

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: P776502

Luminaire Tested: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776502
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: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K
Description: 8 INCH ROUND MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2930.9 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.15
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

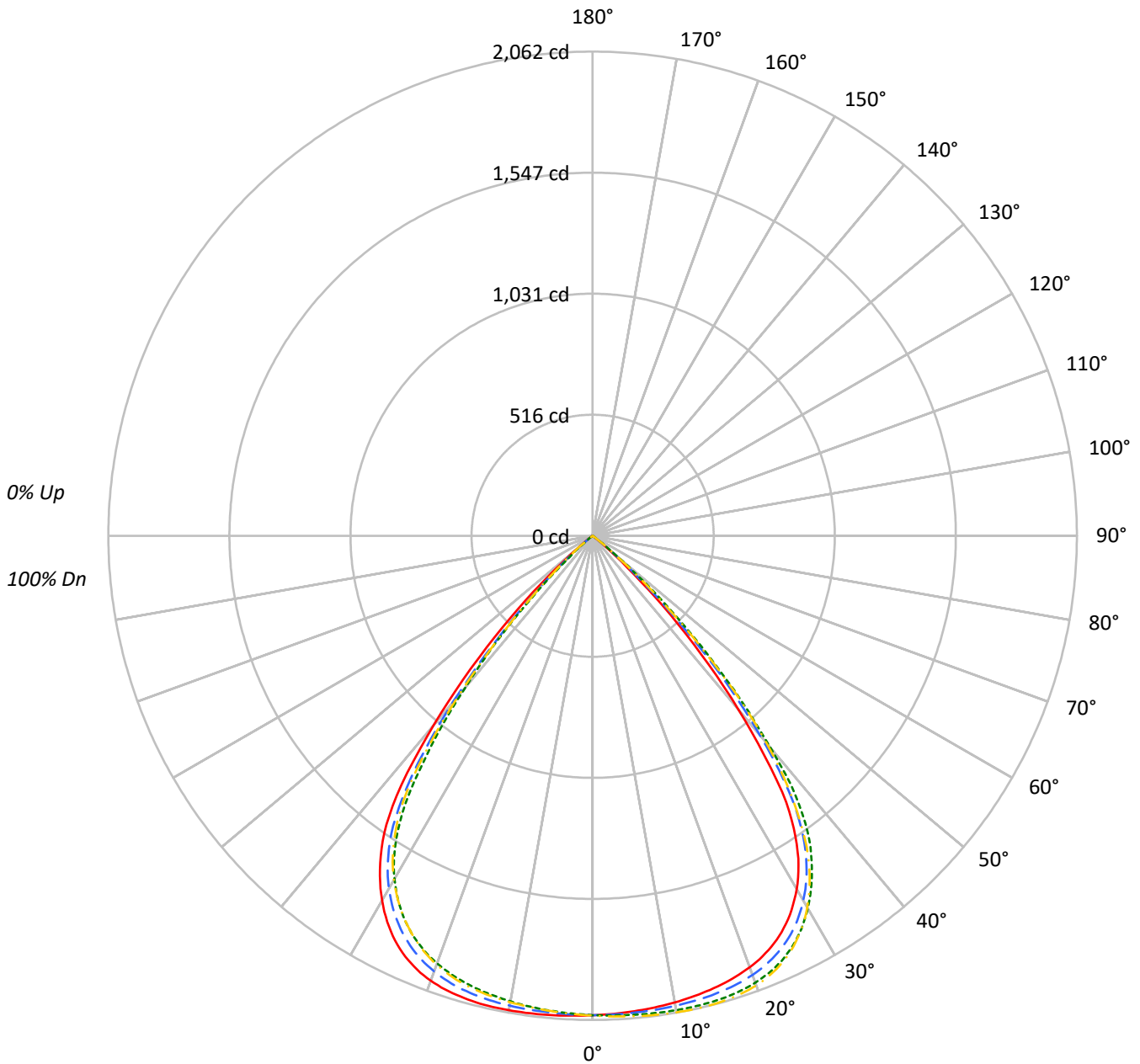
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	100	100	100
1	113	110	107	105	111	108	106	103	104	102	100	100	99	97	97	95	94	93	93	93	93
2	107	102	97	94	105	100	96	92	97	93	90	94	91	89	91	89	87	85	85	85	85
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78	78	78	78
4	95	87	81	76	93	85	80	76	83	78	75	81	77	74	79	76	73	71	71	71	71
5	89	80	74	69	88	79	73	69	77	72	68	76	71	67	74	70	67	65	65	65	65
6	84	74	68	63	83	74	67	63	72	66	62	70	66	62	69	65	61	60	60	60	60
7	79	69	62	58	78	68	62	58	67	61	57	66	61	57	65	60	57	55	55	55	55
8	75	64	58	53	73	64	57	53	63	57	53	61	56	53	60	56	52	51	51	51	51
9	71	60	53	49	69	59	53	49	58	53	49	57	52	49	57	52	48	47	47	47	47
10	67	56	50	45	66	56	49	45	55	49	45	54	49	45	53	48	45	43	43	43	43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	62346	62346	62346	62346
5°	62293	62756	62792	62232
10°	62557	63602	63615	62421
15°	63050	64722	64646	62775
20°	63533	65805	65509	62952
25°	63327	66113	65389	62242
30°	61246	64591	63206	59508
35°	55090	60244	57639	51668
40°	38555	46825	41819	33565
45°	18363	26186	21381	13864
50°	3738	7025	3985	1776
55°	170	255	149	106
60°	49	49	49	49
65°	29	29	29	29
70°	36	36	36	36
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 26186 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.6	6.6
10°-20°	571.0	19.5
20°-30°	874.6	29.8
30°-40°	910.1	31.1
40°-50°	367.4	12.5
50°-60°	12.6	0.4
60°-70°	0.5	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°	1640.2	56.0
0°-40°	2550.4	87.0
0°-60°	2930.4	100.0
0°-90°	2930.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2930.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2042	2042	2042	2042	2042	
5°	2033	2048	2049	2031	2033	194
15°	1995	2048	2045	1986	1995	564
25°	1880	1963	1941	1848	1880	862
35°	1478	1616	1546	1386	1478	889
45°	425	606	495	321	425	342
55°	3	5	3	2	3	11
65°	0	0	0	0	0	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°	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1
0.5°	2041.3	2040.5	2041.3	2041.7	2042.1	2044.1	2044.9	2044.9	2042.9	2041.7	2041.3
1°	2040.5	2040.5	2041.3	2042.1	2042.9	2045.3	2046.1	2045.7	2043.7	2042.1	2040.9
1.5°	2039.7	2039.7	2041.3	2042.5	2043.7	2046.1	2047.3	2046.9	2044.5	2042.1	2040.9
2°	2038.9	2039.3	2040.9	2042.9	2044.5	2046.9	2048.1	2047.7	2044.9	2042.5	2040.9
2.5°	2038.1	2038.5	2040.9	2043.3	2044.9	2047.7	2049.3	2048.5	2045.7	2042.9	2040.5
3°	2036.9	2038.1	2040.5	2043.3	2045.3	2048.9	2050.0	2049.7	2046.5	2043.3	2040.1
