

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: P1037502

Luminaire Tested: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1037502
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-30)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K
Description: Define 3 Regressed Direct Surface with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

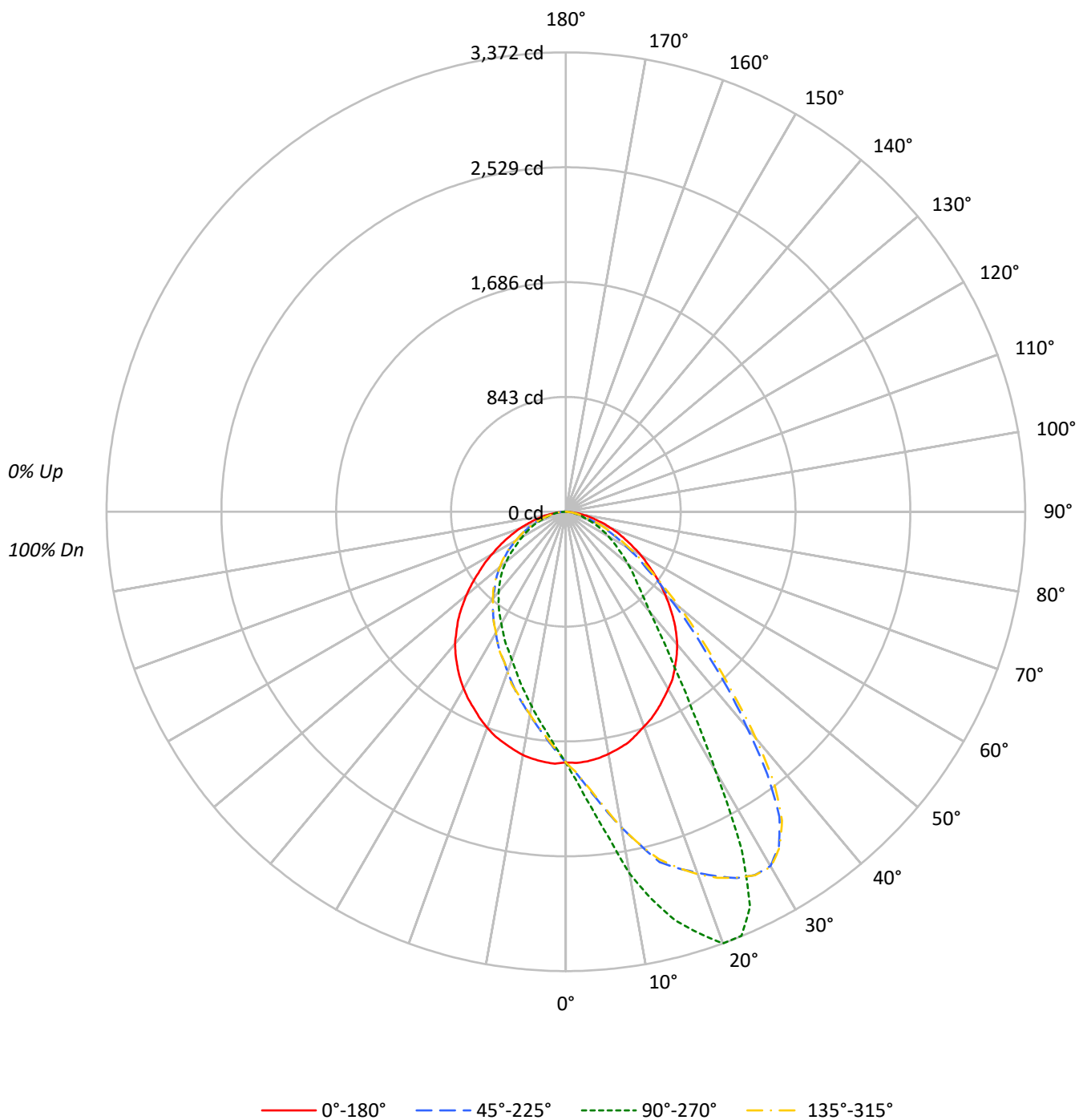
Lumens per Lamp: N/A
Luminaire Lumens: 4582.0 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.34
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

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
RC	80				70					50					30					10
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	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	74		
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64		
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56		
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52	50		
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44		
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39		
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37	36		
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32		
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	29		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	19807	19807	19807	19807
5°	19865	23610	19917	17516
10°	19734	29480	19819	15824
15°	19575	34603	19575	14431
20°	19219	38620	19328	13246
25°	18973	38002	18936	12518
30°	18681	27315	18641	11768
35°	18322	18239	18239	11282
40°	17865	13437	17776	10780
45°	17028	11272	17004	10289
50°	15987	9945	15935	9604
55°	14812	8723	14694	8663
60°	13668	7767	13532	7937
65°	12320	6821	12399	7384
70°	11106	5353	11405	6744
75°	9632	4716	10023	6159
80°	8009	4104	8691	6056
85°	6422	3310	7003	6422

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 30°

Vertical Angle: 45°

Luminance: 32304 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.7	3.9
10°-20°	565.7	12.3
20°-30°	890.9	19.4
30°-40°	926.4	20.2
40°-50°	792.6	17.3
50°-60°	604.3	13.2
60°-70°	387.1	8.4
70°-80°	185.5	4.0
80°-90°	48.8	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°	1637.3	35.7
0°-40°	2563.8	56.0
0°-60°	3960.6	86.4
0°-90°	4582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4582.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1840	1840	1840	1840	1840	
5°	1838	2185	1843	1621	1838	174
15°	1757	3105	1757	1295	1757	494
25°	1598	3200	1594	1054	1598	736
35°	1394	1388	1388	859	1394	873
45°	1119	740	1117	676	1119	861
55°	789	465	783	462	789	707
