

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: NEO-RAY

Report Number: P1000412

Luminaire Tested: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_3000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1000412
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-31)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_3000K
Description: Define 4 Regressed Direct Recessed with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

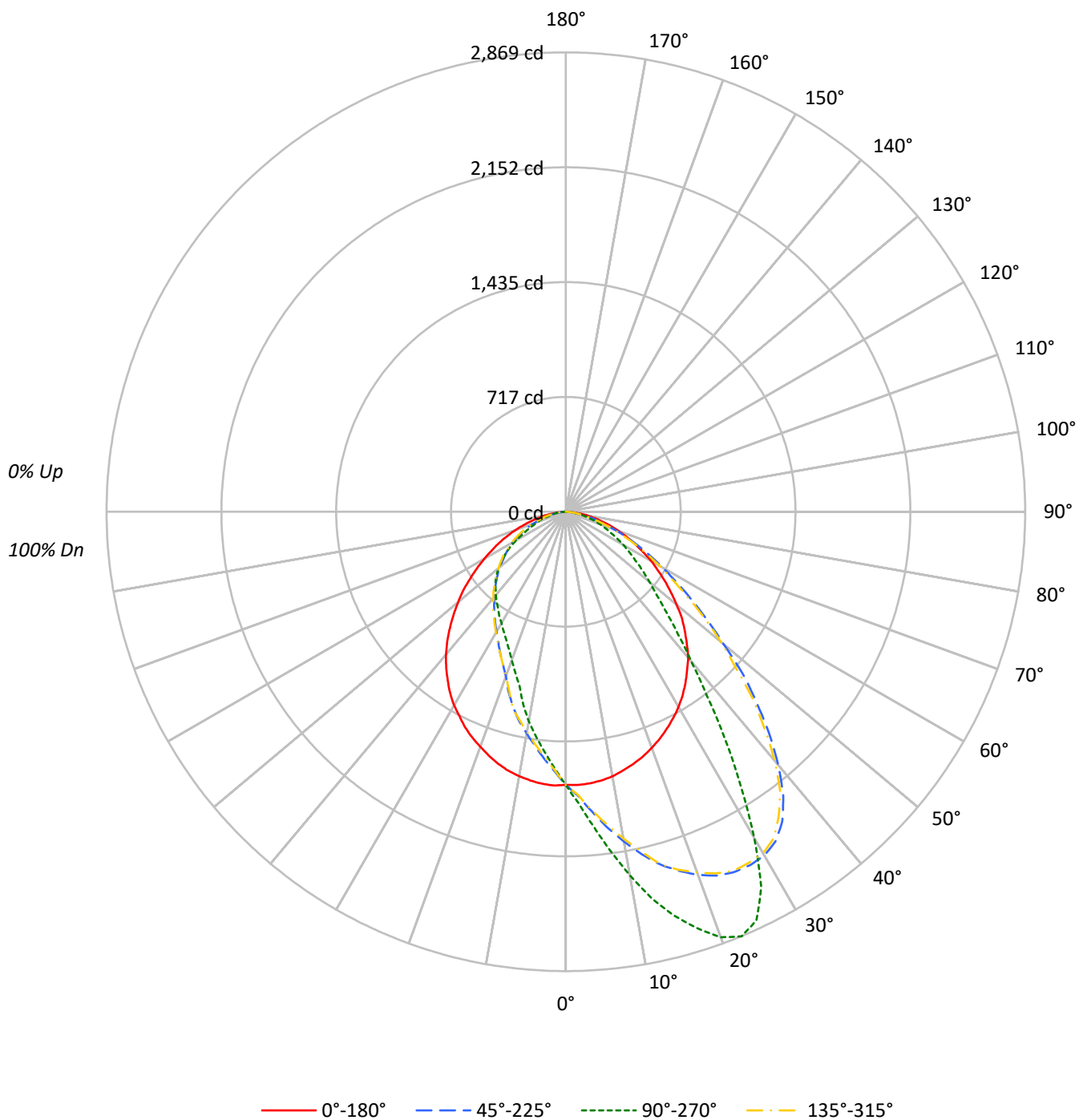
Lumens per Lamp: N/A
Luminaire Lumens: 4311.0 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86		
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74		
3	93	83	76	70	90	81	75	69	79	73	68	76	71	67	73	69	65	63		
4	85	74	66	60	83	73	65	59	71	64	59	68	63	58	66	61	57	55		
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48		
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43		
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	44	40	38		
8	64	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34		
9	59	47	39	33	58	46	38	33	45	38	33	44	38	33	43	37	33	31		
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	28		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	13907	13907	13907	13907
5°	13937	16131	13960	12328
10°	13893	19082	13882	11003
15°	13759	22042	13759	9455
20°	13618	24542	13547	8550
25°	13440	25334	13378	7938
30°	13250	22178	13147	7570
35°	12968	17264	12804	7346
40°	12654	12946	12405	7227
45°	12108	10222	11807	7163
50°	11453	8629	11140	6956
55°	10745	7522	10394	6584
60°	10040	6768	9593	5827
65°	9148	5966	8856	5011
70°	8354	5374	7961	4520
75°	7489	4502	6969	3853
80°	6452	3808	5875	3616
85°	5268	3219	4369	3219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 35°

Vertical Angle: 45°

Luminance: 20791 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.1	3.8
10°-20°	498.7	11.6
20°-30°	781.1	18.1
30°-40°	867.4	20.1
40°-50°	768.7	17.8
50°-60°	599.0	13.9
60°-70°	391.8	9.1
70°-80°	192.3	4.5
80°-90°	46.8	1.1
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°	1445.0	33.5
0°-40°	2312.4	53.6
0°-60°	3680.1	85.4
0°-90°	4311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4311.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1705	1705	1705	1705	1705	
5°	1703	1971	1705	1506	1703	162
15°	1630	2611	1630	1120	1630	460
25°	1494	2816	1487	882	1494	688
35°	1303	1734	1286	738	1303	814
45°	1050	886	1024	621	1050	810
55°	756	529	731	463	756	676
65°	474	309	459	260	474	473
75°	238	143	221	122	238	252
85°	56	34	47	34	56	67
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1708.1	1723.2	1731.5	1738.4	1752.1	1757.6	1768.6	1771.3	1782.3	1781.0	1776.8
5°	1702.6	1728.7	1748.0	1768.6	1793.3	1807.1	1822.2	1844.2	1855.2	1870.3	1879.9
7.5°	1693.0	1728.7	1760.3	1792.0	1831.8	1853.8	1873.0	1907.4	1936.2	1961.0	1988.5
10°	1677.9	1723.2	1770.0	1812.6	1867.5	1893.6	1922.5	1973.3	2013.2	2047.6	2091.5
