

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: P776400

Luminaire Tested: HCDJBS3040CSD-HCD6TRMB-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776400
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B001-HCD6TRMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TRMB-4000lm-2700K
Description: 6 INCH ROUND MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2838.9 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

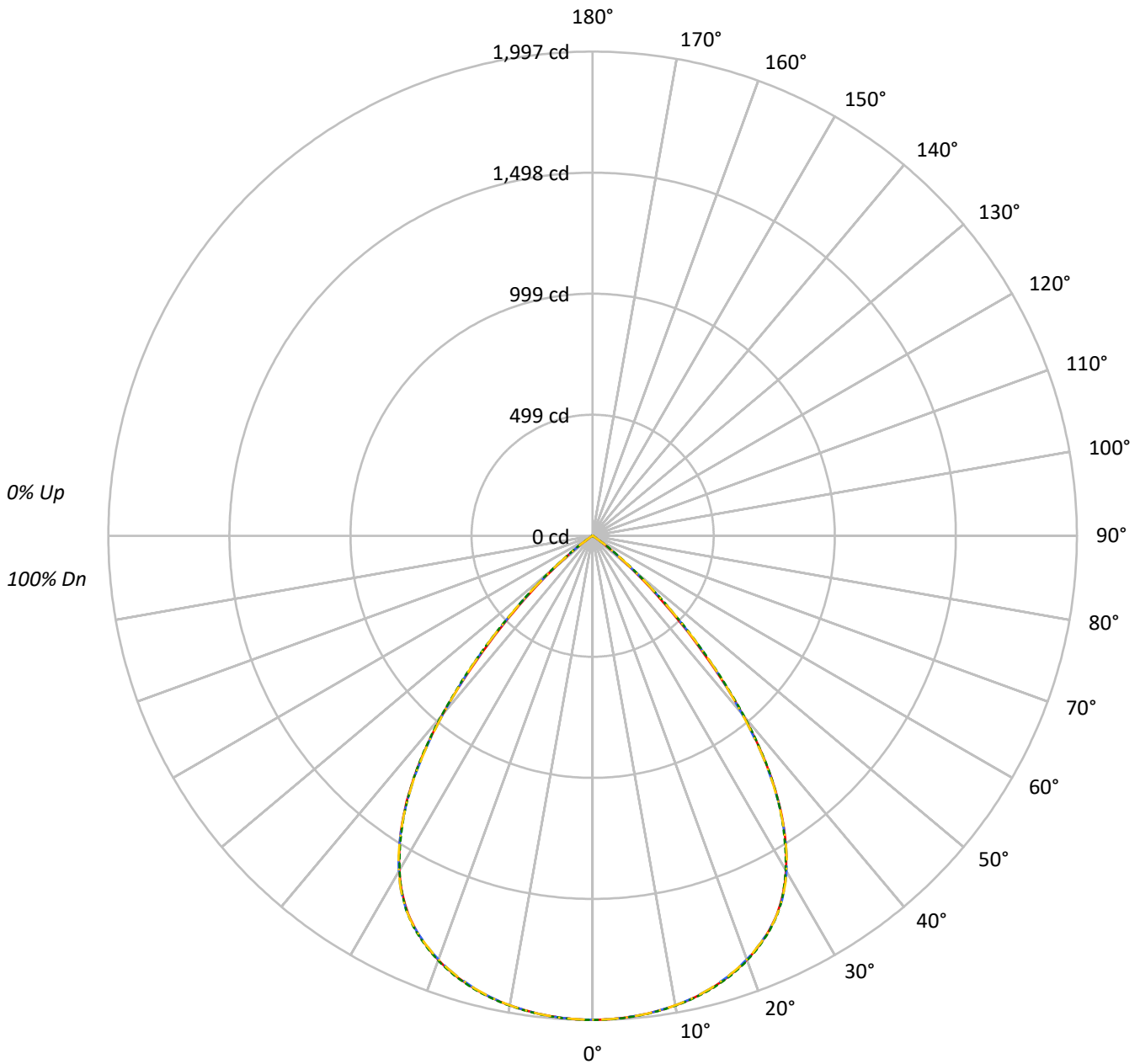
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92					92			
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84					84			
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77					77			
4	94	86	80	75	92	85	79	75	83	78	74	80	76	73	79	75	72	70					70			
5	89	79	73	68	87	78	72	68	77	71	67	75	70	66	73	69	66	64					64			
6	83	73	67	62	82	73	66	62	71	65	61	70	65	61	68	64	60	59					59			
7	79	68	61	57	77	67	61	56	66	60	56	65	60	56	64	59	56	54					54			
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50					50			
9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47	46					46			
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42					42			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	109443	109443	109443	109443
5°	109443	109481	109443	109481
10°	109467	109556	109467	109556
15°	109342	109473	109342	109473
20°	108591	108725	108591	108725
25°	106506	106718	106506	106718
30°	100895	100750	100895	100750
35°	89443	89155	89443	89155
40°	68979	69552	68979	69552
45°	41229	43284	41229	43284
50°	17048	19599	17048	19599
55°	3297	3890	3297	3890
60°	252	252	252	252
65°	104	104	104	104
70°	64	64	64	64
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 43369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.1	6.7
10°-20°	543.2	19.1
20°-30°	806.6	28.4
30°-40°	817.6	28.8
40°-50°	427.8	15.1
50°-60°	53.5	1.9
60°-70°	0.9	0.0
70°-80°	0.1	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°	1538.9	54.2
0°-40°	2356.5	83.0
0°-60°	2837.8	100.0
0°-90°	2838.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2838.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1996	1996	1996	1996	1996	
5°	1989	1990	1989	1990	1989	189
15°	1927	1929	1927	1929	1927	543
25°	1761	1764	1761	1764	1761	806
35°	1336	1332	1336	1332	1336	819
45°	532	558	532	558	532	417
55°	34	41	34	41	34	49
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4
