

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: P1037263

Luminaire Tested: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1037263
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-20)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K
Description: Define 3 Direct Surface with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

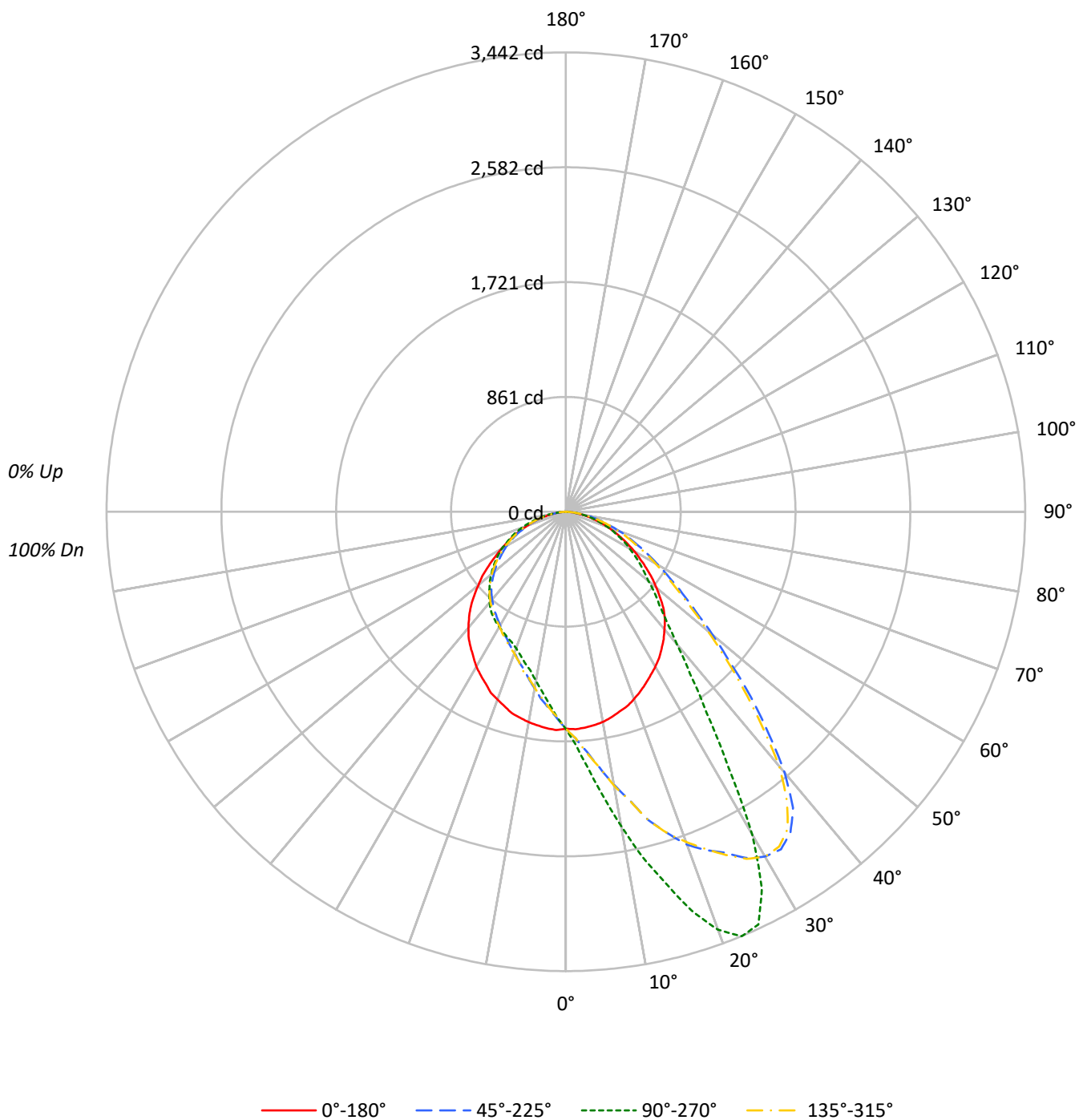
Lumens per Lamp: N/A
Luminaire Lumens: 4907.0 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.37 / 1.5
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
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

TEST NUMBER: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

Luminous Intensity Polar Plot



TEST NUMBER: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				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		0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102		100
1	110	105	101	98	107	103	99	96	99	96	93		95	92	90		91	89	87		85
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81	78	74		72
3	92	82	74	68	89	80	73	67	77	71	66		75	69	65		72	68	64		62
4	84	73	65	58	82	72	64	58	69	62	57		67	61	56		65	60	56		53
5	78	66	57	51	76	64	56	50	62	55	50		60	54	49		59	53	49		47
6	72	59	51	44	70	58	50	44	56	49	44		55	48	43		53	48	43		41
7	67	54	45	39	65	53	45	39	52	44	39		50	44	39		49	43	38		36
8	62	49	41	35	61	49	41	35	47	40	35		46	39	35		45	39	35		33
9	58	45	37	32	57	45	37	32	43	36	32		42	36	31		41	36	31		29
10	55	42	34	29	53	41	34	29	40	33	29		39	33	29		38	33	28		27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	17500	17500	17500	17500
5°	17550	20870	17601	15575
10°	17477	26122	17495	14068
15°	17275	32039	17415	13097
20°	17108	38167	17143	12470
25°	16840	40527	16877	12330
30°	16664	34737	16664	12394
35°	16437	24158	16333	12524
40°	16160	18196	15961	12485
45°	15804	15108	15349	12327
50°	14853	13534	14324	12214
55°	13806	12654	13245	12063
60°	12753	11870	12073	11937
65°	11596	11156	11033	11556
70°	10411	10461	9718	11006
75°	9108	9370	8517	10089
80°	7519	8201	6936	8691
85°	5842	6422	4668	5842

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 35°

Vertical Angle: 45°

Luminance: 35277 cd/sqm

TEST NUMBER: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.9	3.3
10°-20°	513.6	10.5
20°-30°	864.1	17.6
30°-40°	976.5	19.9
40°-50°	874.6	17.8
50°-60°	706.1	14.4
60°-70°	492.0	10.0
70°-80°	258.2	5.3
80°-90°	61.9	1.3
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°	1537.6	31.3
0°-40°	2514.1	51.2
0°-60°	4094.8	83.4
0°-90°	4907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4907.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1626	1626	1626	1626	1626	
5°	1624	1932	1629	1442	1624	154
15°	1550	2875	1563	1175	1550	438
25°	1418	3412	1421	1038	1418	654
35°	1251	1838	1243	953	1251	783
45°	1038	992	1008	810	1038	794
55°	736	674	706	643	736	659
65°	455	438	433	454	455	453
75°	219	225	205	243	219	235