12.5°	1654.5	1717.7	1770.0	1827.7	1897.8	1933.5	1972.0	2032.4	2079.2	2135.5	2190.5
15°	1629.8	1699.9	1768.6	1844.2	1923.9	1965.1	2003.6	2084.7	2156.1	2220.7	2281.2
17.5°	1602.3	1679.3	1754.9	1838.7	1934.9	1985.7	2031.1	2128.6	2207.0	2290.8	2351.3
20°	1569.3	1653.2	1739.7	1833.2	1941.7	1998.1	2048.9	2160.2	2246.8	2337.5	2413.1
22.5°	1533.6	1624.3	1719.1	1820.8	1933.5	1995.3	2054.4	2174.0	2274.3	2358.1	2459.8
25°	1493.8	1589.9	1687.5	1794.7	1921.1	1988.5	2048.9	2167.1	2274.3	2384.2	2483.2
27.5°	1452.5	1551.5	1653.2	1765.8	1895.0	1961.0	2029.7	2143.7	2268.8	2388.4	2488.7
30°	1407.2	1503.4	1610.6	1717.7	1855.2	1921.1	1991.2	2114.9	2250.9	2370.5	2479.1
32.5°	1357.7	1456.6	1558.3	1669.7	1804.3	1875.8	1940.4	2080.5	2219.3	2337.5	2439.2
35°	1302.7	1396.2	1492.4	1606.4	1739.7	1804.3	1881.3	2026.9	2167.1	2292.2	2358.1
37.5°	1243.6	1333.0	1422.3	1535.0	1662.8	1741.1	1816.7	1963.7	2112.1	2196.0	2230.3
40°	1188.7	1267.0	1345.3	1453.9	1583.1	1664.2	1741.1	1893.6	2024.2	2088.8	2062.7
42.5°	1118.6	1199.7	1269.8	1370.1	1500.6	1576.2	1654.5	1812.6	1918.4	1944.5	1879.9
45°	1049.9	1117.2	1184.6	1282.1	1419.5	1484.1	1568.0	1715.0	1802.9	1779.6	1684.8
47.5°	982.6	1037.5	1100.7	1195.6	1319.2	1396.2	1474.5	1602.3	1664.2	1631.2	1499.3
50°	902.8	957.8	1023.8	1106.2	1225.8	1300.0	1361.8	1480.0	1526.7	1445.7	1286.2
52.5°	827.3	875.4	931.7	1008.7	1122.7	1190.1	1257.4	1359.1	1374.2	1280.8	1113.1
55°	755.8	794.3	853.4	915.2	1019.7	1091.1	1137.8	1224.4	1220.3	1103.5	959.2
57.5°	681.6	717.3	757.2	821.8	920.7	974.3	1025.2	1100.7	1060.9	961.9	819.0
60°	615.6	636.3	676.1	737.9	821.8	868.5	908.3	949.6	915.2	808.0	698.1
62.5°	542.8	566.2	595.0	644.5	718.7	762.7	791.5	809.4	773.7	691.2	590.9
65°	474.1	494.7	524.9	568.9	625.3	658.2	673.4	685.7	666.5	573.0	493.3
67.5°	412.3	426.0	453.5	482.3	542.8	551.1	571.7	577.2	538.7	467.2	404.0
70°	350.4	364.2	376.5	410.9	438.4	453.5	457.6	457.6	419.1	372.4	320.2
72.5°	292.7	300.9	313.3	336.7	351.8	362.8	368.3	361.4	325.7	287.2	248.7
75°	237.7	241.9	252.9	268.0	280.3	276.2	274.8	266.6	240.5	213.0	191.0
77.5°	182.8	185.5	197.9	202.0	202.0	206.1	200.6	192.4	170.4	149.8	140.2
80°	137.4	141.5	142.9	145.7	142.9	142.9	138.8	125.1	114.1	104.4	97.6
82.5°	94.8	97.6	98.9	94.8	97.6	93.4	86.6	77.0	70.1	68.7	66.0
85°	56.3	57.7	56.3	56.3	52.2	50.8	45.3	44.0	41.2	41.2	39.9
87.5°	27.5	26.1	23.4	20.6	20.6	19.2	20.6	17.9	20.6	19.2	17.9
90°	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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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1787.8	1802.9	1804.3	1818.1	1813.9	1807.1	1819.4	1811.2	1827.7	1822.2	1829.1
5°	1892.3	1912.9	1930.7	1941.7	1961.0	1956.9	1977.5	1970.6	1985.7	1970.6	1989.8
7.5°	2014.6	2048.9	2066.8	2095.7	2103.9	2105.3	2130.0	2135.5	2145.1	2135.5	2146.5
10°	2134.1	2175.4	2216.6	2239.9	2255.1	2275.7	2297.7	2307.3	2314.1	2304.5	2311.4