0.5°	1996.4	1996.1	1996.1	1996.1	1996.8	1996.1	1996.1	1996.1	1996.4	1996.1	1996.1
1°	1996.1	1996.1	1995.7	1995.7	1996.8	1995.7	1995.7	1996.1	1996.1	1996.1	1995.7
1.5°	1995.7	1995.7	1995.3	1995.3	1996.4	1995.3	1995.3	1995.7	1995.7	1995.7	1995.3
2°	1995.3	1994.9	1994.9	1994.9	1995.7	1994.9	1994.9	1994.9	1995.3	1994.9	1994.9
2.5°	1994.5	1994.1	1994.1	1994.1	1995.3	1994.1	1994.1	1994.1	1994.5	1994.1	1994.1
3°	1993.4	1993.4	1993.4	1993.4	1994.5	1993.4	1993.4	1993.4	1993.4	1993.4	1993.4
3.5°	1992.6	1992.6	1992.6	1992.2	1993.4	1992.2	1992.6	1992.6	1992.6	1992.6	1992.6
4°	1991.5	1991.5	1991.5	1991.5	1992.2	1991.5	1991.5	1991.5	1991.5	1991.5	1991.5
4.5°	1989.9	1989.9	1989.9	1989.9	1991.1	1989.9	1989.9	1989.9	1989.9	1989.9	1989.9
5°	1988.8	1988.8	1988.8	1988.8	1989.5	1988.8	1988.8	1988.8	1988.8	1988.8	1988.8
5.5°	1987.2	1987.2	1987.2	1987.2	1988.4	1987.2	1987.2	1987.2	1987.2	1987.2	1987.2
6°	1985.7	1985.3	1985.3	1985.3	1986.5	1985.3	1985.3	1985.3	1985.7	1985.3	1985.3
6.5°	1983.8	1983.4	1983.8	1983.8	1984.9	1983.8	1983.8	1983.4	1983.8	1983.4	1983.8
7°	1981.9	1981.5	1981.5	1981.9	1982.6	1981.9	1981.5	1981.5	1981.9	1981.5	1981.5
7.5°	1979.6	1979.6	1979.6	1979.6	1980.7	1979.6	1979.6	1979.6	1979.6	1979.6	1979.6
8°	1977.3	1977.3	1977.3	1977.3	1978.4	1977.3	1977.3	1977.3	1977.3	1977.3	1977.3
8.5°	1975.0	1974.6	1974.6	1975.0	1976.1	1975.0	1974.6	1974.6	1975.0	1974.6	1974.6
9°	1972.3	1972.3	1972.3	1972.3	1973.4	1972.3	1972.3	1972.3	1972.3	1972.3	1972.3
9.5°	1969.6	1969.2	1969.2	1969.6	1970.7	1969.6	1969.2	1969.2	1969.6	1969.2	1969.2
10°	1966.5	1966.5	1966.1	1966.5	1968.1	1966.5	1966.1	1966.5	1966.5	1966.5	1966.1
10.5°	1963.8	1963.1	1963.1	1963.4	1965.0	1963.4	1963.1	1963.1	1963.8	1963.1	1963.1
11°	1960.4	1960.0	1959.6	1960.4	1961.9	1960.4	1959.6	1960.0	1960.4	1960.0	1959.6
11.5°	1956.9	1956.2	1956.2	1956.9	1958.5	1956.9	1956.2	1956.2	1956.9	1956.2	1956.2
12°	1953.1	1952.7	1952.3	1953.1	1955.0	1953.1	1952.3	1952.7	1953.1	1952.7	1952.3
12.5°	1949.2	1948.5	1948.1	1949.2	1951.2	1949.2	1948.1	1948.5	1949.2	1948.5	1948.1
13°	1945.4	1944.6	1943.9	1945.0	1947.3	1945.0	1943.9	1944.6	1945.4	1944.6	1943.9
13.5°	1940.8	1940.0	1939.7	1940.8	1943.1	1940.8	1939.7	1940.0	1940.8	1940.0	1939.7
14°	1936.6	1935.4	1934.7	1936.2	1938.5	1936.2	1934.7	1935.4	1936.6	1935.4	1934.7
14.5°	1931.6	1930.8	1930.1	1931.2	1933.9	1931.2	1930.1	1930.8	1931.6	1930.8	1930.1
15°	1926.6	1925.5	1924.7	1926.2	1928.9	1926.2	1924.7	1925.5	1926.6	1925.5	1924.7
