

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: P776379

Luminaire Tested: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776379
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B058)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD62TRMB-4000lm-5000K
Description: 6 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

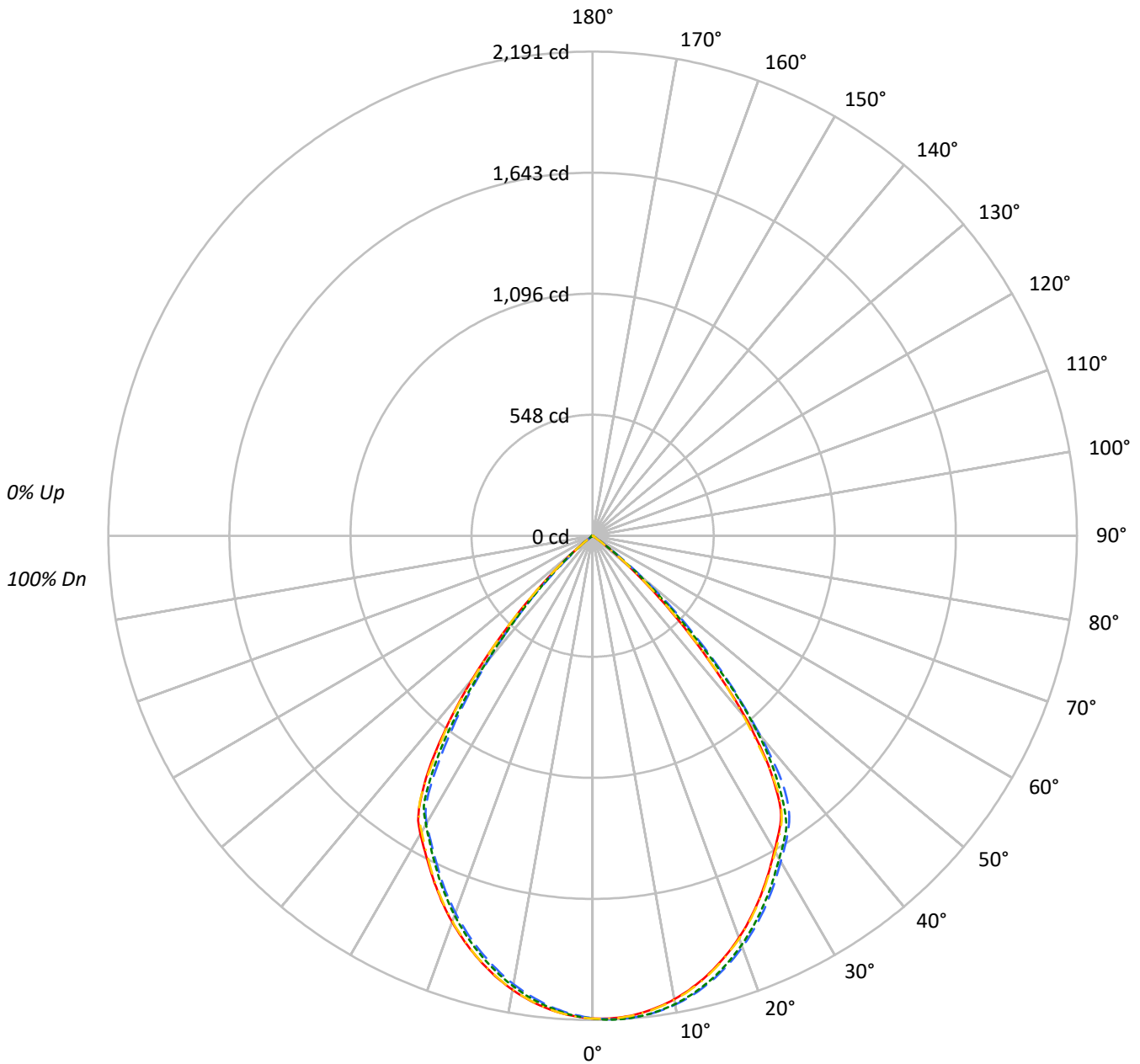
Lumens per Lamp: N/A
Luminaire Lumens: 2852.5 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.11 / 1.11
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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	98	97	97	95	94	92
	1	113	110	107	105	111	108	105	103	104	102	100	100	98	97	97	95	94	92	92	90	88	85	85	82	77
	2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85	85	82	80	85	82	79	77
	3	101	94	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77	77	73	73	79	75	72	71
	4	95	86	80	76	93	85	80	75	83	78	74	81	77	73	79	75	72	71	71	67	67	74	70	66	65
	5	89	80	73	69	87	79	73	68	77	72	68	75	71	67	74	70	66	65	65	62	62	69	64	61	60
	6	84	74	67	63	82	73	67	62	72	66	62	70	65	62	69	64	61	60	60	57	57	64	60	56	55
	7	79	69	62	57	78	68	62	57	67	61	57	65	60	57	64	60	56	55	55	52	52	60	56	52	51
	8	75	64	57	53	73	63	57	53	62	57	52	61	56	52	60	56	52	51	51	48	48	56	52	48	47
	9	70	60	53	49	69	59	53	49	58	53	49	57	52	48	56	52	48	47	47	45	45	53	48	45	44
	10	67	56	50	45	66	55	49	45	55	49	45	54	49	45	53	48	45	44	44	41	41	49	44	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	119749	119749	119749	119749
5°	119733	120366	118517	118088
10°	118524	119754	116130	115217
15°	116215	117912	112708	111340
20°	112920	114973	108480	106643
25°	108762	111115	103439	100990
30°	104187	106852	98616	95508
35°	98591	101328	86538	81720
40°	77137	83020	60563	53679
45°	45369	52378	30585	26840
50°	17867	21603	8938	8972
55°	2619	3403	745	898
60°	581	625	537	450
65°	428	428	376	324
70°	321	321	256	256
75°	254	254	169	169
80°	126	126	126	126
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 57928 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.9	7.2
10°-20°	567.3	19.9
20°-30°	806.6	28.3