12.5°	2242.7	2307.3	2352.6	2399.3	2410.3	2428.2	2451.6	2448.8	2476.3	2470.8	2483.2
15°	2343.0	2414.5	2469.4	2506.5	2536.8	2551.9	2595.9	2598.6	2597.2	2611.0	2602.7
17.5°	2432.3	2492.8	2571.1	2619.2	2656.3	2656.3	2681.1	2731.9	2727.8	2726.4	2734.7
20°	2505.2	2573.9	2646.7	2727.8	2758.0	2763.5	2797.9	2824.0	2828.1	2828.1	2828.1
22.5°	2560.1	2641.2	2719.5	2777.3	2800.6	2819.9	2850.1	2866.6	2872.1	2869.3	2872.1
25°	2587.6	2664.6	2744.3	2796.5	2810.2	2821.2	2824.0	2833.6	2832.2	2815.7	2825.4
27.5°	2593.1	2667.3	2719.5	2733.3	2726.4	2719.5	2675.6	2679.7	2667.3	2642.6	2652.2
30°	2568.4	2608.2	2606.9	2564.3	2551.9	2523.0	2483.2	2424.1	2376.0	2355.4	2362.2
32.5°	2479.1	2479.1	2429.6	2333.4	2290.8	2238.6	2167.1	2113.5	2050.3	2036.6	2062.7
35°	2355.4	2285.3	2194.6	2068.2	2003.6	1965.1	1841.4	1802.9	1749.4	1734.2	1746.6
37.5°	2163.0	2046.2	1914.3	1796.1	1741.1	1672.4	1563.8	1508.9	1470.4	1444.3	1456.6
40°	1947.2	1805.7	1668.3	1522.6	1462.1	1405.8	1324.7	1275.3	1213.4	1216.2	1220.3
42.5°	1741.1	1574.8	1420.9	1286.2	1228.5	1181.8	1125.5	1065.0	1043.0	1036.1	1029.3
45°	1522.6	1345.3	1201.0	1100.7	1048.5	1004.5	952.3	918.0	891.9	886.4	893.2
47.5°	1316.5	1166.7	1029.3	935.8	893.2	871.2	830.0	798.4	781.9	768.2	776.4
50°	1129.6	989.4	879.5	801.2	770.9	755.8	717.3	700.8	684.4	680.2	678.9
52.5°	975.7	856.1	761.3	698.1	674.7	666.5	637.6	614.3	600.5	604.6	607.4
55°	835.5	733.8	659.6	608.8	589.5	579.9	559.3	542.8	533.2	529.1	531.8
57.5°	711.8	623.9	570.3	529.1	514.0	509.8	487.8	482.3	475.5	471.3	471.3
60°	599.2	537.3	487.8	464.5	448.0	443.9	427.4	420.5	419.1	415.0	412.3
62.5°	504.3	453.5	419.1	394.4	387.5	386.1	375.2	366.9	362.8	360.0	360.0
65°	421.9	384.8	355.9	338.1	332.6	329.8	317.4	314.7	311.9	309.2	307.8
67.5°	351.8	318.8	298.2	285.8	279.0	280.3	273.5	268.0	268.0	266.6	265.2
70°	284.5	263.8	246.0	239.1	236.4	233.6	230.9	226.7	225.4	225.4	225.4
72.5°	224.0	210.3	200.6	196.5	193.8	191.0	188.3	188.3	188.3	186.9	186.9
75°	171.8	166.3	159.4	155.3	155.3	158.0	153.9	149.8	145.7	142.9	144.3
77.5°	129.2	126.4	122.3	115.4	116.8	114.1	114.1	111.3	112.7	112.7	109.9
80°	94.8	90.7	89.3	85.2	86.6	85.2	83.8	83.8	81.1	81.1	81.1
82.5°	66.0	61.8	61.8	60.5	59.1	59.1	57.7	57.7	59.1	56.3	56.3
85°	39.9	38.5	38.5	35.7	35.7	35.7	35.7	37.1	35.7	34.4	34.4
87.5°	17.9	19.2	17.9	16.5	16.5	16.5	15.1	15.1	13.7	15.1	15.1
90°	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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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1833.2	1823.6	1822.2	1822.2	1807.1	1815.3	1798.8	1781.0	1772.7	1772.7	1757.6
5°	1985.7	1976.1	1966.5	1951.4	1951.4	1943.1	1917.0	1890.9	1871.7	1855.2	1837.3
7.5°	2142.4	2132.8	2105.3	2090.2	2098.4	2081.9	2047.6	2003.6	1970.6	1944.5	1907.4
10°	2312.8	2286.7	2272.9	2264.7	2235.8	2218.0	2178.1	2113.5	2072.3	2037.9	1989.8
12.5°	2451.6	2459.8	2407.6	2411.7	2382.9	2358.1	2296.3	2234.4	2172.6	2124.5	2053.1