3.5°	2036.1	2037.3	2040.5	2043.3	2046.1	2049.3	2050.8	2050.4	2047.3	2043.3	2039.7
4°	2034.9	2036.5	2039.7	2043.7	2046.5	2050.0	2052.0	2051.2	2048.1	2043.3	2039.7
4.5°	2033.8	2035.7	2039.3	2043.7	2046.9	2051.2	2052.8	2052.0	2048.5	2043.7	2038.9
5°	2032.6	2034.9	2038.9	2043.7	2047.7	2052.0	2053.6	2053.2	2048.9	2043.7	2038.5
5.5°	2031.4	2033.8	2038.5	2044.1	2048.1	2052.8	2054.8	2054.0	2049.7	2043.7	2038.1
6°	2030.2	2033.0	2038.1	2044.1	2048.5	2053.6	2055.6	2054.4	2050.0	2044.1	2037.7
6.5°	2029.0	2031.8	2037.3	2044.1	2049.3	2054.4	2056.4	2055.2	2050.4	2044.1	2037.3
7°	2027.8	2030.6	2036.9	2044.1	2049.7	2054.8	2057.2	2056.0	2050.8	2043.7	2036.5
7.5°	2026.2	2029.4	2036.5	2044.5	2050.0	2055.6	2058.0	2056.8	2051.2	2043.7	2036.1
8°	2024.6	2028.2	2035.7	2044.1	2050.4	2056.4	2058.8	2057.2	2051.6	2044.1	2035.3
8.5°	2023.0	2026.6	2034.9	2044.5	2050.8	2056.8	2059.2	2058.0	2051.6	2043.7	2034.5
9°	2021.4	2025.4	2034.2	2044.1	2051.2	2057.2	2060.0	2058.4	2052.0	2043.3	2034.2
9.5°	2019.4	2023.8	2033.4	2044.1	2051.2	2057.6	2060.4	2058.8	2052.0	2043.3	2033.0
10°	2017.9	2022.2	2032.6	2043.7	2051.6	2058.0	2060.8	2059.2	2052.0	2042.9	2032.2
10.5°	2015.9	2020.6	2031.8	2043.7	2051.6	2058.4	2061.2	2059.2	2052.0	2042.5	2031.0
11°	2013.9	2019.0	2030.6	2043.3	2051.6	2058.8	2061.6	2059.6	2051.6	2041.7	2029.8
11.5°	2011.9	2017.1	2029.4	2042.9	2051.6	2058.8	2061.6	2059.6	2051.6	2040.9	2028.6
12°	2009.9	2015.1	2028.6	2042.5	2051.6	2058.8	2062.0	2059.6	2051.2	2040.1	2027.0
12.5°	2007.5	2013.5	2027.4	2042.1	2051.2	2058.8	2062.0	2059.2	2050.4	2039.3	2025.8
13°	2005.1	2011.1	2025.8	2041.3	2050.8	2058.8	2061.6	2059.2	2050.0	2038.1	2023.8
13.5°	2002.8	2009.1	2024.6	2040.5	2050.0	2058.8	2061.2	2058.8	2049.3	2036.5	2022.2
14°	2000.0	2007.1	2023.0	2039.7	2049.3	2058.0	2060.8	2058.4	2048.1	2035.3	2019.8
14.5°	1997.6	2004.7	2021.4	2038.5	2048.9	2057.6	2060.4	2057.6	2046.9	2033.8	2017.9
15°	1994.8	2002.4	2019.4	2037.3	2047.7	2056.8	2059.6	2056.8	2045.3	2031.8	2015.5
15.5°	1991.6	2000.0	2017.5	2035.7	2046.9	2056.0	2058.4	2055.6	2043.7	2029.8	2012.7
16°	1988.4	1997.2	2015.5	2034.2	2045.3	2054.8	2057.2	2054.0	2041.7	2027.4	2009.9
16.5°	1985.3	1994.4	2013.1	2032.6	2043.7	2053.2	2056.0	2052.4	2039.7	2024.6	2006.7
17°	1981.7	1991.2	2010.7	2030.2	2042.1	2051.6	2054.0	2050.0	2037.3	2021.8	2003.2
17.5°	1977.7	1988.0	2007.9	2027.8	2040.1	2049.7	2052.0	2048.1	2034.9	2018.7	1999.2
18°	1973.7	1984.9	2004.7	2025.0	2037.7	2047.3	2050.0	2045.3	2031.8	2015.1	1994.8
18.5°	1969.8	1980.9	2002.0	2022.2	2035.3	2044.5	2047.3	2042.1	2028.6	2011.1	1990.4
19°	1965.0	1977.3	1998.4	2019.0	2032.2	2041.3	2044.5	2038.9	2024.6	2006.7	1985.7
19.5°	1960.2	1972.9	1994.4	2015.1	2029.0	2038.1	2041.3	2034.9	2020.6	2002.0	1980.1
20°	1955.5	1968.6	1990.4	2011.1	2025.4	2034.5	2037.3	2031.0	2016.3	1996.8	1974.1
20.5°	1949.9	1963.8	1985.7	2006.7	2021.4	2030.2	2033.4	2026.2	2011.1	1991.2	1967.8
21°	1943.9	1958.6	1980.9	2002.0	2016.7	2025.4	2028.6	2021.4	2005.9	1984.9	1961.4



