

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: P776430

Luminaire Tested: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776430
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: HCDJBS3040CSD-HCD6TSQMW-4000lm-2700K
Description: 6 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4070.3 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.27
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

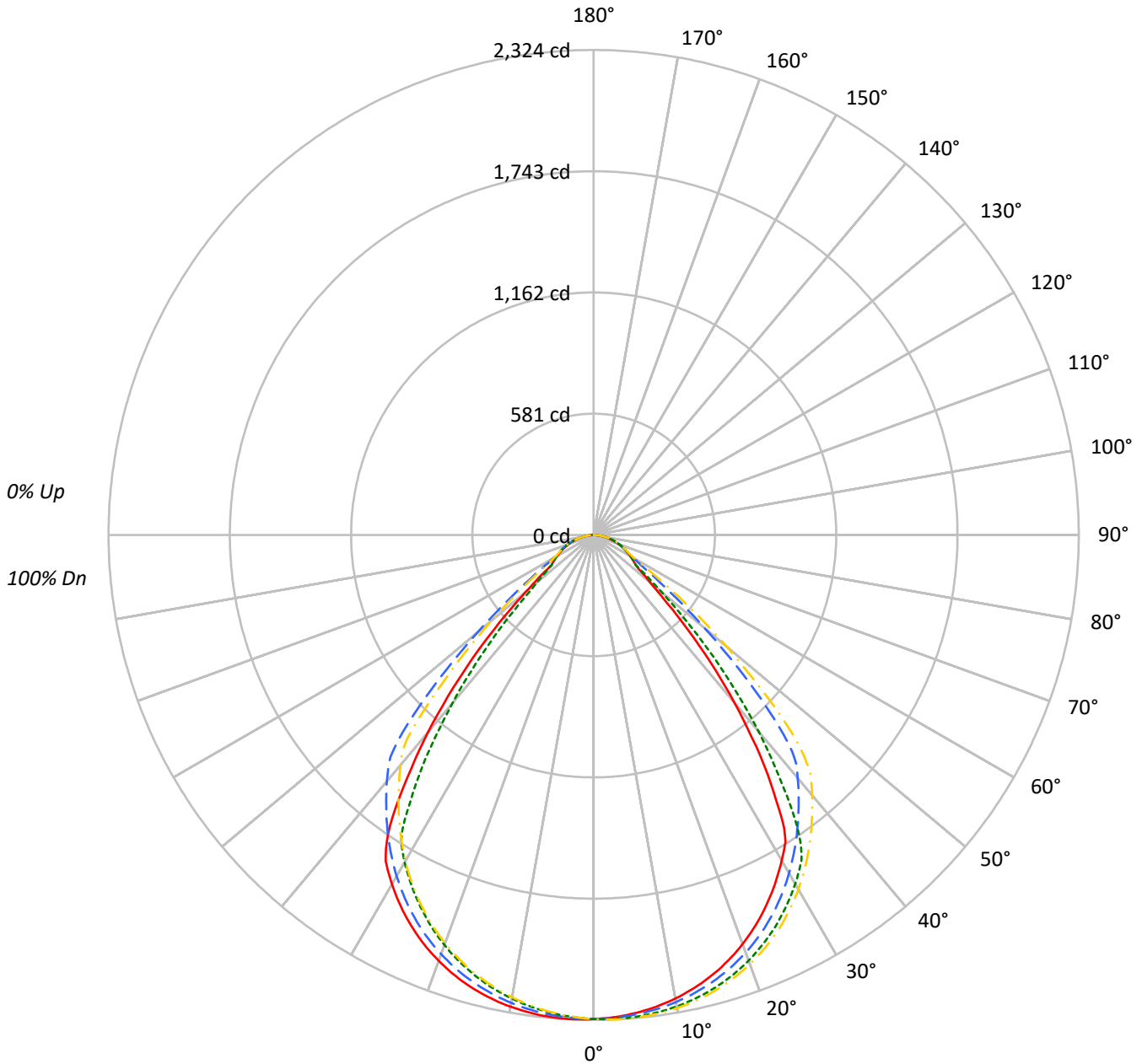
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					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								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79								
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70								
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63								
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	57								
6	78	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51								
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46								
8	69	57	50	45	67	57	49	45	55	49	44	54	48	44	53	48	44	42								
9	65	53	46	41	63	52	46	41	51	45	41	50	45	40	49	44	40	39								
10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	36								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	99881	99881	99881	99881
5°	99402	100180	100249	99419
10°	98619	100298	100368	98654
15°	97418	100119	100172	97520
20°	95601	99450	99505	95812
25°	92994	98135	98211	93322
30°	89574	96022	96097	90031
35°	78984	89070	89354	79262
40°	58852	69031	69441	59044
45°	38306	47305	47610	38513
50°	23605	28180	28488	23759
55°	18211	18263	18263	18211
60°	17481	17420	17420	17481
65°	16657	16810	16657	16891
70°	15799	16277	15899	16378
75°	14623	15770	15005	15704
80°	12571	15125	13612	14555
85°	7015	13635	10226	11757