15°	2601.4	2576.6	2545.0	2520.3	2510.7	2480.4	2428.2	2345.8	2278.4	2202.8	2121.8
17.5°	2719.5	2700.3	2670.1	2646.7	2626.1	2553.3	2509.3	2436.5	2344.4	2270.2	2171.2
20°	2819.9	2802.0	2759.4	2744.3	2707.2	2655.0	2591.7	2479.1	2396.6	2315.5	2219.3
22.5°	2862.5	2844.6	2807.5	2788.2	2764.9	2714.0	2653.6	2546.4	2444.7	2343.0	2241.3
25°	2826.7	2826.7	2808.9	2802.0	2781.4	2736.0	2674.2	2583.5	2474.9	2365.0	2244.1
27.5°	2653.6	2687.9	2700.3	2707.2	2707.2	2708.5	2665.9	2578.0	2472.2	2365.0	2238.6
30°	2403.5	2461.2	2512.0	2527.2	2553.3	2582.1	2600.0	2557.4	2462.6	2349.9	2223.5
32.5°	2088.8	2163.0	2257.8	2281.2	2316.9	2403.5	2451.6	2469.4	2417.2	2318.3	2183.6
35°	1775.5	1868.9	1926.6	1998.1	2031.1	2158.9	2266.1	2330.6	2318.3	2259.2	2136.9
37.5°	1502.0	1555.6	1625.7	1701.3	1767.2	1889.5	2022.8	2147.9	2198.7	2169.9	2077.8
40°	1239.5	1302.7	1386.6	1448.4	1493.8	1616.1	1781.0	1917.0	2028.3	2046.2	1989.8
42.5°	1054.0	1117.2	1168.1	1235.4	1271.1	1389.3	1535.0	1705.4	1837.3	1907.4	1882.7
45°	911.1	949.6	990.8	1029.3	1073.2	1177.7	1312.4	1499.3	1647.7	1746.6	1756.2
47.5°	786.0	820.4	856.1	891.9	916.6	997.7	1121.3	1273.9	1436.0	1572.1	1625.7
50°	698.1	714.6	740.7	761.3	790.2	860.2	959.2	1091.1	1262.9	1409.9	1480.0
52.5°	611.5	632.1	652.7	670.6	689.8	739.3	830.0	944.1	1092.5	1243.6	1330.2
55°	538.7	555.2	574.4	586.8	597.8	641.8	710.5	798.4	926.2	1069.1	1176.3
57.5°	479.6	486.5	503.0	509.8	522.2	557.9	607.4	685.7	788.8	927.6	1015.5
60°	415.0	428.7	441.1	446.6	456.2	481.0	515.3	588.2	677.5	779.2	879.5
62.5°	362.8	368.3	377.9	384.8	391.6	417.8	446.6	501.6	568.9	654.1	746.2
65°	314.7	317.4	322.9	332.6	336.7	355.9	372.4	412.3	475.5	540.1	632.1
67.5°	265.2	268.0	274.8	280.3	284.5	296.8	314.7	343.5	377.9	449.4	500.2
70°	226.7	226.7	230.9	233.6	237.7	243.2	252.9	274.8	306.4	351.8	398.5
72.5°	189.6	189.6	189.6	193.8	193.8	197.9	203.4	218.5	240.5	276.2	306.4
75°	147.0	148.4	151.2	151.2	152.5	158.0	162.2	166.3	177.3	200.6	228.1
77.5°	111.3	114.1	115.4	112.7	115.4	115.4	120.9	126.4	131.9	138.8	159.4
80°	82.5	83.8	81.1	82.5	82.5	85.2	87.9	86.6	89.3	97.6	103.1
82.5°	55.0	56.3	56.3	56.3	56.3	60.5	60.5	59.1	60.5	61.8	63.2
85°	34.4	33.0	33.0	34.4	33.0	33.0	34.4	35.7	34.4	35.7	37.1
87.5°	15.1	15.1	15.1	15.1	13.7	13.7	15.1	13.7	15.1	13.7	12.4
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: P1000412

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1749.4	1742.5	1738.4	1737.0	1724.6	1717.7	1713.6	1710.9	1706.8	1695.8	1686.1
5°	1815.3	1796.1	1786.5	1775.5	1756.2	1734.2	1716.4	1705.4	1691.6	1669.7	1649.0
7.5°	1877.2	1848.3	1829.1	1813.9	1781.0	1745.2	1716.4	1693.0	1666.9	1636.7	1607.8
10°	1941.7	1895.0	1870.3	1846.9	1798.8	1752.1	1710.9	1676.5	1639.4	1599.6	1568.0
12.5°	1992.6	1930.7	1903.3	1870.3	1811.2	1756.2	1704.0	1657.3	1609.2	1566.6	1521.2
15°	2051.7	1974.7	1943.1	1900.5	1819.4	1748.0	1680.6	1629.8	1580.3	1517.1	1469.0
