

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: P775983

Luminaire Tested: HCDJBS1525CSD-HCD4TRH-2500lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775983
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: HCDJBL51525CSD-HCD4TRH-2500lm-4000K
Description: 4 INCH ROUND MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

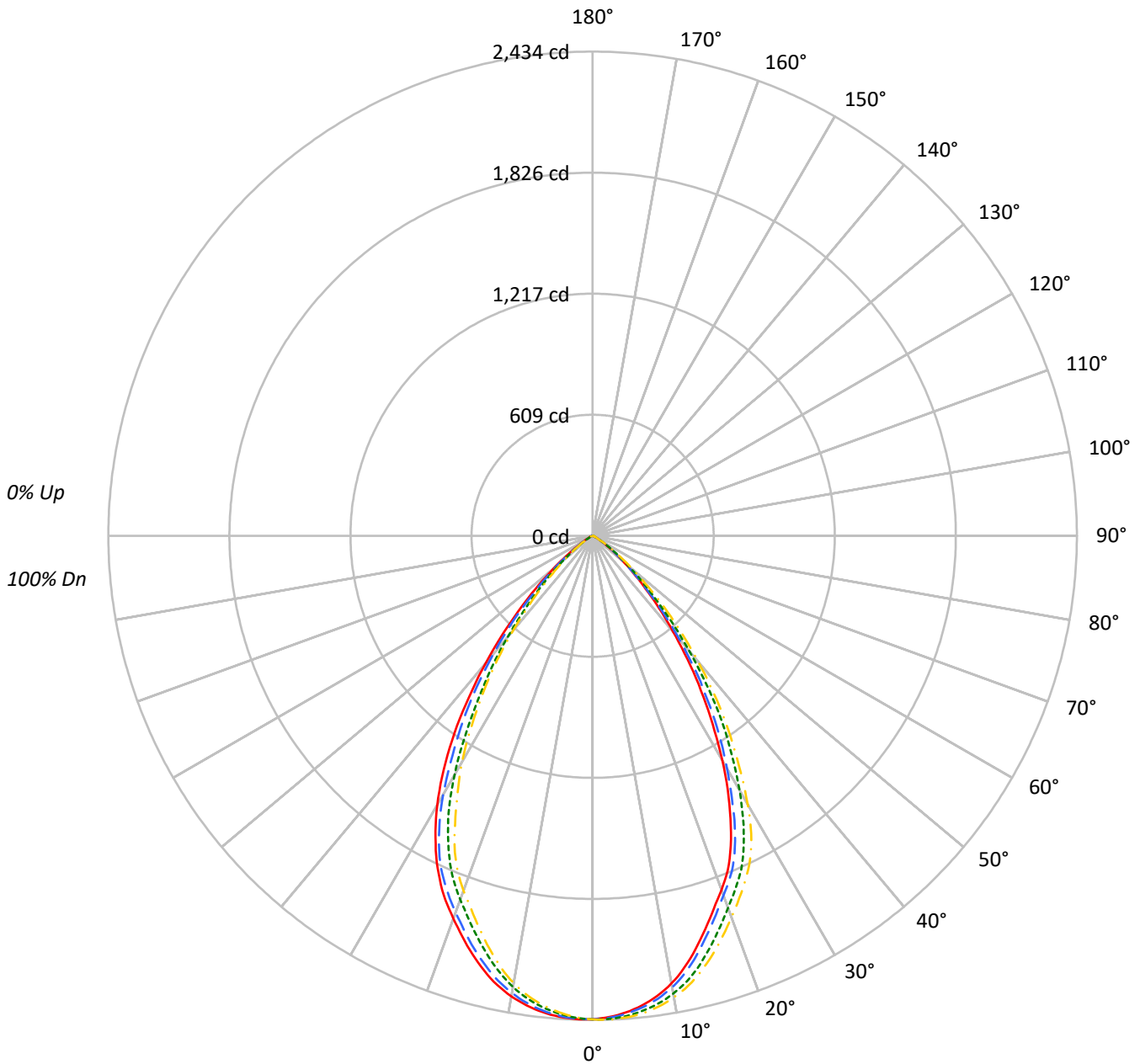
Lumens per Lamp: N/A
Luminaire Lumens: 2739.4 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.98
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25
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



TEST NUMBER: P775983
CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	107	105	111	108	105	103	104	102	100	100	99	97	97	95	94	92					92			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85					85			
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78					78			
4	95	87	81	76	93	85	80	75	83	78	75	81	77	74	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60					60			
7	80	70	63	58	78	69	63	58	68	62	58	66	61	58	65	61	57	56					56			
8	75	65	58	54	74	64	58	54	63	58	54	62	57	53	61	57	53	52					52			
9	71	61	54	50	70	60	54	50	59	54	50	58	53	50	58	53	49	48					48			
10	68	57	51	47	67	57	51	47	56	50	46	55	50	46	54	50	46	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	305941	305941	305941	305941
5°	301804	304734	305316	302865
10°	291977	298674	300450	294342
15°	273425	284851	289529	278624
20°	253630	266567	274174	260608
25°	228494	248143	255905	238242
30°	189554	214694	226930	201790
35°	145845	172777	185821	153972
40°	103516	123871	137605	109283
45°	67098	79361	90039	68219
50°	38805	46167	50259	37200
55°	19089	23280	23543	17136
60°	8004	9086	9338	6670
65°	4169	4318	4467	3484
70°	2429	2539	2723	2061
75°	1507	1605	1605	1216
80°	725	1087	942	725
85°	433	722	433	433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 92086 cd/sqm



