

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: P776427

Luminaire Tested: HCDJBS3040CSD-HCD6TSQMB-4000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776427
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B015-HCD6TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TSQMB-4000lm-3500K
Description: 6 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

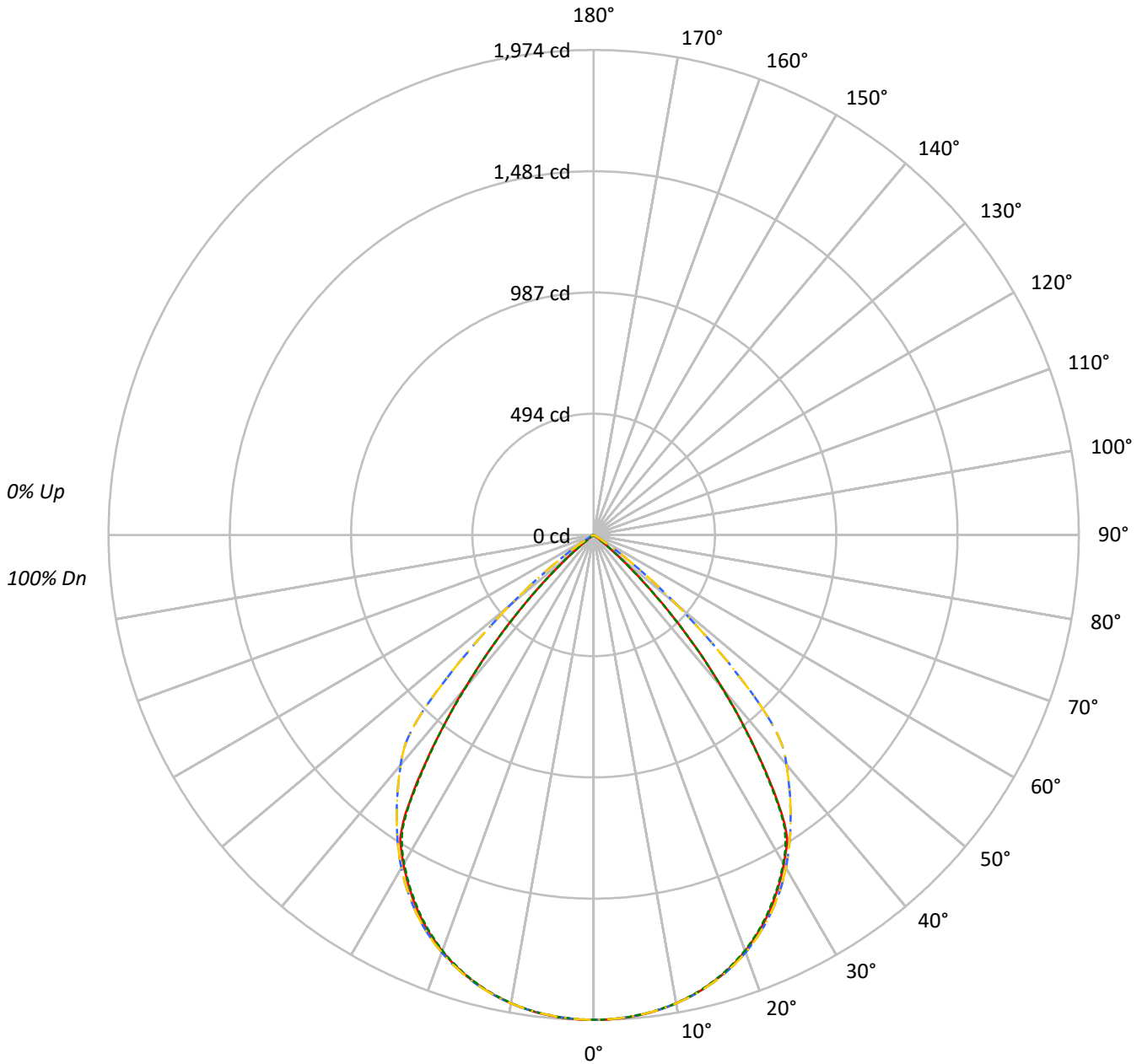
Lumens per Lamp: N/A
Luminaire Lumens: 2847.5 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.23
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

