

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: P776327

Luminaire Tested: HCDJBS3040CSD-HCD4TSQMB-4000lm-3500K

Issue Date: 2/7/2024

Test Information

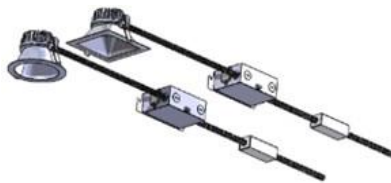
Test Method: LM-79-2019
Report Number: P776327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B006-HCD4TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K
Description: 4 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2649.0 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.14
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')

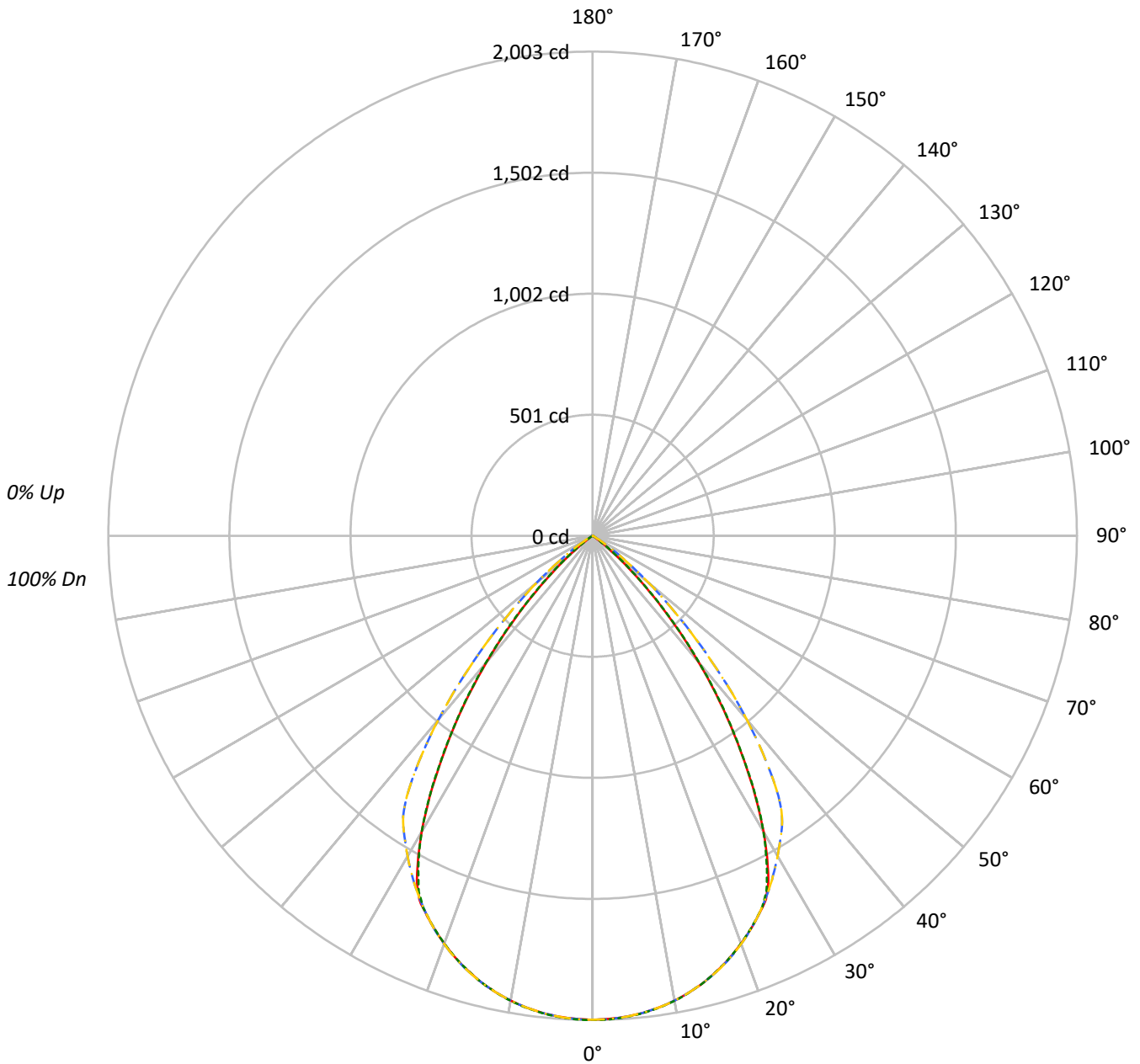
CIE Type: Direct

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



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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									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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92																			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85																			
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	82	79	77																			
4	95	86	80	75	93	85	79	75	83	78	74	81	77	73	79	75	72	71																			
5	89	80	73	68	87	79	73	68	77	72	67	75	71	67	74	70	66	65																			
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	69	64	61	59																			
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55																			
8	74	64	57	53	73	63	57	53	62	56	52	61	56	52	60	55	52	50																			
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47																			
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	197892	197892	197892	197892
5°	197427	197547	197427	197547
10°	195957	196037	195957	196037
15°	193166	193207	193166	193207
20°	188829	188745	188829	188745
25°	183178	182436	183178	182436
30°	161327	161282	161327	161282
35°	125985	126420	125985	126420
40°	87933	88811	87933	88811
45°	49903	51245	49903	51245
50°	19852	21313	19852	21313
55°	2947	3757	2947	3757
60°	633	633	633	633
65°	468	468	468	468
70°	347	347	347	347
75°	306	306	306	306
80°	228	228	228	228
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 84388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.8	7.1
10°-20°	531.5	20.1
20°-30°	765.6	28.9
30°-40°	722.6	27.3
40°-50°	372.4	14.1
50°-60°	65.0	2.5
60°-70°	2.4	0.1
70°-80°	0.7	0.0
80°-90°	0.1	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°	1485.8	56.1
0°-40°	2208.4	83.4
0°-60°	2645.9	99.9
0°-90°	2649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2649.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2002	2002	2002	2002	2002	
5°	1990	1991	1990	1991	1990	189
15°	1888	1888	1888	1888	1888	531
25°	1680	1673	1680	1673	1680	759
35°	1044	1048	1044	1048	1044	648
45°	357	367	357	367	357	283
55°	17	22	17	22	17	30
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1
0.5°	2001.7	2001.7	2001.7	2002.1	2003.3	2002.1	2001.7	2001.7	2001.7	2001.7	2001.7
1°	2001.3	2001.3	2001.3	2001.7	2002.9	2001.7	2001.3	2001.3	2001.3	2001.3	2001.3
1.5°	2000.5	2000.9	2000.9	2000.9	2002.1	2000.9	2000.9	2000.9	2000.5	2000.9	2000.9
2°	1999.7	1999.7	2000.1	2000.1	2001.3	2000.1	2000.1	1999.7	1999.7	1999.7	2000.1