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 81751 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.4	5.4
10°-20°	625.1	15.4
20°-30°	928.2	22.8
30°-40°	1026.3	25.2
40°-50°	695.5	17.1
50°-60°	283.5	7.0
60°-70°	167.3	4.1
70°-80°	98.9	2.4
80°-90°	26.1	0.6
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°	1772.7	43.6
0°-40°	2799.0	68.8
0°-60°	3778.0	92.8
0°-90°	4070.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4070.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2320	2320	2320	2320	2320	
5°	2300	2318	2320	2300	2300	218
15°	2186	2246	2247	2188	2186	616
25°	1958	2066	2067	1964	1958	900
35°	1503	1695	1700	1508	1503	920
45°	629	777	782	632	629	497
55°	243	243	243	243	243	228
65°	164	165	164	166	164	162
75°	88	95	90	94	88	93
85°	14	28	21	24	14	20
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°	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8
0.5°	2319.8	2319.1	2319.1	2319.8	2320.2	2320.6	2321.4	2321.8	2321.8	2320.2	2319.1
1°	2318.3	2318.3	2318.3	2319.8	2321.0	2321.4	2322.5	2322.5	2322.1	2320.2	2319.1
1.5°	2316.8	2317.1	2317.9	2319.5	2321.4	2322.1	2323.3	2323.3	2322.5	2320.6	2318.3
2°	2315.2	2316.0	2317.1	2319.1	2321.4	2322.1	2323.7	2323.7	2322.9	2320.2	2317.9
2.5°	2313.3	2314.1	2316.0	2318.7	2321.4	2322.5	2324.1	2324.1	2322.9	2319.8	2316.8
3°	2311.0	2312.2	2314.5	2317.9	2321.0	2322.5	2324.1	2324.1	2322.5	2319.5	2315.6
3.5°	2308.7	2310.2	2312.9	2316.8	2320.6	2322.1	2324.1	2323.7	2322.1	2318.7	2314.5
4°	2306.0	2307.9	2311.4	2315.6	2319.8	2321.8	2323.7	2323.3	2321.4	2317.5	2312.9
4.5°	2302.9	2305.6	2309.5	2314.1	2319.1	2321.4	2322.9	2322.9	2320.6	2316.4	2311.4
5°	2299.9	2302.9	2307.2	2312.2	2317.9	2320.6	2322.1	2322.1	2319.5	2314.8	2309.5
5.5°	2296.8	2300.3	2304.9	2310.6	2316.4	2319.5	2321.4	2321.0	2318.3	2313.3	2307.2
6°	2293.0	2296.8	2302.2	2308.3	2314.8	2318.3	2320.2	2319.8	2316.8	2311.4	2304.9
6.5°	2289.5	2293.7	2299.1	2306.0	2313.3	2316.8	2318.7	2318.3	2314.8	2309.1	2302.2
7°	2285.3	2289.9	2296.0	2303.3	2311.4	2315.2	2317.1	2316.4	2312.9	2306.4	2299.1
7.5°	2281.1	2286.4	2293.0	2300.6	2308.7	2313.3	2315.2	2314.5	2310.6	2303.7	2296.0
8°	2276.5	2282.2	2289.5	2297.6	2306.4	2311.0	2313.3	2312.2	2307.9	2301.0	2293.0
8.5°	2271.5	2278.0	2285.7	2294.5	2303.7	2308.3	2311.0	2309.9	2305.2	2298.0	2289.1
9°	2266.5	2273.0	2281.5	2290.7	2300.6	2306.0	2308.3	2306.8	2302.2	2294.5	2285.3
9.5°	2261.5	2268.4	2277.2	2287.2	2297.6	2302.9	2305.6	2304.1	2299.1	2291.0	2281.1
10°	2255.7	2263.4	2273.0	2283.0	2294.1	2299.9	2302.6	2300.6	2295.7	2287.6	2276.8
10.5°	2250.0	2258.0	2268.0	2278.8	2290.7	2296.4	2299.1	2297.6	2291.8	2283.4	2272.2
11°	2243.8	2252.3	2263.4	2274.5	2286.4	2293.0	2295.7	2293.7	2288.0	2278.8	2267.6
11.5°	2237.3	2246.5	2258.0	2269.9	2282.2	2288.7	2291.8	2289.9	2283.8	2274.2	2262.6
12°	2230.8	2240.4	2252.7	2264.9	2278.0	2284.9	2288.0	2285.7	2279.5	2269.6	2257.3
12.5°	2223.9	2234.2	2246.9	2260.0	2273.4	2280.3	2283.4	2281.5	2274.5	2264.6	2251.9
13°	2217.0	2227.7	2240.8	2254.2	2268.4	2275.7	2278.8	2276.5	2269.9	2259.2	2246.1
13.5°	2209.7	2220.8	2234.6	2248.4	2263.0	2271.1	2274.2	2271.5	2264.6	2253.8	2240.0
14°	2202.0	2213.5	2228.5	2242.7	2257.7	2265.7	2269.2	2266.5	2259.2	2247.7	2233.9
14.5°	2193.9	2206.2	2221.6	2236.5	2251.9	2260.3	2263.8	2261.1	2253.4	2241.9	2226.9
15°	2185.5	2198.5	2214.7	2230.0	2246.1	2255.0	2258.4	2255.4	2247.3	2235.4	2220.4
15.5°	2177.1	2190.5	2207.0	2223.1	2240.0	2248.8	2252.7	2249.2	2241.2	2228.9	2213.5
16°	2168.2	2182.0	2199.7	2216.2	2233.5	2242.3	2246.5	2243.1	2234.2	2222.0	2205.8
16.5°	2159.0	2173.6	2192.0	2209.3	2226.6	2236.2	2240.4	2236.9	2227.7	2215.1	2198.5
17°	2149.4	2164.8	2184.3	2201.6	2219.3	2229.3	2233.9	2230.0	2220.4	2207.4	2190.5