65°	484	268	487	290	484	483
75°	232	113	241	148	232	250
85°	52	27	57	52	52	61
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°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1844.8	1857.4	1866.9	1873.2	1889.0	1898.4	1906.3	1920.5	1920.5	1923.6	1929.9
5°	1838.5	1865.3	1884.2	1909.4	1942.5	1958.3	1980.3	1999.2	2026.0	2040.2	2054.4
7.5°	1824.4	1862.2	1901.6	1939.4	1988.2	2019.7	2041.8	2090.6	2125.3	2167.8	2200.9
10°	1805.5	1857.4	1907.9	1966.2	2032.3	2079.6	2112.7	2177.3	2243.4	2303.3	2353.7
12.5°	1781.8	1844.8	1917.3	1988.2	2081.2	2128.4	2182.0	2262.3	2356.9	2432.5	2500.2
15°	1756.6	1829.1	1911.0	1997.7	2114.2	2180.4	2257.6	2355.3	2460.8	2569.6	2662.5
17.5°	1717.2	1808.6	1900.0	2026.0	2163.1	2202.5	2268.6	2402.6	2533.3	2631.0	2744.4
20°	1677.8	1780.3	1895.3	2008.7	2156.8	2248.2	2309.6	2451.4	2591.6	2709.8	2818.5
22.5°	1641.6	1748.7	1868.5	2011.8	2150.5	2241.9	2319.1	2467.1	2629.4	2761.8	2895.7
25°	1597.5	1714.1	1846.4	1981.9	2150.5	2219.8	2304.9	2476.6	2648.3	2801.1	2966.6
27.5°	1550.2	1668.4	1799.2	1937.8	2092.2	2194.6	2278.1	2462.4	2672.0	2835.8	3005.9
30°	1503.0	1624.3	1750.3	1874.8	2048.1	2145.8	2241.9	2445.1	2684.6	2872.0	3002.8
32.5°	1457.3	1559.7	1684.2	1805.5	1977.2	2084.3	2193.0	2427.8	2689.3	2846.8	2909.8
35°	1394.3	1501.4	1602.2	1731.4	1904.7	2010.3	2137.9	2426.2	2668.8	2766.5	2735.0
37.5°	1336.0	1425.8	1521.9	1636.9	1814.9	1952.0	2084.3	2385.2	2601.1	2607.4	2429.3
40°	1271.4	1345.4	1425.8	1547.1	1739.3	1874.8	2018.1	2322.2	2478.2	2385.2	2071.7
42.5°	1197.3	1263.5	1326.5	1444.7	1654.2	1805.5	1959.9	2243.4	2300.1	2085.9	1759.8
45°	1118.6	1172.1	1230.4	1354.9	1564.4	1714.1	1868.5	2122.1	2063.8	1761.3	1451.0
47.5°	1036.6	1082.3	1139.0	1252.5	1468.3	1621.1	1767.6	1948.8	1800.7	1476.2	1216.2
50°	954.7	991.0	1046.1	1162.7	1370.6	1509.3	1644.8	1762.9	1555.0	1266.7	1005.1
52.5°	874.4	902.7	959.4	1058.7	1260.4	1392.7	1490.4	1536.1	1324.9	1046.1	872.8
55°	789.3	820.8	858.6	959.4	1159.5	1257.2	1321.8	1320.2	1102.8	887.0	721.6
57.5°	707.4	735.7	768.8	869.6	1031.9	1098.1	1153.2	1126.4	920.1	726.3	619.1
60°	634.9	650.7	686.9	772.0	894.9	951.6	983.1	937.4	751.5	612.8	512.0
62.5°	556.1	571.9	601.8	682.2	757.8	787.7	814.5	756.2	620.7	499.4	438.0
65°	483.7	504.1	523.0	587.6	628.6	664.8	661.7	612.8	485.2	406.5	356.1
67.5°	420.6	428.5	444.3	483.7	502.6	529.3	530.9	475.8	390.7	330.8	300.9
70°	352.9	360.8	371.8	390.7	403.3	409.6	406.5	357.6	294.6	258.4	231.6
72.5°	294.6	293.0	300.9	300.9	313.5	311.9	302.5	264.7	223.7	193.8	178.0