30°-40°	832.9	29.2
40°-50°	398.0	14.0
50°-60°	38.5	1.3
60°-70°	3.1	0.1
70°-80°	1.1	0.0
80°-90°	0.2	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°	1578.7	55.3
0°-40°	2411.7	84.5
0°-60°	2848.1	99.8
0°-90°	2852.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2852.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2184	2184	2184	2184	2184	
5°	2176	2187	2154	2146	2176	206
15°	2048	2078	1986	1962	2048	576
25°	1798	1837	1710	1670	1798	827
35°	1473	1514	1293	1221	1473	892
45°	585	676	394	346	585	459
55°	27	36	8	9	27	49
65°	3	3	3	2	3	3
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	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°	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4
0.5°	2184.8	2184.8	2185.2	2184.4	2187.7	2186.9	2185.6	2185.2	2182.8	2181.5	2179.9
1°	2185.6	2186.0	2186.9	2186.4	2189.3	2187.7	2186.4	2184.8	2181.1	2179.1	2177.4
1.5°	2185.6	2186.9	2188.1	2188.1	2190.1	2188.5	2186.9	2184.0	2178.7	2176.2	2173.8
2°	2185.6	2187.7	2189.3	2189.7	2191.4	2189.3	2186.4	2182.4	2176.6	2172.9	2170.1
2.5°	2184.8	2187.7	2190.1	2190.5	2191.4	2189.3	2186.0	2180.3	2173.8	2169.7	2166.0
3°	2183.6	2187.7	2190.1	2191.0	2191.4	2188.9	2184.8	2178.7	2170.5	2165.6	2161.5
3.5°	2182.4	2186.9	2190.1	2191.4	2191.0	2188.1	2183.6	2176.2	2167.2	2161.5	2156.6
4°	2180.7	2185.6	2189.3	2191.0	2190.1	2187.3	2181.9	2172.9	2163.1	2156.6	2151.3
4.5°	2178.7	2184.0	2188.5	2190.5	2189.3	2185.6	2179.9	2169.7	2159.0	2151.3	2145.9
5°	2175.8	2181.9	2187.3	2189.3	2187.3	2183.6	2177.4	2166.0	2153.7	2145.9	2140.2
5.5°	2172.9	2180.3	2186.0	2188.1	2185.2	2181.5	2174.6	2162.3	2148.4	2139.8	2133.7
6°	2169.7	2177.9	2184.0	2186.0	2183.2	2179.1	2171.3	2158.6	2143.1	2134.1	2126.7
6.5°	2165.6	2175.0	2181.5	2184.4	2180.3	2175.8	2168.0	2153.7	2137.3	2127.5	2119.3
7°	2161.5	2171.3	2178.7	2181.9	2177.4	2172.5	2163.9	2148.8	2131.2	2120.2	2112.0
7.5°	2157.0	2167.6	2175.4	2179.1	2173.8	2168.9	2159.8	2143.5	2124.7	2112.8	2104.2
8°	2152.5	2163.5	2172.1	2176.2	2170.5	2164.8	2154.9	2137.8	2117.3	2105.4	2096.4
8.5°	2147.2	2159.0	2168.0	2172.1	2166.0	2160.3	2150.0	2131.6	2109.9	2097.2	2087.8