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.8	8.3
10°-20°	605.5	22.1
20°-30°	793.7	29.0
30°-40°	664.7	24.3
40°-50°	337.0	12.3
50°-60°	92.1	3.4
60°-70°	15.5	0.6
70°-80°	3.6	0.1
80°-90°	0.4	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°	1626.0	59.4
0°-40°	2290.7	83.6
0°-60°	2719.8	99.3
0°-90°	2739.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2739.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2431	2431	2431	2431	2431	
5°	2389	2412	2417	2397	2389	225
15°	2099	2186	2222	2138	2099	588
25°	1646	1787	1843	1716	1646	746
35°	949	1125	1210	1002	949	591
45°	377	446	506	383	377	297
55°	87	106	107	78	87	84
65°	14	14	15	12	14	15
75°	3	3	3	2	3	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0
0.5°	2428.2	2428.5	2429.5	2431.3	2432.0	2432.8	2433.1	2432.8	2430.8	2430.3	2430.5
1°	2426.2	2426.4	2428.2	2430.3	2432.0	2433.1	2433.6	2433.3	2431.5	2430.5	2430.5
1.5°	2423.4	2424.4	2426.4	2429.0	2431.5	2433.1	2433.6	2433.6	2431.3	2430.3	2429.2
2°	2420.3	2421.9	2423.9	2427.2	2430.3	2432.3	2433.6	2433.3	2430.8	2429.2	2428.5
2.5°	2416.5	2418.3	2421.4	2424.7	2428.7	2431.5	2432.8	2432.3	2429.7	2427.7	2426.7
3°	2412.2	2414.5	2417.5	2421.9	2426.2	2429.5	2431.3	2431.3	2428.0	2425.9	2424.4
3.5°	2407.1	2409.9	2413.7	2417.8	2423.6	2427.5	2429.2	2429.0	2426.2	2423.6	2421.6
4°	2401.8	2404.8	2408.6	2413.5	2420.6	2424.7	2427.2	2426.7	2423.6	2420.8	2418.6
4.5°	2395.9	2399.0	2403.5	2408.9	2416.8	2421.6	2424.7	2424.2	2420.1	2417.3	2414.5
5°	2389.0	2393.1	2397.4	2403.0	2412.2	2418.0	2421.1	2420.6	2416.8	2413.5	2410.4
5.5°	2381.9	2385.7	2391.1	2397.2	2407.4	2413.7	2417.3	2416.5	2412.4	2408.9	2405.3
6°	2373.5	2378.1	2384.5	2390.8	2401.5	2408.9	2413.0	2412.4	2407.9	2404.1	2400.2
6.5°	2365.4	2370.7	2376.8	2384.2	2395.7	2403.8	2408.4	2407.4	2402.8	2398.2	2393.9
7°	2356.0	2361.6	2368.7	2376.8	2389.0	2398.0	2402.8	2402.3	2396.9	2392.4	2387.3
7.5°	2346.1	2351.7	2359.8	2368.7	2381.9	2391.6	2396.4	2395.9	2390.8	2385.5	2379.9
8°	2335.4	2341.7	2350.4	2360.0	2374.3	2384.5	2389.6	2388.5	2384.2	2378.4	2372.0
8.5°	2323.9	2330.5	2340.0	2350.4	2365.9	2376.6	2382.4	2381.9	2376.6	2370.5	2363.4
9°	2311.5	2318.6	2328.5	2340.2	2357.3	2368.4	2374.3	2373.8	2368.7	2362.1	2354.2
9.5°	2298.7	2306.1	2316.8	2329.3	2347.3	2359.3	2365.9	2365.4	2360.6	2353.2	2344.3
10°	2284.8	2292.9	2304.3	2317.6	2337.2	2349.6	2356.0	2356.2	2351.1	2343.8	2333.8
10.5°	2269.5	2278.1	2291.4	2304.9	2325.7	2338.7	2346.1	2346.8	2341.5	2333.1	2323.2
11°	2254.2	2263.1	2276.4	2291.6	2313.8	2327.5	2335.6	2335.9	2330.8	2322.4	2311.2
11.5°	2236.9	2247.1	2260.8	2277.1	2301.3	2315.8	2324.2	2324.9	2319.9	2310.7	2298.5
12°	2218.9	2229.3	2244.1	2261.9	2287.8	2302.6	2311.7	2313.0	2308.2	2298.5	2285.8
12.5°	2200.3	2211.0	2226.5	2245.1	2272.5	2288.8	2299.5	2301.0	2295.7	2285.5	2272.0
13°	2181.2	2192.4	2208.2	2228.5	2257.0	2274.8	2285.3	2287.3	2282.2	2271.5	2257.5
13.5°	2161.1	2172.3	2189.6	2209.7	2240.7	2258.8	2271.3	2273.6	2268.2	2257.3	2242.8
14°	2140.3	2152.5	2169.5	2190.9	2223.5	2243.0	2255.8	2258.3	2253.2	2242.5	2226.5
14.5°	2119.7	2131.1	2148.9	2171.1	2205.1	2226.3	2239.7	2243.5	2238.5	2227.0	2210.7
15°	2098.6	2110.8	2128.3	2151.7	2186.3	2209.0	2223.5	2226.8	2222.2	2210.5	2194.2
15.5°	2077.2	2089.7	2107.5	2131.4	2167.7	2190.9	2206.9	2211.0	2205.9	2194.5	2177.4
16°	2056.3	2068.5	2087.1	2110.8	2148.4	2173.1	2189.9	2194.2	2189.6	2177.4	2160.1
16.5°	2034.7	2047.4	2066.0	2090.9	2129.3	2154.8	2171.6	2177.9	2172.8	2160.6	2142.3
17°	2014.1	2026.1	2045.1	2069.8	2109.0	2136.2	2153.5	2160.1	2155.3	2143.3	2124.0
17.5°	1992.7	2005.2	2023.8	2049.5	2088.9	2116.6	2135.4	2141.8	2137.7	2125.0	2106.2
18°	1971.9	1984.6	2003.4	2029.1	2069.3	2097.8	2116.6	2123.5	2119.7	2107.2	2087.1
18.5°	1950.8	1963.5	1982.3	2008.3	2049.2	2078.5	2098.0	2106.2	2101.1	2089.1	2068.3
19°	1931.4	1943.6	1962.2	1988.2	2029.4	2058.6	2079.2	2086.3	2083.0	2070.8	2050.0
19.5°	1911.8	1924.1	1942.9	1968.3	2010.3	2039.5	2060.4	2068.0	2065.0	2052.8	2032.2
20°	1893.8	1905.2	1923.5	1949.2	1990.4	2020.2	2041.1	2050.2	2047.2	2035.0	2013.9
20.5°	1874.5	1886.4	1904.7	1929.9	1971.6	2000.9	2022.8	2031.9	2029.1	2017.2	1995.5
21°	1855.6	1867.3	1886.2	1910.8	1952.8	1982.3	2003.9	2012.8	2011.1	1999.1	1977.5