75°	231.6	233.2	234.7	231.6	226.9	220.6	212.7	184.3	157.5	143.4	129.2
77.5°	181.2	178.0	179.6	168.6	162.3	156.0	144.9	130.8	108.7	105.6	99.3
80°	129.2	127.6	126.0	121.3	107.1	100.8	93.0	85.1	80.3	77.2	75.6
82.5°	86.6	86.6	83.5	74.0	66.2	61.4	59.9	56.7	52.0	52.0	50.4
85°	52.0	50.4	47.3	37.8	33.1	33.1	33.1	33.1	29.9	29.9	28.4
87.5°	20.5	18.9	14.2	14.2	12.6	12.6	12.6	11.0	11.0	9.5	9.5
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°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1942.5	1942.5	1956.7	1970.9	1963.0	1967.7	1985.1	1978.8	1991.4	1989.8	1994.5
5°	2089.0	2106.4	2120.5	2150.5	2155.2	2150.5	2180.4	2188.3	2202.5	2185.1	2193.0
7.5°	2254.5	2290.7	2325.4	2369.5	2383.6	2386.8	2402.6	2424.6	2443.5	2408.9	2426.2
10°	2415.2	2470.3	2541.2	2580.6	2615.2	2627.8	2640.4	2654.6	2676.7	2697.2	2681.4
12.5°	2588.5	2668.8	2736.5	2807.4	2850.0	2845.3	2881.5	2890.9	2908.3	2913.0	2919.3
15°	2730.2	2843.7	2886.2	2991.8	3001.2	3032.7	3073.7	3109.9	3114.7	3105.2	3105.2
17.5°	2865.7	2963.4	3039.0	3124.1	3141.4	3168.2	3220.2	3237.5	3243.8	3242.3	3242.3
20°	2976.0	3040.6	3168.2	3239.1	3267.5	3302.1	3338.4	3360.4	3365.2	3371.5	3362.0
22.5°	3048.5	3146.2	3250.1	3308.4	3332.1	3344.7	3368.3	3374.6	3366.7	3368.3	3369.9
25°	3105.2	3201.3	3264.3	3280.1	3278.5	3262.7	3245.4	3215.5	3212.3	3199.7	3174.5
27.5°	3121.0	3157.2	3149.3	3084.7	3020.1	3013.8	2909.8	2853.1	2788.5	2798.0	2761.8
30°	3035.9	2988.6	2876.8	2712.9	2645.2	2534.9	2418.3	2297.0	2249.7	2197.7	2293.8
32.5°	2827.9	2659.4	2460.8	2248.2	2134.7	2037.1	1912.6	1824.4	1774.0	1731.4	1813.3
35°	2514.4	2251.3	1988.2	1786.6	1693.6	1605.4	1488.8	1444.7	1381.7	1388.0	1395.8
37.5°	2111.1	1821.2	1622.7	1424.2	1362.8	1326.5	1241.5	1173.7	1151.7	1145.3	1145.3
40°	1733.0	1495.1	1318.6	1162.7	1115.4	1085.5	1017.7	986.2	962.6	956.3	964.2
42.5°	1433.7	1230.4	1093.4	989.4	956.3	918.5	890.1	850.7	846.0	835.0	849.2
45°	1203.6	1027.2	924.8	849.2	820.8	806.6	775.1	751.5	742.0	740.5	751.5
47.5°	1020.9	883.8	794.0	746.8	724.7	710.5	683.7	674.3	664.8	668.0	663.3
50°	857.0	754.6	696.3	653.8	639.6	625.5	608.1	598.7	593.9	593.9	592.4
52.5°	735.7	650.7	612.8	573.5	567.2	559.3	540.4	534.1	526.2	524.6	530.9
55°	630.2	571.9	534.1	510.4	504.1	488.4	480.5	472.6	467.9	464.8	466.3
57.5°	538.8	494.7	469.5	449.0	438.0	431.7	417.5	415.9	412.8	412.8	411.2
60°	463.2	431.7	401.7	389.1	381.3	373.4	371.8	362.4	357.6	360.8	359.2
62.5°	392.3	367.1	349.7	335.6	330.8	324.5	319.8	316.7	311.9	313.5	313.5
65°	327.7	307.2	294.6	282.0	280.4	274.1	272.6	269.4	269.4	267.8	271.0