9°	2141.4	2154.5	2163.9	2168.4	2161.5	2155.8	2144.3	2124.7	2103.0	2089.1	2079.2
9.5°	2135.7	2149.2	2159.4	2163.9	2156.6	2150.0	2138.6	2118.1	2094.8	2080.5	2069.8
10°	2129.2	2143.5	2154.1	2159.0	2151.3	2144.7	2132.4	2110.3	2086.2	2071.5	2060.8
10.5°	2122.6	2137.3	2148.8	2154.1	2145.5	2139.0	2125.9	2103.0	2077.6	2061.6	2051.0
11°	2115.7	2131.2	2143.5	2148.4	2139.4	2132.4	2118.9	2095.2	2068.6	2052.2	2040.8
11.5°	2108.7	2124.7	2136.9	2142.7	2132.8	2125.5	2112.0	2087.0	2059.6	2042.4	2030.1
12°	2100.9	2117.3	2130.8	2136.5	2125.9	2118.9	2104.2	2078.4	2049.8	2032.6	2019.9
12.5°	2092.3	2109.9	2123.8	2130.0	2118.9	2111.6	2096.0	2069.4	2039.9	2021.9	2008.4
13°	2084.1	2102.2	2116.5	2123.0	2111.2	2104.2	2087.8	2060.4	2029.7	2010.9	1997.8
13.5°	2075.6	2094.4	2108.7	2116.1	2103.4	2095.6	2079.6	2050.2	2018.7	2000.3	1986.3
14°	2066.5	2086.2	2100.9	2107.9	2095.2	2087.4	2070.2	2040.8	2008.0	1988.8	1974.5
14.5°	2057.1	2077.6	2092.3	2100.1	2086.2	2078.0	2060.8	2030.5	1997.0	1977.3	1962.2
15°	2047.7	2068.6	2084.1	2091.5	2077.6	2068.6	2051.4	2019.5	1985.9	1965.5	1949.9
15.5°	2037.9	2058.8	2075.6	2082.5	2068.6	2058.8	2041.2	2008.8	1974.5	1953.2	1938.1
16°	2027.3	2049.0	2065.7	2073.5	2058.8	2049.0	2030.9	1997.8	1962.2	1940.9	1925.4
16.5°	2016.6	2039.1	2055.9	2064.1	2049.0	2039.1	2020.7	1986.3	1950.3	1927.8	1912.7
17°	2006.0	2028.9	2045.7	2054.7	2038.3	2028.9	2009.7	1974.9	1938.1	1915.5	1899.2
17.5°	1994.9	2018.3	2035.9	2044.5	2027.7	2017.9	1998.6	1963.4	1925.4	1902.9	1885.7
18°	1983.9	2007.2	2025.2	2033.8	2016.6	2006.8	1987.2	1951.1	1912.7	1889.4	1871.8
18.5°	1972.4	1995.8	2014.2	2023.2	2005.6	1994.9	1974.9	1938.9	1899.6	1875.9	1858.3
19°	1959.7	1984.7	2003.5	2012.5	1994.1	1983.9	1963.4	1926.2	1886.5	1861.9	1844.3
19.5°	1947.9	1973.2	1992.1	2001.1	1982.7	1971.6	1951.6	1913.5	1873.0	1848.4	1829.6
20°	1935.6	1961.4	1980.6	1989.6	1970.8	1959.7	1939.3	1900.0	1859.5	1834.1	1814.9
20.5°	1922.9	1949.1	1968.7	1977.7	1958.5	1947.1	1926.6	1887.3	1845.2	1819.4	1800.1
21°	1910.6	1936.8	1956.5	1965.9	1945.4	1934.8	1913.5	1873.4	1830.8	1805.1	1785.0