17.5°	2086.0	1996.7	1951.4	1914.3	1826.3	1739.7	1661.4	1598.2	1540.5	1477.3	1426.4
20°	2120.4	2018.7	1967.9	1915.6	1811.2	1719.1	1636.7	1561.1	1500.6	1431.9	1379.7
22.5°	2131.4	2013.2	1959.6	1911.5	1801.6	1698.5	1603.7	1526.7	1456.6	1387.9	1328.8
25°	2131.4	2011.8	1948.6	1886.8	1771.3	1665.5	1570.7	1486.9	1408.6	1339.8	1280.8
27.5°	2109.4	1984.3	1918.4	1862.0	1742.5	1628.4	1530.9	1438.8	1363.2	1294.5	1227.2
30°	2081.9	1944.5	1878.5	1811.2	1695.8	1587.2	1481.4	1396.2	1316.5	1238.2	1177.7
32.5°	2047.6	1901.9	1829.1	1760.3	1638.0	1525.4	1427.8	1344.0	1268.4	1187.3	1120.0
35°	1998.1	1838.7	1757.6	1697.1	1579.0	1462.1	1368.7	1286.2	1213.4	1129.6	1056.8
37.5°	1934.9	1781.0	1698.5	1624.3	1502.0	1394.8	1306.9	1227.2	1155.7	1078.7	997.7
40°	1860.7	1699.9	1628.4	1550.1	1420.9	1319.2	1236.8	1165.3	1093.9	1021.0	942.7
42.5°	1776.8	1617.4	1537.7	1462.1	1338.5	1238.2	1161.2	1096.6	1030.6	963.3	879.5
45°	1676.5	1526.7	1449.8	1378.3	1258.8	1155.7	1085.6	1023.8	967.4	898.7	824.5
47.5°	1563.8	1433.3	1355.0	1278.0	1161.2	1071.9	1003.2	950.9	902.8	834.1	766.8
50°	1453.9	1324.7	1261.5	1183.2	1076.0	992.2	922.1	878.1	841.0	773.7	713.2
52.5°	1315.1	1217.5	1157.1	1089.7	986.7	901.5	846.5	808.0	764.1	711.8	658.2
55°	1192.8	1102.1	1054.0	990.8	889.1	813.5	766.8	731.1	696.7	650.0	607.4
57.5°	1054.0	997.7	949.6	894.6	794.3	729.7	688.5	658.2	626.6	588.2	553.8
60°	908.3	882.2	835.5	791.5	706.3	650.0	615.6	588.2	557.9	526.3	497.5
62.5°	779.2	764.1	736.6	702.2	622.5	574.4	540.1	519.4	497.5	468.6	441.1
65°	656.9	650.0	623.9	599.2	544.2	501.6	471.3	459.0	434.2	412.3	387.5
67.5°	548.3	540.1	524.9	514.0	467.2	427.4	412.3	395.8	375.2	358.7	338.1
70°	438.4	437.0	427.4	413.6	388.9	360.0	344.9	333.9	313.3	300.9	285.8
72.5°	340.8	347.7	339.4	333.9	317.4	296.8	283.1	276.2	259.7	250.1	239.1
75°	254.2	259.7	263.8	254.2	250.1	240.5	228.1	221.2	213.0	199.3	195.1
77.5°	173.1	185.5	185.5	188.3	189.6	184.1	174.5	169.0	159.4	156.7	151.2
80°	114.1	125.1	126.4	129.2	133.3	133.3	126.4	125.1	115.4	114.1	109.9
82.5°	66.0	75.6	81.1	85.2	83.8	89.3	83.8	82.5	77.0	77.0	74.2
85°	35.7	37.1	39.9	42.6	45.3	48.1	48.1	46.7	45.3	44.0	41.2
87.5°	13.7	13.7	15.1	13.7	15.1	17.9	19.2	19.2	17.9	16.5	13.7
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: P1000412

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1677.9	1675.1	1672.4	1661.4	1651.8	1635.3	1621.6	1616.1	1614.7	1616.1	1611.9
5°	1629.8	1628.4	1618.8	1599.6	1581.7	1562.5	1548.7	1535.0	1526.7	1526.7	1517.1
7.5°	1584.5	1574.8	1566.6	1541.9	1521.2	1495.1	1474.5	1462.1	1455.3	1440.2	1440.2
10°	1536.4	1522.6	1511.6	1488.3	1458.0	1431.9	1405.8	1390.7	1378.3	1367.3	1363.2
12.5°	1488.3	1477.3	1456.6	1431.9	1401.7	1368.7	1341.2	1330.2	1301.4	1278.0	1279.4
15°	1442.9	1418.2	1408.6	1372.8	1337.1	1305.5	1265.6	1234.0	1210.7	1195.6	1176.3
17.5°	1392.1	1367.3	1349.5	1319.2	1272.5	1223.0	1184.6	1142.0	1118.6	1092.5	1080.1
