

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: P1037265

Luminaire Tested: S123DS-B1165DB2750-4F0-XX-W2A-A_4000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1037265
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_4000K
Description: Define 3 Direct Surface with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

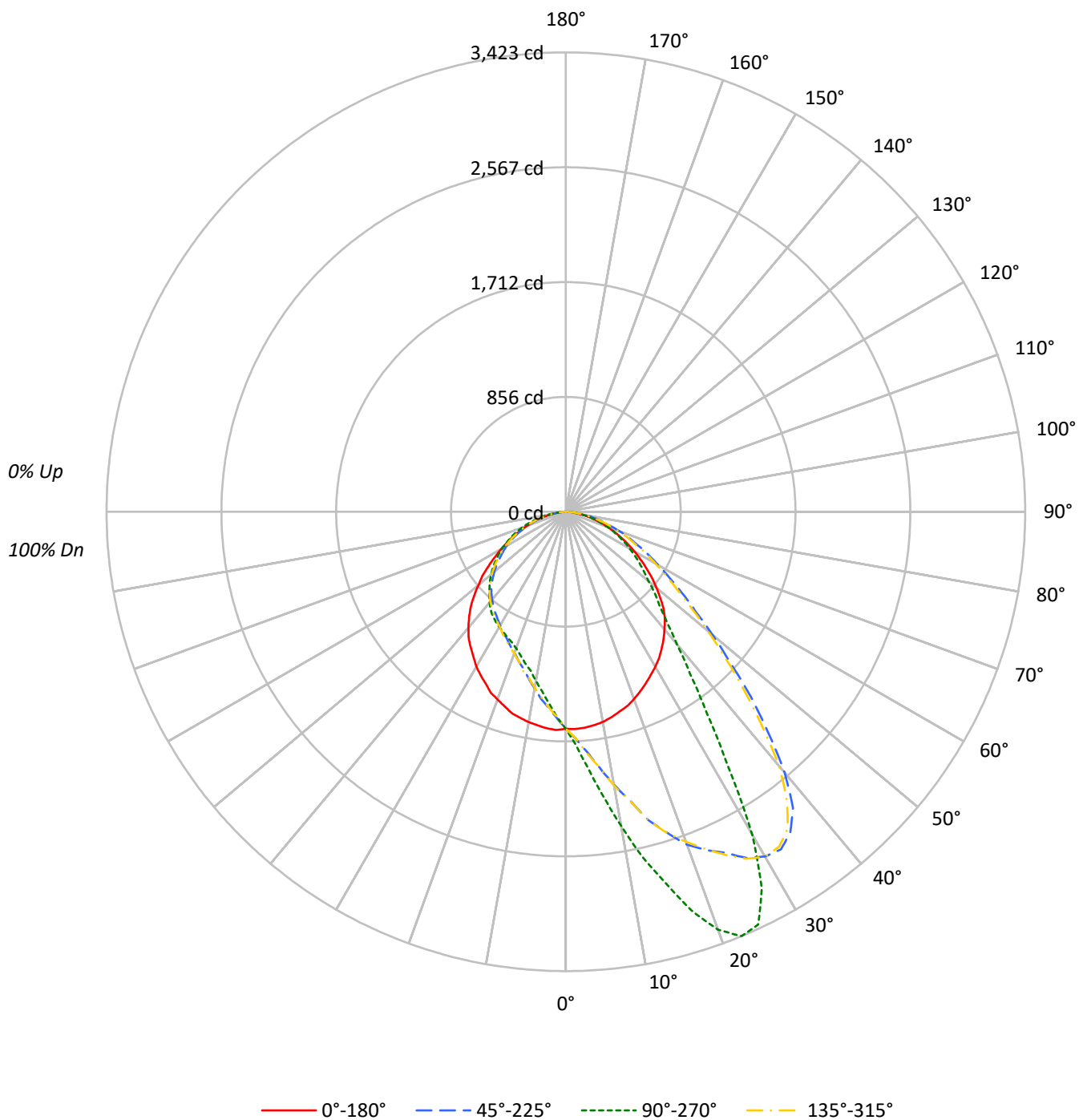
Lumens per Lamp: N/A
Luminaire Lumens: 4879.0 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.37 / 1.5
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot



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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	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°	17400	17400	17400	17400
5°	17450	20750	17501	15487
10°	17378	25973	17395	13988
15°	17177	31856	17316	13022
20°	17010	37949	17046	12399
25°	16744	40296	16781	12260
30°	16568	34538	16568	12323
35°	16343	24020	16240	12453
40°	16068	18092	15870	12414
45°	15714	15022	15261	12256
50°	14768	13457	14244	12146
55°	13728	12581	13170	11994
60°	12680	11802	12004	11870
65°	11530	11092	10972	11489
70°	10351	10401	9662	10943
75°	9054	9316	8467	10031
80°	7476	8157	6893	8641
85°	5805	6385	4644	5805

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 35°

Vertical Angle: 45°

Luminance: 35076 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.0	3.3
10°-20°	510.6	10.5
20°-30°	859.2	17.6
30°-40°	971.0	19.9
40°-50°	869.7	17.8
50°-60°	702.0	14.4
60°-70°	489.2	10.0
70°-80°	256.8	5.3
80°-90°	61.6	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°	1528.8	31.3
0°-40°	2499.8	51.2
0°-60°	4071.5	83.4
0°-90°	4879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4879.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1616	1616	1616	1616	1616	
5°	1615	1920	1620	1433	1615	153
15°	1541	2859	1554	1169	1541	436
25°	1410	3393	1413	1032	1410	650
35°	1244	1828	1236	948	1244	778
45°	1032	987	1002	805	1032	790
55°	732	670	702	639	732	655
65°	453	436	431	451	453	451
75°	218	224	204	241	218	233
85°	47	52	38	47	47	57
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°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1621.2	1633.8	1640.0	1649.4	1658.8	1672.9	1677.6	1685.5	1682.3	1688.6	1691.7
5°	1615.0	1636.9	1655.7	1679.2	1701.1	1716.8	1732.5	1757.5	1776.3	1779.5	1793.6
7.5°	1604.0	1635.3	1668.2	1701.1	1743.4	1768.5	1796.7	1831.1	1859.3	1904.8	1922.0
10°	1589.9	1633.8	1680.8	1726.2	1784.2	1823.3	1857.8	1915.7	1973.7	2020.7	2064.5
12.5°	1568.0	1622.8	1683.9	1751.3	1826.4	1871.9	1918.9	1995.6	2083.3	2155.4	2202.4
15°	1541.4	1610.3	1688.6	1760.7	1843.7	1928.3	1978.4	2064.5	2189.9	2257.2	2377.8
17.5°	1519.4	1589.9	1668.2	1781.0	1893.8	1978.4	2014.4	2172.6	2258.8	2371.6	2507.8
20°	1485.0	1574.3	1674.5	1787.3	1933.0	1984.7	2058.3	2218.1	2324.6	2471.8	2639.4