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL5125CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1788.0	1804.5	1826.6	1853.9	1895.1	1926.1	1948.7	1958.9	1955.6	1942.4	1919.7
23°	1763.3	1779.6	1803.5	1833.0	1875.7	1905.5	1930.2	1939.6	1935.5	1919.7	1899.4
23.5°	1735.8	1752.4	1778.8	1809.3	1856.1	1885.1	1910.3	1918.7	1912.4	1897.3	1879.0
24°	1706.6	1724.4	1751.8	1784.2	1836.6	1864.5	1890.2	1897.9	1889.2	1874.7	1858.4
24.5°	1675.8	1693.9	1723.6	1757.4	1812.4	1844.2	1870.4	1877.3	1866.1	1852.1	1838.1
25°	1645.5	1663.3	1694.4	1728.2	1787.0	1823.8	1850.5	1856.4	1842.9	1829.4	1812.9
25.5°	1612.7	1631.3	1663.3	1697.7	1760.2	1799.2	1830.4	1835.5	1819.8	1804.2	1787.2
26°	1580.9	1601.0	1631.3	1664.3	1731.8	1773.2	1806.8	1809.8	1793.3	1776.0	1760.2
26.5°	1547.6	1569.2	1597.2	1629.8	1703.0	1746.3	1781.6	1784.7	1766.6	1748.3	1731.8
27°	1515.0	1536.9	1562.3	1594.6	1673.2	1717.8	1755.2	1755.9	1738.6	1720.6	1702.2
27.5°	1480.9	1503.8	1525.2	1560.3	1643.2	1689.8	1727.4	1728.2	1710.4	1692.6	1671.2
28°	1447.4	1470.5	1489.6	1526.7	1611.7	1660.5	1696.9	1697.7	1681.9	1663.8	1639.4
28.5°	1412.0	1436.7	1453.7	1493.4	1578.1	1630.8	1664.9	1667.4	1653.9	1634.8	1606.6
29°	1376.9	1402.1	1417.9	1460.8	1544.8	1599.7	1632.0	1635.3	1623.9	1604.6	1572.8
29.5°	1341.0	1366.0	1383.8	1429.3	1510.5	1567.9	1596.7	1602.8	1593.4	1573.8	1537.7
30°	1304.4	1328.8	1350.2	1397.0	1477.4	1534.9	1559.8	1567.9	1561.6	1541.2	1500.3
30.5°	1266.8	1291.9	1316.6	1365.5	1439.7	1499.8	1521.1	1532.8	1529.5	1508.4	1462.9
31°	1230.1	1255.1	1283.3	1331.4	1404.4	1463.6	1484.0	1496.5	1495.7	1475.3	1425.5
31.5°	1193.8	1217.7	1250.0	1298.1	1369.3	1425.5	1444.6	1459.3	1461.6	1440.0	1387.1
32°	1157.6	1181.0	1216.1	1262.2	1336.5	1388.1	1406.4	1421.4	1426.5	1404.4	1349.9
32.5°	1123.3	1144.4	1181.8	1226.8	1300.3	1350.7	1368.8	1384.5	1392.4	1368.8	1312.8
33°	1089.0	1109.6	1147.7	1189.9	1265.5	1311.8	1332.1	1347.4	1356.3	1333.9	1275.9
33.5°	1053.9	1074.7	1112.6	1152.6	1231.2	1272.6	1295.5	1310.3	1320.9	1297.0	1240.1
34°	1019.5	1039.4	1076.5	1114.7	1197.6	1231.9	1259.4	1273.6	1283.8	1259.1	1204.4
34.5°	984.7	1003.5	1040.4	1078.8	1160.4	1191.5	1223.5	1237.8	1247.4	1222.8	1169.3
35°	949.3	967.1	1005.0	1043.4	1124.6	1151.0	1186.9	1202.4	1209.5	1185.1	1133.7
35.5°	916.8	933.0	970.2	1009.3	1087.4	1112.1	1150.8	1167.3	1172.9	1146.2	1098.6
36°	883.7	899.7	935.8	976.0	1052.3	1073.4	1114.4	1131.4	1134.0	1108.0	1063.5
36.5°	850.1	866.6	912.2	942.4	1012.1	1035.8	1078.0	1096.6	1095.8	1069.4	1027.7
37°	816.8	833.3	877.1	904.0	974.7	998.4	1040.6	1060.2	1057.2	1031.7	991.3
37.5°	783.5	800.2	842.2	872.0	936.1	962.5	1003.0	1024.3	1020.5	994.1	954.9
38°	750.1	767.2	807.4	839.7	899.5	927.7	965.8	988.0	982.9	956.9	918.0
38.5°	718.9	736.7	772.3	807.6	860.8	892.1	929.5	951.6	946.0	920.3	882.2
39°	688.8	706.6	740.0	775.6	824.9	857.7	893.3	915.2	910.1	884.7	847.1
39.5°	659.1	675.9	707.7	741.2	788.0	822.6	858.0	879.9	874.3	848.8	812.7
40°	630.1	645.3	675.6	706.9	754.0	789.3	822.6	844.0	837.6	813.7	777.9
40.5°	601.1	616.8	644.6	673.8	718.1	754.7	788.5	808.9	802.3	778.6	745.8
41°	573.4	588.1	613.3	641.3	685.3	721.9	755.5	775.6	766.9	742.5	712.0
41.5°	546.4	561.6	583.0	610.0	652.2	688.8	722.2	741.7	732.1	708.2	679.7
42°	520.4	534.9	553.8	579.5	620.7	657.3	689.9	708.7	697.0	674.6	647.1
42.5°	494.2	509.0	525.5	549.7	589.6	625.2	658.1	675.1	663.4	641.5	615.3
43°	469.3	483.6	497.3	520.2	559.4	594.5	626.5	643.0	630.3	610.0	583.8
43.5°	445.1	459.4	470.8	490.7	529.1	564.2	595.7	611.8	597.8	577.4	552.7