15.5°	1921.2	1920.1	1919.3	1920.9	1923.5	1920.9	1919.3	1920.1	1921.2	1920.1	1919.3
16°	1915.9	1914.7	1913.6	1915.5	1918.2	1915.5	1913.6	1914.7	1915.9	1914.7	1913.6
16.5°	1910.1	1908.6	1907.8	1909.7	1912.4	1909.7	1907.8	1908.6	1910.1	1908.6	1907.8
17°	1904.0	1902.4	1901.7	1903.6	1906.3	1903.6	1901.7	1902.4	1904.0	1902.4	1901.7
17.5°	1897.4	1896.3	1895.1	1897.1	1900.1	1897.1	1895.1	1896.3	1897.4	1896.3	1895.1
18°	1890.9	1889.4	1888.2	1890.5	1893.2	1890.5	1888.2	1889.4	1890.9	1889.4	1888.2
18.5°	1883.6	1882.5	1881.3	1883.6	1886.3	1883.6	1881.3	1882.5	1883.6	1882.5	1881.3
19°	1876.7	1875.2	1874.0	1876.3	1879.0	1876.3	1874.0	1875.2	1876.7	1875.2	1874.0
19.5°	1869.1	1867.9	1866.4	1868.7	1871.7	1868.7	1866.4	1867.9	1869.1	1867.9	1866.4
20°	1861.4	1859.8	1858.7	1861.0	1863.7	1861.0	1858.7	1859.8	1861.4	1859.8	1858.7
20.5°	1852.9	1851.8	1850.6	1852.9	1855.6	1852.9	1850.6	1851.8	1852.9	1851.8	1850.6
21°	1844.5	1843.3	1842.2	1844.5	1846.8	1844.5	1842.2	1843.3	1844.5	1843.3	1842.2



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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°	1816.5	1815.3	1815.0	1816.9	1819.2	1816.9	1815.0	1815.3	1816.5	1815.3	1815.0
23°	1806.1	1805.4	1805.0	1807.3	1808.8	1807.3	1805.0	1805.4	1806.1	1805.4	1805.0
23.5°	1795.4	1795.0	1795.0	1796.9	1798.5	1796.9	1795.0	1795.0	1795.4	1795.0	1795.0
24°	1784.6	1784.3	1784.6	1785.8	1787.7	1785.8	1784.6	1784.3	1784.6	1784.3	1784.6
24.5°	1773.1	1773.1	1773.5	1774.7	1776.2	1774.7	1773.5	1773.1	1773.1	1773.1	1773.5
25°	1760.8	1761.2	1762.0	1762.8	1764.3	1762.8	1762.0	1761.2	1760.8	1761.2	1762.0
25.5°	1748.2	1748.6	1749.7	1749.7	1751.3	1749.7	1749.7	1748.6	1748.2	1748.6	1749.7
26°	1734.4	1735.1	1736.3	1736.3	1737.8	1736.3	1736.3	1735.1	1734.4	1735.1	1736.3
26.5°	1720.2	1721.3	1722.9	1722.1	1722.9	1722.1	1722.9	1721.3	1720.2	1721.3	1722.9
27°	1704.8	1706.4	1707.9	1706.7	1707.5	1706.7	1707.9	1706.4	1704.8	1706.4	1707.9
27.5°	1688.7	1690.6	1692.2	1690.6	1690.6	1690.6	1692.2	1690.6	1688.7	1690.6	1692.2
28°	1671.4	1673.7	1675.7	1673.4	1672.2	1673.4	1675.7	1673.7	1671.4	1673.7	1675.7
28.5°	1653.4	1656.1	1658.0	1655.3	1653.4	1655.3	1658.0	1656.1	1653.4	1656.1	1658.0
29°	1634.6	1637.3	1639.2	1636.5	1633.8	1636.5	1639.2	1637.3	1634.6	1637.3	1639.2
29.5°	1614.7	1617.7	1619.6	1616.6	1613.1	1616.6	1619.6	1617.7	1614.7	1617.7	1619.6