22.5°	1448.9	1544.5	1665.1	1782.6	1945.5	2000.3	2100.6	2227.5	2396.6	2542.3	2727.1
25°	1409.8	1513.2	1635.3	1774.8	1934.5	2014.4	2108.4	2265.0	2448.3	2631.6	2802.3
27.5°	1370.6	1483.4	1610.3	1749.7	1904.8	1998.8	2092.7	2255.6	2490.6	2689.5	2907.3
30°	1333.0	1445.8	1572.7	1715.2	1878.1	1969.0	2058.3	2261.9	2523.5	2747.5	2966.8
32.5°	1292.3	1408.2	1541.4	1660.4	1824.9	1922.0	2022.3	2261.9	2543.9	2782.0	2982.5
35°	1243.7	1362.8	1477.1	1596.2	1759.1	1867.2	1980.0	2246.2	2562.7	2792.9	2916.7
37.5°	1196.7	1301.7	1400.4	1516.3	1687.0	1803.0	1933.0	2227.5	2553.3	2745.9	2780.4
40°	1143.5	1248.4	1328.3	1436.4	1616.5	1751.3	1882.8	2202.4	2512.5	2634.7	2534.5
42.5°	1091.8	1174.8	1243.7	1348.7	1544.5	1676.1	1818.6	2157.0	2432.7	2457.7	2232.2
45°	1032.3	1091.8	1152.9	1271.9	1466.2	1600.9	1759.1	2091.2	2304.2	2232.2	1947.1
47.5°	955.5	1008.8	1076.1	1185.8	1383.2	1522.6	1672.9	2006.6	2117.8	1967.4	1655.7
50°	881.9	927.3	990.0	1096.5	1295.4	1431.7	1591.5	1873.4	1928.3	1691.7	1427.0
52.5°	808.3	842.7	903.8	1010.3	1209.3	1340.9	1486.5	1737.2	1705.8	1452.1	1217.1
55°	731.5	761.3	819.2	924.2	1109.0	1234.3	1373.8	1569.6	1488.1	1246.9	1058.9
57.5°	656.3	687.7	747.2	834.9	1008.8	1131.0	1242.2	1395.7	1273.5	1080.8	914.8
60°	589.0	615.6	661.0	747.2	905.4	1004.1	1105.9	1210.8	1109.0	922.6	795.7
62.5°	518.5	543.5	585.8	664.2	800.4	888.2	969.6	1055.8	943.0	806.7	693.9
65°	452.7	473.1	512.2	584.3	695.5	767.5	833.3	892.9	802.0	676.7	592.1
67.5°	393.2	410.4	443.3	507.5	601.5	653.2	706.5	756.6	679.8	579.6	507.5
70°	328.9	343.0	372.8	419.8	495.0	548.2	587.4	625.0	556.1	476.2	427.6
72.5°	272.6	286.7	305.5	354.0	405.7	438.6	480.9	501.3	462.1	396.3	347.7
75°	217.7	228.7	245.9	277.3	325.8	347.7	374.4	390.0	354.0	310.2	280.4
77.5°	170.7	175.4	188.0	209.9	242.8	267.9	288.2	297.6	272.6	244.4	219.3
80°	120.6	126.9	136.3	155.1	180.1	188.0	200.5	211.5	195.8	170.7	155.1
82.5°	79.9	87.7	92.4	100.3	115.9	125.3	128.4	137.8	123.7	114.3	108.1
85°	47.0	50.1	51.7	56.4	64.2	68.9	73.6	75.2	72.1	70.5	64.2
87.5°	23.5	23.5	23.5	26.6	28.2	31.3	32.9	32.9	32.9	31.3	29.8
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°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1702.7	1705.8	1716.8	1724.6	1740.3	1738.7	1738.7	1737.2	1732.5	1740.3	1745.0
5°	1821.7	1848.4	1851.5	1886.0	1887.5	1901.6	1911.0	1903.2	1922.0	1920.4	1906.3
7.5°	1969.0	2005.0	2022.3	2055.1	2092.7	2083.3	2119.4	2125.6	2122.5	2138.2	2149.1
10°	2130.3	2193.0	2236.9	2297.9	2313.6	2323.0	2346.5	2366.9	2407.6	2376.3	2396.6
12.5°	2315.2	2360.6	2418.6	2515.7	2564.2	2595.6	2606.5	2620.6	2648.8	2631.6	2633.2
15°	2470.2	2531.3	2630.0	2750.6	2764.7	2803.9	2794.5	2879.1	2919.8	2858.7	2893.2
17.5°	2631.6	2713.0	2830.5	2935.5	2995.0	3021.6	3046.7	3128.1	3125.0	3115.6	3123.4
20°	2735.0	2868.1	3013.8	3153.2	3170.4	3190.8	3258.2	3292.6	3286.4	3313.0	3330.2