67.5°	269.4	255.2	244.2	236.3	231.6	233.2	226.9	222.1	222.1	220.6	225.3
70°	214.3	206.4	195.4	185.9	179.6	179.6	171.7	170.1	170.1	170.1	168.6
72.5°	165.4	151.2	146.5	143.4	143.4	143.4	140.2	140.2	138.6	140.2	138.6
75°	122.9	121.3	118.2	116.6	116.6	115.0	113.4	113.4	113.4	113.4	113.4
77.5°	96.1	96.1	93.0	91.4	91.4	91.4	89.8	89.8	88.2	88.2	88.2
80°	70.9	70.9	67.7	67.7	67.7	66.2	66.2	66.2	67.7	66.2	66.2
82.5°	48.8	48.8	47.3	48.8	47.3	45.7	45.7	45.7	44.1	45.7	45.7
85°	28.4	28.4	26.8	25.2	26.8	26.8	25.2	26.8	25.2	26.8	25.2
87.5°	11.0	9.5	9.5	9.5	7.9	9.5	7.9	7.9	9.5	7.9	9.5
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°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1986.6	1977.2	1970.9	1966.2	1961.4	1975.6	1956.7	1936.2	1922.0	1912.6	1909.4
5°	2194.6	2174.1	2156.8	2142.6	2145.8	2145.8	2112.7	2076.4	2044.9	2027.6	2008.7
7.5°	2435.6	2413.6	2378.9	2371.0	2364.7	2325.4	2292.3	2226.1	2186.7	2147.3	2112.7
10°	2675.1	2646.7	2613.7	2602.6	2586.9	2538.0	2487.6	2402.6	2353.7	2281.2	2235.6
12.5°	2898.8	2864.2	2831.1	2823.2	2799.6	2757.0	2670.4	2582.2	2498.7	2421.5	2341.1
15°	3086.3	3076.8	3026.4	2994.9	2942.9	2884.6	2865.7	2746.0	2640.4	2560.1	2415.2
17.5°	3243.8	3199.7	3152.5	3132.0	3111.5	3043.8	2976.0	2853.1	2739.7	2621.5	2528.6
20°	3369.9	3321.0	3288.0	3258.0	3248.6	3171.4	3064.2	2955.5	2831.1	2698.7	2577.4
22.5°	3376.2	3369.9	3347.8	3330.5	3311.6	3261.2	3176.1	3040.6	2908.3	2763.3	2604.2
25°	3245.4	3236.0	3299.0	3283.2	3295.8	3276.9	3231.2	3117.8	2963.4	2793.3	2632.6
27.5°	2851.6	2947.7	3046.9	3081.6	3105.2	3172.9	3195.0	3132.0	3007.5	2826.3	2646.7
30°	2315.9	2443.5	2604.2	2690.9	2757.0	2883.1	3046.9	3067.4	3009.1	2864.2	2643.6
32.5°	1818.1	1934.6	2063.8	2166.2	2254.5	2512.8	2733.4	2892.5	2920.9	2845.3	2651.5
35°	1465.2	1515.6	1638.5	1736.1	1855.9	2076.4	2336.4	2593.2	2766.5	2775.9	2627.8
37.5°	1208.4	1235.1	1342.3	1397.4	1468.3	1662.1	1904.7	2240.3	2509.7	2637.3	2561.7
40°	1000.4	1061.8	1123.3	1154.8	1205.2	1339.1	1572.3	1835.4	2169.4	2405.7	2459.3
42.5°	868.1	894.9	934.2	978.4	1009.9	1126.4	1282.4	1523.5	1824.4	2153.6	2301.7
45°	765.7	775.1	816.1	844.4	877.5	959.4	1069.7	1271.4	1536.1	1860.6	2112.7
47.5°	680.6	699.5	721.6	738.9	760.9	824.0	918.5	1065.0	1298.2	1588.0	1859.0
50°	605.0	616.0	644.4	652.2	668.0	712.1	784.6	896.4	1088.6	1320.2	1600.7
52.5°	534.1	554.6	565.6	576.6	590.8	627.0	674.3	765.7	910.6	1128.0	1365.9
55°	478.9	485.2	501.0	510.4	521.5	546.7	587.6	655.4	768.8	942.1	1167.4
57.5°	425.4	425.4	441.1	449.0	460.0	478.9	515.2	567.2	649.1	778.3	984.7