30°	1593.9	1596.2	1598.5	1595.1	1591.6	1595.1	1598.5	1596.2	1593.9	1596.2	1598.5
30.5°	1572.4	1574.7	1576.7	1572.8	1569.0	1572.8	1576.7	1574.7	1572.4	1574.7	1576.7
31°	1549.8	1551.7	1553.6	1550.2	1546.0	1550.2	1553.6	1551.7	1549.8	1551.7	1553.6
31.5°	1526.4	1527.6	1529.5	1525.6	1521.8	1525.6	1529.5	1527.6	1526.4	1527.6	1529.5
32°	1502.2	1502.2	1504.1	1500.3	1497.2	1500.3	1504.1	1502.2	1502.2	1502.2	1504.1
32.5°	1476.9	1476.5	1477.7	1473.8	1471.5	1473.8	1477.7	1476.5	1476.9	1476.5	1477.7
33°	1450.8	1449.3	1450.4	1446.6	1445.8	1446.6	1450.4	1449.3	1450.8	1449.3	1450.4
33.5°	1424.3	1421.6	1422.0	1418.6	1418.2	1418.6	1422.0	1421.6	1424.3	1421.6	1422.0
34°	1395.9	1392.9	1392.9	1389.0	1391.0	1389.0	1392.9	1392.9	1395.9	1392.9	1392.9
34.5°	1366.8	1363.3	1362.6	1358.7	1362.2	1358.7	1362.6	1363.3	1366.8	1363.3	1362.6
35°	1336.5	1332.6	1331.1	1328.4	1332.2	1328.4	1331.1	1332.6	1336.5	1332.6	1331.1
35.5°	1304.6	1301.5	1298.9	1297.3	1301.5	1297.3	1298.9	1301.5	1304.6	1301.5	1298.9
36°	1271.6	1269.3	1265.5	1264.7	1269.7	1264.7	1265.5	1269.3	1271.6	1269.3	1265.5
36.5°	1237.5	1235.5	1230.9	1231.3	1237.1	1231.3	1230.9	1235.5	1237.5	1235.5	1230.9
37°	1201.8	1200.6	1195.3	1197.2	1202.5	1197.2	1195.3	1200.6	1201.8	1200.6	1195.3
37.5°	1164.9	1164.6	1158.0	1161.5	1166.5	1161.5	1158.0	1164.6	1164.9	1164.6	1158.0
38°	1127.3	1127.0	1119.7	1124.7	1129.6	1124.7	1119.7	1127.0	1127.3	1127.0	1119.7
38.5°	1088.2	1087.8	1079.8	1086.7	1091.7	1086.7	1079.8	1087.8	1088.2	1087.8	1079.8
39°	1048.3	1047.1	1039.5	1048.3	1052.9	1048.3	1039.5	1047.1	1048.3	1047.1	1039.5
39.5°	1007.2	1005.3	998.4	1008.4	1013.0	1008.4	998.4	1005.3	1007.2	1005.3	998.4
40°	963.9	962.3	956.6	967.0	971.9	967.0	956.6	962.3	963.9	962.3	956.6
40.5°	920.9	919.0	915.1	925.1	929.3	925.1	915.1	919.0	920.9	919.0	915.1
41°	876.8	875.6	874.9	883.3	887.1	883.3	874.9	875.6	876.8	875.6	874.9
41.5°	833.0	831.9	834.6	841.5	844.9	841.5	834.6	831.9	833.0	831.9	834.6
42°	788.5	788.9	794.7	799.3	803.5	799.3	794.7	788.9	788.5	788.9	794.7
42.5°	744.4	746.3	754.4	758.2	762.0	758.2	754.4	746.3	744.4	746.3	754.4
43°	700.3	704.1	714.1	717.5	720.2	717.5	714.1	704.1	700.3	704.1	714.1
43.5°	656.9	662.3	673.8	677.2	678.8	677.2	673.8	662.3	656.9	662.3	673.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	531.8	539.5	554.8	559.4	558.3	559.4	554.8	539.5	531.8	539.5	554.8
45.5°	492.3	500.4	516.5	522.6	519.5	522.6	516.5	500.4	492.3	500.4	516.5