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	377.0	390.2	396.3	407.2	445.9	479.2	508.0	517.4	505.9	487.9	462.7
45.5°	356.1	368.8	373.2	381.8	420.7	451.8	480.3	487.1	477.2	459.9	434.5
46°	335.5	348.2	350.8	356.4	395.8	426.1	454.1	458.6	449.5	431.9	407.5
46.5°	315.9	328.4	328.9	332.7	372.1	401.1	427.1	429.4	422.3	404.7	381.3
47°	296.3	308.6	308.6	310.8	349.5	376.7	401.1	402.4	395.5	379.8	355.6
47.5°	278.8	290.0	289.0	290.0	327.6	353.3	375.7	376.0	369.9	355.4	331.7
48°	261.2	272.4	270.4	270.7	306.8	331.2	351.8	351.0	345.2	329.9	308.8
48.5°	244.5	255.4	253.1	253.4	287.2	310.1	327.9	326.6	321.5	307.0	286.9
49°	228.2	238.9	236.1	237.1	268.6	289.5	305.0	303.7	298.9	285.4	265.8
49.5°	212.9	223.1	220.5	221.6	250.8	270.1	283.4	282.4	276.8	264.3	248.0
50°	198.2	207.8	206.0	207.6	235.8	251.8	262.5	262.0	256.7	246.7	230.5
50.5°	184.2	193.3	192.3	194.1	220.5	235.8	245.0	244.5	239.4	229.2	212.9
51°	170.7	179.3	179.3	181.6	205.5	219.8	227.4	226.9	221.8	211.4	195.4
51.5°	157.7	166.1	166.6	169.4	190.3	204.0	209.9	209.6	204.3	193.8	177.8
52°	145.8	153.6	154.7	158.0	175.3	188.0	192.3	192.0	186.7	176.3	162.8
52.5°	134.1	141.7	143.2	146.5	162.3	172.0	174.8	174.8	169.4	160.5	148.8
53°	123.1	130.0	132.0	135.6	149.6	158.5	160.5	160.3	155.2	146.8	136.1
53.5°	112.7	119.0	121.6	125.2	138.1	145.5	147.3	146.3	141.9	134.1	123.9
54°	103.0	108.9	111.7	115.0	126.9	132.8	134.8	133.5	129.5	122.4	112.9
54.5°	94.6	99.7	102.3	105.6	116.0	121.1	122.9	121.6	117.5	110.9	102.5
55°	87.0	91.1	93.6	96.7	106.1	110.4	111.7	110.9	107.3	101.0	93.9
55.5°	79.6	83.7	86.0	89.0	96.7	100.2	101.5	101.0	97.7	92.3	85.5
56°	72.0	76.3	78.3	81.1	88.0	91.1	92.3	91.8	89.0	84.2	76.8
56.5°	64.4	68.9	70.7	73.3	79.9	82.7	83.9	83.2	80.6	75.3	68.7
57°	56.7	61.3	63.1	65.4	71.5	74.3	75.5	74.5	72.5	67.7	61.3
57.5°	51.1	53.9	55.5	57.5	63.6	66.1	67.2	66.9	64.6	60.3	54.7
58°	46.3	48.6	49.9	51.4	56.7	58.8	59.8	59.5	57.7	53.9	48.8
58.5°	42.0	44.0	44.8	45.8	50.6	52.4	53.2	53.2	51.6	48.3	43.8
59°	38.2	39.9	40.4	41.2	45.0	46.3	47.3	47.3	46.0	43.5	39.4
59.5°	34.8	36.4	36.4	37.1	40.2	41.5	42.2	42.2	41.2	38.9	35.4
60°	31.8	33.1	33.3	33.6	36.1	37.1	37.6	37.9	37.1	35.1	32.1
60.5°	29.0	30.3	30.3	30.3	32.6	33.3	33.8	34.3	33.6	32.1	29.3
61°	26.5	27.7	27.7	27.5	29.5	30.3	30.5	31.0	30.3	29.0	26.5
61.5°	24.4	25.4	25.4	25.2	26.7	27.5	27.7	28.2	27.5	26.5	24.4
62°	22.4	23.4	23.1	23.1	24.4	24.9	25.2	25.7	25.2	24.2	22.6
62.5°	20.9	21.6	21.4	21.1	22.6	23.1	23.1	23.4	22.9	22.4	21.1
63°	19.1	20.1	19.8	19.3	20.9	21.4	21.6	21.9	21.4	20.9	19.3
63.5°	17.6	18.6	18.1	17.8	19.1	19.6	19.8	20.1	19.8	19.1	17.8
64°	16.3	17.0	16.8	16.5	17.6	17.8	18.3	18.6	18.3	17.6	16.0
64.5°	15.0	15.8	15.5	15.3	15.8	16.0	16.8	17.0	16.8	15.8	14.8
65°	14.0	14.8	14.5	14.0	14.5	14.8	15.0	15.3	15.0	14.8	13.7
65.5°	13.0	13.5	13.5	13.0	13.5	13.7	14.0	14.2	14.0	13.7	12.7
66°	12.0	12.7	12.5	12.2	12.5	12.7	13.0	13.2	13.0	12.7	12.0