85°	47	52	38	47	47	58
90°	0	0	0	0	0	

TEST NUMBER: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1630.6	1643.2	1649.5	1658.9	1668.4	1682.5	1687.3	1695.1	1692.0	1698.3	1701.4
5°	1624.2	1646.3	1665.2	1688.8	1710.9	1726.7	1742.4	1767.6	1786.5	1789.7	1803.8
7.5°	1613.2	1644.7	1677.8	1710.9	1753.4	1778.6	1807.0	1841.7	1870.0	1915.7	1933.0
10°	1599.0	1643.2	1690.4	1736.1	1794.4	1833.8	1868.4	1926.7	1985.0	2032.3	2076.4
12.5°	1577.0	1632.1	1693.6	1761.3	1836.9	1882.6	1929.9	2007.1	2095.3	2167.8	2215.0
15°	1550.2	1619.5	1698.3	1770.8	1854.3	1939.3	1989.7	2076.4	2202.4	2270.2	2391.5
17.5°	1528.1	1599.0	1677.8	1791.2	1904.7	1989.7	2026.0	2185.1	2271.7	2385.2	2522.2
20°	1493.5	1583.3	1684.1	1797.5	1944.1	1996.0	2070.1	2230.8	2337.9	2486.0	2654.6
22.5°	1457.3	1553.4	1674.7	1792.8	1956.7	2011.8	2112.6	2240.2	2410.4	2556.9	2742.8
25°	1417.9	1521.8	1644.7	1784.9	1945.6	2026.0	2120.5	2278.0	2462.4	2646.7	2818.4
27.5°	1378.5	1491.9	1619.5	1759.7	1915.7	2010.2	2104.7	2268.6	2504.9	2705.0	2924.0
30°	1340.7	1454.1	1581.7	1725.1	1888.9	1980.3	2070.1	2274.9	2538.0	2763.3	2983.8
32.5°	1299.7	1416.3	1550.2	1669.9	1835.4	1933.0	2033.9	2274.9	2558.5	2797.9	2999.6
35°	1250.9	1370.6	1485.6	1605.3	1769.2	1877.9	1991.3	2259.1	2577.4	2809.0	2933.4
37.5°	1203.6	1309.2	1408.4	1525.0	1696.7	1813.3	1944.1	2240.2	2567.9	2761.7	2796.4
40°	1150.1	1255.6	1335.9	1444.7	1625.8	1761.3	1893.6	2215.0	2527.0	2649.8	2549.0
42.5°	1098.1	1181.6	1250.9	1356.4	1553.4	1685.7	1829.1	2169.3	2446.6	2471.8	2245.0
45°	1038.2	1098.1	1159.5	1279.2	1474.6	1610.1	1769.2	2103.2	2317.4	2245.0	1958.2
47.5°	961.0	1014.6	1082.3	1192.6	1391.1	1531.3	1682.5	2018.1	2130.0	1978.7	1665.2
50°	887.0	932.6	995.7	1102.8	1302.9	1439.9	1600.6	1884.2	1939.3	1701.4	1435.2
52.5°	812.9	847.6	909.0	1016.1	1216.2	1348.6	1495.1	1747.1	1715.6	1460.4	1224.1
55°	735.7	765.6	823.9	929.5	1115.4	1241.4	1381.6	1578.6	1496.6	1254.0	1065.0
57.5°	660.1	691.6	751.5	839.7	1014.6	1137.4	1249.3	1403.7	1280.8	1087.0	920.0
60°	592.4	619.1	664.8	751.5	910.6	1009.8	1112.2	1217.8	1115.4	927.9	800.3
62.5°	521.5	546.7	589.2	668.0	805.0	893.3	975.2	1061.8	948.4	811.3	697.9
65°	455.3	475.8	515.2	587.6	699.5	772.0	838.1	898.0	806.6	680.6	595.5
67.5°	395.4	412.8	445.8	510.4	605.0	656.9	710.5	760.9	683.7	582.9	510.4
70°	330.8	345.0	374.9	422.2	497.8	551.4	590.8	628.6	559.3	478.9	430.1
72.5°	274.1	288.3	307.2	356.0	408.0	441.1	483.7	504.1	464.7	398.6	349.7
75°	219.0	230.0	247.3	278.8	327.7	349.7	376.5	392.3	356.0	311.9	282.0
77.5°	171.7	176.4	189.0	211.1	244.2	269.4	289.9	299.3	274.1	245.8	220.6
80°	121.3	127.6	137.1	156.0	181.2	189.0	201.7	212.7	196.9	171.7	156.0
82.5°	80.3	88.2	92.9	100.8	116.6	126.0	129.2	138.6	124.5	115.0	108.7
85°	47.3	50.4	52.0	56.7	64.6	69.3	74.0	75.6	72.5	70.9	64.6
87.5°	23.6	23.6	23.6	26.8	28.4	31.5	33.1	33.1	33.1	31.5	29.9
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1712.5	1715.6	1726.7	1734.5	1750.3	1748.7	1748.7	1747.1	1742.4	1750.3	1755.0