17.5°	2139.8	2155.6	2175.9	2193.6	2212.4	2222.3	2226.9	2222.7	2213.1	2199.7	2182.4
18°	2129.5	2146.0	2167.1	2185.5	2204.3	2215.1	2220.0	2215.4	2205.5	2191.6	2174.0
18.5°	2119.5	2136.4	2157.9	2177.1	2196.6	2207.8	2212.4	2207.8	2197.4	2183.6	2165.5
19°	2108.7	2126.4	2149.0	2168.6	2188.2	2199.7	2204.7	2199.7	2189.0	2174.7	2155.9
19.5°	2097.6	2116.0	2139.4	2159.4	2179.4	2191.6	2197.0	2191.6	2180.5	2166.3	2147.1
20°	2086.5	2105.7	2129.8	2150.2	2170.5	2182.8	2188.6	2183.2	2171.7	2157.1	2137.9
20.5°	2075.0	2094.1	2119.9	2140.2	2161.7	2174.0	2180.1	2174.4	2162.5	2147.9	2127.9
21°	2063.1	2083.0	2109.5	2130.2	2151.7	2164.8	2171.3	2165.2	2153.3	2137.9	2117.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2025.4	2047.3	2076.5	2099.1	2121.8	2136.0	2142.9	2136.4	2123.3	2108.0	2086.1
23°	2012.4	2035.0	2065.0	2088.0	2111.0	2125.6	2132.9	2126.4	2112.6	2096.4	2074.6
23.5°	1999.3	2022.4	2053.1	2076.5	2100.3	2115.3	2122.9	2116.0	2101.8	2085.3	2063.1
24°	1985.9	2009.7	2041.2	2065.0	2088.8	2104.5	2112.2	2105.3	2090.3	2074.2	2051.2
24.5°	1971.7	1996.3	2028.5	2053.1	2077.3	2093.4	2101.1	2094.1	2078.8	2062.7	2039.3
25°	1957.5	1982.8	2015.8	2040.8	2065.7	2081.9	2089.9	2082.6	2067.3	2050.8	2026.6
25.5°	1942.9	1968.6	2002.8	2028.1	2053.5	2070.3	2078.8	2071.1	2055.0	2038.5	2014.3
26°	1928.3	1954.8	1989.4	2015.5	2040.8	2058.1	2066.9	2058.8	2042.7	2025.8	2001.6
26.5°	1913.4	1940.6	1975.5	2002.4	2028.1	2045.8	2054.6	2046.6	2029.7	2013.2	1988.2
27°	1898.0	1926.0	1961.7	1989.4	2015.1	2033.1	2041.9	2033.9	2017.0	2000.1	1974.4
27.5°	1882.3	1910.3	1947.5	1975.9	2002.0	2020.5	2029.7	2021.2	2003.9	1987.1	1961.3
28°	1866.5	1895.3	1932.9	1962.1	1987.8	2007.0	2016.2	2007.8	1990.1	1972.9	1946.8
28.5°	1850.8	1880.0	1918.0	1947.5	1974.4	1993.6	2002.8	1994.7	1975.9	1959.4	1932.6
29°	1834.7	1864.6	1903.8	1933.3	1960.2	1979.8	1989.0	1980.5	1962.1	1944.8	1917.6
29.5°	1818.2	1848.5	1888.0	1918.7	1946.0	1965.9	1975.5	1966.7	1947.9	1931.4	1902.6
30°	1801.7	1833.1	1872.3	1903.8	1931.4	1951.4	1961.0	1952.5	1932.9	1915.7	1887.6
30.5°	1784.8	1816.6	1856.6	1888.8	1916.1	1937.2	1946.4	1938.3	1917.6	1901.1	1872.3
31°	1767.9	1800.1	1840.4	1873.4	1900.3	1922.6	1931.8	1923.0	1902.2	1885.3	1856.6
31.5°	1751.0	1783.2	1823.9	1857.7	1885.0	1907.6	1916.8	1908.0	1886.9	1870.0	1840.4
32°	1734.5	1766.4	1807.4	1842.0	1868.1	1891.9	1901.1	1893.0	1870.4	1854.6	1824.3
32.5°	1704.9	1749.1	1790.5	1825.9	1852.0	1876.5	1886.1	1877.3	1853.9	1838.5	1808.2
33°	1674.2	1731.8	1774.0	1809.3	1828.5	1860.4	1870.0	1861.2	1828.5	1822.0	1791.3
33.5°	1633.6	1714.9	1756.4	1792.5	1801.3	1844.3	1853.9	1845.0	1802.4	1806.3	1774.4
34°	1589.8	1698.4	1739.1	1774.8	1770.2	1827.0	1837.0	1828.5	1772.1	1788.6	1757.1
34.5°	1545.3	1670.0	1721.5	1757.9	1734.9	1810.1	1820.9	1810.1	1737.6	1770.2	1740.3
35°	1502.7	1639.3	1703.8	1733.0	1694.6	1790.9	1804.4	1790.2	1700.0	1746.8	1722.6
35.5°	1460.5	1601.3	1685.8	1706.1	1652.0	1761.8	1787.5	1761.8	1657.4	1720.3	1704.9
36°	1417.8	1558.7	1668.1	1676.5	1604.4	1735.7	1770.2	1736.4	1610.5	1692.3	1687.3
36.5°	1373.7	1516.9	1649.7	1642.0	1556.8	1701.9	1753.3	1704.2	1563.7	1658.9	1669.6
37°	1326.5	1475.0	1631.6	1604.4	1505.7	1664.3	1736.0	1668.5	1515.0	1622.0	1650.8
37.5°	1278.9	1433.2	1613.2	1563.7	1457.8	1623.6	1718.0	1630.1	1465.8	1583.3	1632.8
38°	1230.9	1391.0	1594.8	1519.2	1410.2	1580.2	1700.3	1587.9	1419.0	1539.9	1614.7
38.5°	1183.7	1348.8	1576.8	1473.1	1365.3	1534.5	1682.3	1543.4	1372.9	1495.0	1596.7
39°	1137.3	1305.0	1557.9	1427.8	1319.6	1487.3	1665.0	1496.9	1327.3	1448.9	1577.9
39.5°	1092.0	1259.7	1539.9	1382.2	1274.7	1438.6	1646.6	1450.5	1282.0	1402.9	1559.5
40°	1047.1	1212.1	1520.7	1336.1	1228.2	1392.1	1629.0	1404.0	1235.5	1357.2	1541.1