2.5°	1998.5	1998.5	1998.9	1999.3	2000.1	1999.3	1998.9	1998.5	1998.5	1998.5	1998.9
3°	1997.3	1997.3	1997.7	1997.7	1998.9	1997.7	1997.7	1997.3	1997.3	1997.3	1997.7
3.5°	1995.7	1995.7	1996.1	1996.1	1997.3	1996.1	1996.1	1995.7	1995.7	1995.7	1996.1
4°	1994.1	1994.1	1994.1	1994.5	1995.3	1994.5	1994.1	1994.1	1994.1	1994.1	1994.1
4.5°	1992.2	1992.2	1992.2	1992.2	1993.4	1992.2	1992.2	1992.2	1992.2	1992.2	1992.2
5°	1989.8	1989.8	1989.8	1989.8	1991.0	1989.8	1989.8	1989.8	1989.8	1989.8	1989.8
5.5°	1987.0	1987.0	1987.4	1987.4	1988.2	1987.4	1987.4	1987.0	1987.0	1987.0	1987.4
6°	1984.2	1984.2	1984.2	1984.6	1985.4	1984.6	1984.2	1984.2	1984.2	1984.2	1984.2
6.5°	1981.0	1981.0	1981.4	1981.4	1982.2	1981.4	1981.4	1981.0	1981.0	1981.0	1981.4
7°	1977.9	1977.9	1977.9	1978.3	1979.1	1978.3	1977.9	1977.9	1977.9	1977.9	1977.9
7.5°	1974.3	1974.3	1974.3	1974.3	1975.5	1974.3	1974.3	1974.3	1974.3	1974.3	1974.3
8°	1970.3	1970.3	1970.7	1970.7	1971.5	1970.7	1970.7	1970.3	1970.3	1970.3	1970.7
8.5°	1966.3	1966.3	1966.3	1966.3	1967.1	1966.3	1966.3	1966.3	1966.3	1966.3	1966.3
9°	1962.0	1962.0	1962.0	1962.0	1962.8	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0
9.5°	1957.2	1957.2	1957.2	1957.2	1958.0	1957.2	1957.2	1957.2	1957.2	1957.2	1957.2
10°	1952.4	1952.4	1952.4	1952.4	1953.2	1952.4	1952.4	1952.4	1952.4	1952.4	1952.4
10.5°	1947.3	1947.3	1947.3	1946.9	1948.1	1946.9	1947.3	1947.3	1947.3	1947.3	1947.3
11°	1941.7	1941.7	1942.1	1941.7	1942.5	1941.7	1942.1	1941.7	1941.7	1941.7	1942.1
11.5°	1936.2	1936.2	1936.2	1935.8	1936.6	1935.8	1936.2	1936.2	1936.2	1936.2	1936.2
12°	1930.2	1930.2	1930.2	1929.8	1930.6	1929.8	1930.2	1930.2	1930.2	1930.2	1930.2
12.5°	1923.5	1923.9	1923.9	1923.5	1923.9	1923.5	1923.9	1923.9	1923.5	1923.9	1923.9
13°	1917.1	1917.5	1917.5	1916.7	1917.5	1916.7	1917.5	1917.5	1917.1	1917.5	1917.5
13.5°	1910.3	1910.3	1910.7	1910.0	1910.7	1910.0	1910.7	1910.3	1910.3	1910.3	1910.7
14°	1903.2	1903.6	1903.6	1902.8	1903.2	1902.8	1903.6	1903.6	1903.2	1903.6	1903.6
14.5°	1895.7	1896.0	1896.4	1895.7	1895.7	1895.7	1896.4	1896.0	1895.7	1896.0	1896.4
15°	1887.7	1888.5	1888.5	1887.7	1888.1	1887.7	1888.5	1888.5	1887.7	1888.5	1888.5
15.5°	1879.8	1880.6	1880.6	1879.8	1879.8	1879.8	1880.6	1880.6	1879.8	1880.6	1880.6
16°	1871.4	1872.2	1872.6	1871.4	1871.4	1871.4	1872.6	1872.2	1871.4	1872.2	1872.6
16.5°	1863.1	1863.5	1864.3	1863.1	1862.7	1863.1	1864.3	1863.5	1863.1	1863.5	1864.3
17°	1854.3	1854.7	1855.5	1854.0	1854.0	1854.0	1855.5	1854.7	1854.3	1854.7	1855.5
17.5°	1844.8	1845.6	1846.4	1844.8	1844.8	1844.8	1846.4	1845.6	1844.8	1845.6	1846.4
18°	1835.7	1836.1	1836.9	1835.7	1835.3	1835.7	1836.9	1836.1	1835.7	1836.1	1836.9
18.5°	1826.1	1826.5	1827.3	1825.8	1825.4	1825.8	1827.3	1826.5	1826.1	1826.5	1827.3
19°	1815.8	1816.6	1817.4	1815.8	1815.0	1815.8	1817.4	1816.6	1815.8	1816.6	1817.4
19.5°	1805.9	1806.3	1807.1	1805.5	1805.1	1805.5	1807.1	1806.3	1805.9	1806.3	1807.1
20°	1795.2	1796.0	1796.8	1794.8	1794.4	1794.8	1796.8	1796.0	1795.2	1796.0	1796.8
20.5°	1784.8	1785.2	1786.0	1784.0	1783.7	1784.0	1786.0	1785.2	1784.8	1785.2	1786.0
21°	1773.7	1774.1	1774.9	1772.9	1772.5	1772.9	1774.9	1774.1	1773.7	1774.1	1774.9