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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°	1924.1	1941.1	1963.4	1984.9	2001.2	2008.3	2011.1	2002.8	1986.1	1963.8	1938.0
23°	1916.5	1934.4	1956.6	1978.1	1994.8	2001.6	2004.3	1995.6	1978.5	1955.5	1929.2
23.5°	1908.2	1927.2	1949.5	1970.6	1987.3	1994.0	1996.8	1987.3	1970.2	1946.3	1920.1
24°	1899.4	1919.3	1941.5	1963.0	1980.5	1986.1	1988.8	1978.9	1961.4	1937.2	1910.1
24.5°	1890.3	1911.3	1933.2	1954.3	1972.5	1977.3	1979.3	1969.8	1951.5	1926.8	1899.4
25°	1879.9	1902.2	1924.5	1945.1	1962.6	1968.2	1970.2	1959.8	1941.1	1916.1	1888.3
25.5°	1869.6	1892.7	1914.5	1935.6	1953.5	1957.8	1959.4	1949.1	1930.0	1904.6	1876.8
26°	1858.1	1881.9	1904.2	1925.3	1943.5	1947.1	1948.3	1937.6	1918.1	1892.3	1864.0
26.5°	1846.2	1871.2	1893.5	1914.1	1932.4	1934.8	1936.0	1925.3	1905.4	1879.1	1850.5
27°	1833.0	1858.9	1881.5	1902.6	1919.7	1922.5	1922.9	1912.1	1891.9	1865.6	1836.6
27.5°	1819.1	1846.6	1868.8	1890.3	1907.8	1909.4	1909.4	1898.2	1877.6	1850.9	1821.1
28°	1804.4	1832.6	1855.3	1876.8	1894.2	1894.6	1895.0	1883.1	1862.5	1835.4	1805.6
28.5°	1788.9	1817.9	1841.4	1863.2	1879.9	1879.5	1879.1	1867.2	1846.2	1818.7	1789.3
29°	1772.2	1802.4	1826.3	1848.5	1864.8	1863.6	1863.2	1850.5	1829.5	1802.0	1771.8
29.5°	1755.5	1786.5	1810.8	1833.0	1849.3	1846.6	1845.8	1833.0	1811.6	1784.2	1753.6
30°	1737.3	1769.1	1794.1	1817.1	1832.2	1828.7	1827.5	1814.8	1792.9	1765.9	1734.5
30.5°	1718.6	1750.8	1776.6	1800.1	1815.2	1810.0	1808.4	1795.3	1773.4	1746.4	1714.6
31°	1697.9	1730.9	1758.3	1781.8	1796.5	1789.7	1787.7	1774.6	1753.2	1725.7	1693.1
31.5°	1676.4	1710.6	1739.2	1763.1	1777.0	1769.4	1767.1	1753.2	1732.1	1704.3	1670.5
32°	1653.8	1688.4	1718.2	1744.0	1757.1	1748.0	1743.6	1730.5	1709.4	1682.0	1646.2
32.5°	1629.5	1664.5	1695.9	1722.9	1736.9	1724.5	1719.4	1706.3	1685.6	1658.6	1619.6
33°	1602.9	1639.5	1672.5	1701.5	1714.2	1700.3	1694.3	1680.4	1660.9	1633.5	1592.6
33.5°	1575.5	1612.1	1647.0	1678.8	1691.5	1675.3	1667.3	1653.8	1635.5	1607.3	1563.6
34°	1544.9	1584.2	1621.6	1655.0	1667.7	1649.0	1639.1	1625.2	1608.1	1579.1	1532.6
34.5°	1512.7	1553.6	1593.0	1629.9	1642.7	1620.4	1608.5	1595.0	1578.3	1548.1	1498.8
35°	1478.1	1520.2	1563.6	1602.5	1616.4	1589.8	1575.5	1562.4	1546.5	1513.5	1459.8
35.5°	1442.3	1484.1	1531.0	1573.1	1587.4	1555.6	1540.9	1527.0	1511.5	1474.9	1418.9
36°	1403.0	1445.5	1497.2	1540.9	1556.8	1520.6	1504.4	1489.2	1473.3	1434.4	1375.2
36.5°	1356.9	1403.8	1459.0	1504.4	1523.0	1481.3	1465.0	1449.9	1432.0	1389.5	1326.7
37°	1304.0	1355.3	1417.3	1466.6	1484.9	1442.3	1425.3	1408.6	1387.1	1341.0	1275.8
37.5°	1247.2	1301.3	1372.4	1424.5	1445.1	1399.0	1383.9	1366.0	1337.0	1286.1	1221.0
38°	1190.8	1246.4	1324.7	1382.7	1403.0	1354.5	1342.2	1321.1	1282.2	1227.7	1166.1
38.5°	1132.7	1192.7	1274.2	1333.8	1356.9	1306.0	1298.5	1275.0	1224.1	1168.1	1108.5
39°	1077.1	1141.9	1221.4	1285.4	1301.3	1256.7	1252.4	1226.1	1164.9	1105.7	1048.5
39.5°	1022.2	1089.8	1165.7	1231.3	1238.1	1203.5	1200.7	1174.5	1105.7	1044.5	987.3
40°	967.4	1038.9	1108.5	1176.5	1174.9	1148.2	1149.8	1119.6	1049.3	984.1	926.5