22.5°	2880.7	3021.6	3176.7	3269.1	3308.3	3331.8	3385.0	3407.0	3416.4	3422.6	3411.7
25°	3002.8	3153.2	3267.6	3349.0	3372.5	3385.0	3402.3	3408.5	3403.8	3392.9	3402.3
27.5°	3085.9	3206.5	3284.8	3322.4	3309.8	3289.5	3256.6	3234.7	3186.1	3162.6	3190.8
30°	3120.3	3173.6	3197.1	3134.4	3071.8	3021.6	2959.0	2843.1	2752.2	2778.8	2742.8
32.5°	3065.5	3031.0	2918.2	2756.9	2708.3	2626.9	2449.9	2313.6	2318.3	2246.2	2276.0
35°	2904.1	2747.5	2534.5	2290.1	2225.9	2182.0	1987.8	1958.0	1895.4	1828.0	1846.8
37.5°	2619.1	2390.4	2131.9	1951.8	1856.2	1760.7	1651.0	1585.2	1547.6	1519.4	1541.4
40°	2271.3	1992.5	1779.5	1618.1	1536.7	1475.6	1400.4	1334.6	1292.3	1287.6	1295.4
42.5°	1929.8	1694.9	1499.1	1345.6	1318.9	1246.9	1198.3	1146.6	1134.1	1113.7	1124.7
45°	1633.8	1442.7	1281.3	1156.0	1124.7	1105.9	1046.4	1013.5	999.4	986.8	1005.6
47.5°	1419.2	1218.7	1101.2	1026.0	994.7	963.3	930.5	908.5	897.6	899.1	897.6
50°	1212.4	1065.2	961.8	903.8	885.0	863.1	836.5	822.4	817.7	803.6	814.5
52.5°	1043.2	936.7	864.7	809.8	795.7	780.1	758.1	750.3	739.4	736.2	736.2
55°	907.0	823.9	766.0	730.0	712.7	700.2	687.7	678.3	670.4	670.4	670.4
57.5°	800.4	728.4	686.1	654.8	648.5	636.0	621.9	621.9	610.9	609.3	614.0
60°	709.6	645.4	612.5	585.8	576.4	573.3	559.2	559.2	556.1	548.2	554.5
62.5°	617.2	570.2	542.0	521.6	512.2	512.2	501.3	493.4	493.4	495.0	491.9
65°	532.6	498.1	473.1	457.4	452.7	446.4	444.9	438.6	433.9	435.5	433.9
67.5°	457.4	430.8	413.5	401.0	393.2	390.0	385.3	385.3	382.2	383.8	375.9
70°	390.0	363.4	349.3	336.8	333.6	333.6	327.4	328.9	325.8	330.5	327.4
72.5°	321.1	300.8	289.8	285.1	282.0	280.4	277.3	274.1	272.6	275.7	274.1
75°	260.0	242.8	235.0	231.8	228.7	228.7	227.1	225.6	224.0	224.0	224.0
77.5°	202.1	191.1	181.7	184.8	180.1	181.7	177.0	177.0	178.6	177.0	177.0
80°	148.8	141.0	141.0	137.8	131.6	134.7	134.7	130.0	128.4	131.6	126.9
82.5°	98.7	97.1	94.0	92.4	89.3	90.9	89.3	87.7	86.2	89.3	86.2
85°	58.0	58.0	56.4	53.3	56.4	54.8	53.3	53.3	51.7	51.7	51.7
87.5°	29.8	26.6	26.6	25.1	26.6	23.5	25.1	23.5	21.9	23.5	21.9
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1732.5	1737.2	1724.6	1721.5	1721.5	1727.8	1723.1	1680.8	1688.6	1679.2	1676.1
5°	1923.6	1914.2	1901.6	1895.4	1887.5	1865.6	1864.0	1815.5	1806.1	1774.8	1760.7
7.5°	2133.5	2125.6	2088.0	2083.3	2080.2	2059.8	2008.2	1956.5	1918.9	1882.8	1848.4
10°	2373.1	2349.6	2332.4	2297.9	2280.7	2252.5	2185.2	2136.6	2072.4	2017.6	1945.5
12.5°	2661.4	2634.7	2576.8	2551.7	2529.8	2451.5	2384.1	2329.3	2204.0	2166.4	2077.1
15°	2872.8	2816.4	2810.2	2755.3	2752.2	2666.1	2537.6	2478.1	2381.0	2243.1	2150.7
17.5°	3101.5	3051.4	3012.2	2946.4	2937.0	2855.6	2761.6	2615.9	2509.4	2377.8	2260.3
20°	3269.1	3242.5	3175.1	3148.5	3093.7	3024.8	2927.6	2747.5	2617.5	2485.9	2341.8
22.5°	3402.3	3375.6	3322.4	3286.4	3255.0	3165.7	3049.8	2896.3	2717.7	2545.4	2396.6
25°	3400.7	3392.9	3370.9	3353.7	3330.2	3264.4	3167.3	3020.1	2821.1	2631.6	2424.8