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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°	1870.1	1898.0	1918.4	1927.4	1906.5	1895.5	1873.4	1831.7	1787.1	1759.6	1739.2
23°	1856.2	1883.6	1905.3	1914.7	1893.0	1882.0	1859.5	1817.3	1771.5	1744.1	1722.8
23.5°	1841.9	1870.1	1891.8	1900.8	1879.1	1868.1	1845.6	1802.6	1756.4	1728.5	1706.8
24°	1827.2	1855.8	1878.3	1888.1	1865.2	1854.2	1831.2	1787.9	1740.8	1713.0	1690.5
24.5°	1812.8	1842.3	1864.4	1874.2	1850.9	1839.8	1816.9	1773.1	1725.7	1696.6	1674.5
25°	1798.1	1827.6	1850.5	1859.9	1837.0	1825.5	1802.2	1758.0	1710.1	1681.1	1657.7
25.5°	1783.0	1812.8	1835.7	1845.6	1822.2	1810.8	1787.5	1742.9	1694.2	1664.7	1641.4
26°	1768.2	1798.9	1821.4	1831.2	1807.9	1796.1	1772.7	1727.3	1678.6	1648.7	1625.0
26.5°	1752.7	1784.2	1806.7	1816.9	1793.2	1780.9	1757.6	1712.2	1663.1	1632.4	1609.5
27°	1737.5	1769.5	1792.0	1802.2	1778.5	1766.2	1742.4	1696.6	1646.7	1616.8	1593.1
27.5°	1722.0	1753.9	1777.2	1787.1	1763.3	1751.0	1727.3	1680.7	1631.6	1601.3	1577.5
28°	1706.8	1738.8	1762.1	1772.3	1747.8	1736.3	1711.8	1665.5	1616.4	1586.5	1562.0
28.5°	1690.9	1723.6	1747.4	1756.8	1732.2	1720.8	1696.6	1650.8	1602.1	1571.4	1547.7
29°	1675.3	1708.5	1732.2	1742.0	1717.5	1705.6	1681.9	1635.6	1587.4	1556.3	1532.1
29.5°	1660.6	1693.3	1717.1	1727.3	1702.8	1690.9	1667.6	1621.3	1572.2	1541.1	1517.0
30°	1645.9	1678.6	1702.3	1712.2	1688.0	1676.6	1652.8	1606.6	1557.9	1526.4	1501.8
30.5°	1631.1	1663.9	1687.6	1697.4	1673.7	1661.8	1638.9	1592.7	1543.2	1510.8	1485.1
31°	1616.8	1650.0	1673.7	1683.1	1660.2	1647.9	1624.6	1578.4	1527.6	1494.5	1467.9
31.5°	1602.1	1635.6	1659.4	1669.2	1645.9	1634.0	1610.7	1563.6	1511.2	1474.4	1445.8
32°	1587.8	1621.3	1645.1	1654.9	1632.0	1620.1	1596.4	1548.1	1487.5	1447.4	1415.9
32.5°	1573.4	1607.0	1631.6	1641.4	1617.6	1606.2	1581.6	1531.3	1460.9	1415.9	1381.5
33°	1558.3	1592.7	1617.2	1626.6	1602.9	1590.2	1565.7	1511.2	1431.0	1379.9	1342.2
33.5°	1541.9	1577.9	1602.9	1613.1	1586.1	1574.3	1548.5	1486.7	1399.1	1341.4	1301.7
34°	1524.3	1561.6	1586.9	1597.6	1566.5	1555.4	1529.2	1459.3	1366.4	1300.5	1258.3
34.5°	1500.6	1544.0	1570.6	1580.8	1541.5	1533.3	1508.0	1428.2	1330.8	1260.4	1215.4
35°	1473.2	1523.1	1551.3	1559.9	1514.1	1507.1	1483.4	1395.8	1293.1	1219.9	1171.2
35.5°	1443.3	1499.8	1530.5	1535.4	1484.6	1478.5	1455.6	1361.1	1253.8	1179.0	1129.0
36°	1410.2	1471.5	1505.1	1507.6	1455.2	1447.4	1423.3	1324.2	1210.9	1139.3	1084.0
36.5°	1377.0	1441.3	1477.7	1477.7	1423.7	1413.4	1385.2	1284.5	1167.1	1099.6	1041.0
37°	1340.6	1406.1	1445.8	1446.2	1391.7	1377.8	1341.8	1243.6	1121.7	1056.6	997.7
37.5°	1302.1	1368.4	1410.2	1414.3	1357.4	1339.4	1295.2	1199.0	1077.9	1014.0	954.7
38°	1260.8	1325.9	1368.4	1380.3	1322.6	1299.7	1244.8	1152.4	1032.0	968.6	910.1
38.5°	1217.4	1281.3	1325.5	1344.3	1283.7	1257.9	1196.6	1102.8	986.2	923.6	865.1
39°	1172.0	1232.6	1278.4	1306.6	1244.4	1213.3	1148.3	1054.6	939.6	876.5	820.9
39.5°	1125.8	1184.7	1228.9	1266.1	1202.7	1167.9	1102.8	1003.0	894.1	830.7	777.1
40°	1077.9	1134.8	1180.2	1224.8	1160.1	1119.2	1057.0	951.8	846.3	784.5	732.5