46°	453.5	463.1	480.0	486.2	481.6	486.2	480.0	463.1	453.5	463.1	480.0
46.5°	418.2	426.7	443.6	449.3	445.1	449.3	443.6	426.7	418.2	426.7	443.6
47°	382.9	391.0	407.5	414.0	409.4	414.0	407.5	391.0	382.9	391.0	407.5
47.5°	348.8	356.5	371.8	379.1	375.7	379.1	371.8	356.5	348.8	356.5	371.8
48°	315.0	323.1	338.0	346.1	343.8	346.1	338.0	323.1	315.0	323.1	338.0
48.5°	282.8	291.6	305.8	314.6	312.7	314.6	305.8	291.6	282.8	291.6	305.8
49°	253.2	261.7	274.7	284.3	284.7	284.3	274.7	261.7	253.2	261.7	274.7
49.5°	226.0	232.5	244.8	255.6	257.1	255.6	244.8	232.5	226.0	232.5	244.8
50°	199.9	205.7	216.0	227.5	229.8	227.5	216.0	205.7	199.9	205.7	216.0
50.5°	175.4	180.0	188.8	200.7	203.4	200.7	188.8	180.0	175.4	180.0	188.8
51°	152.7	156.9	165.4	175.7	178.4	175.7	165.4	156.9	152.7	156.9	165.4
51.5°	132.4	135.8	143.1	152.3	156.6	152.3	143.1	135.8	132.4	135.8	143.1
52°	113.2	116.3	122.4	130.5	135.1	130.5	122.4	116.3	113.2	116.3	122.4
52.5°	97.1	97.8	102.5	110.1	114.3	110.1	102.5	97.8	97.1	97.8	102.5
53°	82.1	81.7	85.6	92.9	95.9	92.9	85.6	81.7	82.1	81.7	85.6
53.5°	67.5	68.3	71.4	77.9	79.0	77.9	71.4	68.3	67.5	68.3	71.4
54°	54.9	56.0	57.9	63.7	63.7	63.7	57.9	56.0	54.9	56.0	57.9
54.5°	44.1	44.9	45.7	50.6	50.3	50.6	45.7	44.9	44.1	44.9	45.7
55°	34.5	34.2	34.9	39.1	40.7	39.1	34.9	34.2	34.5	34.2	34.9
55.5°	25.3	25.3	26.5	29.2	31.5	29.2	26.5	25.3	25.3	25.3	26.5
56°	16.9	18.0	20.0	22.3	24.2	22.3	20.0	18.0	16.9	18.0	20.0
56.5°	11.5	11.9	14.6	15.7	17.3	15.7	14.6	11.9	11.5	11.9	14.6
57°	9.2	8.4	9.6	10.4	10.4	10.4	9.6	8.4	9.2	8.4	9.6
57.5°	7.3	6.5	6.9	7.7	6.9	7.7	6.9	6.5	7.3	6.5	6.9
58°	5.8	5.4	5.8	6.1	5.0	6.1	5.8	5.4	5.8	5.4	5.8
58.5°	3.8	4.2	4.6	5.0	4.2	5.0	4.6	4.2	3.8	4.2	4.6
59°	3.5	3.5	3.5	3.8	3.5	3.8	3.5	3.5	3.5	3.5	3.5
59.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
60°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
60.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
61°	1.5	1.5	1.5	1.9	1.5	1.9	1.5	1.5	1.5	1.5	1.5
61.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
62°	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.2	1.5	1.5
62.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
63°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
63.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
64°	0.8	0.8	0.8	0.8	1.2	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	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-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°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