27.5°	3208.0	3230.0	3267.6	3286.4	3281.7	3272.3	3217.4	3093.7	2915.1	2689.5	2457.7
30°	2807.0	2886.9	2957.4	3051.4	3079.6	3148.5	3179.8	3109.3	2966.8	2756.9	2500.0
32.5°	2327.7	2443.6	2597.1	2648.8	2738.1	2871.3	3020.1	3046.7	2957.4	2796.1	2526.6
35°	1909.5	2005.0	2124.1	2205.5	2285.4	2501.6	2689.5	2852.5	2882.2	2775.7	2520.4
37.5°	1580.5	1647.9	1752.8	1821.7	1895.4	2080.2	2343.4	2554.8	2703.6	2706.8	2503.1
40°	1342.4	1372.2	1463.0	1513.2	1583.7	1743.4	1978.4	2254.1	2471.8	2572.1	2457.7
42.5°	1137.2	1176.4	1251.6	1289.2	1334.6	1474.0	1629.1	1890.7	2160.1	2374.7	2373.1
45°	1015.0	1043.2	1077.7	1109.0	1160.7	1243.7	1420.7	1616.5	1875.0	2117.8	2213.4
47.5°	907.0	933.6	968.0	977.4	1011.9	1090.2	1198.3	1369.1	1610.3	1851.5	2031.6
50°	816.1	838.0	861.5	878.8	894.4	958.7	1040.1	1184.2	1376.9	1610.3	1834.3
52.5°	745.6	761.3	781.6	791.0	805.1	852.1	914.8	1021.3	1179.5	1392.5	1610.3
55°	679.8	690.8	703.3	719.0	725.3	759.7	808.3	899.1	1016.6	1207.7	1414.5
57.5°	618.7	623.4	631.3	640.7	648.5	678.3	720.6	781.6	885.0	1032.3	1228.1
60°	549.8	562.3	567.0	576.4	581.1	604.6	637.5	689.2	769.1	896.0	1043.2
62.5°	491.9	499.7	507.5	512.2	523.2	531.0	557.6	604.6	670.4	764.4	897.6
65°	440.2	443.3	448.0	452.7	455.8	465.2	490.3	521.6	571.7	654.8	758.1
67.5°	380.6	383.8	390.0	391.6	394.7	407.3	421.4	448.0	490.3	552.9	637.5
70°	322.7	327.4	330.5	333.6	338.3	343.0	358.7	380.6	413.5	457.4	523.2
72.5°	272.6	277.3	277.3	280.4	278.8	285.1	300.8	316.4	338.3	374.4	432.3
75°	222.4	222.4	225.6	227.1	228.7	235.0	241.2	253.8	271.0	299.2	335.2
77.5°	175.4	173.9	177.0	177.0	177.0	181.7	188.0	194.2	205.2	225.6	253.8
80°	128.4	128.4	131.6	133.1	130.0	131.6	134.7	141.0	148.8	162.9	178.6
82.5°	84.6	90.9	89.3	90.9	89.3	92.4	94.0	95.6	98.7	105.0	115.9
85°	51.7	51.7	51.7	53.3	51.7	53.3	53.3	53.3	54.8	58.0	62.7
87.5°	21.9	21.9	21.9	23.5	21.9	21.9	23.5	21.9	23.5	23.5	25.1
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: P1037265

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1660.4	1655.7	1655.7	1652.6	1643.2	1625.9	1624.4	1627.5	1618.1	1608.7	1594.6
5°	1741.9	1712.1	1702.7	1693.3	1674.5	1643.2	1630.6	1619.7	1602.4	1582.1	1560.2
7.5°	1810.8	1768.5	1756.0	1738.7	1701.1	1657.3	1629.1	1605.6	1582.1	1553.9	1527.3
10°	1896.9	1835.8	1806.1	1781.0	1729.3	1668.2	1625.9	1591.5	1553.9	1519.4	1485.0
12.5°	1994.1	1895.4	1886.0	1824.9	1765.4	1674.5	1622.8	1572.7	1522.6	1480.3	1444.2
15°	2075.5	1967.4	1928.3	1887.5	1773.2	1660.4	1610.3	1553.9	1495.9	1450.5	1397.2
17.5°	2127.2	2037.9	1954.9	1900.1	1781.0	1680.8	1583.7	1519.4	1458.3	1395.7	1351.8
20°	2189.9	2059.8	1987.8	1914.2	1796.7	1665.1	1568.0	1488.1	1412.9	1356.5	1303.3
22.5°	2252.5	2077.1	2017.6	1937.7	1799.8	1649.4	1539.8	1459.9	1373.8	1317.4	1259.4
25°	2246.2	2102.1	2003.5	1936.1	1768.5	1635.3	1506.9	1412.9	1333.0	1261.0	1203.0