40.5°	1029.2	1083.2	1131.9	1181.8	1115.5	1070.9	1013.2	901.1	799.6	741.1	689.5
41°	977.6	1031.6	1084.4	1136.0	1071.7	1023.5	967.8	851.2	752.1	696.1	647.0
41.5°	926.5	983.8	1038.2	1089.3	1024.7	976.4	922.0	801.2	704.3	653.5	605.2
42°	874.1	935.5	991.1	1040.2	977.2	930.2	874.5	753.4	655.6	610.1	563.5
42.5°	823.8	887.2	945.7	992.4	926.9	884.3	825.8	706.7	608.1	567.2	521.8
43°	773.4	838.9	898.6	942.8	877.0	838.1	778.3	660.9	561.4	523.4	481.2
43.5°	725.5	791.4	852.4	894.5	825.4	792.2	732.1	615.5	516.8	481.6	442.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	585.2	649.8	710.8	747.2	675.6	653.1	598.3	490.2	394.5	363.8	331.9
45.5°	542.2	604.4	666.6	700.2	626.1	607.7	554.9	451.0	357.7	326.1	295.0
46°	498.4	560.6	621.6	652.7	579.0	563.1	512.3	414.9	320.8	288.1	258.2
46.5°	455.9	518.9	578.6	606.9	532.0	519.7	471.0	378.9	284.0	250.4	226.7
47°	414.9	478.8	535.7	561.4	487.0	476.3	428.9	342.9	252.9	218.9	196.4
47.5°	375.7	439.5	493.9	516.4	443.2	434.2	392.0	306.9	223.0	188.6	169.0
48°	338.4	401.4	453.0	472.2	405.1	394.5	355.2	270.9	195.2	160.0	144.0
48.5°	302.8	365.0	411.7	429.7	367.1	354.8	318.4	238.6	169.8	135.5	121.5
49°	269.3	329.4	372.4	387.5	329.0	315.1	282.0	208.7	146.1	113.4	101.5
49.5°	238.2	295.5	334.3	348.7	291.0	275.4	250.4	181.7	124.8	93.7	84.3
50°	209.5	262.7	297.5	310.6	253.3	239.4	218.1	155.5	104.8	77.3	69.2
50.5°	182.9	230.8	263.1	274.2	220.2	206.2	188.2	131.8	87.2	63.8	56.9
51°	157.5	200.5	228.8	240.6	189.9	174.7	160.0	110.9	71.2	54.8	48.7
51.5°	135.9	171.5	197.2	207.9	162.1	147.3	134.6	91.7	61.4	45.4	40.5
52°	117.4	145.3	168.6	178.4	135.5	121.9	109.3	74.5	51.6	36.4	32.3
52.5°	99.0	126.0	140.8	150.2	111.3	99.0	87.6	63.8	41.7	27.4	24.1
53°	80.6	106.4	121.1	129.7	89.2	79.4	68.7	53.2	31.9	18.4	16.0
53.5°	62.2	86.8	101.5	109.3	70.0	63.0	57.7	43.0	22.1	13.5	11.5
54°	49.1	67.1	81.8	89.2	58.5	52.4	46.7	32.7	12.3	9.8	8.6
54.5°	37.2	47.9	62.2	68.7	47.1	42.1	36.0	22.1	9.0	7.8	7.4
55°	27.4	34.8	42.6	48.7	35.6	31.9	25.0	11.9	7.8	7.0	7.0
55.5°	18.8	25.0	30.7	35.6	23.7	21.7	13.9	8.6	7.0	7.0	6.5
56°	12.7	16.8	20.9	25.0	12.3	11.5	9.8	7.4	7.0	6.5	6.1
56.5°	11.0	14.7	13.9	16.4	9.0	8.6	7.8	7.0	6.5	6.1	6.1
57°	9.4	12.7	12.3	13.9	7.8	7.4	7.4	7.0	6.1	6.1	5.7
57.5°	7.8	10.6	10.2	11.5	7.4	7.0	7.0	6.5	6.1	5.7	5.3
58°	6.5	8.6	8.6	9.4	7.0	7.0	6.5	6.1	5.7	5.3	5.3
58.5°	6.1	6.5	7.0	7.0	6.5	6.5	6.5	6.1	5.3	5.3	4.9
59°	5.7	6.1	6.5	6.5	6.1	6.1	6.1	5.7	5.3	4.9	4.9
59.5°	5.7	6.1	6.1	6.5	6.1	6.1	5.7	5.3	4.9	4.9	4.5
60°	5.3	5.7	6.1	6.1	5.7	5.7	5.7	5.3	4.9	4.5	4.5
60.5°	4.9	5.3	5.7	5.7	5.3	5.3	5.3	4.9	4.5	4.5	4.1
61°	4.9	5.3	5.3	5.7	5.3	5.3	4.9	4.5	4.1	4.1	4.1
61.5°	4.5	4.9	5.3	5.3	4.9	4.9	4.9	4.5	4.1	4.1	3.7
62°	4.5	4.5	4.9	4.9	4.5	4.5	4.5	4.1	3.7	3.7	3.7
62.5°	4.1	4.5	4.5	4.9	4.5	4.5	4.5	4.1	3.7	3.7	3.3
63°	4.1	4.1	4.5	4.5	4.1	4.1	4.1	3.7	3.7	3.3	3.3
63.5°	3.7	4.1	4.1	4.5	4.1	4.1	4.1	3.7	3.3	3.3	3.3
64°	3.7	3.7	4.1	4.1	3.7	3.7	3.7	3.3	3.3	3.3	2.9
64.5°	3.3	3.7	3.7	4.1	3.7	3.7	3.7	3.3	2.9	2.9	2.9
65°	3.3	3.3	3.7	3.7	3.3	3.3	3.3	3.3	2.9	2.9	2.9
65.5°	2.9	3.3	3.3	3.7	3.3	3.3	3.3	2.9	2.9	2.9	2.5
66°	2.9	3.3	3.3	3.3	3.3	3.3	2.9	2.9	2.5	2.5	2.5