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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°	1739.6	1739.6	1740.0	1738.4	1738.4	1738.4	1740.0	1739.6	1739.6	1739.6	1740.0
23°	1727.7	1727.7	1727.7	1726.5	1726.5	1726.5	1727.7	1727.7	1727.7	1727.7	1727.7
23.5°	1715.7	1715.7	1714.9	1714.1	1714.1	1714.1	1714.9	1715.7	1715.7	1715.7	1714.9
24°	1703.4	1703.4	1702.2	1701.8	1701.8	1701.8	1702.2	1703.4	1703.4	1703.4	1702.2
24.5°	1691.1	1690.7	1689.1	1689.1	1689.1	1689.1	1689.1	1690.7	1691.1	1690.7	1689.1
25°	1679.6	1677.6	1675.6	1676.0	1676.0	1676.0	1675.6	1677.6	1679.6	1677.6	1675.6
25.5°	1666.1	1664.9	1662.1	1663.3	1663.3	1663.3	1662.1	1664.9	1666.1	1664.9	1662.1
26°	1643.5	1651.8	1648.2	1650.6	1650.6	1650.6	1648.2	1651.8	1643.5	1651.8	1648.2
26.5°	1624.4	1638.7	1634.3	1637.1	1637.1	1637.1	1634.3	1638.7	1624.4	1638.7	1634.3
27°	1601.4	1626.4	1620.0	1618.4	1618.4	1618.4	1620.0	1626.4	1601.4	1626.4	1620.0
27.5°	1572.8	1609.3	1605.3	1601.4	1601.4	1601.4	1605.3	1609.3	1572.8	1609.3	1605.3
28°	1542.6	1586.7	1590.6	1583.1	1583.1	1583.1	1590.6	1586.7	1542.6	1586.7	1590.6
28.5°	1512.0	1567.2	1575.9	1557.3	1557.3	1557.3	1575.9	1567.2	1512.0	1567.2	1575.9
29°	1479.8	1543.0	1560.8	1530.3	1530.3	1530.3	1560.8	1543.0	1479.8	1543.0	1560.8
29.5°	1447.3	1514.4	1545.8	1504.1	1504.1	1504.1	1545.8	1514.4	1447.3	1514.4	1545.8
30°	1413.5	1485.0	1530.3	1476.2	1476.2	1476.2	1530.3	1485.0	1413.5	1485.0	1530.3
30.5°	1378.9	1454.0	1515.2	1447.3	1447.3	1447.3	1515.2	1454.0	1378.9	1454.0	1515.2
31°	1343.2	1423.0	1499.7	1417.5	1417.5	1417.5	1499.7	1423.0	1343.2	1423.0	1499.7
31.5°	1307.1	1390.9	1484.2	1387.7	1387.7	1387.7	1484.2	1390.9	1307.1	1390.9	1484.2
32°	1270.1	1358.3	1468.7	1357.1	1357.1	1357.1	1468.7	1358.3	1270.1	1358.3	1468.7
32.5°	1232.4	1324.5	1453.6	1325.7	1325.7	1325.7	1453.6	1324.5	1232.4	1324.5	1453.6
33°	1194.7	1290.8	1438.1	1292.8	1292.8	1292.8	1438.1	1290.8	1194.7	1290.8	1438.1
33.5°	1156.5	1255.4	1420.2	1259.0	1259.0	1259.0	1420.2	1255.4	1156.5	1255.4	1420.2
34°	1119.2	1219.7	1401.2	1223.7	1223.7	1223.7	1401.2	1219.7	1119.2	1219.7	1401.2
34.5°	1081.5	1183.5	1378.9	1187.1	1187.1	1187.1	1378.9	1183.5	1081.5	1183.5	1378.9
35°	1044.1	1147.4	1351.9	1150.2	1150.2	1150.2	1351.9	1147.4	1044.1	1147.4	1351.9
35.5°	1007.6	1111.7	1322.9	1114.0	1114.0	1114.0	1322.9	1111.7	1007.6	1111.7	1322.9
36°	971.5	1075.1	1290.8	1077.1	1077.1	1077.1	1290.8	1075.1	971.5	1075.1	1290.8
36.5°	934.9	1039.4	1256.2	1041.0	1041.0	1041.0	1256.2	1039.4	934.9	1039.4	1256.2
37°	898.8	1003.6	1219.7	1005.2	1005.2	1005.2	1219.7	1003.6	898.8	1003.6	1219.7
37.5°	862.2	968.3	1182.7	970.7	970.7	970.7	1182.7	968.3	862.2	968.3	1182.7
38°	825.7	932.9	1144.6	935.7	935.7	935.7	1144.6	932.9	825.7	932.9	1144.6
38.5°	788.8	898.8	1106.9	902.0	902.0	902.0	1106.9	898.8	788.8	898.8	1106.9
39°	753.0	864.2	1068.8	868.2	868.2	868.2	1068.8	864.2	753.0	864.2	1068.8
39.5°	717.7	829.7	1030.2	834.8	834.8	834.8	1030.2	829.7	717.7	829.7	1030.2
40°	681.5	794.7	990.9	800.7	800.7	800.7	990.9	794.7	681.5	794.7	990.9
40.5°	646.2	760.2	951.2	766.1	766.1	766.1	951.2	760.2	646.2	760.2	951.2
41°	612.0	726.0	911.5	732.0	732.0	732.0	911.5	726.0	612.0	726.0	911.5
41.5°	577.9	691.9	871.4	697.8	697.8	697.8	871.4	691.9	577.9	691.9	871.4
42°	544.9	658.5	831.3	663.7	663.7	663.7	831.3	658.5	544.9	658.5	831.3
42.5°	512.3	625.1	791.9	630.7	630.7	630.7	791.9	625.1	512.3	625.1	791.9
43°	480.2	592.6	752.6	597.3	597.3	597.3	752.6	592.6	480.2	592.6	752.6
43.5°	448.0	560.4	714.1	566.0	566.0	566.0	714.1	560.4	448.0	560.4	714.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	357.0	467.5	603.7	473.4	366.6	473.4	603.7	467.5	357.0	467.5	603.7
45.5°	329.2	437.7	569.1	444.4	338.4	444.4	569.1	437.7	329.2	437.7	569.1
46°	302.6	408.7	536.2	415.8	311.4	415.8	536.2	408.7	302.6	408.7	536.2
46.5°	275.6	379.3	503.6	387.2	285.6	387.2	503.6	379.3	275.6	379.3	503.6
47°	250.2	351.5	471.8	359.0	261.3	359.0	471.8	351.5	250.2	351.5	471.8
47.5°	224.8	324.5	441.2	331.2	237.5	331.2	441.2	324.5	224.8	324.5	441.2
48°	202.6	298.7	411.9	305.4	214.5	305.4	411.9	298.7	202.6	298.7	411.9
48.5°	181.1	273.2	383.7	280.8	193.8	280.8	383.7	273.2	181.1	273.2	383.7
49°	163.2	248.2	355.5	256.6	174.8	256.6	355.5	248.2	163.2	248.2	355.5
49.5°	146.2	224.8	328.5	233.5	156.5	233.5	328.5	224.8	146.2	224.8	328.5
50°	129.1	202.6	301.8	211.3	138.6	211.3	301.8	202.6	129.1	202.6	301.8
50.5°	112.8	181.5	277.2	190.6	121.1	190.6	277.2	181.5	112.8	181.5	277.2
51°	97.3	163.2	253.4	172.0	106.4	172.0	253.4	163.2	97.3	163.2	253.4
51.5°	84.6	145.8	230.8	153.7	92.5	153.7	230.8	145.8	84.6	145.8	230.8
52°	72.3	128.7	208.9	136.2	79.4	136.2	208.9	128.7	72.3	128.7	208.9
52.5°	60.8	112.0	188.3	119.5	67.1	119.5	188.3	112.0	60.8	112.0	188.3
53°	50.0	96.9	170.0	104.9	55.6	104.9	170.0	96.9	50.0	96.9	170.0
53.5°	41.3	83.4	152.1	91.3	44.5	91.3	152.1	83.4	41.3	83.4	152.1
54°	32.2	71.1	135.4	78.2	35.3	78.2	135.4	71.1	32.2	71.1	135.4
54.5°	23.4	59.6	119.9	65.9	28.6	65.9	119.9	59.6	23.4	59.6	119.9
55°	17.1	49.6	104.9	54.4	21.8	54.4	104.9	49.6	17.1	49.6	104.9
55.5°	10.7	40.5	91.3	43.7	15.1	43.7	91.3	40.5	10.7	40.5	91.3
56°	7.1	31.8	78.2	34.2	8.3	34.2	78.2	31.8	7.1	31.8	78.2
56.5°	5.6	23.0	67.1	26.2	5.2	26.2	67.1	23.0	5.6	23.0	67.1
57°	4.0	15.1	57.2	19.1	4.4	19.1	57.2	15.1	4.0	15.1	57.2
57.5°	4.0	9.5	48.1	12.7	4.0	12.7	48.1	9.5	4.0	9.5	48.1
58°	3.6	6.0	40.1	8.3	4.0	8.3	40.1	6.0	3.6	6.0	40.1
58.5°	3.6	4.0	33.4	6.0	3.6	6.0	33.4	4.0	3.6	4.0	33.4
59°	3.2	3.2	27.0	4.4	3.6	4.4	27.0	3.2	3.2	3.2	27.0
59.5°	3.2	3.2	21.8	3.2	3.6	3.2	21.8	3.2	3.2	3.2	21.8
60°	3.2	3.2	17.5	3.2	3.2	3.2	17.5	3.2	3.2	3.2	17.5
60.5°	2.8	2.8	13.5	3.2	3.2	3.2	13.5	2.8	2.8	2.8	13.5
61°	2.8	2.8	10.7	2.8	3.2	2.8	10.7	2.8	2.8	2.8	10.7
61.5°	2.8	2.8	7.9	2.8	2.8	2.8	7.9	2.8	2.8	2.8	7.9
62°	2.4	2.4	6.0	2.8	2.8	2.8	6.0	2.4	2.4	2.4	6.0
62.5°	2.4	2.4	4.4	2.4	2.8	2.4	4.4	2.4	2.4	2.4	4.4
63°	2.4	2.4	3.2	2.4	2.4	2.4	3.2	2.4	2.4	2.4	3.2
63.5°	2.4	2.0	2.4	2.4	2.4	2.4	2.4	2.0	2.4	2.0	2.4
64°	2.0	2.0	2.0	2.0	2.4	2.0	2.0	2.0	2.0	2.0	2.0
64.5°	2.0	2.0	1.6	2.0	2.4	2.0	1.6	2.0	2.0	2.0	1.6
65°	2.0	2.0	1.6	2.0	2.0	2.0	1.6	2.0	2.0	2.0	1.6
65.5°	2.0	1.6	1.6	2.0	2.0	2.0	1.6	1.6	2.0	1.6	1.6
66°	2.0	1.6	1.2	1.6	2.0	1.6	1.2	1.6	2.0	1.6	1.2