27.5°	2250.9	2073.9	1973.7	1895.4	1746.6	1615.0	1472.4	1373.8	1290.7	1215.5	1154.5
30°	2252.5	2031.6	1943.9	1849.9	1705.8	1566.4	1433.3	1333.0	1245.3	1163.9	1109.0
32.5°	2247.8	1997.2	1887.5	1803.0	1641.6	1519.4	1387.8	1281.3	1192.0	1116.9	1065.2
35°	2236.9	1956.5	1829.6	1723.1	1575.8	1452.1	1345.6	1235.9	1140.4	1071.4	1011.9
37.5°	2207.1	1912.6	1768.5	1663.5	1499.1	1373.8	1279.8	1188.9	1096.5	1015.0	964.9
40°	2185.2	1853.1	1707.4	1593.1	1416.0	1293.9	1215.5	1129.4	1038.5	964.9	916.4
42.5°	2135.0	1796.7	1644.7	1508.5	1334.6	1209.3	1135.7	1066.7	988.4	916.4	872.5
45°	2053.6	1735.6	1568.0	1430.1	1245.3	1126.3	1058.9	1002.5	933.6	864.7	820.8
47.5°	1939.2	1647.9	1486.5	1348.7	1157.6	1037.0	969.6	927.3	872.5	814.5	776.9
50°	1815.5	1552.3	1403.5	1267.2	1073.0	955.5	889.7	850.6	814.5	761.3	725.3
52.5°	1654.1	1450.5	1308.0	1177.9	982.1	869.4	811.4	783.2	745.6	708.0	676.7
55°	1497.5	1318.9	1201.4	1077.7	892.9	787.9	731.5	701.8	679.8	648.5	623.4
57.5°	1315.8	1196.7	1088.7	975.9	809.8	714.3	661.0	625.0	610.9	596.8	573.3
60°	1148.2	1057.3	969.6	875.6	723.7	637.5	585.8	557.6	543.5	534.1	518.5
62.5°	994.7	924.2	849.0	773.8	636.0	557.6	518.5	490.3	477.8	476.2	462.1
65°	847.4	797.3	736.2	662.6	554.5	485.6	448.0	430.8	416.7	416.7	405.7
67.5°	700.2	665.7	617.2	565.5	480.9	416.7	382.2	366.5	358.7	358.7	350.9
70°	582.7	559.2	515.4	469.9	396.3	347.7	321.1	307.0	302.3	303.9	297.6
72.5°	473.1	448.0	412.0	379.1	324.2	288.2	269.4	253.8	245.9	247.5	245.9
75°	366.5	354.0	322.7	297.6	253.8	228.7	211.5	203.6	197.4	198.9	195.8
77.5°	275.7	256.9	239.7	222.4	195.8	175.4	161.3	153.5	148.8	148.8	148.8
80°	188.0	184.8	170.7	161.3	139.4	123.7	112.8	111.2	106.5	106.5	106.5
82.5°	122.2	114.3	106.5	100.3	87.7	78.3	73.6	70.5	68.9	67.4	70.5
85°	67.4	62.7	59.5	53.3	48.6	43.9	39.2	37.6	36.0	37.6	36.0
87.5°	26.6	21.9	21.9	20.4	18.8	17.2	17.2	14.1	14.1	12.5	12.5
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: P1037265

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1591.5	1589.9	1593.1	1583.7	1568.0	1560.2	1538.2	1533.5	1532.0	1533.5	1535.1
5°	1547.6	1546.1	1541.4	1525.7	1506.9	1492.8	1466.2	1464.6	1455.2	1445.8	1450.5
7.5°	1505.3	1499.1	1489.7	1469.3	1444.2	1428.6	1406.6	1391.0	1378.5	1370.6	1364.4
10°	1463.0	1453.6	1444.2	1417.6	1386.3	1362.8	1336.2	1323.6	1309.5	1303.3	1297.0
12.5°	1408.2	1398.8	1381.6	1350.3	1331.5	1301.7	1275.1	1262.5	1254.7	1242.2	1234.3
15°	1364.4	1345.6	1336.2	1303.3	1264.1	1261.0	1212.4	1209.3	1193.6	1193.6	1181.1
17.5°	1314.2	1300.1	1282.9	1250.0	1221.8	1193.6	1168.6	1159.2	1145.1	1141.9	1135.7
20°	1265.7	1246.9	1240.6	1207.7	1177.9	1143.5	1116.9	1107.5	1101.2	1094.9	1099.6
22.5°	1215.5	1199.9	1184.2	1154.5	1132.5	1098.1	1082.4	1073.0	1063.6	1060.5	1062.0
25°	1167.0	1152.9	1137.2	1107.5	1084.0	1055.8	1041.7	1037.0	1032.3	1032.3	1030.7