40.5°	910.6	982.9	1051.7	1115.2	1114.5	1089.8	1100.1	1064.4	994.4	924.5	861.7
41°	852.9	924.5	994.4	1053.2	1059.2	1032.6	1045.3	1007.9	938.8	866.4	798.9
41.5°	796.9	864.1	935.6	990.8	1004.4	973.0	989.3	949.1	882.3	807.2	737.7
42°	740.5	806.8	877.6	927.3	948.3	917.3	931.6	890.7	823.9	748.8	681.6
42.5°	686.0	750.4	819.1	863.3	891.9	861.3	872.4	832.7	767.5	690.4	621.2
43°	633.5	694.3	759.9	802.5	831.1	805.6	810.8	772.6	709.4	631.5	566.4
43.5°	579.9	639.5	699.1	740.5	771.8	748.8	751.6	714.6	655.0	575.9	511.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	425.3	473.8	517.9	569.9	606.5	579.1	570.3	546.9	495.2	429.6	368.4
45.5°	375.2	420.9	462.2	515.9	552.9	524.6	515.1	491.2	444.7	384.3	322.7
46°	329.5	370.4	410.2	466.6	500.0	471.4	458.7	438.4	397.1	339.4	277.0
46.5°	284.6	321.9	360.9	417.7	445.9	422.9	411.8	390.3	349.4	294.5	231.7
47°	242.0	276.2	314.4	370.8	399.8	374.0	364.9	342.6	301.7	249.2	196.3
47.5°	202.3	231.7	272.3	325.5	353.7	325.1	318.0	294.9	254.0	210.3	164.1
48°	167.3	192.0	232.5	281.0	307.6	276.2	271.1	246.8	213.0	174.5	135.5
48.5°	135.9	156.2	196.7	240.1	261.5	227.3	224.2	206.3	175.3	141.9	109.7
49°	116.9	127.2	164.9	202.7	221.8	185.6	187.6	167.7	140.7	112.5	87.8
49.5°	97.8	107.3	135.1	168.9	183.2	150.2	151.8	134.3	110.5	87.0	68.4
50°	78.7	87.4	115.3	137.9	147.9	119.2	119.2	104.9	83.9	72.3	56.4
50.5°	59.2	67.6	95.8	116.9	115.7	91.4	91.4	78.7	69.2	57.2	44.9
51°	40.5	48.1	76.3	96.2	87.4	75.5	75.1	64.8	54.5	42.5	33.0
51.5°	29.4	36.2	56.8	75.5	72.3	59.2	59.2	50.9	39.7	27.4	21.1
52°	20.3	25.8	37.4	54.8	57.2	43.3	42.9	37.0	25.0	12.3	9.5
52.5°	12.7	17.1	25.4	34.2	41.7	27.4	26.6	23.1	10.7	7.9	6.4
53°	10.7	14.7	15.9	21.9	26.6	11.9	10.7	8.7	7.2	6.0	5.2
53.5°	8.3	11.9	13.1	12.7	11.9	7.6	7.2	6.4	5.6	4.8	4.0
54°	6.0	9.1	9.9	10.3	7.6	6.0	5.6	5.2	4.4	3.6	3.2
54.5°	4.0	6.4	7.2	7.9	6.0	4.8	4.4	4.0	3.2	2.8	2.4
55°	3.2	3.6	4.4	6.0	4.8	3.6	3.6	3.2	2.8	2.4	2.0
55.5°	2.4	2.8	3.2	3.6	3.6	2.8	2.8	2.4	2.0	2.0	1.6
56°	2.0	2.4	2.8	2.8	2.8	2.0	2.0	2.0	1.6	1.6	1.6
56.5°	1.6	2.0	2.0	2.4	2.0	1.6	1.6	1.6	1.6	1.2	1.2
57°	1.6	1.6	1.6	2.0	1.6	1.6	1.6	1.6	1.2	1.2	1.2
57.5°	1.2	1.2	1.6	1.6	1.6	1.2	1.2	1.2	1.2	1.2	1.2
58°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8
58.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8
59°	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8	0.8	0.8
59.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
60°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
60.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
61°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
61.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
62°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4
62.5°	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4
63°	0.4	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
63.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
64°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
64.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
65.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K