40.5°	1004.1	1165.7	1501.9	1292.7	1181.4	1347.2	1610.1	1359.1	1188.7	1312.7	1522.6
41°	959.9	1120.8	1483.1	1249.7	1133.0	1303.5	1591.7	1314.2	1140.0	1269.3	1503.4
41.5°	916.6	1075.9	1465.4	1206.7	1085.5	1259.3	1572.1	1270.5	1092.4	1226.7	1483.9
42°	872.4	1032.1	1437.8	1164.5	1038.6	1215.2	1552.6	1226.7	1045.2	1183.7	1463.9
42.5°	829.4	991.0	1408.6	1121.2	993.3	1170.7	1533.8	1182.6	999.1	1139.6	1440.9
43°	786.1	948.0	1368.7	1075.9	949.2	1125.0	1499.6	1136.9	954.6	1095.1	1401.3
43.5°	745.8	905.8	1325.0	1032.5	905.1	1079.3	1465.8	1090.4	910.8	1049.8	1367.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	629.1	779.2	1179.1	903.1	776.9	945.0	1342.6	955.7	781.9	919.3	1220.9
45.5°	592.2	738.5	1130.0	862.8	733.9	902.4	1293.9	911.6	740.4	877.4	1169.5
46°	556.9	698.6	1078.2	822.5	692.8	860.2	1241.3	869.4	698.9	836.7	1117.3
46.5°	523.5	660.9	1026.3	782.2	653.3	817.5	1187.6	827.5	659.0	796.8	1065.1
47°	490.9	622.6	974.5	742.7	614.9	776.1	1132.7	785.7	621.0	756.9	1013.3
47.5°	461.0	586.9	922.7	703.6	578.0	735.4	1077.0	744.6	584.2	717.8	962.2
48°	433.7	551.9	872.4	665.2	543.5	695.5	1024.0	705.1	549.3	680.1	911.6
48.5°	409.9	518.2	825.2	628.3	510.1	656.3	971.5	664.8	515.5	642.1	862.5
49°	388.8	485.5	779.9	592.6	478.6	617.2	922.3	626.4	483.6	606.4	814.9
49.5°	370.0	456.0	735.4	558.5	448.7	580.7	874.4	589.6	453.7	570.7	768.8
50°	352.4	427.6	692.0	523.9	420.7	545.0	827.5	553.9	425.3	537.0	724.7
50.5°	337.8	402.2	651.7	491.7	394.6	511.3	781.9	518.9	398.4	504.0	682.4
51°	323.6	379.2	612.6	461.4	370.4	479.4	737.3	486.7	374.2	473.6	640.6
51.5°	310.1	360.0	575.0	433.0	351.6	448.7	693.2	456.0	354.7	444.1	602.2
52°	296.3	342.4	538.5	405.7	332.4	420.3	651.7	426.4	334.7	416.8	565.0
52.5°	283.3	327.0	504.7	380.0	313.6	393.0	609.5	398.8	315.1	390.0	529.3
53°	270.2	312.4	472.5	356.2	294.4	368.9	569.6	372.7	295.2	365.0	495.9
53.5°	259.8	299.0	442.2	333.9	275.6	349.3	531.6	352.4	275.6	344.7	463.7
54°	251.8	285.9	414.1	314.0	260.6	329.3	497.8	332.0	260.6	324.3	434.1
54.5°	246.8	273.3	387.7	295.5	249.5	309.4	463.3	311.7	249.1	304.0	406.5
55°	242.6	259.8	363.5	278.3	243.3	289.4	432.2	291.3	243.3	283.6	381.1
55.5°	238.4	249.1	340.8	262.2	238.7	269.8	402.2	271.0	238.4	266.8	357.3
56°	234.1	240.3	320.9	247.6	234.5	254.1	375.4	254.9	234.1	251.8	338.5
56.5°	230.3	235.3	302.1	236.8	230.3	241.0	353.9	241.4	229.9	240.3	319.7
57°	226.5	231.1	285.2	231.1	226.1	233.0	332.0	232.6	226.1	233.7	300.9
57.5°	222.2	226.8	269.8	226.8	222.2	228.0	310.5	227.6	221.9	229.1	282.1
58°	218.4	223.0	257.2	222.6	218.0	223.8	288.6	223.4	218.0	224.9	267.1
58.5°	214.6	218.8	245.6	218.4	214.2	219.9	267.1	219.5	213.8	221.1	254.5
59°	210.7	214.9	235.3	214.6	210.3	215.7	252.2	215.7	210.0	216.9	243.3
59.5°	206.9	211.1	226.5	210.3	206.5	211.9	239.5	211.5	206.1	213.0	233.4
60°	203.0	207.3	218.8	206.5	202.3	208.0	228.8	207.6	202.3	209.2	224.5
60.5°	198.8	203.4	211.5	202.7	198.4	203.8	219.9	203.8	198.4	205.0	216.9
61°	195.0	199.6	205.0	198.4	195.0	200.0	211.5	200.0	194.2	201.1	210.0
61.5°	191.1	195.8	199.2	195.0	191.1	196.1	204.6	196.1	190.4	197.3	203.4
62°	187.3	191.9	193.8	191.1	187.3	192.7	198.1	192.3	186.5	193.4	197.7
62.5°	183.1	188.1	188.8	186.9	183.5	188.8	192.3	188.5	182.7	189.6	192.7
63°	179.2	184.2	184.6	183.1	179.6	185.0	187.3	184.2	178.5	185.4	187.7
63.5°	175.4	180.0	180.4	179.2	176.2	181.2	182.3	180.4	175.0	181.5	183.5
64°	171.6	176.2	176.2	175.4	172.3	177.3	178.5	176.6	171.2	177.7	179.6
64.5°	167.3	172.3	172.3	171.6	168.9	173.5	174.3	172.7	167.3	173.9	175.4
65°	163.5	168.5	168.5	168.1	165.0	170.0	170.4	168.9	163.5	170.0	171.6
65.5°	159.7	164.3	164.3	164.3	161.6	166.2	166.6	165.0	159.7	166.2	167.7
66°	155.8	160.4	160.4	160.4	157.8	162.4	162.4	161.2	155.8	162.4	163.5