27.5°	1120.0	1105.9	1091.8	1065.2	1041.7	1021.3	1010.3	1005.6	1000.9	1004.1	1007.2
30°	1071.4	1058.9	1046.4	1022.9	1004.1	985.3	979.0	975.9	974.3	982.1	982.1
32.5°	1027.6	1016.6	1007.2	985.3	966.5	950.8	946.1	947.7	949.3	954.0	957.1
35°	982.1	974.3	964.9	946.1	930.5	916.4	917.9	917.9	921.1	928.9	935.2
37.5°	941.4	930.5	922.6	907.0	894.4	881.9	886.6	891.3	894.4	903.8	907.0
40°	892.9	888.2	881.9	866.2	855.3	853.7	855.3	858.4	864.7	869.4	874.1
42.5°	853.7	847.4	839.6	827.1	817.7	819.2	820.8	823.9	827.1	834.9	839.6
45°	809.8	805.1	798.9	787.9	780.1	781.6	783.2	783.2	786.3	795.7	798.9
47.5°	761.3	762.8	755.0	744.1	739.4	739.4	739.4	742.5	750.3	753.4	755.0
50°	714.3	711.2	709.6	698.6	695.5	693.9	695.5	697.1	708.0	706.5	711.2
52.5°	664.2	664.2	662.6	656.3	651.6	651.6	648.5	656.3	659.5	662.6	667.3
55°	615.6	610.9	609.3	606.2	599.9	598.4	601.5	610.9	614.0	617.2	621.9
57.5°	562.3	562.3	559.2	554.5	554.5	554.5	554.5	560.8	565.5	568.6	578.0
60°	513.8	507.5	502.8	502.8	502.8	501.3	510.7	510.7	520.1	521.6	524.8
62.5°	455.8	452.7	449.6	451.1	449.6	452.7	455.8	462.1	463.7	468.4	473.1
65°	401.0	401.0	397.9	407.3	401.0	401.0	408.8	408.8	412.0	416.7	422.9
67.5°	347.7	349.3	346.2	346.2	349.3	350.9	352.4	358.7	360.3	366.5	374.4
70°	292.9	296.1	297.6	294.5	297.6	300.8	303.9	305.5	311.7	314.9	319.6
72.5°	244.4	247.5	242.8	244.4	245.9	249.1	250.6	253.8	256.9	266.3	269.4
75°	195.8	194.2	192.7	198.9	195.8	202.1	203.6	203.6	206.8	214.6	217.7
77.5°	150.4	150.4	151.9	148.8	153.5	151.9	153.5	158.2	162.9	162.9	175.4
80°	105.0	108.1	108.1	108.1	109.6	111.2	108.1	115.9	117.5	117.5	122.2
82.5°	67.4	68.9	67.4	70.5	70.5	73.6	72.1	73.6	76.8	79.9	81.5
85°	36.0	36.0	39.2	39.2	37.6	39.2	37.6	39.2	42.3	42.3	43.9
87.5°	12.5	12.5	12.5	12.5	14.1	12.5	14.1	14.1	12.5	12.5	17.2
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: P1037265

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1533.5	1535.1	1528.8	1524.1	1536.7	1528.8	1528.8	1530.4	1527.3	1532.0	1530.4
5°	1447.4	1448.9	1438.0	1441.1	1434.8	1433.3	1431.7	1441.1	1439.5	1438.0	1441.1
7.5°	1362.8	1362.8	1358.1	1355.0	1355.0	1350.3	1356.5	1355.0	1358.1	1358.1	1362.8
10°	1292.3	1295.4	1287.6	1279.8	1278.2	1279.8	1279.8	1281.3	1282.9	1293.9	1292.3
12.5°	1234.3	1229.6	1228.1	1223.4	1215.5	1212.4	1209.3	1226.5	1221.8	1221.8	1221.8
15°	1170.1	1181.1	1179.5	1165.4	1162.3	1168.6	1165.4	1165.4	1181.1	1179.5	1177.9
17.5°	1135.7	1132.5	1129.4	1121.6	1123.1	1121.6	1123.1	1123.1	1132.5	1132.5	1132.5
20°	1096.5	1090.2	1090.2	1087.1	1087.1	1082.4	1088.7	1090.2	1096.5	1096.5	1098.1
22.5°	1062.0	1057.3	1057.3	1055.8	1058.9	1052.6	1058.9	1060.5	1060.5	1065.2	1065.2
25°	1032.3	1029.1	1029.1	1032.3	1032.3	1032.3	1032.3	1038.5	1033.8	1035.4	1033.8
27.5°	1005.6	1007.2	1008.8	1010.3	1008.8	1010.3	1011.9	1015.0	1016.6	1015.0	1011.9
30°	980.6	985.3	986.8	986.8	990.0	991.5	993.1	993.1	994.7	990.0	993.1