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									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	96	95	94	92																			
2	106	101	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84																			
3	100	93	87	83	98	91	86	82	89	84	81	86	83	80	84	81	78	77																			
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	74	71	70																			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64																			
6	83	73	66	61	81	72	66	61	71	65	61	69	64	60	68	63	60	58																			
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53																			
8	74	63	56	51	72	62	56	51	61	55	51	60	55	51	59	54	51	49																			
9	69	58	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47	45																			
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	52	47	43	42																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	84966	84966	84966	84966
5°	84928	84893	84928	84893
10°	84642	84589	84642	84589
15°	83925	83854	83925	83854
20°	82584	82479	82584	82479
25°	80320	80115	80320	80115
30°	76941	76707	76941	76707
35°	67347	66905	67347	66905
40°	45981	45695	45981	45695
45°	23942	23966	23942	23966
50°	6980	6899	6980	6899
55°	210	270	210	270
60°	69	69	69	69
65°	41	41	41	41
70°	50	50	50	50
75°	0	67	0	67
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 55361 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.6	6.6
10°-20°	530.7	18.6
20°-30°	778.9	27.4
30°-40°	826.5	29.0
40°-50°	461.4	16.2
50°-60°	62.4	2.2
60°-70°	0.7	0.0
70°-80°	0.2	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°	1496.2	52.5
0°-40°	2322.7	81.6
0°-60°	2846.6	100.0
0°-90°	2847.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2847.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1973	1973	1973	1973	1973	
5°	1965	1964	1965	1964	1965	187
15°	1883	1881	1883	1881	1883	530
25°	1691	1686	1691	1686	1691	777
35°	1281	1273	1281	1273	1281	774
45°	393	394	393	394	393	314
55°	3	4	3	4	3	17
65°	0	0	0	0	0	0
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°	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4
0.5°	1974.2	1973.4	1973.4	1973.0	1973.4	1973.0	1973.4	1973.4	1974.2	1973.4	1973.4
1°	1973.8	1973.4	1973.0	1973.0	1973.4	1973.0	1973.0	1973.4	1973.8	1973.4	1973.0
1.5°	1973.4	1972.6	1972.6	1972.6	1972.6	1972.6	1972.6	1972.6	1973.4	1972.6	1972.6
2°	1972.6	1972.2	1971.8	1971.8	1972.2	1971.8	1971.8	1972.2	1972.6	1972.2	1971.8
2.5°	1971.8	1971.4	1971.0	1971.0	1971.4	1971.0	1971.0	1971.4	1971.8	1971.4	1971.0
3°	1971.0	1970.2	1970.2	1970.2	1970.2	1970.2	1970.2	1970.2	1971.0	1970.2	1970.2
3.5°	1969.8	1969.4	1969.0	1969.0	1969.0	1969.0	1969.0	1969.4	1969.8	1969.4	1969.0
4°	1968.6	1967.8	1967.4	1967.4	1967.8	1967.4	1967.4	1967.8	1968.6	1967.8	1967.4