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	0.0	0.0	0.0	0.0
71.5°	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
72°	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-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: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2042.1	2042.1	2042.1	2042.1	2042.1	2042.1
0.5°	2040.9	2040.5	2042.1	2042.9	2042.9	2041.3
1°	2040.5	2039.7	2040.9	2041.7	2041.7	2040.5
1.5°	2039.7	2038.5	2039.7	2040.5	2040.5	2039.7
2°	2038.9	2037.7	2038.5	2039.3	2039.3	2038.9
2.5°	2038.5	2036.5	2037.7	2038.1	2038.5	2038.1
3°	2037.7	2035.7	2036.5	2036.9	2036.9	2036.9
3.5°	2036.5	2034.5	2034.9	2035.7	2035.7	2036.1
4°	2036.1	2033.4	2033.8	2034.5	2034.5	2034.9
4.5°	2034.9	2031.8	2032.6	2033.4	2033.4	2033.8
5°	2034.2	2030.6	2031.0	2031.8	2032.6	2032.6
5.5°	2033.0	2029.4	2029.8	2030.6	2031.0	2031.4
6°	2032.2	2027.8	2028.2	2029.4	2029.8	2030.2
6.5°	2031.0	2026.2	2027.0	2027.8	2028.6	2029.0
7°	2029.4	2024.6	2025.4	2026.6	2027.4	2027.8
7.5°	2028.2	2023.0	2023.8	2025.0	2025.8	2026.2
8°	2027.0	2021.4	2022.2	2023.8	2024.6	2024.6
8.5°	2025.4	2019.4	2020.2	2022.2	2023.0	2023.0
9°	2023.8	2017.5	2018.7	2020.6	2021.4	2021.4
9.5°	2022.6	2015.5	2016.7	2019.0	2019.8	2019.4
10°	2020.6	2013.5	2014.7	2017.5	2018.3	2017.9
10.5°	2019.0	2011.1	2012.7	2015.5	2016.3	2015.9
11°	2017.1	2009.1	2010.7	2013.9	2014.7	2013.9
11.5°	2015.1	2006.3	2008.3	2011.9	2012.7	2011.9
12°	2013.1	2003.9	2005.9	2009.9	2010.7	2009.9
12.5°	2010.7	2001.6	2003.2	2007.5	2008.7	2007.5
13°	2008.3	1998.8	2000.4	2005.1	2006.3	2005.1
13.5°	2005.5	1996.0	1998.0	2002.8	2003.5	2002.8
14°	2003.2	1992.8	1994.8	2000.0	2001.2	2000.0
14.5°	2000.0	1989.6	1991.6	1996.8	1998.4	1997.6
15°	1997.2	1986.1	1988.4	1993.6	1995.2	1994.8
15.5°	1994.0	1982.5	1984.5	1990.4	1992.0	1991.6
16°	1990.0	1978.5	1980.9	1986.5	1988.4	1988.4
16.5°	1986.5	1974.5	1976.9	1982.5	1984.9	1985.3
17°	1982.5	1970.2	1972.1	1978.1	1980.9	1981.7
17.5°	1978.1	1965.4	1967.8	1973.3	1976.5	1977.7
18°	1973.3	1960.2	1962.6	1968.2	1971.8	1973.7
18.5°	1968.2	1955.5	1957.4	1962.6	1966.6	1969.8
19°	1963.0	1949.9	1951.9	1956.6	1961.4	1965.0
19.5°	1957.4	1943.5	1945.9	1950.3	1955.5	1960.2
20°	1951.1	1937.6	1939.6	1943.5	1949.1	1955.5
20.5°	1944.7	1930.8	1932.8	1936.4	1942.3	1949.9
21°	1937.6	1923.7	1925.6	1928.4	1935.6	1943.9