32.5°	961.8	961.8	964.9	966.5	969.6	971.2	971.2	974.3	972.7	968.0	969.6
35°	935.2	935.2	941.4	944.6	949.3	947.7	949.3	949.3	950.8	947.7	943.0
37.5°	908.5	911.7	911.7	917.9	919.5	921.1	919.5	922.6	921.1	917.9	916.4
40°	877.2	875.6	877.2	881.9	883.5	883.5	883.5	886.6	886.6	886.6	885.0
42.5°	838.0	842.7	841.2	845.9	844.3	844.3	847.4	850.6	852.1	847.4	849.0
45°	800.4	800.4	803.6	803.6	805.1	805.1	811.4	808.3	811.4	808.3	809.8
47.5°	759.7	761.3	761.3	762.8	766.0	769.1	766.0	767.5	767.5	769.1	766.0
50°	714.3	714.3	717.4	722.1	728.4	725.3	723.7	730.0	725.3	725.3	722.1
52.5°	667.3	672.0	673.6	678.3	683.0	684.5	686.1	683.0	684.5	679.8	681.4
55°	621.9	623.4	629.7	634.4	639.1	639.1	637.5	639.1	640.7	634.4	634.4
57.5°	576.4	581.1	587.4	587.4	593.7	593.7	592.1	592.1	593.7	589.0	587.4
60°	527.9	532.6	540.4	540.4	549.8	551.4	548.2	545.1	545.1	540.4	542.0
62.5°	476.2	480.9	485.6	493.4	499.7	496.6	502.8	496.6	498.1	488.7	488.7
65°	430.8	432.3	440.2	448.0	448.0	451.1	448.0	449.6	444.9	444.9	438.6
67.5°	377.5	377.5	385.3	393.2	401.0	401.0	401.0	396.3	396.3	391.6	391.6
70°	330.5	328.9	336.8	341.5	346.2	347.7	344.6	343.0	339.9	335.2	333.6
72.5°	272.6	275.7	283.5	286.7	294.5	292.9	300.8	291.4	291.4	283.5	282.0
75°	220.9	224.0	231.8	236.5	241.2	241.2	245.9	241.2	235.0	231.8	230.3
77.5°	175.4	173.9	180.1	188.0	189.5	188.0	191.1	189.5	183.3	183.3	180.1
80°	125.3	130.0	136.3	134.7	141.0	139.4	139.4	136.3	136.3	131.6	134.7
82.5°	83.0	87.7	89.3	87.7	89.3	92.4	94.0	92.4	92.4	89.3	90.9
85°	43.9	43.9	47.0	48.6	47.0	47.0	48.6	53.3	50.1	47.0	50.1
87.5°	14.1	12.5	12.5	14.1	12.5	12.5	14.1	14.1	15.7	15.7	15.7
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: P1037265

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5	1616.5
2.5°	1535.1	1538.2	1539.8	1533.5	1528.8	1536.7	1547.6	1555.5	1561.7	1569.6	1574.3
5°	1444.2	1455.2	1455.2	1458.3	1463.0	1470.9	1491.2	1505.3	1517.9	1527.3	1535.1
7.5°	1367.5	1375.3	1380.0	1387.8	1395.7	1406.6	1430.1	1450.5	1469.3	1480.3	1492.8
10°	1298.6	1304.8	1312.7	1317.4	1331.5	1347.1	1376.9	1394.1	1416.0	1433.3	1448.9
12.5°	1232.8	1254.7	1259.4	1257.8	1270.4	1287.6	1317.4	1344.0	1367.5	1384.7	1401.9
15°	1185.8	1193.6	1203.0	1201.4	1228.1	1232.8	1257.8	1289.2	1320.5	1331.5	1347.1
17.5°	1134.1	1146.6	1156.0	1160.7	1168.6	1185.8	1209.3	1232.8	1273.5	1275.1	1315.8
20°	1093.4	1105.9	1112.2	1118.4	1123.1	1143.5	1163.9	1190.5	1223.4	1240.6	1262.5
22.5°	1066.7	1073.0	1077.7	1082.4	1088.7	1099.6	1124.7	1154.5	1176.4	1195.2	1209.3
25°	1035.4	1041.7	1047.9	1051.1	1055.8	1062.0	1080.8	1104.3	1135.7	1148.2	1162.3
27.5°	1013.5	1013.5	1016.6	1016.6	1022.9	1029.1	1043.2	1065.2	1090.2	1105.9	1124.7
30°	990.0	988.4	990.0	988.4	986.8	996.2	1008.8	1027.6	1044.8	1063.6	1076.1
32.5°	966.5	964.9	964.9	966.5	960.2	964.9	971.2	988.4	1007.2	1016.6	1030.7