TEST NUMBER: P776430

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	144.3	148.9	148.9	149.3	147.0	151.2	150.8	149.7	144.7	150.8	152.0
68°	140.5	145.1	145.1	145.5	143.6	147.8	147.0	145.9	140.9	146.6	148.2
68.5°	136.6	141.2	141.2	141.6	140.1	143.9	143.6	142.4	137.0	143.2	144.3
69°	132.8	137.4	137.4	139.7	136.6	140.5	139.7	138.6	133.6	139.3	140.5
69.5°	129.3	133.6	133.6	135.9	133.2	136.6	135.5	134.7	129.7	135.5	136.6
70°	125.5	129.7	129.7	132.0	129.3	133.2	132.0	130.9	126.3	131.7	132.8
70.5°	121.7	125.9	125.9	127.8	125.9	129.7	128.2	127.4	122.4	127.8	129.0
71°	118.2	122.4	122.1	124.0	122.4	125.9	124.4	123.6	119.0	124.0	125.1
71.5°	114.4	118.2	118.6	120.5	119.0	122.4	120.5	119.8	115.1	120.1	121.3
72°	110.5	114.8	114.8	116.7	115.5	118.6	116.7	116.3	111.7	116.7	117.5
72.5°	106.7	110.5	110.9	113.2	112.1	115.1	113.2	112.5	107.9	112.8	113.6
73°	102.9	107.1	107.1	109.4	108.6	111.7	109.4	108.6	104.4	109.0	109.8
73.5°	99.0	103.2	103.2	105.9	105.2	108.2	105.6	105.2	100.9	105.2	105.9
74°	95.2	99.4	99.4	102.1	101.7	104.4	102.1	101.3	97.1	101.7	102.1
74.5°	91.7	95.6	95.6	98.6	98.3	100.9	98.3	97.9	93.7	97.9	98.6
75°	87.9	91.7	92.1	95.2	94.8	97.5	94.8	94.0	90.2	94.0	94.8
75.5°	84.1	87.9	88.3	91.7	91.4	94.0	91.0	90.6	86.4	90.6	91.0
76°	80.6	84.1	84.4	87.9	87.9	90.6	87.1	86.7	82.9	86.7	87.1
76.5°	76.8	80.2	80.6	84.4	84.4	87.1	83.7	82.9	79.5	82.9	83.7
77°	72.9	76.4	76.8	81.0	81.4	83.7	80.2	79.5	76.0	79.5	79.8
77.5°	69.1	72.5	73.3	77.1	77.9	80.2	76.4	75.6	72.5	75.6	76.0
78°	65.6	68.7	69.5	73.7	74.5	76.4	72.9	72.2	69.1	71.8	72.5
78.5°	61.8	65.3	65.6	70.2	71.0	72.9	69.1	68.3	65.3	68.3	68.7
79°	58.0	61.4	62.2	66.4	67.6	69.5	65.6	64.9	61.8	64.5	64.9
79.5°	54.1	57.6	58.3	62.9	64.1	66.0	62.2	61.0	58.7	60.6	61.4
80°	50.7	53.7	54.5	59.1	61.0	62.6	58.3	57.6	54.9	57.2	57.6
80.5°	46.8	49.9	51.0	55.7	57.6	59.1	54.9	53.7	51.4	53.4	54.1
81°	43.4	46.1	47.2	52.2	54.1	55.3	51.4	50.3	48.0	49.9	50.3
81.5°	39.5	42.2	43.8	48.7	50.7	51.8	48.0	46.4	44.5	46.1	46.8
82°	36.1	38.8	39.9	45.3	47.6	48.4	44.5	43.0	41.1	42.2	43.0
82.5°	32.2	34.9	36.5	41.8	44.1	45.3	41.1	39.2	37.6	38.8	39.5
83°	28.8	31.1	33.0	38.4	41.1	41.8	38.0	35.7	34.2	34.9	36.1
83.5°	24.9	27.3	29.9	34.9	37.6	38.4	34.9	32.2	30.7	31.5	33.0
84°	21.5	23.4	26.5	31.5	34.2	34.9	31.9	28.4	27.3	27.6	29.9
84.5°	17.7	20.0	23.4	28.4	31.1	31.9	28.4	24.9	23.8	24.2	26.9
85°	14.2	16.1	20.7	24.9	27.6	28.4	25.3	21.5	20.7	20.3	23.8
85.5°	11.9	13.8	17.7	21.5	24.6	25.3	22.3	18.4	17.3	17.3	20.7
86°	9.6	11.5	15.0	18.4	21.1	21.9	19.6	15.7	13.8	14.2	17.7
86.5°	7.7	8.8	12.3	15.0	18.0	18.4	16.5	13.1	11.1	11.9	15.0
87°	5.4	6.5	9.2	11.9	14.6	15.4	13.8	10.7	9.2	9.6	11.9
87.5°	3.5	4.2	6.5	8.8	11.5	12.3	11.1	8.4	7.3	7.7	9.2
88°	1.5	2.3	3.8	5.8	8.4	9.2	8.4	6.5	5.8	5.8	6.5
88.5°	0.4	0.8	1.5	2.7	5.4	5.8	5.8	4.6	3.8	3.5	3.5