4.5°	1967.0	1966.2	1966.2	1965.8	1966.2	1965.8	1966.2	1966.2	1967.0	1966.2	1966.2
5°	1965.0	1964.6	1964.2	1964.2	1964.2	1964.2	1964.2	1964.6	1965.0	1964.6	1964.2
5.5°	1963.1	1962.7	1962.3	1962.3	1962.3	1962.3	1962.3	1962.7	1963.1	1962.7	1962.3
6°	1961.1	1960.7	1960.3	1959.9	1960.3	1959.9	1960.3	1960.7	1961.1	1960.7	1960.3
6.5°	1958.7	1958.3	1957.9	1957.9	1957.9	1957.9	1957.9	1958.3	1958.7	1958.3	1957.9
7°	1956.3	1955.9	1955.5	1955.1	1955.1	1955.1	1955.5	1955.9	1956.3	1955.9	1955.5
7.5°	1953.5	1953.1	1952.7	1952.3	1952.3	1952.3	1952.7	1953.1	1953.5	1953.1	1952.7
8°	1950.3	1949.9	1949.9	1949.5	1949.5	1949.5	1949.9	1949.9	1950.3	1949.9	1949.9
8.5°	1947.2	1946.8	1946.8	1946.4	1946.0	1946.4	1946.8	1946.8	1947.2	1946.8	1946.8
9°	1943.6	1943.6	1943.2	1942.8	1942.4	1942.8	1943.2	1943.6	1943.6	1943.6	1943.2
9.5°	1940.0	1940.0	1939.6	1939.2	1938.8	1939.2	1939.6	1940.0	1940.0	1940.0	1939.6
10°	1936.0	1936.0	1936.0	1935.2	1934.8	1935.2	1936.0	1936.0	1936.0	1936.0	1936.0
10.5°	1932.0	1932.0	1932.0	1931.3	1930.9	1931.3	1932.0	1932.0	1932.0	1932.0	1932.0
11°	1927.3	1927.7	1927.7	1926.9	1926.1	1926.9	1927.7	1927.7	1927.3	1927.7	1927.7
11.5°	1922.9	1923.3	1923.3	1922.1	1921.3	1922.1	1923.3	1923.3	1922.9	1923.3	1923.3
12°	1918.1	1918.5	1918.5	1917.3	1916.5	1917.3	1918.5	1918.5	1918.1	1918.5	1918.5
12.5°	1913.0	1913.4	1913.8	1912.2	1911.4	1912.2	1913.8	1913.4	1913.0	1913.4	1913.8
13°	1907.4	1908.2	1908.6	1907.0	1905.8	1907.0	1908.6	1908.2	1907.4	1908.2	1908.6
13.5°	1901.8	1902.6	1903.0	1901.4	1900.2	1901.4	1903.0	1902.6	1901.8	1902.6	1903.0
14°	1895.5	1896.7	1897.5	1895.5	1894.3	1895.5	1897.5	1896.7	1895.5	1896.7	1897.5
14.5°	1889.5	1890.7	1891.5	1889.5	1887.9	1889.5	1891.5	1890.7	1889.5	1890.7	1891.5
15°	1882.8	1884.3	1885.1	1883.2	1881.2	1883.2	1885.1	1884.3	1882.8	1884.3	1885.1
15.5°	1876.4	1877.6	1878.8	1876.4	1874.4	1876.4	1878.8	1877.6	1876.4	1877.6	1878.8
16°	1869.2	1870.8	1872.0	1869.6	1867.2	1869.6	1872.0	1870.8	1869.2	1870.8	1872.0
16.5°	1862.1	1863.7	1864.9	1862.5	1860.1	1862.5	1864.9	1863.7	1862.1	1863.7	1864.9
17°	1854.1	1856.5	1857.7	1854.9	1852.1	1854.9	1857.7	1856.5	1854.1	1856.5	1857.7
17.5°	1846.6	1848.6	1850.2	1847.4	1844.2	1847.4	1850.2	1848.6	1846.6	1848.6	1850.2
18°	1838.2	1840.6	1842.2	1839.0	1835.8	1839.0	1842.2	1840.6	1838.2	1840.6	1842.2
18.5°	1829.9	1832.7	1834.3	1831.1	1827.5	1831.1	1834.3	1832.7	1829.9	1832.7	1834.3
19°	1821.1	1823.9	1825.9	1821.9	1818.4	1821.9	1825.9	1823.9	1821.1	1823.9	1825.9
19.5°	1812.0	1815.2	1817.2	1813.2	1809.6	1813.2	1817.2	1815.2	1812.0	1815.2	1817.2
20°	1802.4	1806.0	1808.4	1804.0	1800.1	1804.0	1808.4	1806.0	1802.4	1806.0	1808.4
20.5°	1792.9	1796.9	1799.3	1794.5	1790.1	1794.5	1799.3	1796.9	1792.9	1796.9	1799.3
21°	1783.0	1786.9	1789.7	1785.0	1779.8	1785.0	1789.7	1786.9	1783.0	1786.9	1789.7