5°	1832.2	1859.0	1862.1	1896.8	1898.4	1912.5	1922.0	1914.1	1933.0	1931.5	1917.3
7.5°	1980.3	2016.5	2033.9	2066.9	2104.7	2095.3	2131.5	2137.8	2134.7	2150.4	2161.5
10°	2142.6	2205.6	2249.7	2311.1	2326.9	2336.3	2360.0	2380.4	2421.4	2389.9	2410.4
12.5°	2328.5	2374.1	2432.4	2530.1	2578.9	2610.5	2621.5	2635.7	2664.0	2646.7	2648.3
15°	2484.4	2545.9	2645.1	2766.4	2780.6	2820.0	2810.5	2895.6	2936.6	2875.1	2909.8
17.5°	2646.7	2728.6	2846.8	2952.3	3012.2	3039.0	3064.2	3146.1	3142.9	3133.5	3141.4
20°	2750.7	2884.6	3031.1	3171.3	3188.6	3209.1	3276.9	3311.5	3305.2	3332.0	3349.3
22.5°	2897.2	3039.0	3194.9	3287.9	3327.3	3350.9	3404.5	3426.5	3436.0	3442.3	3431.2
25°	3020.1	3171.3	3286.3	3368.2	3391.9	3404.5	3421.8	3428.1	3423.4	3412.3	3421.8
27.5°	3103.6	3224.9	3303.6	3341.4	3328.8	3308.4	3275.3	3253.2	3204.4	3180.8	3209.1
30°	3138.2	3191.8	3215.4	3152.4	3089.4	3039.0	2976.0	2859.4	2768.0	2794.8	2758.5
32.5°	3083.1	3048.4	2935.0	2772.7	2723.9	2642.0	2463.9	2326.9	2331.6	2259.1	2289.1
35°	2920.8	2763.3	2549.0	2303.3	2238.7	2194.5	1999.2	1969.3	1906.2	1838.5	1857.4
37.5°	2634.1	2404.1	2144.1	1963.0	1866.9	1770.8	1660.5	1594.3	1556.5	1528.1	1550.2
40°	2284.3	2003.9	1789.7	1627.4	1545.5	1484.0	1408.4	1342.3	1299.7	1295.0	1302.9
42.5°	1940.9	1704.6	1507.7	1353.3	1326.5	1254.0	1205.2	1153.2	1140.6	1120.1	1131.1
45°	1643.2	1451.0	1288.7	1162.7	1131.1	1112.2	1052.4	1019.3	1005.1	992.5	1011.4
47.5°	1427.3	1225.7	1107.5	1031.9	1000.4	968.9	935.8	913.7	902.7	904.3	902.7
50°	1219.4	1071.3	967.3	909.0	890.1	868.1	841.3	827.1	822.4	808.2	819.2
52.5°	1049.2	942.1	869.6	814.5	800.3	784.6	762.5	754.6	743.6	740.4	740.4
55°	912.2	828.7	770.4	734.1	716.8	704.2	691.6	682.2	674.3	674.3	674.3
57.5°	805.0	732.6	690.0	658.5	652.2	639.6	625.4	625.4	614.4	612.8	617.6
60°	713.7	649.1	616.0	589.2	579.8	576.6	562.4	562.4	559.3	551.4	557.7
62.5°	620.7	573.4	545.1	524.6	515.2	515.2	504.1	496.3	496.3	497.8	494.7
65°	535.6	501.0	475.8	460.0	455.3	449.0	447.4	441.1	436.4	438.0	436.4
67.5°	460.0	433.2	415.9	403.3	395.4	392.3	387.6	387.6	384.4	386.0	378.1
70°	392.3	365.5	351.3	338.7	335.6	335.6	329.3	330.8	327.7	332.4	329.3
72.5°	323.0	302.5	291.5	286.7	283.6	282.0	278.8	275.7	274.1	277.3	275.7
75°	261.5	244.2	236.3	233.2	230.0	230.0	228.4	226.9	225.3	225.3	225.3
77.5°	203.2	192.2	182.7	185.9	181.2	182.7	178.0	178.0	179.6	178.0	178.0
80°	149.7	141.8	141.8	138.6	132.3	135.5	135.5	130.8	129.2	132.3	127.6
82.5°	99.3	97.7	94.5	92.9	89.8	91.4	89.8	88.2	86.6	89.8	86.6
85°	58.3	58.3	56.7	53.6	56.7	55.1	53.6	53.6	52.0	52.0	52.0
87.5°	29.9	26.8	26.8	25.2	26.8	23.6	25.2	23.6	22.1	23.6	22.1
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1742.4	1747.1	1734.5	1731.4	1731.4	1737.7	1733.0	1690.4	1698.3	1688.8	1685.7
5°	1934.6	1925.2	1912.5	1906.2	1898.4	1876.3	1874.7	1825.9	1816.4	1784.9	1770.8