TEST NUMBER: P776379

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	2.5	2.5	2.9	2.9	2.9	2.9	2.5	2.5	2.0	2.0	2.0
68°	2.5	2.5	2.9	2.9	2.5	2.5	2.5	2.5	2.0	2.0	2.0
68.5°	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0
69°	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	1.6
69.5°	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	1.6	1.6	1.6
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.6
70.5°	1.6	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.6	1.6
71°	1.6	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.6	1.6	1.6
71.5°	1.6	1.6	2.0	2.0	1.6	1.6	1.6	1.6	1.2	1.2	1.2
72°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2
72.5°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.2
73°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.2
73.5°	1.2	1.2	1.6	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.2
74°	1.2	1.2	1.2	1.6	1.2	1.2	1.2	1.2	1.2	0.8	0.8
74.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8
75.5°	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8
76°	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8
76.5°	0.8	0.8	1.2	1.2	0.8	0.8	0.8	0.8	0.8	0.8	0.8
77°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8
78°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4
78.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4
79°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
79.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
80.5°	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
81°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
83°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
84°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.4	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: P776379
CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

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: P776379

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2184.4	2184.4	2184.4	2184.4	2184.4	2184.4
0.5°	2179.1	2183.6	2183.2	2183.2	2184.8	2184.8
1°	2175.8	2180.7	2180.7	2181.5	2184.0	2185.6
1.5°	2172.1	2177.9	2177.9	2179.5	2182.8	2185.6
2°	2168.0	2174.6	2175.0	2177.0	2181.5	2185.6
2.5°	2163.5	2170.5	2171.3	2173.8	2179.9	2184.8
3°	2159.0	2166.4	2167.6	2170.5	2177.4	2183.6
3.5°	2153.7	2161.9	2163.1	2166.8	2174.6	2182.4
4°	2148.0	2157.0	2158.6	2162.7	2171.7	2180.7
4.5°	2142.3	2151.7	2153.7	2158.2	2168.4	2178.7
5°	2136.5	2145.9	2148.4	2153.3	2164.8	2175.8
5.5°	2129.6	2140.2	2142.7	2148.4	2160.3	2172.9
6°	2122.6	2133.7	2136.1	2142.7	2155.8	2169.7
6.5°	2115.2	2127.1	2130.0	2136.5	2151.3	2165.6
7°	2107.9	2120.2	2123.4	2130.4	2145.9	2161.5
7.5°	2099.7	2112.8	2116.1	2123.8	2140.2	2157.0
8°	2091.1	2105.0	2108.7	2116.5	2134.1	2152.5
8.5°	2082.5	2096.4	2100.5	2109.5	2127.9	2147.2
9°	2073.1	2087.8	2092.3	2101.7	2121.4	2141.4
9.5°	2063.7	2079.2	2083.7	2093.1	2114.4	2135.7
10°	2054.7	2069.8	2074.7	2085.0	2106.7	2129.2
10.5°	2044.5	2060.8	2065.7	2076.0	2098.9	2122.6
11°	2034.2	2050.6	2055.9	2067.4	2090.3	2115.7
11.5°	2023.6	2040.8	2046.1	2058.0	2082.5	2108.7
12°	2012.5	2030.5	2035.9	2048.1	2073.9	2100.9
12.5°	2001.5	2019.5	2025.6	2037.9	2064.5	2092.3
13°	1990.0	2008.8	2015.0	2027.7	2054.7	2084.1
13.5°	1978.2	1997.4	2003.9	2017.0	2045.7	2075.6
14°	1966.3	1985.9	1992.9	2006.4	2035.4	2066.5
14.5°	1954.4	1974.1	1981.4	1995.3	2025.6	2057.1
15°	1941.7	1961.8	1969.2	1983.9	2014.6	2047.7
15.5°	1929.1	1949.9	1957.3	1972.0	2003.9	2037.9
16°	1916.4	1937.2	1944.6	1960.2	1992.9	2027.3
16.5°	1902.9	1924.1	1931.9	1948.3	1981.4	2016.6
17°	1889.8	1911.5	1919.2	1936.0	1969.6	2006.0
17.5°	1875.9	1898.0	1906.1	1922.9	1957.7	1994.9
18°	1861.9	1884.4	1893.0	1910.2	1945.8	1983.9
18.5°	1848.4	1870.5	1879.1	1896.7	1933.1	1972.4
19°	1833.7	1856.6	1865.2	1883.2	1920.5	1959.7
19.5°	1819.0	1842.3	1851.3	1869.7	1907.8	1947.9
20°	1803.8	1828.0	1836.6	1855.8	1894.3	1935.6
20.5°	1789.1	1812.8	1822.2	1841.9	1881.2	1922.9
21°	1774.0	1797.7	1807.1	1827.2	1867.3	1910.6