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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°	1750.8	1755.9	1759.1	1753.6	1747.2	1753.6	1759.1	1755.9	1750.8	1755.9	1759.1
23°	1739.6	1744.8	1748.4	1742.4	1735.7	1742.4	1748.4	1744.8	1739.6	1744.8	1748.4
23.5°	1728.1	1733.7	1737.7	1730.9	1723.7	1730.9	1737.7	1733.7	1728.1	1733.7	1737.7
24°	1715.8	1722.1	1726.1	1719.0	1711.8	1719.0	1726.1	1722.1	1715.8	1722.1	1726.1
24.5°	1703.5	1709.8	1714.6	1707.0	1699.5	1707.0	1714.6	1709.8	1703.5	1709.8	1714.6
25°	1690.7	1697.5	1702.3	1694.3	1686.4	1694.3	1702.3	1697.5	1690.7	1697.5	1702.3
25.5°	1678.0	1684.8	1690.3	1681.6	1673.2	1681.6	1690.3	1684.8	1678.0	1684.8	1690.3
26°	1664.9	1672.1	1677.6	1668.9	1659.7	1668.9	1677.6	1672.1	1664.9	1672.1	1677.6
26.5°	1651.4	1658.5	1664.5	1655.4	1646.2	1655.4	1664.5	1658.5	1651.4	1658.5	1664.5
27°	1637.1	1645.4	1651.4	1641.8	1632.3	1641.8	1651.4	1645.4	1637.1	1645.4	1651.4
27.5°	1622.8	1631.5	1637.9	1627.5	1618.4	1627.5	1637.9	1631.5	1622.8	1631.5	1637.9
28°	1608.4	1617.2	1624.0	1613.6	1603.3	1613.6	1624.0	1617.2	1608.4	1617.2	1624.0
28.5°	1593.7	1602.9	1609.6	1599.3	1588.6	1599.3	1609.6	1602.9	1593.7	1602.9	1609.6
29°	1578.6	1588.6	1594.9	1584.6	1573.5	1584.6	1594.9	1588.6	1578.6	1588.6	1594.9
29.5°	1563.5	1573.5	1580.2	1569.9	1558.4	1569.9	1580.2	1573.5	1563.5	1573.5	1580.2
30°	1547.6	1558.4	1564.7	1554.8	1542.9	1554.8	1564.7	1558.4	1547.6	1558.4	1564.7
30.5°	1532.1	1543.3	1549.2	1539.7	1527.0	1539.7	1549.2	1543.3	1532.1	1543.3	1549.2
31°	1515.8	1527.7	1533.3	1524.2	1510.7	1524.2	1533.3	1527.7	1515.8	1527.7	1533.3
31.5°	1499.5	1512.2	1517.0	1508.3	1494.0	1508.3	1517.0	1512.2	1499.5	1512.2	1517.0
32°	1482.8	1495.9	1500.7	1492.4	1472.9	1492.4	1500.7	1495.9	1482.8	1495.9	1500.7
32.5°	1465.3	1479.6	1484.0	1476.1	1451.4	1476.1	1484.0	1479.6	1465.3	1479.6	1484.0
33°	1437.1	1463.3	1466.9	1459.8	1428.0	1459.8	1466.9	1463.3	1437.1	1463.3	1466.9
33.5°	1406.5	1447.0	1449.8	1443.1	1396.2	1443.1	1449.8	1447.0	1406.5	1447.0	1449.8
34°	1369.1	1430.4	1432.3	1422.8	1360.8	1422.8	1432.3	1430.4	1369.1	1430.4	1432.3
34.5°	1325.8	1412.5	1414.8	1400.5	1318.6	1400.5	1414.8	1412.5	1325.8	1412.5	1414.8
35°	1281.3	1385.8	1397.4	1377.9	1272.9	1377.9	1397.4	1385.8	1281.3	1385.8	1397.4
35.5°	1236.7	1359.6	1379.9	1349.3	1226.8	1349.3	1379.9	1359.6	1236.7	1359.6	1379.9
36°	1190.6	1324.2	1362.0	1317.4	1181.1	1317.4	1362.0	1324.2	1190.6	1324.2	1362.0
36.5°	1144.1	1286.8	1344.5	1278.9	1136.2	1278.9	1344.5	1286.8	1144.1	1286.8	1344.5
37°	1096.8	1244.3	1327.0	1237.9	1090.1	1237.9	1327.0	1244.3	1096.8	1244.3	1327.0
37.5°	1051.1	1201.8	1309.1	1194.6	1044.7	1194.6	1309.1	1201.8	1051.1	1201.8	1309.1
38°	1003.4	1158.0	1291.6	1150.5	999.0	1150.5	1291.6	1158.0	1003.4	1158.0	1291.6
38.5°	957.3	1114.3	1273.7	1107.2	952.9	1107.2	1273.7	1114.3	957.3	1114.3	1273.7
39°	911.2	1069.8	1256.6	1064.2	906.0	1064.2	1256.6	1069.8	911.2	1069.8	1256.6
39.5°	865.0	1026.1	1239.1	1021.3	859.5	1021.3	1239.1	1026.1	865.0	1026.1	1239.1