7.5°	2145.7	2137.8	2100.0	2095.3	2092.1	2071.7	2019.7	1967.7	1929.9	1893.6	1859.0
10°	2386.7	2363.1	2345.8	2311.1	2293.8	2265.4	2197.7	2148.9	2084.3	2029.1	1956.7
12.5°	2676.6	2649.8	2591.6	2566.3	2544.3	2465.5	2397.8	2342.6	2216.6	2178.8	2089.0
15°	2889.3	2832.6	2826.3	2771.1	2768.0	2681.4	2552.2	2492.3	2394.6	2256.0	2163.0
17.5°	3119.3	3068.9	3029.5	2963.3	2953.9	2872.0	2777.5	2630.9	2523.8	2391.5	2273.3
20°	3287.9	3261.1	3193.4	3166.6	3111.4	3042.1	2944.4	2763.3	2632.5	2500.2	2355.2
22.5°	3421.8	3395.0	3341.4	3305.2	3273.7	3183.9	3067.3	2912.9	2733.3	2560.0	2410.4
25°	3420.2	3412.3	3390.3	3373.0	3349.3	3283.2	3185.5	3037.4	2837.3	2646.7	2438.7
27.5°	3226.4	3248.5	3286.3	3305.2	3300.5	3291.0	3235.9	3111.4	2931.8	2705.0	2471.8
30°	2823.1	2903.5	2974.4	3068.9	3097.3	3166.6	3198.1	3127.2	2983.8	2772.7	2514.4
32.5°	2341.1	2457.6	2612.0	2664.0	2753.8	2887.7	3037.4	3064.2	2974.4	2812.1	2541.1
35°	1920.4	2016.5	2136.3	2218.2	2298.5	2515.9	2705.0	2868.8	2898.8	2791.6	2534.8
37.5°	1589.6	1657.3	1762.9	1832.2	1906.2	2092.1	2356.8	2569.5	2719.2	2722.3	2517.5
40°	1350.1	1380.1	1471.4	1521.8	1592.7	1753.4	1989.7	2267.0	2486.0	2586.8	2471.8
42.5°	1143.7	1183.1	1258.8	1296.6	1342.3	1482.5	1638.4	1901.5	2172.5	2388.3	2386.7
45°	1020.9	1049.2	1083.9	1115.4	1167.4	1250.9	1428.9	1625.8	1885.8	2130.0	2226.1
47.5°	912.2	938.9	973.6	983.1	1017.7	1096.5	1205.2	1376.9	1619.5	1862.1	2043.3
50°	820.8	842.8	866.5	883.8	899.6	964.2	1046.1	1191.0	1384.8	1619.5	1844.8
52.5°	749.9	765.6	786.1	795.6	809.8	857.0	920.0	1027.2	1186.3	1400.5	1619.5
55°	683.7	694.8	707.4	723.1	729.4	764.1	812.9	904.3	1022.4	1214.6	1422.6
57.5°	622.3	627.0	634.9	644.3	652.2	682.2	724.7	786.1	890.1	1038.2	1235.1
60°	553.0	565.6	570.3	579.8	584.5	608.1	641.2	693.2	773.5	901.1	1049.2
62.5°	494.7	502.6	510.4	515.2	526.2	534.1	560.8	608.1	674.3	768.8	902.7
65°	442.7	445.8	450.6	455.3	458.4	467.9	493.1	524.6	575.0	658.5	762.5
67.5°	382.8	386.0	392.3	393.9	397.0	409.6	423.8	450.6	493.1	556.1	641.2
70°	324.5	329.3	332.4	335.6	340.3	345.0	360.8	382.8	415.9	460.0	526.2
72.5°	274.1	278.8	278.8	282.0	280.4	286.7	302.5	318.2	340.3	376.5	434.8
75°	223.7	223.7	226.9	228.4	230.0	236.3	242.6	255.2	272.5	300.9	337.1
77.5°	176.4	174.9	178.0	178.0	178.0	182.7	189.0	195.4	206.4	226.9	255.2
80°	129.2	129.2	132.3	133.9	130.8	132.3	135.5	141.8	149.7	163.8	179.6
82.5°	85.1	91.4	89.8	91.4	89.8	92.9	94.5	96.1	99.3	105.6	116.6
85°	52.0	52.0	52.0	53.6	52.0	53.6	53.6	53.6	55.1	58.3	63.0
87.5°	22.1	22.1	22.1	23.6	22.1	22.1	23.6	22.1	23.6	23.6	25.2
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1669.9	1665.2	1665.2	1662.1	1652.6	1635.3	1633.7	1636.9	1627.4	1617.9	1603.8
5°	1751.9	1721.9	1712.5	1703.0	1684.1	1652.6	1640.0	1629.0	1611.6	1591.2	1569.1
7.5°	1821.2	1778.6	1766.0	1748.7	1710.9	1666.8	1638.4	1614.8	1591.2	1562.8	1536.0
10°	1907.8	1846.4	1816.4	1791.2	1739.3	1677.8	1635.3	1600.6	1562.8	1528.1	1493.5