20°	1335.7	1315.1	1301.4	1253.3	1196.9	1137.8	1095.2	1069.1	1043.0	1023.8	1012.8
22.5°	1287.6	1261.5	1245.0	1180.4	1118.6	1059.5	1026.5	1004.5	982.6	966.1	960.6
25°	1225.8	1210.7	1170.8	1114.5	1038.9	999.0	970.2	941.3	929.0	918.0	905.6
27.5°	1174.9	1137.8	1110.4	1036.1	989.4	944.1	915.2	893.2	878.1	867.1	857.5
30°	1111.7	1077.4	1038.9	977.1	934.5	891.9	865.7	847.9	831.4	824.5	816.3
32.5°	1045.8	1014.2	977.1	927.6	875.4	842.4	821.8	802.5	791.5	784.7	775.0
35°	986.7	946.8	922.1	875.4	832.8	795.7	776.4	759.9	747.6	744.8	743.4
37.5°	923.5	893.2	869.9	821.8	786.0	754.4	736.6	718.7	711.8	710.5	705.0
40°	868.5	842.4	820.4	775.0	736.6	707.7	694.0	683.0	676.1	676.1	674.7
42.5°	820.4	792.9	770.9	729.7	695.3	669.2	654.1	643.1	640.4	641.8	640.4
45°	766.8	743.4	721.5	678.9	650.0	630.8	614.3	608.8	604.6	606.0	607.4
47.5°	716.0	696.7	674.7	640.4	607.4	586.8	577.2	571.7	571.7	571.7	574.4
50°	670.6	648.6	629.4	593.7	563.4	546.9	538.7	531.8	533.2	534.6	535.9
52.5°	617.0	597.8	584.0	548.3	526.3	505.7	496.1	497.5	496.1	496.1	498.8
55°	570.3	551.1	537.3	504.3	482.3	468.6	460.4	456.2	457.6	454.9	460.4
57.5°	518.1	501.6	492.0	460.4	441.1	428.7	421.9	415.0	417.8	416.4	415.0
60°	472.7	453.5	438.4	416.4	399.9	384.8	380.7	373.8	376.5	373.8	372.4
62.5°	420.5	405.4	394.4	372.4	358.7	346.3	336.7	332.6	331.2	327.1	322.9
65°	368.3	360.0	349.0	327.1	313.3	303.7	298.2	294.1	292.7	281.7	269.3
67.5°	320.2	314.7	303.7	287.2	274.8	265.2	257.0	250.1	241.9	233.6	226.7
70°	274.8	266.6	259.7	244.6	233.6	224.0	215.7	207.5	203.4	195.1	192.4
72.5°	230.9	222.6	215.7	202.0	192.4	182.8	180.0	170.4	166.3	164.9	164.9
75°	185.5	178.6	174.5	162.2	153.9	147.0	142.9	140.2	137.4	134.7	130.5
77.5°	141.5	137.4	134.7	126.4	119.6	115.4	114.1	104.4	101.7	98.9	96.2
80°	103.1	101.7	98.9	92.1	89.3	79.7	79.7	77.0	75.6	75.6	75.6
82.5°	70.1	67.3	66.0	59.1	57.7	56.3	55.0	53.6	55.0	53.6	55.0
85°	37.1	35.7	34.4	34.4	34.4	34.4	34.4	34.4	34.4	33.0	34.4
87.5°	13.7	13.7	13.7	13.7	12.4	13.7	13.7	12.4	13.7	13.7	13.7
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: P1000412

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1611.9	1617.4	1610.6	1614.7	1605.1	1603.7	1605.1	1605.1	1606.4	1607.8	1609.2
5°	1521.2	1519.9	1511.6	1506.1	1502.0	1506.1	1508.9	1511.6	1508.9	1511.6	1513.0
7.5°	1436.0	1431.9	1427.8	1418.2	1420.9	1418.2	1426.4	1422.3	1422.3	1429.2	1434.7
10°	1360.5	1352.2	1349.5	1338.5	1330.2	1328.8	1338.5	1342.6	1346.7	1349.5	1360.5
12.5°	1262.9	1250.5	1240.9	1245.0	1221.7	1231.3	1234.0	1228.5	1245.0	1264.3	1253.3
15°	1158.4	1159.8	1140.6	1133.7	1114.5	1120.0	1121.3	1135.1	1148.8	1147.5	1163.9
17.5°	1081.5	1073.2	1056.8	1055.4	1047.1	1051.3	1049.9	1060.9	1056.8	1063.6	1077.4
20°	1010.0	1004.5	990.8	985.3	988.0	985.3	986.7	988.0	992.2	1007.3	1004.5
22.5°	953.7	946.8	946.8	940.0	931.7	929.0	935.8	940.0	945.4	948.2	955.1
25°	904.2	898.7	891.9	887.7	880.9	882.2	886.4	891.9	896.0	901.5	907.0