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	9.7	10.2	9.9	9.7	9.9	10.2	10.4	10.4	10.4	10.2	9.4
68°	8.9	9.4	9.4	9.2	9.2	9.4	9.7	9.7	9.7	9.4	8.9
68.5°	8.4	8.9	8.9	8.6	8.6	8.6	8.9	9.2	8.9	8.9	8.1
69°	7.9	8.1	8.1	7.9	8.1	8.1	8.4	8.4	8.4	8.1	7.6
69.5°	7.1	7.6	7.6	7.4	7.6	7.6	7.9	7.9	7.9	7.6	7.1
70°	6.6	7.1	7.1	6.9	6.9	7.1	7.4	7.4	7.4	7.1	6.6
70.5°	6.1	6.6	6.6	6.4	6.6	6.6	6.9	6.9	6.9	6.6	6.1
71°	5.9	6.1	6.1	5.9	6.1	6.1	6.4	6.4	6.4	6.1	5.9
71.5°	5.3	5.6	5.6	5.6	5.6	5.6	5.9	5.9	5.9	5.6	5.3
72°	4.8	5.3	5.3	5.1	5.3	5.3	5.3	5.6	5.3	5.3	5.1
72.5°	4.6	4.8	4.8	4.8	4.8	5.1	5.1	5.1	5.1	4.8	4.6
73°	4.1	4.6	4.6	4.3	4.6	4.6	4.8	4.8	4.6	4.6	4.3
73.5°	3.8	4.1	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.1	4.1
74°	3.6	3.8	3.8	3.8	4.1	4.1	4.1	4.1	4.1	3.8	3.8
74.5°	3.3	3.6	3.6	3.6	3.6	3.8	3.8	3.8	3.8	3.6	3.3
75°	3.1	3.3	3.3	3.3	3.3	3.6	3.6	3.6	3.3	3.3	3.1
75.5°	2.8	3.1	3.1	3.1	3.1	3.3	3.3	3.3	3.1	3.1	2.8
76°	2.5	2.8	2.8	2.8	2.8	3.1	3.1	2.8	2.8	2.8	2.5
76.5°	2.3	2.5	2.5	2.5	2.8	2.8	2.8	2.8	2.5	2.5	2.5
77°	2.0	2.3	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.3	2.3
77.5°	1.8	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.0	2.0
78°	1.8	1.8	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.0	1.8
78.5°	1.5	1.8	1.8	1.8	2.0	2.0	2.0	1.8	1.8	1.8	1.8
79°	1.3	1.5	1.5	1.8	1.8	1.8	1.8	1.8	1.8	1.5	1.5
79.5°	1.3	1.3	1.5	1.5	1.5	1.8	1.5	1.5	1.5	1.3	1.5
80°	1.0	1.3	1.3	1.3	1.5	1.5	1.5	1.3	1.3	1.3	1.3
80.5°	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.0	1.0
81°	0.8	1.0	1.0	1.3	1.3	1.3	1.3	1.0	1.0	1.0	1.0
81.5°	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0
82°	0.5	0.8	0.8	1.0	1.0	1.0	1.0	0.8	0.8	0.8	0.8
82.5°	0.5	0.5	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.5	0.8
83°	0.3	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.5	0.5	0.5
83.5°	0.3	0.5	0.5	0.8	0.8	0.8	0.8	0.5	0.5	0.5	0.5
84°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5
84.5°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.5
85°	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3
85.5°	0.0	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.3
86°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
86.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.3
87°	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.3	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: P775983
CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