TEST NUMBER: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.6	1.6	1.2	1.6	1.6	1.6	1.2	1.6	1.6	1.6	1.2
68°	1.6	1.2	1.2	1.6	1.6	1.6	1.2	1.2	1.6	1.2	1.2
68.5°	1.6	1.2	0.8	1.2	1.6	1.2	0.8	1.2	1.6	1.2	0.8
69°	1.2	1.2	0.8	1.2	1.6	1.2	0.8	1.2	1.2	1.2	0.8
69.5°	1.2	1.2	0.8	1.2	1.6	1.2	0.8	1.2	1.2	1.2	0.8
70°	1.2	1.2	0.8	1.2	1.2	1.2	0.8	1.2	1.2	1.2	0.8
70.5°	1.2	1.2	0.8	1.2	1.2	1.2	0.8	1.2	1.2	1.2	0.8
71°	1.2	0.8	0.8	1.2	1.2	1.2	0.8	0.8	1.2	0.8	0.8
71.5°	1.2	0.8	0.8	0.8	1.2	0.8	0.8	0.8	1.2	0.8	0.8
72°	1.2	0.8	0.8	0.8	1.2	0.8	0.8	0.8	1.2	0.8	0.8
72.5°	0.8	0.8	0.4	0.8	1.2	0.8	0.4	0.8	0.8	0.8	0.4
73°	0.8	0.8	0.4	0.8	1.2	0.8	0.4	0.8	0.8	0.8	0.4
73.5°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
74°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
74.5°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
75°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
75.5°	0.8	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.8	0.4	0.4
76°	0.8	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.8	0.4	0.4
76.5°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
78°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
78.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
79°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
79.5°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
80°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
80.5°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
81°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
81.5°	0.4	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.4	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.4	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: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