TEST NUMBER: P776430

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-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	0.4	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0



TEST NUMBER: P776430

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2319.8	2319.8	2319.8	2319.8	2319.8	2319.8
0.5°	2319.1	2318.3	2318.3	2319.1	2319.1	2319.8
1°	2318.3	2317.1	2316.8	2317.5	2317.5	2318.3
1.5°	2317.1	2315.6	2314.8	2315.2	2316.0	2316.8
2°	2316.0	2313.7	2312.9	2313.3	2314.1	2315.2
2.5°	2314.8	2312.2	2311.0	2311.0	2311.8	2313.3
3°	2313.3	2310.2	2308.3	2308.3	2309.5	2311.0
3.5°	2311.4	2308.3	2306.0	2306.0	2306.8	2308.7
4°	2309.5	2305.6	2303.3	2302.9	2303.7	2306.0
4.5°	2307.2	2302.9	2300.3	2299.9	2300.6	2302.9
5°	2304.9	2300.3	2296.8	2296.4	2297.6	2299.9
5.5°	2302.2	2296.8	2293.7	2292.6	2294.1	2296.8
6°	2299.5	2293.0	2290.3	2289.1	2290.3	2293.0
6.5°	2296.4	2289.5	2286.1	2285.3	2286.1	2289.5
7°	2293.0	2285.7	2281.8	2280.7	2281.8	2285.3
7.5°	2289.1	2281.5	2277.6	2276.1	2277.6	2281.1
8°	2285.3	2276.8	2273.0	2271.5	2272.6	2276.5
8.5°	2281.5	2272.2	2268.0	2266.5	2268.0	2271.5
9°	2276.8	2267.3	2262.6	2261.1	2262.6	2266.5
9.5°	2272.2	2261.9	2257.3	2255.7	2256.9	2261.5
10°	2267.6	2256.5	2251.5	2250.0	2251.5	2255.7
10.5°	2262.3	2250.7	2246.1	2244.2	2245.8	2250.0
11°	2256.9	2245.0	2239.6	2238.1	2239.2	2243.8
11.5°	2251.5	2238.8	2233.1	2231.6	2233.1	2237.3
12°	2245.8	2232.3	2226.9	2224.6	2226.2	2230.8
12.5°	2239.6	2225.8	2220.0	2217.7	2219.3	2223.9
13°	2233.1	2218.5	2212.7	2210.4	2211.6	2217.0
13.5°	2226.6	2211.2	2205.5	2203.2	2204.3	2209.7
14°	2220.0	2203.5	2197.8	2195.5	2196.6	2202.0
14.5°	2212.7	2195.9	2189.7	2187.8	2188.6	2193.9
15°	2205.1	2187.8	2181.7	2179.4	2180.1	2185.5
15.5°	2197.4	2179.4	2173.2	2170.9	2171.7	2177.1
16°	2189.3	2170.5	2164.4	2162.1	2162.5	2168.2
16.5°	2180.9	2161.7	2155.2	2153.3	2153.3	2159.0
17°	2172.4	2152.5	2146.0	2143.7	2144.0	2149.4
17.5°	2163.6	2143.3	2136.4	2134.1	2134.4	2139.8
18°	2154.8	2133.3	2126.4	2124.1	2124.1	2129.5
18.5°	2145.2	2123.3	2116.4	2113.7	2113.7	2119.5
19°	2135.6	2112.6	2105.7	2103.4	2103.0	2108.7
19.5°	2125.6	2101.8	2094.9	2092.6	2092.2	2097.6
20°	2115.3	2091.1	2083.8	2082.2	2081.1	2086.5
20.5°	2104.9	2079.6	2072.3	2070.7	2069.6	2075.0
21°	2093.8	2068.4	2060.8	2059.2	2057.7	2063.1