27.5°	853.4	853.4	846.5	845.1	842.4	841.0	846.5	849.3	849.3	853.4	858.9
30°	813.5	813.5	806.7	805.3	803.9	803.9	808.0	809.4	810.8	814.9	817.6
32.5°	775.0	773.7	770.9	772.3	770.9	772.3	772.3	773.7	776.4	777.8	783.3
35°	739.3	740.7	737.9	737.9	736.6	737.9	740.7	742.1	743.4	746.2	746.2
37.5°	705.0	707.7	706.3	710.5	710.5	710.5	710.5	713.2	713.2	713.2	711.8
40°	674.7	674.7	673.4	676.1	678.9	678.9	680.2	680.2	681.6	681.6	680.2
42.5°	640.4	643.1	647.2	648.6	651.4	650.0	654.1	652.7	654.1	651.4	648.6
45°	608.8	608.8	614.3	619.8	621.1	621.1	621.1	623.9	621.1	617.0	615.6
47.5°	574.4	577.2	579.9	586.8	588.2	588.2	588.2	588.2	585.4	585.4	585.4
50°	540.1	541.4	542.8	545.6	549.7	548.3	548.3	548.3	553.8	548.3	549.7
52.5°	498.8	500.2	501.6	507.1	505.7	505.7	507.1	507.1	511.2	509.8	507.1
55°	457.6	457.6	460.4	460.4	460.4	463.1	464.5	467.2	465.9	467.2	468.6
57.5°	416.4	413.6	412.3	412.3	416.4	415.0	416.4	416.4	421.9	424.6	426.0
60°	368.3	368.3	366.9	358.7	358.7	357.3	361.4	364.2	366.9	379.3	377.9
62.5°	318.8	313.3	307.8	309.2	300.9	305.1	302.3	305.1	313.3	322.9	324.3
65°	269.3	265.2	259.7	258.3	255.6	259.7	258.3	259.7	263.8	269.3	276.2
67.5°	225.4	224.0	221.2	219.9	219.9	219.9	222.6	222.6	224.0	228.1	232.2
70°	192.4	191.0	192.4	189.6	191.0	189.6	191.0	192.4	193.8	195.1	199.3
72.5°	162.2	162.2	162.2	159.4	162.2	160.8	160.8	162.2	163.5	164.9	167.7
75°	129.2	126.4	123.7	120.9	119.6	122.3	123.7	122.3	126.4	131.9	131.9
77.5°	97.6	96.2	96.2	96.2	97.6	96.2	98.9	97.6	98.9	98.9	101.7
80°	75.6	74.2	75.6	75.6	74.2	77.0	75.6	75.6	77.0	78.3	77.0
82.5°	55.0	56.3	55.0	55.0	55.0	57.7	55.0	55.0	55.0	56.3	56.3
85°	34.4	34.4	34.4	34.4	35.7	34.4	35.7	34.4	37.1	35.7	35.7
87.5°	12.4	13.7	15.1	15.1	15.1	15.1	13.7	15.1	16.5	15.1	16.5
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: P1000412

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CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1614.7	1621.6	1618.8	1609.2	1613.3	1621.6	1629.8	1640.8	1647.7	1653.2	1655.9
5°	1519.9	1532.2	1529.5	1529.5	1535.0	1548.7	1562.5	1585.8	1594.1	1603.7	1617.4
7.5°	1436.0	1445.7	1453.9	1456.6	1464.9	1482.8	1500.6	1526.7	1547.3	1558.3	1566.6
10°	1361.8	1368.7	1381.1	1387.9	1396.2	1418.2	1444.3	1471.8	1492.4	1511.6	1522.6
12.5°	1267.0	1294.5	1311.0	1322.0	1333.0	1366.0	1386.6	1416.8	1441.5	1459.4	1475.9
15°	1161.2	1194.2	1203.8	1246.4	1273.9	1300.0	1331.6	1367.3	1390.7	1411.3	1433.3
17.5°	1071.9	1095.2	1106.2	1151.6	1174.9	1216.2	1261.5	1306.9	1342.6	1357.7	1379.7
20°	1015.5	1027.9	1049.9	1065.0	1089.7	1137.8	1187.3	1242.3	1295.9	1311.0	1333.0
22.5°	957.8	974.3	989.4	1010.0	1029.3	1062.3	1111.7	1172.2	1229.9	1257.4	1283.5
25°	905.6	922.1	931.7	953.7	971.6	1004.5	1038.9	1100.7	1169.4	1192.8	1234.0
27.5°	864.4	874.0	890.5	900.1	920.7	950.9	982.6	1029.3	1096.6	1136.5	1176.3
30°	823.1	830.0	843.8	857.5	872.6	893.2	929.0	974.3	1036.1	1070.5	1110.4