73.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
74°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	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: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-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: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1996.4	1996.4	1996.4	1996.4	1996.4	1996.4
0.5°	1996.1	1996.8	1996.1	1996.1	1996.1	1996.4
1°	1995.7	1996.8	1995.7	1995.7	1996.1	1996.1
1.5°	1995.3	1996.4	1995.3	1995.3	1995.7	1995.7
2°	1994.9	1995.7	1994.9	1994.9	1994.9	1995.3
2.5°	1994.1	1995.3	1994.1	1994.1	1994.1	1994.5
3°	1993.4	1994.5	1993.4	1993.4	1993.4	1993.4
3.5°	1992.2	1993.4	1992.2	1992.6	1992.6	1992.6
4°	1991.5	1992.2	1991.5	1991.5	1991.5	1991.5
4.5°	1989.9	1991.1	1989.9	1989.9	1989.9	1989.9
5°	1988.8	1989.5	1988.8	1988.8	1988.8	1988.8
5.5°	1987.2	1988.4	1987.2	1987.2	1987.2	1987.2
6°	1985.3	1986.5	1985.3	1985.3	1985.3	1985.7
6.5°	1983.8	1984.9	1983.8	1983.8	1983.4	1983.8
7°	1981.9	1982.6	1981.9	1981.5	1981.5	1981.9
7.5°	1979.6	1980.7	1979.6	1979.6	1979.6	1979.6
8°	1977.3	1978.4	1977.3	1977.3	1977.3	1977.3
8.5°	1975.0	1976.1	1975.0	1974.6	1974.6	1975.0
9°	1972.3	1973.4	1972.3	1972.3	1972.3	1972.3
9.5°	1969.6	1970.7	1969.6	1969.2	1969.2	1969.6
10°	1966.5	1968.1	1966.5	1966.1	1966.5	1966.5
10.5°	1963.4	1965.0	1963.4	1963.1	1963.1	1963.8
11°	1960.4	1961.9	1960.4	1959.6	1960.0	1960.4
11.5°	1956.9	1958.5	1956.9	1956.2	1956.2	1956.9
12°	1953.1	1955.0	1953.1	1952.3	1952.7	1953.1
12.5°	1949.2	1951.2	1949.2	1948.1	1948.5	1949.2
13°	1945.0	1947.3	1945.0	1943.9	1944.6	1945.4
13.5°	1940.8	1943.1	1940.8	1939.7	1940.0	1940.8
14°	1936.2	1938.5	1936.2	1934.7	1935.4	1936.6
14.5°	1931.2	1933.9	1931.2	1930.1	1930.8	1931.6
15°	1926.2	1928.9	1926.2	1924.7	1925.5	1926.6
15.5°	1920.9	1923.5	1920.9	1919.3	1920.1	1921.2
16°	1915.5	1918.2	1915.5	1913.6	1914.7	1915.9
16.5°	1909.7	1912.4	1909.7	1907.8	1908.6	1910.1
17°	1903.6	1906.3	1903.6	1901.7	1902.4	1904.0
17.5°	1897.1	1900.1	1897.1	1895.1	1896.3	1897.4
18°	1890.5	1893.2	1890.5	1888.2	1889.4	1890.9
18.5°	1883.6	1886.3	1883.6	1881.3	1882.5	1883.6
19°	1876.3	1879.0	1876.3	1874.0	1875.2	1876.7
19.5°	1868.7	1871.7	1868.7	1866.4	1867.9	1869.1
20°	1861.0	1863.7	1861.0	1858.7	1859.8	1861.4
20.5°	1852.9	1855.6	1852.9	1850.6	1851.8	1852.9
21°	1844.5	1846.8	1844.5	1842.2	1843.3	1844.5