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: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1
0.5°	2002.1	2003.3	2002.1	2001.7	2001.7	2001.7
1°	2001.7	2002.9	2001.7	2001.3	2001.3	2001.3
1.5°	2000.9	2002.1	2000.9	2000.9	2000.9	2000.5
2°	2000.1	2001.3	2000.1	2000.1	1999.7	1999.7
2.5°	1999.3	2000.1	1999.3	1998.9	1998.5	1998.5
3°	1997.7	1998.9	1997.7	1997.7	1997.3	1997.3
3.5°	1996.1	1997.3	1996.1	1996.1	1995.7	1995.7
4°	1994.5	1995.3	1994.5	1994.1	1994.1	1994.1
4.5°	1992.2	1993.4	1992.2	1992.2	1992.2	1992.2
5°	1989.8	1991.0	1989.8	1989.8	1989.8	1989.8
5.5°	1987.4	1988.2	1987.4	1987.4	1987.0	1987.0
6°	1984.6	1985.4	1984.6	1984.2	1984.2	1984.2
6.5°	1981.4	1982.2	1981.4	1981.4	1981.0	1981.0
7°	1978.3	1979.1	1978.3	1977.9	1977.9	1977.9
7.5°	1974.3	1975.5	1974.3	1974.3	1974.3	1974.3
8°	1970.7	1971.5	1970.7	1970.7	1970.3	1970.3
8.5°	1966.3	1967.1	1966.3	1966.3	1966.3	1966.3
9°	1962.0	1962.8	1962.0	1962.0	1962.0	1962.0
9.5°	1957.2	1958.0	1957.2	1957.2	1957.2	1957.2
10°	1952.4	1953.2	1952.4	1952.4	1952.4	1952.4
10.5°	1946.9	1948.1	1946.9	1947.3	1947.3	1947.3
11°	1941.7	1942.5	1941.7	1942.1	1941.7	1941.7
11.5°	1935.8	1936.6	1935.8	1936.2	1936.2	1936.2
12°	1929.8	1930.6	1929.8	1930.2	1930.2	1930.2
12.5°	1923.5	1923.9	1923.5	1923.9	1923.9	1923.5
13°	1916.7	1917.5	1916.7	1917.5	1917.5	1917.1
13.5°	1910.0	1910.7	1910.0	1910.7	1910.3	1910.3
14°	1902.8	1903.2	1902.8	1903.6	1903.6	1903.2
14.5°	1895.7	1895.7	1895.7	1896.4	1896.0	1895.7
15°	1887.7	1888.1	1887.7	1888.5	1888.5	1887.7
15.5°	1879.8	1879.8	1879.8	1880.6	1880.6	1879.8
16°	1871.4	1871.4	1871.4	1872.6	1872.2	1871.4
16.5°	1863.1	1862.7	1863.1	1864.3	1863.5	1863.1
17°	1854.0	1854.0	1854.0	1855.5	1854.7	1854.3
17.5°	1844.8	1844.8	1844.8	1846.4	1845.6	1844.8
18°	1835.7	1835.3	1835.7	1836.9	1836.1	1835.7
18.5°	1825.8	1825.4	1825.8	1827.3	1826.5	1826.1
19°	1815.8	1815.0	1815.8	1817.4	1816.6	1815.8
19.5°	1805.5	1805.1	1805.5	1807.1	1806.3	1805.9
20°	1794.8	1794.4	1794.8	1796.8	1796.0	1795.2
20.5°	1784.0	1783.7	1784.0	1786.0	1785.2	1784.8
21°	1772.9	1772.5	1772.9	1774.9	1774.1	1773.7