32.5°	781.9	792.9	801.2	810.8	827.3	852.0	876.7	920.7	970.2	1008.7	1048.5
35°	747.6	751.7	762.7	773.7	784.7	806.7	832.8	875.4	919.3	949.6	985.3
37.5°	710.5	717.3	725.6	729.7	747.6	761.3	788.8	821.8	874.0	893.2	929.0
40°	681.6	680.2	688.5	695.3	703.6	725.6	742.1	777.8	819.0	849.3	871.2
42.5°	645.9	645.9	648.6	656.9	667.9	681.6	700.8	731.1	773.7	795.7	821.8
45°	617.0	612.9	614.3	619.8	626.6	640.4	659.6	685.7	728.3	746.2	773.7
47.5°	582.7	578.5	578.5	584.0	589.5	599.2	614.3	644.5	678.9	702.2	722.8
50°	544.2	545.6	544.2	548.3	551.1	560.7	577.2	601.9	633.5	652.7	676.1
52.5°	508.5	505.7	504.3	507.1	512.6	519.4	537.3	559.3	589.5	608.8	629.4
55°	464.5	467.2	467.2	467.2	475.5	478.2	492.0	514.0	544.2	559.3	578.5
57.5°	424.6	423.3	426.0	424.6	431.5	441.1	452.1	468.6	498.8	514.0	531.8
60°	380.7	382.0	383.4	383.4	388.9	398.5	410.9	426.0	450.7	465.9	482.3
62.5°	327.1	333.9	340.8	343.5	351.8	358.7	366.9	383.4	405.4	416.4	431.5
65°	276.2	285.8	295.5	302.3	307.8	314.7	325.7	340.8	358.7	369.7	384.8
67.5°	232.2	239.1	251.5	258.3	269.3	277.6	284.5	296.8	318.8	322.9	335.3
70°	200.6	203.4	208.9	214.4	226.7	233.6	241.9	254.2	270.7	280.3	287.2
72.5°	169.0	170.4	173.1	178.6	184.1	192.4	202.0	213.0	228.1	232.2	241.9
75°	134.7	142.9	142.9	147.0	151.2	155.3	163.5	174.5	184.1	191.0	196.5
77.5°	100.3	104.4	107.2	114.1	119.6	123.7	129.2	137.4	142.9	148.4	152.5
80°	78.3	79.7	81.1	81.1	83.8	89.3	94.8	100.3	107.2	109.9	114.1
82.5°	57.7	57.7	57.7	60.5	61.8	63.2	63.2	66.0	72.8	75.6	79.7
85°	37.1	37.1	37.1	37.1	38.5	39.9	41.2	42.6	42.6	42.6	45.3
87.5°	15.1	17.9	16.5	17.9	17.9	17.9	17.9	19.2	19.2	20.6	20.6
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: P1000412

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1705.4	1705.4	1705.4	1705.4
2.5°	1666.9	1675.1	1688.9	1708.1
5°	1628.4	1651.8	1673.8	1702.6
7.5°	1594.1	1621.6	1651.8	1693.0
10°	1554.2	1588.6	1627.1	1677.9
12.5°	1507.5	1555.6	1599.6	1654.5
15°	1473.1	1508.9	1565.2	1629.8
17.5°	1425.0	1473.1	1529.5	1602.3
20°	1379.7	1430.5	1493.8	1569.3
22.5°	1331.6	1389.3	1452.5	1533.6
25°	1282.1	1344.0	1407.2	1493.8
27.5°	1236.8	1293.1	1364.6	1452.5
30°	1181.8	1246.4	1315.1	1407.2
32.5°	1128.2	1195.6	1265.6	1357.7
35°	1070.5	1137.8	1214.8	1302.7
37.5°	1014.2	1088.4	1158.4	1243.6
40°	952.3	1029.3	1102.1	1188.7
42.5°	891.9	971.6	1044.4	1118.6
45°	835.5	913.8	979.8	1049.9
47.5°	781.9	852.0	919.3	982.6
50°	729.7	788.8	850.6	902.8
52.5°	674.7	731.1	780.5	827.3
55°	625.3	669.2	713.2	755.8
57.5°	566.2	610.1	648.6	681.6
60°	516.7	544.2	581.3	615.6
62.5°	460.4	492.0	520.8	542.8
65°	405.4	432.9	454.9	474.1
67.5°	358.7	375.2	391.6	412.3
70°	302.3	316.1	335.3	350.4
72.5°	254.2	265.2	274.8	292.7
75°	206.1	215.7	221.2	237.7
77.5°	159.4	169.0	173.1	182.8
80°	122.3	123.7	129.2	137.4
82.5°	83.8	86.6	87.9	94.8
85°	48.1	55.0	53.6	56.3
87.5°	20.6	22.0	24.7	27.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)