TEST NUMBER: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1914.1	1899.4	1901.0	1902.2	1910.9	1924.1
23°	1905.4	1890.3	1891.9	1892.3	1901.8	1916.5
23.5°	1895.4	1880.7	1881.9	1882.3	1891.9	1908.2
24°	1885.5	1870.4	1872.0	1871.6	1881.5	1899.4
24.5°	1874.8	1859.3	1860.9	1860.1	1870.8	1890.3
25°	1863.2	1847.7	1849.3	1847.7	1859.3	1879.9
25.5°	1851.3	1835.4	1836.6	1835.4	1847.0	1869.6
26°	1838.2	1822.7	1823.5	1821.9	1834.6	1858.1
26.5°	1824.7	1808.8	1810.0	1808.4	1821.1	1846.2
27°	1810.4	1793.7	1795.7	1793.7	1807.2	1833.0
27.5°	1794.9	1778.2	1780.6	1778.6	1792.1	1819.1
28°	1778.6	1761.9	1764.7	1761.9	1776.6	1804.4
28.5°	1761.5	1744.4	1748.0	1746.0	1759.9	1788.9
29°	1744.0	1726.5	1730.5	1728.1	1742.8	1772.2
29.5°	1725.3	1707.4	1712.6	1710.6	1725.7	1755.5
30°	1705.5	1688.0	1693.1	1691.5	1707.4	1737.3
30.5°	1684.0	1666.1	1673.7	1672.9	1688.4	1718.6
31°	1660.5	1643.9	1652.2	1651.8	1668.1	1697.9
31.5°	1635.9	1618.8	1629.5	1630.3	1646.2	1676.4
32°	1609.7	1593.0	1604.5	1605.7	1622.4	1653.8
32.5°	1581.1	1564.4	1578.7	1580.3	1597.0	1629.5
33°	1552.0	1534.6	1550.1	1552.4	1569.9	1602.9
33.5°	1519.5	1502.4	1521.8	1525.0	1542.9	1575.5
34°	1486.1	1466.6	1491.2	1495.2	1513.5	1544.9
34.5°	1449.5	1428.4	1458.2	1462.2	1481.7	1512.7
35°	1409.4	1386.3	1422.5	1426.1	1446.7	1478.1
35.5°	1364.1	1339.8	1381.5	1387.1	1408.6	1442.3
36°	1316.4	1288.1	1335.8	1343.0	1366.8	1403.0
36.5°	1262.7	1234.1	1284.6	1294.5	1319.5	1356.9
37°	1208.6	1181.6	1228.5	1241.6	1267.1	1304.0
37.5°	1151.8	1130.7	1168.1	1186.8	1210.2	1247.2
38°	1098.2	1078.3	1106.9	1128.0	1152.6	1190.8
38.5°	1042.9	1026.2	1048.9	1069.1	1094.2	1132.7
39°	989.7	965.4	992.8	1006.3	1035.0	1077.1
39.5°	934.8	904.2	939.2	946.3	974.9	1022.2
40°	878.4	842.2	883.1	885.9	913.3	967.4
40.5°	819.5	788.5	824.7	825.1	854.9	910.6
41°	759.1	735.3	767.1	764.7	798.1	852.9
41.5°	698.3	683.6	710.6	704.3	741.2	796.9
42°	639.9	629.2	655.8	647.4	684.8	740.5
42.5°	581.1	574.3	602.5	593.4	627.2	686.0
43°	523.4	520.3	550.9	540.9	572.3	633.5
43.5°	468.2	466.6	499.6	490.5	519.1	579.9