TEST NUMBER: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1738.4	1738.4	1738.4	1740.0	1739.6	1739.6
23°	1726.5	1726.1	1726.5	1727.7	1727.7	1727.7
23.5°	1714.1	1714.1	1714.1	1714.9	1715.7	1715.7
24°	1701.8	1702.6	1701.8	1702.2	1703.4	1703.4
24.5°	1689.1	1690.3	1689.1	1689.1	1690.7	1691.1
25°	1676.0	1672.8	1676.0	1675.6	1677.6	1679.6
25.5°	1663.3	1656.2	1663.3	1662.1	1664.9	1666.1
26°	1650.6	1639.5	1650.6	1648.2	1651.8	1643.5
26.5°	1637.1	1615.3	1637.1	1634.3	1638.7	1624.4
27°	1618.4	1587.1	1618.4	1620.0	1626.4	1601.4
27.5°	1601.4	1561.6	1601.4	1605.3	1609.3	1572.8
28°	1583.1	1533.4	1583.1	1590.6	1586.7	1542.6
28.5°	1557.3	1504.1	1557.3	1575.9	1567.2	1512.0
29°	1530.3	1475.5	1530.3	1560.8	1543.0	1479.8
29.5°	1504.1	1444.5	1504.1	1545.8	1514.4	1447.3
30°	1476.2	1413.1	1476.2	1530.3	1485.0	1413.5
30.5°	1447.3	1380.5	1447.3	1515.2	1454.0	1378.9
31°	1417.5	1347.2	1417.5	1499.7	1423.0	1343.2
31.5°	1387.7	1311.0	1387.7	1484.2	1390.9	1307.1
32°	1357.1	1274.1	1357.1	1468.7	1358.3	1270.1
32.5°	1325.7	1236.8	1325.7	1453.6	1324.5	1232.4
33°	1292.8	1199.8	1292.8	1438.1	1290.8	1194.7
33.5°	1259.0	1159.7	1259.0	1420.2	1255.4	1156.5
34°	1223.7	1121.6	1223.7	1401.2	1219.7	1119.2
34.5°	1187.1	1083.9	1187.1	1378.9	1183.5	1081.5
35°	1150.2	1047.7	1150.2	1351.9	1147.4	1044.1
35.5°	1114.0	1010.4	1114.0	1322.9	1111.7	1007.6
36°	1077.1	975.4	1077.1	1290.8	1075.1	971.5
36.5°	1041.0	939.7	1041.0	1256.2	1039.4	934.9
37°	1005.2	904.3	1005.2	1219.7	1003.6	898.8
37.5°	970.7	868.6	970.7	1182.7	968.3	862.2
38°	935.7	832.8	935.7	1144.6	932.9	825.7
38.5°	902.0	796.3	902.0	1106.9	898.8	788.8
39°	868.2	760.6	868.2	1068.8	864.2	753.0
39.5°	834.8	723.6	834.8	1030.2	829.7	717.7
40°	800.7	688.3	800.7	990.9	794.7	681.5
40.5°	766.1	652.5	766.1	951.2	760.2	646.2
41°	732.0	618.0	732.0	911.5	726.0	612.0
41.5°	697.8	584.2	697.8	871.4	691.9	577.9
42°	663.7	551.7	663.7	831.3	658.5	544.9
42.5°	630.7	519.5	630.7	791.9	625.1	512.3
43°	597.3	487.7	597.3	752.6	592.6	480.2
43.5°	566.0	456.7	566.0	714.1	560.4	448.0