TEST NUMBER: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1816.9	1819.2	1816.9	1815.0	1815.3	1816.5
23°	1807.3	1808.8	1807.3	1805.0	1805.4	1806.1
23.5°	1796.9	1798.5	1796.9	1795.0	1795.0	1795.4
24°	1785.8	1787.7	1785.8	1784.6	1784.3	1784.6
24.5°	1774.7	1776.2	1774.7	1773.5	1773.1	1773.1
25°	1762.8	1764.3	1762.8	1762.0	1761.2	1760.8
25.5°	1749.7	1751.3	1749.7	1749.7	1748.6	1748.2
26°	1736.3	1737.8	1736.3	1736.3	1735.1	1734.4
26.5°	1722.1	1722.9	1722.1	1722.9	1721.3	1720.2
27°	1706.7	1707.5	1706.7	1707.9	1706.4	1704.8
27.5°	1690.6	1690.6	1690.6	1692.2	1690.6	1688.7
28°	1673.4	1672.2	1673.4	1675.7	1673.7	1671.4
28.5°	1655.3	1653.4	1655.3	1658.0	1656.1	1653.4
29°	1636.5	1633.8	1636.5	1639.2	1637.3	1634.6
29.5°	1616.6	1613.1	1616.6	1619.6	1617.7	1614.7
30°	1595.1	1591.6	1595.1	1598.5	1596.2	1593.9
30.5°	1572.8	1569.0	1572.8	1576.7	1574.7	1572.4
31°	1550.2	1546.0	1550.2	1553.6	1551.7	1549.8
31.5°	1525.6	1521.8	1525.6	1529.5	1527.6	1526.4
32°	1500.3	1497.2	1500.3	1504.1	1502.2	1502.2
32.5°	1473.8	1471.5	1473.8	1477.7	1476.5	1476.9
33°	1446.6	1445.8	1446.6	1450.4	1449.3	1450.8
33.5°	1418.6	1418.2	1418.6	1422.0	1421.6	1424.3
34°	1389.0	1391.0	1389.0	1392.9	1392.9	1395.9
34.5°	1358.7	1362.2	1358.7	1362.6	1363.3	1366.8
35°	1328.4	1332.2	1328.4	1331.1	1332.6	1336.5
35.5°	1297.3	1301.5	1297.3	1298.9	1301.5	1304.6
36°	1264.7	1269.7	1264.7	1265.5	1269.3	1271.6
36.5°	1231.3	1237.1	1231.3	1230.9	1235.5	1237.5
37°	1197.2	1202.5	1197.2	1195.3	1200.6	1201.8
37.5°	1161.5	1166.5	1161.5	1158.0	1164.6	1164.9
38°	1124.7	1129.6	1124.7	1119.7	1127.0	1127.3
38.5°	1086.7	1091.7	1086.7	1079.8	1087.8	1088.2
39°	1048.3	1052.9	1048.3	1039.5	1047.1	1048.3
39.5°	1008.4	1013.0	1008.4	998.4	1005.3	1007.2
40°	967.0	971.9	967.0	956.6	962.3	963.9
40.5°	925.1	929.3	925.1	915.1	919.0	920.9
41°	883.3	887.1	883.3	874.9	875.6	876.8
41.5°	841.5	844.9	841.5	834.6	831.9	833.0
42°	799.3	803.5	799.3	794.7	788.9	788.5
42.5°	758.2	762.0	758.2	754.4	746.3	744.4
43°	717.5	720.2	717.5	714.1	704.1	700.3
43.5°	677.2	678.8	677.2	673.8	662.3	656.9



TEST NUMBER: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	559.4	558.3	559.4	554.8	539.5	531.8
45.5°	522.6	519.5	522.6	516.5	500.4	492.3
46°	486.2	481.6	486.2	480.0	463.1	453.5
46.5°	449.3	445.1	449.3	443.6	426.7	418.2
47°	414.0	409.4	414.0	407.5	391.0	382.9
47.5°	379.1	375.7	379.1	371.8	356.5	348.8
48°	346.1	343.8	346.1	338.0	323.1	315.0