12.5°	2005.5	1906.2	1896.8	1835.4	1775.5	1684.1	1632.1	1581.7	1531.3	1488.8	1452.5
15°	2087.4	1978.7	1939.3	1898.4	1783.4	1669.9	1619.5	1562.8	1504.5	1458.8	1405.3
17.5°	2139.4	2049.6	1966.1	1911.0	1791.2	1690.4	1592.7	1528.1	1466.7	1403.7	1359.6
20°	2202.4	2071.7	1999.2	1925.2	1807.0	1674.7	1577.0	1496.6	1421.0	1364.3	1310.7
22.5°	2265.4	2089.0	2029.1	1948.8	1810.1	1658.9	1548.6	1468.3	1381.6	1324.9	1266.6
25°	2259.1	2114.2	2015.0	1947.2	1778.6	1644.7	1515.5	1421.0	1340.7	1268.2	1209.9
27.5°	2263.9	2085.8	1985.0	1906.2	1756.6	1624.2	1480.9	1381.6	1298.1	1222.5	1161.1
30°	2265.4	2043.3	1955.1	1860.6	1715.6	1575.4	1441.5	1340.7	1252.5	1170.5	1115.4
32.5°	2260.7	2008.6	1898.4	1813.3	1651.0	1528.1	1395.8	1288.7	1198.9	1123.3	1071.3
35°	2249.7	1967.7	1840.1	1733.0	1584.9	1460.4	1353.3	1243.0	1146.9	1077.6	1017.7
37.5°	2219.8	1923.6	1778.6	1673.1	1507.7	1381.6	1287.1	1195.7	1102.8	1020.9	970.5
40°	2197.7	1863.7	1717.2	1602.2	1424.2	1301.3	1222.5	1135.9	1044.5	970.5	921.6
42.5°	2147.3	1807.0	1654.2	1517.1	1342.3	1216.2	1142.2	1072.9	994.1	921.6	877.5
45°	2065.4	1745.6	1577.0	1438.4	1252.5	1132.7	1065.0	1008.3	938.9	869.6	825.5
47.5°	1950.4	1657.3	1495.1	1356.4	1164.2	1042.9	975.2	932.6	877.5	819.2	781.4
50°	1825.9	1561.2	1411.6	1274.5	1079.2	961.0	894.8	855.4	819.2	765.6	729.4
52.5°	1663.6	1458.8	1315.5	1184.7	987.8	874.4	816.1	787.7	749.9	712.1	680.6
55°	1506.1	1326.5	1208.3	1083.9	898.0	792.4	735.7	705.8	683.7	652.2	627.0
57.5°	1323.3	1203.6	1094.9	981.5	814.5	718.4	664.8	628.6	614.4	600.2	576.6
60°	1154.8	1063.4	975.2	880.7	727.8	641.2	589.2	560.8	546.7	537.2	521.5
62.5°	1000.4	929.5	853.9	778.3	639.6	560.8	521.5	493.1	480.5	478.9	464.7
65°	852.3	801.9	740.4	666.4	557.7	488.4	450.6	433.2	419.1	419.1	408.0
67.5°	704.2	669.5	620.7	568.7	483.7	419.1	384.4	368.6	360.8	360.8	352.9
70°	586.1	562.4	518.3	472.6	398.6	349.7	323.0	308.8	304.1	305.6	299.3
72.5°	475.8	450.6	414.3	381.2	326.1	289.9	271.0	255.2	247.3	248.9	247.3
75°	368.6	356.0	324.5	299.3	255.2	230.0	212.7	204.8	198.5	200.1	196.9
77.5°	277.3	258.4	241.0	223.7	196.9	176.4	162.3	154.4	149.7	149.7	149.7
80°	189.0	185.9	171.7	162.3	140.2	124.5	113.4	111.9	107.1	107.1	107.1
82.5°	122.9	115.0	107.1	100.8	88.2	78.8	74.0	70.9	69.3	67.7	70.9
85°	67.7	63.0	59.9	53.6	48.8	44.1	39.4	37.8	36.2	37.8	36.2
87.5°	26.8	22.1	22.1	20.5	18.9	17.3	17.3	14.2	14.2	12.6	12.6
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1600.6	1599.0	1602.2	1592.7	1577.0	1569.1	1547.1	1542.3	1540.8	1542.3	1543.9
5°	1556.5	1554.9	1550.2	1534.5	1515.5	1501.4	1474.6	1473.0	1463.6	1454.1	1458.8
7.5°	1514.0	1507.7	1498.2	1477.7	1452.5	1436.8	1414.7	1399.0	1386.4	1378.5	1372.2
10°	1471.4	1462.0	1452.5	1425.7	1394.2	1370.6	1343.8	1331.2	1317.0	1310.7	1304.4
12.5°	1416.3	1406.8	1389.5	1358.0	1339.1	1309.2	1282.4	1269.8	1261.9	1249.3	1241.4
15°	1372.2	1353.3	1343.8	1310.7	1271.4	1268.2	1219.4	1216.2	1200.5	1200.5	1187.9