TEST NUMBER: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	325.5	321.1	353.3	352.1	375.2	425.3
45.5°	277.8	275.4	308.8	312.4	331.9	375.2
46°	230.1	230.1	267.9	275.0	292.1	329.5
46.5°	193.2	190.0	230.1	239.7	255.2	284.6
47°	161.0	153.0	194.8	207.1	220.2	242.0
47.5°	132.0	132.0	162.2	176.5	188.4	202.3
48°	107.3	111.3	133.1	149.8	159.4	167.3
48.5°	85.5	90.6	112.9	129.2	132.7	135.9
49°	67.6	70.0	93.0	108.9	112.9	116.9
49.5°	56.0	49.3	73.5	89.0	93.0	97.8
50°	44.9	37.4	53.7	68.8	72.7	78.7
50.5°	33.8	27.4	39.7	48.5	53.3	59.2
51°	22.7	19.1	29.0	35.4	39.0	40.5
51.5°	11.5	11.9	19.5	23.8	27.0	29.4
52°	7.6	9.5	12.3	14.7	17.5	20.3
52.5°	5.6	7.6	9.9	11.9	14.7	12.7
53°	4.8	6.0	7.9	9.1	11.9	10.7
53.5°	3.6	4.0	6.0	6.8	9.1	8.3
54°	2.8	3.2	4.0	4.0	6.4	6.0
54.5°	2.4	2.4	3.2	3.2	3.6	4.0
55°	2.0	2.0	2.4	2.4	2.8	3.2
55.5°	1.6	1.6	2.0	2.0	2.4	2.4
56°	1.6	1.6	1.6	1.6	2.0	2.0
56.5°	1.2	1.2	1.6	1.6	1.6	1.6
57°	1.2	1.2	1.2	1.2	1.2	1.6
57.5°	1.2	1.2	1.2	1.2	1.2	1.2
58°	0.8	0.8	1.2	1.2	1.2	1.2
58.5°	0.8	0.8	0.8	1.2	1.2	1.2
59°	0.8	0.8	0.8	0.8	0.8	0.8
59.5°	0.8	0.8	0.8	0.8	0.8	0.8
60°	0.8	0.8	0.8	0.8	0.8	0.8
60.5°	0.8	0.8	0.8	0.8	0.8	0.8
61°	0.8	0.8	0.8	0.8	0.8	0.8
61.5°	0.8	0.8	0.8	0.8	0.8	0.8
62°	0.4	0.8	0.8	0.8	0.8	0.8
62.5°	0.4	0.4	0.8	0.8	0.8	0.8
63°	0.4	0.4	0.4	0.4	0.4	0.4
63.5°	0.4	0.4	0.4	0.4	0.4	0.4
64°	0.4	0.4	0.4	0.4	0.4	0.4
64.5°	0.4	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4	0.4
65.5°	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-4000lm-3500K