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: P775983

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2431.0	2431.0	2431.0	2431.0	2431.0	2431.0
0.5°	2430.5	2430.3	2430.5	2430.0	2429.5	2428.2
1°	2430.0	2428.7	2428.2	2427.5	2426.9	2426.2
1.5°	2428.7	2426.7	2425.4	2424.7	2424.4	2423.4
2°	2426.9	2424.2	2422.6	2421.6	2421.1	2420.3
2.5°	2424.4	2421.1	2418.6	2417.0	2416.8	2416.5
3°	2421.9	2417.3	2414.5	2412.4	2411.9	2412.2
3.5°	2418.8	2413.2	2409.4	2407.4	2406.9	2407.1
4°	2415.0	2408.4	2404.1	2401.3	2401.0	2401.8
4.5°	2410.7	2403.3	2398.2	2395.4	2394.6	2395.9
5°	2405.8	2397.4	2391.8	2388.5	2387.5	2389.0
5.5°	2400.2	2391.1	2384.2	2381.2	2380.4	2381.9
6°	2394.4	2384.2	2376.8	2372.8	2372.3	2373.5
6.5°	2387.8	2376.3	2368.7	2364.6	2363.6	2365.4
7°	2380.4	2368.2	2359.5	2355.2	2353.7	2356.0
7.5°	2372.3	2359.3	2350.1	2345.3	2343.8	2346.1
8°	2363.9	2349.6	2340.2	2334.6	2333.1	2335.4
8.5°	2354.5	2338.9	2329.0	2323.4	2321.6	2323.9
9°	2344.5	2327.7	2317.3	2311.0	2308.9	2311.5
9.5°	2333.6	2316.0	2305.1	2297.5	2295.9	2298.7
10°	2322.4	2303.3	2291.4	2284.0	2281.4	2284.8
10.5°	2310.2	2289.6	2277.1	2269.2	2266.9	2269.5
11°	2297.2	2275.6	2262.1	2253.0	2249.9	2254.2
11.5°	2283.7	2260.8	2245.6	2235.7	2233.4	2236.9
12°	2270.0	2244.8	2228.5	2217.9	2215.1	2218.9
12.5°	2254.7	2228.3	2210.7	2199.3	2195.7	2200.3
13°	2239.5	2211.2	2192.4	2180.0	2176.1	2181.2
13.5°	2223.2	2193.9	2174.1	2160.1	2156.6	2161.1
14°	2206.7	2175.9	2154.3	2140.3	2135.9	2140.3
14.5°	2188.9	2157.3	2135.2	2120.4	2115.3	2119.7
15°	2172.1	2138.5	2114.3	2099.3	2093.7	2098.6
15.5°	2153.8	2119.2	2095.0	2078.7	2072.6	2077.2
16°	2135.7	2100.1	2074.4	2057.3	2051.5	2056.3
16.5°	2116.9	2081.0	2055.6	2036.7	2030.9	2034.7
17°	2098.6	2060.7	2035.0	2015.1	2009.8	2014.1
17.5°	2079.5	2041.8	2014.9	1995.0	1988.4	1992.7
18°	2060.1	2022.0	1994.3	1974.2	1967.8	1971.9
18.5°	2041.1	2002.4	1975.2	1954.1	1947.7	1950.8
19°	2022.5	1983.1	1955.9	1935.5	1928.4	1931.4
19.5°	2003.9	1965.0	1937.0	1916.7	1909.1	1911.8
20°	1985.9	1945.9	1918.0	1897.6	1890.0	1893.8
20.5°	1966.8	1926.9	1898.9	1878.8	1870.6	1874.5
21°	1949.2	1907.5	1878.3	1857.9	1851.3	1855.6