TEST NUMBER: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	473.4	366.6	473.4	603.7	467.5	357.0
45.5°	444.4	338.4	444.4	569.1	437.7	329.2
46°	415.8	311.4	415.8	536.2	408.7	302.6
46.5°	387.2	285.6	387.2	503.6	379.3	275.6
47°	359.0	261.3	359.0	471.8	351.5	250.2
47.5°	331.2	237.5	331.2	441.2	324.5	224.8
48°	305.4	214.5	305.4	411.9	298.7	202.6
48.5°	280.8	193.8	280.8	383.7	273.2	181.1
49°	256.6	174.8	256.6	355.5	248.2	163.2
49.5°	233.5	156.5	233.5	328.5	224.8	146.2
50°	211.3	138.6	211.3	301.8	202.6	129.1
50.5°	190.6	121.1	190.6	277.2	181.5	112.8
51°	172.0	106.4	172.0	253.4	163.2	97.3
51.5°	153.7	92.5	153.7	230.8	145.8	84.6
52°	136.2	79.4	136.2	208.9	128.7	72.3
52.5°	119.5	67.1	119.5	188.3	112.0	60.8
53°	104.9	55.6	104.9	170.0	96.9	50.0
53.5°	91.3	44.5	91.3	152.1	83.4	41.3
54°	78.2	35.3	78.2	135.4	71.1	32.2
54.5°	65.9	28.6	65.9	119.9	59.6	23.4
55°	54.4	21.8	54.4	104.9	49.6	17.1
55.5°	43.7	15.1	43.7	91.3	40.5	10.7
56°	34.2	8.3	34.2	78.2	31.8	7.1
56.5°	26.2	5.2	26.2	67.1	23.0	5.6
57°	19.1	4.4	19.1	57.2	15.1	4.0
57.5°	12.7	4.0	12.7	48.1	9.5	4.0
58°	8.3	4.0	8.3	40.1	6.0	3.6
58.5°	6.0	3.6	6.0	33.4	4.0	3.6
59°	4.4	3.6	4.4	27.0	3.2	3.2
59.5°	3.2	3.6	3.2	21.8	3.2	3.2
60°	3.2	3.2	3.2	17.5	3.2	3.2
60.5°	3.2	3.2	3.2	13.5	2.8	2.8
61°	2.8	3.2	2.8	10.7	2.8	2.8
61.5°	2.8	2.8	2.8	7.9	2.8	2.8
62°	2.8	2.8	2.8	6.0	2.4	2.4
62.5°	2.4	2.8	2.4	4.4	2.4	2.4
63°	2.4	2.4	2.4	3.2	2.4	2.4
63.5°	2.4	2.4	2.4	2.4	2.0	2.4
64°	2.0	2.4	2.0	2.0	2.0	2.0
64.5°	2.0	2.4	2.0	1.6	2.0	2.0
65°	2.0	2.0	2.0	1.6	2.0	2.0
65.5°	2.0	2.0	2.0	1.6	1.6	2.0
66°	1.6	2.0	1.6	1.2	1.6	2.0