TEST NUMBER: P776430

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2059.6	2032.0	2024.3	2022.8	2020.5	2025.4
23°	2047.7	2018.9	2011.6	2010.1	2007.4	2012.4
23.5°	2035.4	2005.9	1998.2	1997.0	1994.4	1999.3
24°	2022.8	1992.4	1985.1	1983.6	1980.5	1985.9
24.5°	2010.1	1978.6	1971.7	1969.8	1966.7	1971.7
25°	1997.0	1964.4	1958.3	1956.4	1952.9	1957.5
25.5°	1983.6	1950.2	1943.3	1942.2	1938.7	1942.9
26°	1969.8	1936.0	1929.5	1927.9	1924.1	1928.3
26.5°	1956.0	1921.4	1914.9	1913.4	1909.1	1913.4
27°	1941.4	1906.5	1899.9	1898.8	1894.2	1898.0
27.5°	1926.8	1890.7	1885.0	1883.4	1878.8	1882.3
28°	1912.2	1875.4	1869.2	1867.7	1863.5	1866.5
28.5°	1897.6	1859.2	1853.5	1852.0	1847.3	1850.8
29°	1881.9	1843.5	1837.8	1836.2	1831.6	1834.7
29.5°	1866.5	1827.4	1821.6	1820.1	1815.5	1818.2
30°	1850.4	1810.9	1805.5	1803.6	1799.0	1801.7
30.5°	1834.3	1793.6	1788.6	1786.7	1782.5	1784.8
31°	1817.8	1776.3	1772.1	1769.8	1765.6	1767.9
31.5°	1802.1	1758.3	1754.5	1752.5	1748.3	1751.0
32°	1785.2	1741.4	1737.2	1735.3	1731.4	1734.5
32.5°	1768.3	1712.6	1719.9	1717.6	1714.2	1704.9
33°	1751.0	1681.9	1702.3	1700.3	1696.5	1674.2
33.5°	1733.4	1639.7	1683.1	1682.3	1678.5	1633.6
34°	1714.9	1595.9	1666.2	1664.3	1662.0	1589.8
34.5°	1697.7	1551.8	1634.7	1645.8	1642.0	1545.3
35°	1670.4	1508.0	1604.8	1627.4	1608.2	1502.7
35.5°	1640.1	1465.4	1561.8	1609.0	1576.8	1460.5
36°	1600.9	1422.8	1522.6	1590.6	1536.4	1417.8
36.5°	1557.6	1378.3	1480.0	1572.1	1493.8	1373.7
37°	1516.5	1331.9	1439.0	1553.0	1452.4	1326.5
37.5°	1473.5	1284.3	1397.1	1534.1	1412.5	1278.9
38°	1431.3	1234.8	1356.4	1515.3	1372.2	1230.9
38.5°	1389.4	1186.8	1314.6	1496.5	1330.7	1183.7
39°	1348.4	1140.3	1271.2	1477.7	1289.7	1137.3
39.5°	1302.7	1094.7	1225.6	1458.5	1245.9	1092.0
40°	1257.0	1050.5	1180.6	1439.3	1201.4	1047.1
40.5°	1209.8	1007.5	1135.7	1420.2	1156.5	1004.1
41°	1164.9	963.8	1090.4	1401.3	1111.6	959.9
41.5°	1118.1	919.3	1046.3	1381.0	1068.6	916.6
42°	1073.6	875.1	1006.4	1351.4	1026.7	872.4
42.5°	1030.6	832.5	965.7	1319.6	986.4	829.4
43°	989.5	789.1	923.9	1272.8	945.0	786.1
43.5°	945.7	748.8	883.6	1226.7	903.9	745.8

TEST NUMBER: P776430

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	821.0	632.5	760.0	1071.6	781.1	629.1
45.5°	778.0	594.9	722.4	1023.7	742.7	592.2
46°	737.7	559.6	683.6	977.2	704.3	556.9
46.5°	698.2	525.5	647.1	931.9	666.7	523.5
47°	660.2	493.2	610.3	886.6	630.2	490.9
47.5°	622.9	463.3	575.7	841.3	595.3	461.0
48°	586.9	435.6	541.2	796.4	560.0	433.7
48.5°	551.9	411.5	508.6	754.2	527.0	409.9
49°	518.2	390.0	478.2	713.1	495.5	388.8
49.5°	486.3	371.2	449.8	673.6	466.0	370.0
50°	455.6	354.7	422.2	634.8	436.8	352.4
50.5°	427.2	338.9	398.8	599.9	411.5	337.8
51°	401.9	324.7	376.9	566.1	388.4	323.6
51.5°	379.6	311.3	358.1	533.5	368.1	310.1
52°	360.0	298.2	341.2	502.8	349.7	296.3
52.5°	342.8	284.8	326.3	473.3	333.5	283.3
53°	328.6	271.7	312.4	445.2	318.6	270.2
53.5°	314.4	260.6	298.6	419.1	304.8	259.8
54°	300.2	252.2	285.6	394.2	291.3	251.8
54.5°	286.3	246.8	272.5	371.2	278.7	246.8
55°	273.3	242.6	259.8	350.0	265.6	242.6
55.5°	259.8	238.4	249.5	330.1	253.7	238.4
56°	248.7	234.5	241.4	312.0	244.1	234.1
56.5°	239.9	230.3	236.8	295.9	238.4	230.3
57°	234.5	226.5	232.6	280.6	233.7	226.5
57.5°	230.3	222.2	228.4	266.8	229.5	222.2
58°	226.5	218.4	224.5	254.5	225.7	218.4
58.5°	222.2	214.6	220.3	243.3	221.5	214.6
59°	218.4	210.7	216.5	234.1	217.6	210.7
59.5°	214.6	206.9	212.6	225.7	213.8	206.9
60°	210.7	203.0	208.8	218.0	209.6	203.0
60.5°	206.9	199.2	205.0	211.5	205.7	198.8
61°	203.0	195.4	201.1	205.3	201.9	195.0
61.5°	199.2	191.9	197.3	199.6	198.1	191.1
62°	195.4	188.1	193.4	194.6	193.8	187.3
62.5°	191.5	184.2	189.6	190.0	190.0	183.1
63°	187.7	180.8	185.8	186.2	186.2	179.2
63.5°	183.9	176.9	181.9	181.9	181.9	175.4
64°	180.0	173.1	178.1	178.1	178.1	171.6
64.5°	176.2	169.7	174.3	173.9	173.9	167.3
65°	172.7	165.8	170.4	170.0	170.0	163.5
65.5°	168.9	162.4	166.6	165.8	165.8	159.7
66°	165.0	158.5	162.7	162.0	162.0	155.8