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1891.2	1844.4	1810.1	1790.0	1783.4	1788.0
23°	1871.7	1820.3	1785.2	1763.3	1757.7	1763.3
23.5°	1851.8	1796.4	1758.7	1735.6	1730.5	1735.8
24°	1832.2	1770.4	1731.0	1706.3	1700.7	1706.6
24.5°	1808.6	1743.7	1702.8	1674.3	1669.4	1675.8
25°	1784.2	1715.7	1674.0	1641.2	1637.9	1645.5
25.5°	1757.4	1687.2	1644.3	1606.9	1603.3	1612.7
26°	1730.2	1658.5	1613.7	1572.3	1569.5	1580.9
26.5°	1699.7	1628.7	1581.7	1538.7	1533.6	1547.6
27°	1668.4	1598.5	1549.1	1505.6	1497.5	1515.0
27.5°	1634.3	1566.2	1515.5	1472.6	1461.6	1480.9
28°	1599.5	1533.1	1480.9	1440.5	1426.8	1447.4
28.5°	1562.3	1499.0	1445.6	1409.0	1391.4	1412.0
29°	1523.9	1463.1	1410.2	1377.2	1358.6	1376.9
29.5°	1485.0	1426.5	1374.4	1344.6	1323.7	1341.0
30°	1446.9	1388.6	1339.0	1311.8	1290.7	1304.4
30.5°	1407.4	1350.7	1303.1	1276.9	1257.9	1266.8
31°	1370.3	1312.0	1269.6	1241.8	1224.3	1230.1
31.5°	1333.9	1272.6	1234.5	1205.2	1190.2	1193.8
32°	1298.1	1233.7	1199.9	1167.6	1156.1	1157.6
32.5°	1262.9	1194.3	1165.0	1130.4	1121.3	1123.3
33°	1226.3	1154.6	1129.2	1094.3	1086.2	1089.0
33.5°	1190.7	1114.7	1092.0	1058.4	1051.1	1053.9
34°	1154.8	1077.0	1055.9	1022.8	1015.7	1019.5
34.5°	1118.7	1039.4	1018.5	987.2	979.3	984.7
35°	1081.8	1002.2	981.4	953.9	945.0	949.3
35.5°	1045.0	967.4	943.5	921.3	910.9	916.8
36°	1007.8	932.5	902.0	887.8	878.8	883.7
36.5°	970.9	898.4	866.9	854.4	846.8	850.1
37°	934.0	864.4	831.5	820.9	814.7	816.8
37.5°	897.9	830.5	796.4	787.5	783.0	783.5
38°	862.8	796.4	761.1	754.0	750.9	750.1
38.5°	828.5	762.6	726.2	720.4	719.6	718.9
39°	794.4	729.5	693.9	687.6	688.6	688.8
39.5°	761.3	696.7	661.1	654.7	656.3	659.1
40°	728.3	665.2	628.8	622.4	625.0	630.1
40.5°	696.0	633.6	597.8	590.9	594.7	601.1
41°	664.2	602.3	567.5	559.9	565.2	573.4
41.5°	632.9	571.8	537.5	530.1	536.2	546.4
42°	601.8	543.1	509.0	501.1	507.5	520.4
42.5°	572.1	513.8	481.5	472.6	480.5	494.2
43°	542.8	486.1	454.8	444.9	453.8	469.3
43.5°	514.1	458.9	428.9	417.4	428.1	445.1



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	432.7	383.3	357.1	343.4	355.9	377.0
45.5°	407.2	359.7	335.5	321.0	333.5	356.1
46°	382.1	337.3	314.7	299.6	312.1	335.5
46.5°	357.4	315.9	294.3	279.6	292.0	315.9
47°	333.7	295.3	275.5	261.5	273.2	296.3
47.5°	310.3	275.0	257.4	244.7	255.1	278.8
48°	288.2	256.4	240.4	228.4	238.6	261.2
48.5°	267.9	238.9	224.1	213.4	222.8	244.5
49°	247.8	221.8	208.3	199.2	207.8	228.2
49.5°	230.5	205.8	193.6	186.5	194.6	212.9
50°	213.2	190.0	179.6	174.0	181.1	198.2
50.5°	195.9	175.3	166.1	161.8	168.9	184.2
51°	178.6	161.5	153.4	150.3	156.9	170.7
51.5°	164.1	148.3	141.4	139.6	145.5	157.7
52°	150.6	136.1	130.0	129.2	134.6	145.8
52.5°	137.4	123.9	119.3	119.0	124.4	134.1
53°	125.7	112.7	109.1	109.1	114.5	123.1
53.5°	114.5	102.5	99.7	100.2	105.1	112.7
54°	104.0	93.4	90.8	91.8	96.2	103.0
54.5°	94.9	85.7	83.4	84.5	89.0	94.6
55°	86.5	78.1	76.1	77.1	81.4	87.0
55.5°	78.1	70.2	68.4	69.7	73.8	79.6
56°	69.7	62.6	61.0	62.3	66.1	72.0
56.5°	62.3	54.9	53.7	54.9	58.5	64.4
57°	55.5	48.8	47.8	49.1	52.4	56.7
57.5°	49.3	43.8	43.0	44.3	47.3	51.1
58°	44.0	39.4	38.7	39.9	43.0	46.3
58.5°	39.7	35.4	35.1	36.1	38.9	42.0
59°	35.6	32.1	31.8	33.1	35.6	38.2
59.5°	32.3	29.0	28.7	30.0	32.3	34.8
60°	29.3	26.5	26.2	27.5	29.8	31.8
60.5°	26.7	24.2	23.9	25.2	27.2	29.0
61°	24.4	22.1	21.9	23.1	24.9	26.5
61.5°	22.6	20.3	20.1	21.4	23.1	24.4
62°	20.9	18.6	18.6	19.6	21.4	22.4
62.5°	19.3	17.0	17.0	18.1	19.6	20.9
63°	17.6	15.8	15.8	16.8	18.1	19.1
63.5°	16.0	14.5	14.8	15.5	16.8	17.6
64°	14.8	13.5	13.5	14.2	15.5	16.3
64.5°	13.7	12.5	12.5	13.2	14.2	15.0
65°	12.7	11.7	11.7	12.2	13.2	14.0
65.5°	11.7	10.7	10.9	11.4	12.5	13.0
66°	10.9	9.9	10.2	10.7	11.4	12.0