TEST NUMBER: P776379

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1726.5	1751.5	1761.3	1782.6	1825.5	1870.1
23°	1710.1	1735.5	1745.7	1767.4	1810.4	1856.2
23.5°	1694.2	1719.1	1729.8	1751.9	1795.6	1841.9
24°	1677.4	1702.8	1713.8	1736.3	1780.5	1827.2
24.5°	1661.4	1686.4	1697.8	1720.4	1765.8	1812.8
25°	1644.6	1669.6	1681.1	1704.0	1750.2	1798.1
25.5°	1627.9	1653.2	1665.1	1688.0	1734.7	1783.0
26°	1611.5	1636.5	1648.3	1672.1	1719.1	1768.2
26.5°	1595.1	1620.1	1632.0	1655.7	1703.2	1752.7
27°	1578.8	1603.3	1615.6	1639.3	1687.6	1737.5
27.5°	1563.2	1586.9	1599.2	1623.8	1671.7	1722.0
28°	1547.7	1570.6	1582.9	1607.8	1656.1	1706.8
28.5°	1532.1	1555.0	1567.3	1592.3	1640.1	1690.9
29°	1517.0	1539.9	1552.2	1577.1	1625.0	1675.3
29.5°	1501.4	1524.3	1536.6	1562.4	1610.3	1660.6
30°	1485.9	1508.8	1521.5	1547.7	1595.1	1645.9
30.5°	1469.1	1492.8	1505.9	1532.1	1580.8	1631.1
31°	1451.5	1477.3	1490.4	1516.6	1566.5	1616.8
31.5°	1425.7	1460.5	1473.6	1501.0	1551.8	1602.1
32°	1395.4	1440.9	1454.4	1483.8	1536.2	1587.8
32.5°	1361.5	1412.2	1427.4	1462.5	1520.2	1573.4
33°	1322.2	1377.4	1396.3	1435.5	1502.6	1558.3
33.5°	1281.3	1339.4	1361.9	1400.8	1477.7	1541.9
34°	1239.1	1301.7	1323.4	1359.0	1449.0	1524.3
34.5°	1197.0	1262.0	1281.7	1316.9	1416.3	1500.6
35°	1153.6	1221.1	1235.8	1273.9	1379.9	1473.2
35.5°	1107.8	1179.8	1189.6	1231.7	1343.1	1443.3
36°	1061.1	1134.4	1144.2	1190.4	1304.2	1410.2
36.5°	1013.2	1088.5	1097.5	1149.1	1262.4	1377.0
37°	966.2	1040.2	1052.1	1107.8	1219.9	1340.6
37.5°	918.7	992.8	1007.5	1064.4	1175.7	1302.1
38°	873.3	943.2	961.7	1017.7	1131.9	1260.8
38.5°	827.8	895.8	917.1	971.1	1086.9	1217.4
39°	782.8	847.9	872.0	923.6	1044.3	1172.0
39.5°	738.2	799.6	826.2	876.1	1000.1	1125.8
40°	693.2	750.1	780.4	828.7	955.9	1077.9
40.5°	648.2	703.0	735.0	784.9	908.5	1029.2
41°	604.0	657.6	689.9	740.7	862.2	977.6
41.5°	561.4	613.4	646.2	698.1	813.1	926.5
42°	518.1	571.3	603.6	656.4	764.4	874.1
42.5°	478.4	528.7	561.4	613.8	716.1	823.8
43°	440.3	489.8	520.5	570.0	668.7	773.4
43.5°	406.8	451.0	480.4	527.1	621.6	725.5