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°	0.0	0.4	0.4	0.4	0.4	0.4
72°	0.0	0.0	0.4	0.4	0.4	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0
73°	0.0	0.0	0.0	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	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: P776502

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMB-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



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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report





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

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21.5°	1938.0	1953.5	1975.7	1996.8	2011.9	2020.2	2023.4	2015.5	2000.0	1978.5	1954.3
22°	1931.2	1947.5	1969.8	1990.8	2007.1	2014.7	2017.5	2009.5	1993.2	1971.4	1946.7



44°	527.0	585.0	637.1	682.0	714.6	692.0	688.8	659.0	601.3	523.4	459.5
44.5°	475.4	529.4	575.9	624.0	659.0	635.1	631.2	602.5	548.9	474.6	413.7



66.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67°	0.4	0.4	0.4	0.4	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°	1930.4	1916.1	1918.1	1920.5	1927.6	1938.0
22°	1922.5	1908.2	1909.7	1911.7	1919.7	1931.2

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44°	420.5	415.7	449.9	440.8	468.2	527.0
44.5°	373.2	368.0	400.2	395.1	420.5	475.4

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66.5°	0.4	0.4	0.4	0.4	0.4	0.4
67°	0.4	0.4	0.4	0.4	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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Scaled Data Report



(END OF REPORT)