40°	818.1	981.5	1221.6	978.0	813.0	978.0	1221.6	981.5	818.1	981.5	1221.6
40.5°	772.4	937.8	1204.2	934.2	767.7	934.2	1204.2	937.8	772.4	937.8	1204.2
41°	727.9	894.1	1186.3	890.9	722.7	890.9	1186.3	894.1	727.9	894.1	1186.3
41.5°	683.4	850.3	1166.4	846.8	679.8	846.8	1166.4	850.3	683.4	850.3	1166.4
42°	638.8	806.6	1144.1	803.0	636.5	803.0	1144.1	806.6	638.8	806.6	1144.1
42.5°	596.3	763.7	1115.1	759.7	593.5	759.7	1115.1	763.7	596.3	763.7	1115.1
43°	553.8	720.3	1082.1	717.2	551.8	717.2	1082.1	720.3	553.8	720.3	1082.1
43.5°	512.4	678.2	1046.7	675.4	510.0	675.4	1046.7	678.2	512.4	678.2	1046.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	393.2	555.4	909.2	553.8	393.6	553.8	909.2	555.4	393.2	555.4	909.2
45.5°	357.4	515.6	857.5	514.4	357.4	514.4	857.5	515.6	357.4	515.6	857.5
46°	322.4	476.7	806.2	475.5	322.4	475.5	806.2	476.7	322.4	476.7	806.2
46.5°	287.8	438.5	755.7	437.3	287.0	437.3	755.7	438.5	287.8	438.5	755.7
47°	254.0	401.1	705.2	401.1	252.8	401.1	705.2	401.1	254.0	401.1	705.2
47.5°	221.4	365.7	657.1	366.1	221.8	366.1	657.1	365.7	221.4	365.7	657.1
48°	192.8	331.5	610.6	331.5	192.8	331.5	610.6	331.5	192.8	331.5	610.6
48.5°	166.6	298.2	565.7	297.8	166.2	297.8	565.7	298.2	166.6	298.2	565.7
49°	144.7	265.2	522.0	264.8	141.1	264.8	522.0	265.2	144.7	265.2	522.0
49.5°	124.0	233.4	479.4	233.4	121.6	233.4	479.4	233.4	124.0	233.4	479.4
50°	104.2	204.3	438.1	204.3	103.0	204.3	438.1	204.3	104.2	204.3	438.1
50.5°	85.9	178.9	398.3	176.5	85.1	176.5	398.3	178.9	85.9	178.9	398.3
51°	70.4	154.6	362.6	151.1	70.4	151.1	362.6	154.6	70.4	154.6	362.6
51.5°	56.5	133.6	327.6	130.4	55.3	130.4	327.6	133.6	56.5	133.6	327.6
52°	44.9	112.9	293.4	110.5	42.5	110.5	293.4	112.9	44.9	112.9	293.4
52.5°	33.8	93.8	260.0	91.4	30.2	91.4	260.0	93.8	33.8	93.8	260.0
53°	22.7	76.7	229.0	75.1	18.7	75.1	229.0	76.7	22.7	76.7	229.0
53.5°	15.1	61.2	200.8	58.8	11.1	58.8	200.8	61.2	15.1	61.2	200.8
54°	7.2	49.3	174.5	45.7	6.4	45.7	174.5	49.3	7.2	49.3	174.5
54.5°	4.4	37.8	151.9	33.8	4.8	33.8	151.9	37.8	4.4	37.8	151.9
55°	2.8	26.2	130.4	22.3	3.6	22.3	130.4	26.2	2.8	26.2	130.4
55.5°	1.2	16.7	110.5	15.1	2.4	15.1	110.5	16.7	1.2	16.7	110.5
56°	0.8	7.2	92.2	11.1	1.2	11.1	92.2	7.2	0.8	7.2	92.2
56.5°	0.8	3.6	74.7	6.8	0.8	6.8	74.7	3.6	0.8	3.6	74.7
57°	0.8	2.0	60.8	3.6	0.8	3.6	60.8	2.0	0.8	2.0	60.8
57.5°	0.8	1.6	48.9	1.6	0.8	1.6	48.9	1.6	0.8	1.6	48.9
58°	0.8	0.8	39.4	0.8	0.8	0.8	39.4	0.8	0.8	0.8	39.4
58.5°	0.8	0.8	30.6	0.8	0.8	0.8	30.6	0.8	0.8	0.8	30.6
59°	0.8	0.8	22.7	0.8	0.8	0.8	22.7	0.8	0.8	0.8	22.7
59.5°	0.8	0.8	16.7	0.8	0.8	0.8	16.7	0.8	0.8	0.8	16.7
60°	0.8	0.8	11.5	0.8	0.8	0.8	11.5	0.8	0.8	0.8	11.5
60.5°	0.8	0.8	8.0	0.8	0.8	0.8	8.0	0.8	0.8	0.8	8.0
61°	0.8	0.8	5.2	0.8	0.8	0.8	5.2	0.8	0.8	0.8	5.2
61.5°	0.8	0.8	3.2	0.8	0.8	0.8	3.2	0.8	0.8	0.8	3.2
62°	0.4	0.4	1.6	0.8	0.8	0.8	1.6	0.4	0.4	0.4	1.6
62.5°	0.4	0.4	1.2	0.4	0.4	0.4	1.2	0.4	0.4	0.4	1.2
63°	0.4	0.4	0.8	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.8
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: P776427

