73.7	20.0	73.7	329.7	60.3	4.6
53.5°	56.0	11.5	56.0	288.6	44.5	3.5
54°	41.1	3.1	41.1	249.9	30.7	2.3
54.5°	30.7	1.5	30.7	213.8	16.9	1.2
55°	20.7	1.5	20.7	181.2	5.8	1.2
55.5°	12.7	1.5	12.7	150.1	3.5	1.2
56°	7.7	1.2	7.7	122.8	2.7	1.2
56.5°	3.1	1.2	3.1	101.3	1.5	1.2
57°	1.9	1.2	1.9	81.0	1.2	1.2
57.5°	1.2	1.2	1.2	62.9	1.2	1.2
58°	1.2	1.2	1.2	46.8	1.2	1.2
58.5°	1.2	1.2	1.2	33.8	0.8	0.8
59°	0.8	1.2	0.8	25.7	0.8	0.8
59.5°	0.8	1.2	0.8	18.8	0.8	0.8
60°	0.8	1.2	0.8	12.3	0.8	0.8
60.5°	0.8	0.8	0.8	7.3	0.8	0.8
61°	0.8	0.8	0.8	4.6	0.8	0.8
61.5°	0.8	0.8	0.8	2.7	0.8	0.8
62°	0.8	0.8	0.8	1.2	0.8	0.8
62.5°	0.8	0.8	0.8	0.8	0.8	0.8
63°	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.8	0.8	0.8	0.8	0.8	0.8
64°	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.4	0.8	0.8
65.5°	0.4	0.8	0.4	0.4	0.4	0.4
66°	0.4	0.8	0.4	0.4	0.4	0.4



TEST NUMBER: P776525
 CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.4	0.4	0.4	0.4	0.4	0.4
68°	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.4	0.0	0.4	0.4
77°	0.4	0.4	0.4	0.0	0.4	0.4
77.5°	0.4	0.4	0.4	0.0	0.4	0.0
78°	0.0	0.4	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776525

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

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



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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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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	1645.4	1648.1	1650.4	1649.6	1647.3	1649.6	1650.4	1648.1	1645.4	1648.1	1650.4
22°	1637.0	1639.7	1642.4	1641.2	1638.9	1641.2	1642.4	1639.7	1637.0	1639.7	1642.4



44°	527.0	734.6	1066.2	741.5	538.1	741.5	1066.2	734.6	527.0	734.6	1066.2
44.5°	479.0	684.7	1050.9	692.8	490.1	692.8	1050.9	684.7	479.0	684.7	1050.9



66.5°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4



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

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21.5°	1649.6	1647.3	1649.6	1650.4	1648.1	1645.4
22°	1641.2	1638.9	1641.2	1642.4	1639.7	1637.0



44°	741.5	538.1	741.5	1066.2	734.6	527.0
44.5°	692.8	490.1	692.8	1050.9	684.7	479.0

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66.5°	0.4	0.8	0.4	0.4	0.4	0.4
67°	0.4	0.8	0.4	0.4	0.4	0.4

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Scaled Data Report



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

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Scaled Data Report



(END OF REPORT)