17.5°	1321.8	1307.6	1290.3	1257.2	1228.8	1200.5	1175.3	1165.8	1151.6	1148.5	1142.2
20°	1272.9	1254.0	1247.7	1214.6	1184.7	1150.1	1123.3	1113.8	1107.5	1101.2	1105.9
22.5°	1222.5	1206.8	1191.0	1161.1	1139.0	1104.4	1088.6	1079.2	1069.7	1066.6	1068.1
25°	1173.7	1159.5	1143.7	1113.8	1090.2	1061.8	1047.6	1042.9	1038.2	1038.2	1036.6
27.5°	1126.4	1112.2	1098.1	1071.3	1047.6	1027.2	1016.1	1011.4	1006.7	1009.8	1013.0
30°	1077.6	1065.0	1052.4	1028.7	1009.8	990.9	984.6	981.5	979.9	987.8	987.8
32.5°	1033.5	1022.4	1013.0	990.9	972.0	956.3	951.5	953.1	954.7	959.4	962.6
35°	987.8	979.9	970.5	951.5	935.8	921.6	923.2	923.2	926.3	934.2	940.5
37.5°	946.8	935.8	927.9	912.2	899.6	887.0	891.7	896.4	899.6	909.0	912.2
40°	898.0	893.3	887.0	871.2	860.2	858.6	860.2	863.3	869.6	874.4	879.1
42.5°	858.6	852.3	844.4	831.8	822.4	823.9	825.5	828.7	831.8	839.7	844.4
45°	814.5	809.8	803.5	792.4	784.6	786.1	787.7	787.7	790.9	800.3	803.5
47.5°	765.6	767.2	759.3	748.3	743.6	743.6	743.6	746.7	754.6	757.8	759.3
50°	718.4	715.2	713.7	702.6	699.5	697.9	699.5	701.1	712.1	710.5	715.2
52.5°	668.0	668.0	666.4	660.1	655.4	655.4	652.2	660.1	663.2	666.4	671.1
55°	619.1	614.4	612.8	609.7	603.4	601.8	605.0	614.4	617.6	620.7	625.4
57.5°	565.6	565.6	562.4	557.7	557.7	557.7	557.7	564.0	568.7	571.9	581.3
60°	516.7	510.4	505.7	505.7	505.7	504.1	513.6	513.6	523.0	524.6	527.8
62.5°	458.4	455.3	452.1	453.7	452.1	455.3	458.4	464.7	466.3	471.0	475.8
65°	403.3	403.3	400.2	409.6	403.3	403.3	411.2	411.2	414.3	419.1	425.4
67.5°	349.7	351.3	348.2	348.2	351.3	352.9	354.5	360.8	362.3	368.6	376.5
70°	294.6	297.8	299.3	296.2	299.3	302.5	305.6	307.2	313.5	316.7	321.4
72.5°	245.8	248.9	244.2	245.8	247.3	250.5	252.1	255.2	258.4	267.8	271.0
75°	196.9	195.4	193.8	200.1	196.9	203.2	204.8	204.8	208.0	215.8	219.0
77.5°	151.2	151.2	152.8	149.7	154.4	152.8	154.4	159.1	163.8	163.8	176.4
80°	105.6	108.7	108.7	108.7	110.3	111.9	108.7	116.6	118.2	118.2	122.9
82.5°	67.7	69.3	67.7	70.9	70.9	74.0	72.5	74.0	77.2	80.3	81.9
85°	36.2	36.2	39.4	39.4	37.8	39.4	37.8	39.4	42.5	42.5	44.1
87.5°	12.6	12.6	12.6	12.6	14.2	12.6	14.2	14.2	12.6	12.6	17.3
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1542.3	1543.9	1537.6	1532.9	1545.5	1537.6	1537.6	1539.2	1536.0	1540.8	1539.2
5°	1455.7	1457.3	1446.2	1449.4	1443.1	1441.5	1439.9	1449.4	1447.8	1446.2	1449.4
7.5°	1370.6	1370.6	1365.9	1362.7	1362.7	1358.0	1364.3	1362.7	1365.9	1365.9	1370.6
10°	1299.7	1302.9	1295.0	1287.1	1285.5	1287.1	1287.1	1288.7	1290.3	1301.3	1299.7
12.5°	1241.4	1236.7	1235.1	1230.4	1222.5	1219.4	1216.2	1233.5	1228.8	1228.8	1228.8
15°	1176.8	1187.9	1186.3	1172.1	1169.0	1175.3	1172.1	1172.1	1187.9	1186.3	1184.7
17.5°	1142.2	1139.0	1135.9	1128.0	1129.6	1128.0	1129.6	1129.6	1139.0	1139.0	1139.0
20°	1102.8	1096.5	1096.5	1093.3	1093.3	1088.6	1094.9	1096.5	1102.8	1102.8	1104.4
22.5°	1068.1	1063.4	1063.4	1061.8	1065.0	1058.7	1065.0	1066.6	1066.6	1071.3	1071.3