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-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	0.4	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	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
75°	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.4	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: P776427

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-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: P776427

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1973.4	1973.4	1973.4	1973.4	1973.4	1973.4
0.5°	1973.0	1973.4	1973.0	1973.4	1973.4	1974.2
1°	1973.0	1973.4	1973.0	1973.0	1973.4	1973.8
1.5°	1972.6	1972.6	1972.6	1972.6	1972.6	1973.4
2°	1971.8	1972.2	1971.8	1971.8	1972.2	1972.6
2.5°	1971.0	1971.4	1971.0	1971.0	1971.4	1971.8
3°	1970.2	1970.2	1970.2	1970.2	1970.2	1971.0
3.5°	1969.0	1969.0	1969.0	1969.0	1969.4	1969.8
4°	1967.4	1967.8	1967.4	1967.4	1967.8	1968.6
4.5°	1965.8	1966.2	1965.8	1966.2	1966.2	1967.0
5°	1964.2	1964.2	1964.2	1964.2	1964.6	1965.0
5.5°	1962.3	1962.3	1962.3	1962.3	1962.7	1963.1
6°	1959.9	1960.3	1959.9	1960.3	1960.7	1961.1
6.5°	1957.9	1957.9	1957.9	1957.9	1958.3	1958.7
7°	1955.1	1955.1	1955.1	1955.5	1955.9	1956.3
7.5°	1952.3	1952.3	1952.3	1952.7	1953.1	1953.5
8°	1949.5	1949.5	1949.5	1949.9	1949.9	1950.3
8.5°	1946.4	1946.0	1946.4	1946.8	1946.8	1947.2
9°	1942.8	1942.4	1942.8	1943.2	1943.6	1943.6
9.5°	1939.2	1938.8	1939.2	1939.6	1940.0	1940.0
10°	1935.2	1934.8	1935.2	1936.0	1936.0	1936.0
10.5°	1931.3	1930.9	1931.3	1932.0	1932.0	1932.0
11°	1926.9	1926.1	1926.9	1927.7	1927.7	1927.3
11.5°	1922.1	1921.3	1922.1	1923.3	1923.3	1922.9
12°	1917.3	1916.5	1917.3	1918.5	1918.5	1918.1
12.5°	1912.2	1911.4	1912.2	1913.8	1913.4	1913.0
13°	1907.0	1905.8	1907.0	1908.6	1908.2	1907.4
13.5°	1901.4	1900.2	1901.4	1903.0	1902.6	1901.8
14°	1895.5	1894.3	1895.5	1897.5	1896.7	1895.5
14.5°	1889.5	1887.9	1889.5	1891.5	1890.7	1889.5
15°	1883.2	1881.2	1883.2	1885.1	1884.3	1882.8
15.5°	1876.4	1874.4	1876.4	1878.8	1877.6	1876.4
16°	1869.6	1867.2	1869.6	1872.0	1870.8	1869.2
16.5°	1862.5	1860.1	1862.5	1864.9	1863.7	1862.1
17°	1854.9	1852.1	1854.9	1857.7	1856.5	1854.1
17.5°	1847.4	1844.2	1847.4	1850.2	1848.6	1846.6
18°	1839.0	1835.8	1839.0	1842.2	1840.6	1838.2
18.5°	1831.1	1827.5	1831.1	1834.3	1832.7	1829.9
19°	1821.9	1818.4	1821.9	1825.9	1823.9	1821.1
19.5°	1813.2	1809.6	1813.2	1817.2	1815.2	1812.0
20°	1804.0	1800.1	1804.0	1808.4	1806.0	1802.4
20.5°	1794.5	1790.1	1794.5	1799.3	1796.9	1792.9
21°	1785.0	1779.8	1785.0	1789.7	1786.9	1783.0