TEST NUMBER: P776430

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	153.9	147.8	151.6	150.5	150.1	144.3
68°	150.1	143.9	147.8	146.6	145.9	140.5
68.5°	146.2	140.5	143.9	142.4	142.0	136.6
69°	142.4	137.0	140.5	137.8	140.1	132.8
69.5°	138.9	133.6	136.6	134.3	135.9	129.3
70°	135.1	130.1	133.2	130.5	131.7	125.5
70.5°	131.3	126.3	129.3	127.0	127.0	121.7
71°	127.8	122.8	125.5	123.6	122.8	118.2
71.5°	124.0	119.4	122.1	119.4	119.0	114.4
72°	120.5	115.9	118.2	115.5	115.1	110.5
72.5°	116.7	112.1	114.8	111.7	111.3	106.7
73°	112.8	108.6	110.9	107.9	107.1	102.9
73.5°	109.4	104.8	107.1	104.0	103.2	99.0
74°	105.6	101.3	103.2	100.2	99.4	95.2
74.5°	102.1	97.9	99.8	96.3	95.6	91.7
75°	98.3	94.4	96.0	92.5	91.7	87.9
75.5°	94.8	90.6	92.1	88.7	87.9	84.1
76°	91.0	87.1	88.7	84.8	83.7	80.6
76.5°	87.5	83.7	84.8	81.0	79.8	76.8
77°	83.7	80.2	81.4	77.1	76.0	72.9
77.5°	80.2	76.4	77.5	73.3	72.2	69.1
78°	76.4	72.9	73.7	69.5	68.3	65.6
78.5°	72.9	69.5	70.2	65.6	64.5	61.8
79°	69.1	65.6	66.4	61.8	60.6	58.0
79.5°	65.3	62.2	62.6	58.0	56.8	54.1
80°	61.8	58.7	58.7	54.5	52.6	50.7
80.5°	58.0	55.3	55.3	50.7	48.7	46.8
81°	54.5	51.8	51.4	47.2	44.9	43.4
81.5°	50.7	48.4	48.0	43.4	41.1	39.5
82°	47.2	44.5	44.1	39.9	37.2	36.1
82.5°	43.8	41.1	40.7	36.5	33.4	32.2
83°	40.3	37.6	37.2	33.0	29.6	28.8
83.5°	36.8	34.2	33.4	29.6	25.7	24.9
84°	33.0	30.7	29.9	26.5	22.3	21.5
84.5°	29.6	27.3	26.5	23.0	19.2	17.7
85°	26.1	23.8	23.0	20.0	16.1	14.2
85.5°	22.6	20.3	19.2	16.9	13.4	11.9
86°	19.2	16.9	15.7	13.8	11.1	9.6
86.5°	15.7	13.4	12.7	10.7	8.8	7.7
87°	12.7	10.4	9.6	7.7	6.1	5.4
87.5°	9.2	7.3	6.5	5.0	3.8	3.5
88°	6.1	3.8	3.5	1.9	1.5	1.5
88.5°	2.7	0.8	0.4	0.4	0.4	0.4



TEST NUMBER: P776430
CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.4	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	2050.4	2071.5	2098.8	2120.2	2141.7	2155.6	2161.7	2155.6	2143.3	2127.9	2107.6
22°	2038.1	2059.6	2087.6	2109.9	2131.8	2146.0	2152.5	2146.3	2133.3	2117.9	2096.8



44°	705.1	862.5	1277.8	988.3	861.3	1032.9	1430.5	1044.4	867.1	1005.2	1320.4
44.5°	666.7	821.0	1229.8	945.7	818.7	988.3	1387.5	999.5	824.5	961.9	1271.2



66.5°	152.0	156.6	156.6	156.6	154.3	158.5	158.5	157.4	152.0	158.5	159.7
67°	148.2	152.8	152.8	153.1	150.8	155.1	154.7	153.5	148.2	154.7	155.8



89°	0.0	0.4	0.4	0.8	2.3	3.1	3.1	2.3	1.9	1.5	1.2
89.5°	0.0	0.0	0.4	0.4	0.4	0.8	1.2	0.8	0.4	0.4	0.4

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21.5°	2082.6	2056.5	2048.9	2047.3	2045.4	2050.4
22°	2071.5	2044.2	2036.6	2035.4	2033.5	2038.1



44°	903.5	707.8	841.7	1171.4	862.8	705.1
44.5°	861.7	670.2	801.0	1121.9	822.2	666.7



66.5°	161.2	155.1	158.9	158.1	157.8	152.0
67°	157.4	151.2	155.4	154.3	153.9	148.2

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89°	0.8	0.0	0.4	0.4	0.4	0.0
89.5°	0.0	0.0	0.0	0.4	0.4	0.0

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Scaled Data Report



(END OF REPORT)