TEST NUMBER: P776379

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	306.9	346.2	365.0	404.7	486.2	585.2
45.5°	273.8	314.7	330.2	367.1	443.2	542.2
46°	242.7	284.4	297.5	330.6	401.9	498.4
46.5°	216.1	255.8	265.6	294.2	361.7	455.9
47°	191.1	229.6	236.1	259.9	322.9	414.9
47.5°	168.2	204.2	207.9	226.7	287.3	375.7
48°	146.1	180.5	182.1	194.4	253.7	338.4
48.5°	125.6	158.4	158.0	165.3	223.0	302.8
49°	107.2	139.1	137.9	138.3	194.4	269.3
49.5°	90.4	121.9	120.3	119.9	168.2	238.2
50°	75.3	105.2	102.3	101.9	143.6	209.5
50.5°	61.8	88.0	84.7	83.5	126.0	182.9
51°	52.4	71.2	66.7	65.5	108.4	157.5
51.5°	43.0	58.1	54.0	53.6	90.8	135.9
52°	34.0	46.7	43.4	43.4	72.8	117.4
52.5°	24.6	36.0	33.6	34.8	55.7	99.0
53°	15.1	26.6	25.4	27.0	44.2	80.6
53.5°	10.2	18.8	18.4	20.1	34.4	62.2
54°	7.8	12.7	12.7	14.3	25.8	49.1
54.5°	7.0	11.0	11.0	12.3	18.8	37.2
55°	6.5	9.4	9.4	10.2	13.1	27.4
55.5°	6.1	7.8	7.8	8.2	11.5	18.8
56°	6.1	6.1	6.1	6.5	9.8	12.7
56.5°	5.7	6.1	5.7	6.1	7.8	11.0
57°	5.3	5.7	5.7	5.7	6.1	9.4
57.5°	5.3	5.3	5.3	5.7	6.1	7.8
58°	4.9	5.3	5.3	5.3	5.7	6.5
58.5°	4.9	4.9	4.9	4.9	5.7	6.1
59°	4.5	4.9	4.5	4.9	5.3	5.7
59.5°	4.5	4.5	4.5	4.5	4.9	5.7
60°	4.1	4.1	4.1	4.1	4.9	5.3
60.5°	4.1	4.1	4.1	4.1	4.5	4.9
61°	3.7	3.7	3.7	3.7	4.1	4.9
61.5°	3.7	3.7	3.7	3.7	4.1	4.5
62°	3.3	3.7	3.3	3.7	3.7	4.5
62.5°	3.3	3.3	3.3	3.3	3.7	4.1
63°	2.9	3.3	3.3	3.3	3.3	4.1
63.5°	2.9	2.9	2.9	2.9	3.3	3.7
64°	2.9	2.9	2.9	2.9	3.3	3.7
64.5°	2.5	2.9	2.5	2.9	2.9	3.3
65°	2.5	2.5	2.5	2.5	2.9	3.3
65.5°	2.5	2.5	2.5	2.5	2.9	2.9
66°	2.5	2.5	2.5	2.5	2.5	2.9



TEST NUMBER: P776379

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	2.0	2.0	2.0	2.0	2.0	2.5
68°	2.0	2.0	1.6	2.0	2.0	2.5
68.5°	1.6	1.6	1.6	1.6	2.0	2.0
69°	1.6	1.6	1.6	1.6	2.0	2.0
69.5°	1.6	1.6	1.6	1.6	1.6	2.0
70°	1.6	1.6	1.6	1.6	1.6	2.0
70.5°	1.2	1.6	1.2	1.2	1.6	1.6
71°	1.2	1.2	1.2	1.2	1.6	1.6
71.5°	1.2	1.2	1.2	1.2	1.2	1.6
72°	1.2	1.2	1.2	1.2	1.2	1.6
72.5°	1.2	1.2	1.2	1.2	1.2	1.2
73°	1.2	1.2	1.2	1.2	1.2	1.2
73.5°	0.8	0.8	0.8	0.8	1.2	1.2
74°	0.8	0.8	0.8	0.8	1.2	1.2
74.5°	0.8	0.8	0.8	0.8	0.8	1.2
75°	0.8	0.8	0.8	0.8	0.8	1.2
75.5°	0.8	0.8	0.8	0.8	0.8	0.8
76°	0.8	0.8	0.8	0.8	0.8	0.8
76.5°	0.8	0.8	0.8	0.8	0.8	0.8
77°	0.8	0.8	0.4	0.4	0.8	0.8
77.5°	0.4	0.4	0.4	0.4	0.8	0.8
78°	0.4	0.4	0.4	0.4	0.4	0.8
78.5°	0.4	0.4	0.4	0.4	0.4	0.8
79°	0.4	0.4	0.4	0.4	0.4	0.4
79.5°	0.4	0.4	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4
80.5°	0.4	0.4	0.4	0.4	0.4	0.4
81°	0.4	0.4	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.0	0.4	0.4	0.0	0.4	0.4
83°	0.0	0.0	0.0	0.0	0.0	0.4
83.5°	0.0	0.0	0.0	0.0	0.0	0.4
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: P776379

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMB-4000lm-5000K

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°	1897.1	1923.3	1943.4	1953.2	1932.7	1922.1	1900.4	1859.5	1816.1	1790.3	1769.9
22°	1883.2	1910.6	1931.5	1940.5	1919.6	1908.6	1886.9	1845.6	1801.8	1775.2	1754.3



44°	677.7	743.5	804.9	845.0	775.9	746.0	686.7	572.5	473.9	439.5	405.5
44.5°	631.4	696.1	758.3	795.9	725.1	699.8	642.5	531.2	431.7	401.9	368.7



66.5°	2.9	2.9	3.3	3.3	2.9	2.9	2.9	2.9	2.5	2.5	2.5
67°	2.5	2.9	2.9	2.9	2.9	2.9	2.9	2.5	2.5	2.5	2.0



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°	1758.4	1782.1	1792.4	1812.4	1853.8	1897.1
22°	1742.0	1766.2	1776.8	1797.7	1839.4	1883.2



44°	373.6	414.5	440.3	484.9	576.2	677.7
44.5°	340.1	379.3	402.7	444.8	530.3	631.4

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66.5°	2.0	2.0	2.0	2.0	2.5	2.9
67°	2.0	2.0	2.0	2.0	2.5	2.5

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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)