TEST NUMBER: P776427

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1753.6	1747.2	1753.6	1759.1	1755.9	1750.8
23°	1742.4	1735.7	1742.4	1748.4	1744.8	1739.6
23.5°	1730.9	1723.7	1730.9	1737.7	1733.7	1728.1
24°	1719.0	1711.8	1719.0	1726.1	1722.1	1715.8
24.5°	1707.0	1699.5	1707.0	1714.6	1709.8	1703.5
25°	1694.3	1686.4	1694.3	1702.3	1697.5	1690.7
25.5°	1681.6	1673.2	1681.6	1690.3	1684.8	1678.0
26°	1668.9	1659.7	1668.9	1677.6	1672.1	1664.9
26.5°	1655.4	1646.2	1655.4	1664.5	1658.5	1651.4
27°	1641.8	1632.3	1641.8	1651.4	1645.4	1637.1
27.5°	1627.5	1618.4	1627.5	1637.9	1631.5	1622.8
28°	1613.6	1603.3	1613.6	1624.0	1617.2	1608.4
28.5°	1599.3	1588.6	1599.3	1609.6	1602.9	1593.7
29°	1584.6	1573.5	1584.6	1594.9	1588.6	1578.6
29.5°	1569.9	1558.4	1569.9	1580.2	1573.5	1563.5
30°	1554.8	1542.9	1554.8	1564.7	1558.4	1547.6
30.5°	1539.7	1527.0	1539.7	1549.2	1543.3	1532.1
31°	1524.2	1510.7	1524.2	1533.3	1527.7	1515.8
31.5°	1508.3	1494.0	1508.3	1517.0	1512.2	1499.5
32°	1492.4	1472.9	1492.4	1500.7	1495.9	1482.8
32.5°	1476.1	1451.4	1476.1	1484.0	1479.6	1465.3
33°	1459.8	1428.0	1459.8	1466.9	1463.3	1437.1
33.5°	1443.1	1396.2	1443.1	1449.8	1447.0	1406.5
34°	1422.8	1360.8	1422.8	1432.3	1430.4	1369.1
34.5°	1400.5	1318.6	1400.5	1414.8	1412.5	1325.8
35°	1377.9	1272.9	1377.9	1397.4	1385.8	1281.3
35.5°	1349.3	1226.8	1349.3	1379.9	1359.6	1236.7
36°	1317.4	1181.1	1317.4	1362.0	1324.2	1190.6
36.5°	1278.9	1136.2	1278.9	1344.5	1286.8	1144.1
37°	1237.9	1090.1	1237.9	1327.0	1244.3	1096.8
37.5°	1194.6	1044.7	1194.6	1309.1	1201.8	1051.1
38°	1150.5	999.0	1150.5	1291.6	1158.0	1003.4
38.5°	1107.2	952.9	1107.2	1273.7	1114.3	957.3
39°	1064.2	906.0	1064.2	1256.6	1069.8	911.2
39.5°	1021.3	859.5	1021.3	1239.1	1026.1	865.0
40°	978.0	813.0	978.0	1221.6	981.5	818.1
40.5°	934.2	767.7	934.2	1204.2	937.8	772.4
41°	890.9	722.7	890.9	1186.3	894.1	727.9
41.5°	846.8	679.8	846.8	1166.4	850.3	683.4
42°	803.0	636.5	803.0	1144.1	806.6	638.8
42.5°	759.7	593.5	759.7	1115.1	763.7	596.3
43°	717.2	551.8	717.2	1082.1	720.3	553.8
43.5°	675.4	510.0	675.4	1046.7	678.2	512.4