TEST NUMBER: P775983

CATALOG NUMBER: HCDJBL1525CSD-HCD4TRH-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	8.6	8.1	8.1	8.6	9.2	9.7
68°	8.1	7.6	7.6	8.1	8.6	8.9
68.5°	7.6	7.1	7.1	7.4	7.9	8.4
69°	7.1	6.6	6.6	6.9	7.4	7.9
69.5°	6.6	6.1	6.1	6.4	6.9	7.1
70°	6.1	5.6	5.6	6.1	6.4	6.6
70.5°	5.9	5.3	5.3	5.6	5.9	6.1
71°	5.3	4.8	4.8	5.1	5.3	5.9
71.5°	5.1	4.6	4.6	4.8	5.1	5.3
72°	4.6	4.3	4.3	4.6	4.6	4.8
72.5°	4.3	3.8	3.8	4.1	4.3	4.6
73°	4.1	3.6	3.6	3.8	4.1	4.1
73.5°	3.8	3.3	3.3	3.6	3.6	3.8
74°	3.6	3.1	3.1	3.3	3.3	3.6
74.5°	3.3	2.8	2.8	3.1	3.1	3.3
75°	3.1	2.5	2.5	2.8	2.8	3.1
75.5°	2.8	2.5	2.5	2.5	2.5	2.8
76°	2.5	2.3	2.3	2.3	2.3	2.5
76.5°	2.3	2.0	2.0	2.0	2.0	2.3
77°	2.0	1.8	1.8	1.8	2.0	2.0
77.5°	2.0	1.8	1.8	1.8	1.8	1.8
78°	1.8	1.5	1.5	1.5	1.5	1.8
78.5°	1.5	1.5	1.5	1.5	1.5	1.5
79°	1.5	1.3	1.3	1.3	1.3	1.3
79.5°	1.3	1.3	1.3	1.3	1.0	1.3
80°	1.3	1.0	1.0	1.0	1.0	1.0
80.5°	1.0	1.0	1.0	1.0	0.8	1.0
81°	1.0	0.8	0.8	0.8	0.8	0.8
81.5°	0.8	0.8	0.8	0.8	0.8	0.8
82°	0.8	0.8	0.8	0.5	0.5	0.5
82.5°	0.8	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.3
83.5°	0.5	0.5	0.5	0.5	0.3	0.3
84°	0.5	0.3	0.3	0.3	0.3	0.3
84.5°	0.3	0.3	0.3	0.3	0.3	0.3
85°	0.3	0.3	0.3	0.3	0.3	0.3
85.5°	0.3	0.3	0.3	0.3	0.0	0.0
86°	0.3	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: P775983

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRH-2500lm-4000K

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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Scaled Data Report



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Scaled Data Report





21.5°	1834.5	1847.7	1867.1	1892.0	1934.2	1963.5	1985.4	1994.8	1993.0	1980.8	1959.2
22°	1812.6	1827.9	1847.5	1873.4	1914.6	1945.2	1966.5	1976.7	1974.7	1962.0	1940.3



44°	421.5	435.2	445.1	462.4	500.6	534.9	565.7	579.5	566.5	546.1	522.0
44.5°	399.1	412.3	420.2	434.5	473.1	505.9	536.5	547.7	535.7	517.1	492.2



66.5°	11.2	11.7	11.7	11.2	11.4	11.7	12.0	12.2	12.0	11.7	10.9
67°	10.4	10.9	10.7	10.4	10.7	10.9	11.2	11.2	11.2	10.9	10.2



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°	1930.7	1887.4	1856.9	1835.8	1830.4	1834.5
22°	1910.8	1866.1	1834.0	1813.7	1807.6	1812.6



44°	486.4	432.9	404.2	392.2	403.4	421.5
44.5°	459.6	407.8	380.0	367.3	379.5	399.1



66.5°	10.2	9.4	9.4	9.9	10.7	11.2
67°	9.4	8.6	8.9	9.4	9.9	10.4

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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)