25°	1038.2	1035.0	1035.0	1038.2	1038.2	1038.2	1038.2	1044.5	1039.8	1041.3	1039.8
27.5°	1011.4	1013.0	1014.6	1016.1	1014.6	1016.1	1017.7	1020.9	1022.4	1020.9	1017.7
30°	986.2	990.9	992.5	992.5	995.7	997.2	998.8	998.8	1000.4	995.7	998.8
32.5°	967.3	967.3	970.5	972.0	975.2	976.8	976.8	979.9	978.3	973.6	975.2
35°	940.5	940.5	946.8	950.0	954.7	953.1	954.7	954.7	956.3	953.1	948.4
37.5°	913.7	916.9	916.9	923.2	924.8	926.3	924.8	927.9	926.3	923.2	921.6
40°	882.2	880.7	882.2	887.0	888.5	888.5	888.5	891.7	891.7	891.7	890.1
42.5°	842.8	847.6	846.0	850.7	849.1	849.1	852.3	855.4	857.0	852.3	853.9
45°	805.0	805.0	808.2	808.2	809.8	809.8	816.1	812.9	816.1	812.9	814.5
47.5°	764.1	765.6	765.6	767.2	770.4	773.5	770.4	772.0	772.0	773.5	770.4
50°	718.4	718.4	721.5	726.3	732.6	729.4	727.8	734.1	729.4	729.4	726.3
52.5°	671.1	675.9	677.4	682.2	686.9	688.5	690.0	686.9	688.5	683.7	685.3
55°	625.4	627.0	633.3	638.0	642.8	642.8	641.2	642.8	644.3	638.0	638.0
57.5°	579.8	584.5	590.8	590.8	597.1	597.1	595.5	595.5	597.1	592.4	590.8
60°	530.9	535.6	543.5	543.5	553.0	554.5	551.4	548.2	548.2	543.5	545.1
62.5°	478.9	483.7	488.4	496.3	502.6	499.4	505.7	499.4	501.0	491.5	491.5
65°	433.2	434.8	442.7	450.6	450.6	453.7	450.6	452.1	447.4	447.4	441.1
67.5°	379.7	379.7	387.6	395.4	403.3	403.3	403.3	398.6	398.6	393.9	393.9
70°	332.4	330.8	338.7	343.4	348.2	349.7	346.6	345.0	341.9	337.1	335.6
72.5°	274.1	277.3	285.1	288.3	296.2	294.6	302.5	293.0	293.0	285.1	283.6
75°	222.1	225.3	233.2	237.9	242.6	242.6	247.3	242.6	236.3	233.2	231.6
77.5°	176.4	174.9	181.2	189.0	190.6	189.0	192.2	190.6	184.3	184.3	181.2
80°	126.0	130.8	137.1	135.5	141.8	140.2	140.2	137.1	137.1	132.3	135.5
82.5°	83.5	88.2	89.8	88.2	89.8	92.9	94.5	92.9	92.9	89.8	91.4
85°	44.1	44.1	47.3	48.8	47.3	47.3	48.8	53.6	50.4	47.3	50.4
87.5°	14.2	12.6	12.6	14.2	12.6	12.6	14.2	14.2	15.8	15.8	15.8
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8	1625.8
2.5°	1543.9	1547.1	1548.6	1542.3	1537.6	1545.5	1556.5	1564.4	1570.7	1578.6	1583.3
5°	1452.5	1463.6	1463.6	1466.7	1471.4	1479.3	1499.8	1514.0	1526.6	1536.0	1543.9
7.5°	1375.3	1383.2	1387.9	1395.8	1403.7	1414.7	1438.4	1458.8	1477.7	1488.8	1501.4
10°	1306.0	1312.3	1320.2	1324.9	1339.1	1354.9	1384.8	1402.1	1424.2	1441.5	1457.3
12.5°	1239.8	1261.9	1266.6	1265.1	1277.7	1295.0	1324.9	1351.7	1375.3	1392.7	1410.0
15°	1192.6	1200.5	1209.9	1208.3	1235.1	1239.8	1265.1	1296.6	1328.1	1339.1	1354.9
17.5°	1140.6	1153.2	1162.7	1167.4	1175.3	1192.6	1216.2	1239.8	1280.8	1282.4	1323.3
20°	1099.6	1112.2	1118.5	1124.8	1129.6	1150.1	1170.5	1197.3	1230.4	1247.7	1269.8
22.5°	1072.9	1079.2	1083.9	1088.6	1094.9	1105.9	1131.1	1161.1	1183.1	1202.0	1216.2
25°	1041.3	1047.6	1054.0	1057.1	1061.8	1068.1	1087.0	1110.7	1142.2	1154.8	1169.0
27.5°	1019.3	1019.3	1022.4	1022.4	1028.7	1035.0	1049.2	1071.3	1096.5	1112.2	1131.1
30°	995.7	994.1	995.7	994.1	992.5	1002.0	1014.6	1033.5	1050.8	1069.7	1082.3