48.5°	314.6	312.7	314.6	305.8	291.6	282.8
49°	284.3	284.7	284.3	274.7	261.7	253.2
49.5°	255.6	257.1	255.6	244.8	232.5	226.0
50°	227.5	229.8	227.5	216.0	205.7	199.9
50.5°	200.7	203.4	200.7	188.8	180.0	175.4
51°	175.7	178.4	175.7	165.4	156.9	152.7
51.5°	152.3	156.6	152.3	143.1	135.8	132.4
52°	130.5	135.1	130.5	122.4	116.3	113.2
52.5°	110.1	114.3	110.1	102.5	97.8	97.1
53°	92.9	95.9	92.9	85.6	81.7	82.1
53.5°	77.9	79.0	77.9	71.4	68.3	67.5
54°	63.7	63.7	63.7	57.9	56.0	54.9
54.5°	50.6	50.3	50.6	45.7	44.9	44.1
55°	39.1	40.7	39.1	34.9	34.2	34.5
55.5°	29.2	31.5	29.2	26.5	25.3	25.3
56°	22.3	24.2	22.3	20.0	18.0	16.9
56.5°	15.7	17.3	15.7	14.6	11.9	11.5
57°	10.4	10.4	10.4	9.6	8.4	9.2
57.5°	7.7	6.9	7.7	6.9	6.5	7.3
58°	6.1	5.0	6.1	5.8	5.4	5.8
58.5°	5.0	4.2	5.0	4.6	4.2	3.8
59°	3.8	3.5	3.8	3.5	3.5	3.5
59.5°	2.7	2.7	2.7	2.7	2.7	2.7
60°	2.3	2.3	2.3	2.3	2.3	2.3
60.5°	1.9	1.9	1.9	1.9	1.9	1.9
61°	1.9	1.5	1.9	1.5	1.5	1.5
61.5°	1.5	1.5	1.5	1.5	1.5	1.5
62°	1.5	1.5	1.5	1.5	1.5	1.2
62.5°	1.2	1.2	1.2	1.2	1.2	1.2
63°	1.2	1.2	1.2	1.2	1.2	1.2
63.5°	1.2	1.2	1.2	1.2	1.2	1.2
64°	0.8	1.2	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	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-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	0.0
73.5°	0.4	0.4	0.4	0.4	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	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
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: P776400

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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21.5°	1835.7	1834.1	1833.4	1835.7	1838.0	1835.7	1833.4	1834.1	1835.7	1834.1	1833.4
22°	1826.1	1825.3	1824.2	1826.5	1828.4	1826.5	1824.2	1825.3	1826.1	1825.3	1824.2



44°	613.9	620.8	633.5	637.3	638.1	637.3	633.5	620.8	613.9	620.8	633.5
44.5°	572.5	579.8	594.0	598.2	597.8	598.2	594.0	579.8	572.5	579.8	594.0



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



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°	1835.7	1838.0	1835.7	1833.4	1834.1	1835.7
22°	1826.5	1828.4	1826.5	1824.2	1825.3	1826.1



44°	637.3	638.1	637.3	633.5	620.8	613.9
44.5°	598.2	597.8	598.2	594.0	579.8	572.5

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

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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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(END OF REPORT)