35°	941.4	938.3	938.3	938.3	935.2	932.0	938.3	954.0	966.5	979.0	990.0
37.5°	916.4	911.7	911.7	908.5	905.4	900.7	900.7	913.2	930.5	935.2	949.3
40°	881.9	881.9	878.8	877.2	874.1	870.9	866.2	877.2	892.9	897.6	908.5
42.5°	847.4	842.7	841.2	841.2	841.2	836.5	833.3	841.2	850.6	858.4	864.7
45°	808.3	805.1	806.7	805.1	802.0	800.4	798.9	802.0	813.0	816.1	823.9
47.5°	766.0	764.4	764.4	762.8	761.3	762.8	756.6	764.4	767.5	770.7	776.9
50°	722.1	720.6	719.0	717.4	717.4	719.0	717.4	717.4	723.7	726.8	733.1
52.5°	678.3	673.6	673.6	672.0	672.0	668.9	672.0	673.6	676.7	679.8	683.0
55°	631.3	631.3	626.6	626.6	623.4	623.4	625.0	623.4	629.7	632.8	632.8
57.5°	585.8	579.6	581.1	578.0	574.9	573.3	573.3	576.4	579.6	579.6	582.7
60°	537.3	531.0	529.5	523.2	526.3	521.6	523.2	523.2	529.5	526.3	529.5
62.5°	488.7	480.9	476.2	473.1	473.1	474.6	471.5	469.9	473.1	476.2	482.5
65°	437.0	432.3	427.6	422.9	422.9	421.4	424.5	419.8	418.2	419.8	422.9
67.5°	383.8	379.1	374.4	369.7	371.2	366.5	363.4	368.1	365.0	366.5	369.7
70°	332.1	328.9	319.6	316.4	314.9	316.4	314.9	311.7	316.4	314.9	316.4
72.5°	280.4	277.3	272.6	264.7	264.7	263.2	261.6	261.6	260.0	260.0	260.0
75°	230.3	224.0	219.3	217.7	214.6	213.0	211.5	208.3	209.9	211.5	208.3
77.5°	178.6	170.7	169.2	169.2	164.5	164.5	166.0	164.5	162.9	162.9	162.9
80°	131.6	125.3	125.3	122.2	119.0	119.0	119.0	119.0	117.5	115.9	117.5
82.5°	84.6	83.0	81.5	81.5	84.6	78.3	81.5	79.9	78.3	78.3	76.8
85°	47.0	48.6	47.0	48.6	45.4	47.0	47.0	47.0	45.4	47.0	43.9
87.5°	17.2	17.2	17.2	18.8	18.8	18.8	18.8	18.8	20.4	18.8	18.8
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: P1037265

CATALOG NUMBER: S123DS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1616.5	1616.5	1616.5	1616.5
2.5°	1582.1	1586.8	1602.4	1621.2
5°	1550.8	1563.3	1585.2	1615.0
7.5°	1516.3	1535.1	1566.4	1604.0
10°	1477.1	1503.8	1542.9	1589.9
12.5°	1434.8	1469.3	1519.4	1568.0
15°	1408.2	1442.7	1488.1	1541.4
17.5°	1356.5	1397.2	1444.2	1519.4
20°	1303.3	1348.7	1409.8	1485.0
22.5°	1262.5	1311.1	1369.1	1448.9
25°	1214.0	1264.1	1326.8	1409.8
27.5°	1162.3	1212.4	1282.9	1370.6
30°	1123.1	1171.7	1239.0	1333.0
32.5°	1076.1	1123.1	1193.6	1292.3
35°	1022.9	1076.1	1143.5	1243.7
37.5°	982.1	1030.7	1101.2	1196.7
40°	938.3	980.6	1049.5	1143.5
42.5°	891.3	938.3	997.8	1091.8
45°	847.4	881.9	943.0	1032.3
47.5°	800.4	839.6	886.6	955.5
50°	750.3	783.2	834.9	881.9
52.5°	701.8	728.4	772.2	808.3
55°	650.1	676.7	709.6	731.5
57.5°	601.5	620.3	642.2	656.3
60°	542.0	560.8	574.9	589.0
62.5°	488.7	502.8	510.7	518.5
65°	433.9	441.7	446.4	452.7
67.5°	374.4	382.2	383.8	393.2
70°	319.6	321.1	324.2	328.9
72.5°	267.9	271.0	269.4	272.6
75°	214.6	217.7	214.6	217.7
77.5°	162.9	166.0	166.0	170.7
80°	117.5	119.0	120.6	120.6
82.5°	76.8	81.5	78.3	79.9
85°	43.9	45.4	45.4	47.0
87.5°	20.4	21.9	20.4	23.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)