32.5°	972.0	970.5	970.5	972.0	965.7	970.5	976.8	994.1	1013.0	1022.4	1036.6
35°	946.8	943.7	943.7	943.7	940.5	937.4	943.7	959.4	972.0	984.6	995.7
37.5°	921.6	916.9	916.9	913.7	910.6	905.9	905.9	918.5	935.8	940.5	954.7
40°	887.0	887.0	883.8	882.2	879.1	875.9	871.2	882.2	898.0	902.7	913.7
42.5°	852.3	847.6	846.0	846.0	846.0	841.3	838.1	846.0	855.4	863.3	869.6
45°	812.9	809.8	811.3	809.8	806.6	805.0	803.5	806.6	817.6	820.8	828.7
47.5°	770.4	768.8	768.8	767.2	765.6	767.2	760.9	768.8	772.0	775.1	781.4
50°	726.3	724.7	723.1	721.5	721.5	723.1	721.5	721.5	727.8	731.0	737.3
52.5°	682.2	677.4	677.4	675.9	675.9	672.7	675.9	677.4	680.6	683.7	686.9
55°	634.9	634.9	630.2	630.2	627.0	627.0	628.6	627.0	633.3	636.5	636.5
57.5°	589.2	582.9	584.5	581.3	578.2	576.6	576.6	579.8	582.9	582.9	586.1
60°	540.4	534.1	532.5	526.2	529.3	524.6	526.2	526.2	532.5	529.3	532.5
62.5°	491.5	483.7	478.9	475.8	475.8	477.3	474.2	472.6	475.8	478.9	485.2
65°	439.5	434.8	430.1	425.4	425.4	423.8	426.9	422.2	420.6	422.2	425.4
67.5°	386.0	381.2	376.5	371.8	373.4	368.6	365.5	370.2	367.1	368.6	371.8
70°	334.0	330.8	321.4	318.2	316.7	318.2	316.7	313.5	318.2	316.7	318.2
72.5°	282.0	278.8	274.1	266.2	266.2	264.7	263.1	263.1	261.5	261.5	261.5
75°	231.6	225.3	220.6	219.0	215.8	214.3	212.7	209.5	211.1	212.7	209.5
77.5°	179.6	171.7	170.1	170.1	165.4	165.4	167.0	165.4	163.8	163.8	163.8
80°	132.3	126.0	126.0	122.9	119.7	119.7	119.7	119.7	118.2	116.6	118.2
82.5°	85.1	83.5	81.9	81.9	85.1	78.8	81.9	80.3	78.8	78.8	77.2
85°	47.3	48.8	47.3	48.8	45.7	47.3	47.3	47.3	45.7	47.3	44.1
87.5°	17.3	17.3	17.3	18.9	18.9	18.9	18.9	18.9	20.5	18.9	18.9
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: P1037263

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1625.8	1625.8	1625.8	1625.8
2.5°	1591.2	1595.9	1611.6	1630.6
5°	1559.7	1572.3	1594.3	1624.2
7.5°	1525.0	1543.9	1575.4	1613.2
10°	1485.6	1512.4	1551.8	1599.0
12.5°	1443.1	1477.7	1528.1	1577.0
15°	1416.3	1451.0	1496.6	1550.2
17.5°	1364.3	1405.3	1452.5	1528.1
20°	1310.7	1356.4	1417.9	1493.5
22.5°	1269.8	1318.6	1376.9	1457.3
25°	1220.9	1271.4	1334.4	1417.9
27.5°	1169.0	1219.4	1290.3	1378.5
30°	1129.6	1178.4	1246.2	1340.7
32.5°	1082.3	1129.6	1200.5	1299.7
35°	1028.7	1082.3	1150.1	1250.9
37.5°	987.8	1036.6	1107.5	1203.6
40°	943.7	986.2	1055.5	1150.1
42.5°	896.4	943.7	1003.5	1098.1
45°	852.3	887.0	948.4	1038.2
47.5°	805.0	844.4	891.7	961.0
50°	754.6	787.7	839.7	887.0
52.5°	705.8	732.6	776.7	812.9
55°	653.8	680.6	713.7	735.7
57.5°	605.0	623.9	645.9	660.1
60°	545.1	564.0	578.2	592.4
62.5°	491.5	505.7	513.6	521.5
65°	436.4	444.3	449.0	455.3
67.5°	376.5	384.4	386.0	395.4
70°	321.4	323.0	326.1	330.8
72.5°	269.4	272.5	271.0	274.1
75°	215.8	219.0	215.8	219.0
77.5°	163.8	167.0	167.0	171.7
80°	118.2	119.7	121.3	121.3
82.5°	77.2	81.9	78.8	80.3
85°	44.1	45.7	45.7	47.3
87.5°	20.5	22.1	20.5	23.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)