TEST NUMBER: P776427

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	553.8	393.6	553.8	909.2	555.4	393.2
45.5°	514.4	357.4	514.4	857.5	515.6	357.4
46°	475.5	322.4	475.5	806.2	476.7	322.4
46.5°	437.3	287.0	437.3	755.7	438.5	287.8
47°	401.1	252.8	401.1	705.2	401.1	254.0
47.5°	366.1	221.8	366.1	657.1	365.7	221.4
48°	331.5	192.8	331.5	610.6	331.5	192.8
48.5°	297.8	166.2	297.8	565.7	298.2	166.6
49°	264.8	141.1	264.8	522.0	265.2	144.7
49.5°	233.4	121.6	233.4	479.4	233.4	124.0
50°	204.3	103.0	204.3	438.1	204.3	104.2
50.5°	176.5	85.1	176.5	398.3	178.9	85.9
51°	151.1	70.4	151.1	362.6	154.6	70.4
51.5°	130.4	55.3	130.4	327.6	133.6	56.5
52°	110.5	42.5	110.5	293.4	112.9	44.9
52.5°	91.4	30.2	91.4	260.0	93.8	33.8
53°	75.1	18.7	75.1	229.0	76.7	22.7
53.5°	58.8	11.1	58.8	200.8	61.2	15.1
54°	45.7	6.4	45.7	174.5	49.3	7.2
54.5°	33.8	4.8	33.8	151.9	37.8	4.4
55°	22.3	3.6	22.3	130.4	26.2	2.8
55.5°	15.1	2.4	15.1	110.5	16.7	1.2
56°	11.1	1.2	11.1	92.2	7.2	0.8
56.5°	6.8	0.8	6.8	74.7	3.6	0.8
57°	3.6	0.8	3.6	60.8	2.0	0.8
57.5°	1.6	0.8	1.6	48.9	1.6	0.8
58°	0.8	0.8	0.8	39.4	0.8	0.8
58.5°	0.8	0.8	0.8	30.6	0.8	0.8
59°	0.8	0.8	0.8	22.7	0.8	0.8
59.5°	0.8	0.8	0.8	16.7	0.8	0.8
60°	0.8	0.8	0.8	11.5	0.8	0.8
60.5°	0.8	0.8	0.8	8.0	0.8	0.8
61°	0.8	0.8	0.8	5.2	0.8	0.8
61.5°	0.8	0.8	0.8	3.2	0.8	0.8
62°	0.8	0.8	0.8	1.6	0.4	0.4
62.5°	0.4	0.4	0.4	1.2	0.4	0.4
63°	0.4	0.4	0.4	0.8	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: P776427
 CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-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°	0.4	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	0.0	0.4	0.4
75°	0.4	0.4	0.4	0.0	0.0	0.0
75.5°	0.4	0.4	0.4	0.0	0.0	0.0
76°	0.0	0.4	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: P776427

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMB-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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Scaled Data Report





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

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21.5°	1772.6	1777.0	1779.8	1774.6	1769.1	1774.6	1779.8	1777.0	1772.6	1777.0	1779.8
22°	1761.9	1766.7	1769.5	1764.3	1758.3	1764.3	1769.5	1766.7	1761.9	1766.7	1769.5



44°	471.5	636.1	1003.8	634.1	469.5	634.1	1003.8	636.1	471.5	636.1	1003.8
44.5°	432.1	595.5	957.3	593.9	430.5	593.9	957.3	595.5	432.1	595.5	957.3



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°	1774.6	1769.1	1774.6	1779.8	1777.0	1772.6
22°	1764.3	1758.3	1764.3	1769.5	1766.7	1761.9



44°	634.1	469.5	634.1	1003.8	636.1	471.5
44.5°	593.9	430.5	593.9	957.3	595.5	432.1

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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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(END OF REPORT)