TEST NUMBER: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.6	1.6	1.6	1.2	1.6	1.6
68°	1.6	1.6	1.6	1.2	1.2	1.6
68.5°	1.2	1.6	1.2	0.8	1.2	1.6
69°	1.2	1.6	1.2	0.8	1.2	1.2
69.5°	1.2	1.6	1.2	0.8	1.2	1.2
70°	1.2	1.2	1.2	0.8	1.2	1.2
70.5°	1.2	1.2	1.2	0.8	1.2	1.2
71°	1.2	1.2	1.2	0.8	0.8	1.2
71.5°	0.8	1.2	0.8	0.8	0.8	1.2
72°	0.8	1.2	0.8	0.8	0.8	1.2
72.5°	0.8	1.2	0.8	0.4	0.8	0.8
73°	0.8	1.2	0.8	0.4	0.8	0.8
73.5°	0.8	0.8	0.8	0.4	0.8	0.8
74°	0.8	0.8	0.8	0.4	0.8	0.8
74.5°	0.8	0.8	0.8	0.4	0.8	0.8
75°	0.8	0.8	0.8	0.4	0.8	0.8
75.5°	0.8	0.8	0.8	0.4	0.4	0.8
76°	0.4	0.8	0.4	0.4	0.4	0.8
76.5°	0.4	0.8	0.4	0.4	0.4	0.4
77°	0.4	0.8	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.4
78°	0.4	0.4	0.4	0.4	0.4	0.4
78.5°	0.4	0.4	0.4	0.4	0.4	0.4
79°	0.4	0.4	0.4	0.0	0.4	0.4
79.5°	0.4	0.4	0.4	0.0	0.4	0.4
80°	0.4	0.4	0.4	0.0	0.4	0.4
80.5°	0.4	0.4	0.4	0.0	0.4	0.4
81°	0.4	0.4	0.4	0.0	0.4	0.4
81.5°	0.4	0.4	0.4	0.0	0.0	0.4
82°	0.0	0.4	0.0	0.0	0.0	0.0
82.5°	0.0	0.4	0.0	0.0	0.0	0.0
83°	0.0	0.4	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: P776327

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-3500K

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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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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°	1762.6	1763.0	1763.4	1761.8	1761.4	1761.8	1763.4	1763.0	1762.6	1763.0	1763.4
22°	1751.1	1751.5	1751.9	1749.9	1749.9	1749.9	1751.9	1751.5	1751.1	1751.5	1751.9



44°	417.0	528.6	676.0	534.2	425.8	534.2	676.0	528.6	417.0	528.6	676.0
44.5°	386.8	498.0	639.4	503.6	395.6	503.6	639.4	498.0	386.8	498.0	639.4



66.5°	1.6	1.6	1.2	1.6	2.0	1.6	1.2	1.6	1.6	1.6	1.2
67°	1.6	1.6	1.2	1.6	1.6	1.6	1.2	1.6	1.6	1.6	1.2



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°	1761.8	1761.4	1761.8	1763.4	1763.0	1762.6
22°	1749.9	1749.9	1749.9	1751.9	1751.5	1751.1



44°	534.2	425.8	534.2	676.0	528.6	417.0
44.5°	503.6	395.6	503.6	639.4	498.0	386.8

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66.5°	1.6	2.0	1.6	1.2	1.6	1.6
67°	1.6	1.6	1.6	1.2	1.6	1.6

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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)