60°	368.7	370.2	382.8	392.3	395.4	414.3	444.3	485.2	548.3	642.8	811.4
62.5°	318.2	326.1	332.4	335.6	346.6	357.6	382.8	411.2	455.3	538.8	658.5
65°	275.7	277.3	282.0	285.2	289.9	302.5	321.4	340.3	378.1	439.5	537.2
67.5°	226.9	233.2	239.5	239.5	244.2	250.5	269.4	285.2	313.5	349.7	415.9
70°	170.1	173.3	182.8	187.5	193.8	204.8	214.3	223.7	245.8	272.6	323.0
72.5°	141.8	141.8	144.9	146.5	146.5	154.4	168.6	178.0	189.1	208.0	242.6
75°	113.4	113.4	118.2	116.6	119.7	122.9	124.5	130.8	137.1	151.2	171.7
77.5°	89.8	91.4	91.4	93.0	93.0	94.5	96.1	99.3	102.4	110.3	119.7
80°	66.2	67.7	67.7	69.3	69.3	70.9	72.5	74.0	77.2	80.3	85.1
82.5°	45.7	47.3	47.3	48.8	47.3	48.8	50.4	50.4	52.0	55.1	56.7
85°	26.8	26.8	28.4	26.8	26.8	26.8	28.4	28.4	29.9	34.7	34.7
87.5°	7.9	9.5	7.9	9.5	9.5	9.5	9.5	11.0	11.0	12.6	14.2
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: P1037502

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1904.7	1896.8	1889.0	1889.0	1871.6	1855.9	1848.0	1851.1	1841.7	1829.1	1816.5
5°	1988.2	1956.7	1950.4	1933.1	1909.4	1876.4	1859.0	1843.3	1824.4	1799.2	1775.5
7.5°	2065.4	2024.4	2002.4	1985.1	1939.4	1893.7	1855.9	1830.7	1797.6	1759.8	1731.4
10°	2166.2	2090.6	2067.0	2027.6	1963.0	1898.4	1854.3	1813.3	1767.6	1723.5	1685.7
12.5°	2246.6	2159.9	2115.8	2076.4	1992.9	1911.0	1837.0	1786.6	1731.4	1682.6	1633.7
15°	2338.0	2240.3	2163.1	2115.8	2010.3	1911.0	1827.5	1756.6	1695.2	1635.3	1592.8
17.5°	2382.1	2259.2	2224.5	2156.8	2004.0	1904.7	1802.3	1726.7	1652.6	1583.3	1532.9
20°	2451.4	2308.0	2221.4	2175.7	2040.2	1893.7	1774.0	1687.3	1610.1	1536.1	1482.5
22.5°	2456.1	2300.1	2243.4	2156.8	1989.8	1860.6	1748.7	1643.2	1553.4	1484.1	1428.9
25°	2445.1	2286.0	2207.2	2137.9	1999.2	1841.7	1698.3	1594.4	1506.1	1425.8	1361.2
27.5°	2440.4	2245.0	2171.0	2101.6	1945.7	1786.6	1668.4	1550.2	1449.4	1378.5	1312.3
30°	2434.1	2200.9	2111.1	2030.7	1887.4	1744.0	1602.2	1499.8	1403.7	1313.9	1247.8
32.5°	2393.1	2141.0	2049.7	1964.6	1810.2	1666.8	1555.0	1446.3	1342.3	1258.8	1198.9
35°	2380.5	2085.9	1966.2	1874.8	1723.5	1595.9	1477.8	1388.0	1290.3	1206.8	1135.9
37.5°	2344.3	2029.2	1900.0	1783.4	1625.9	1504.6	1417.9	1328.1	1233.6	1143.8	1087.1
40°	2281.2	1963.0	1816.5	1696.8	1534.5	1411.6	1331.3	1265.1	1172.1	1091.8	1022.5
42.5°	2188.3	1895.3	1737.7	1611.7	1432.1	1317.1	1250.9	1187.9	1109.1	1025.6	968.9
45°	2081.2	1805.5	1658.9	1518.7	1336.0	1224.1	1154.8	1117.0	1044.5	973.6	907.5
47.5°	1934.6	1712.5	1567.6	1422.6	1236.7	1128.0	1072.9	1035.1	984.7	907.5	853.9
50°	1750.3	1592.8	1455.7	1326.5	1139.0	1035.1	979.9	951.6	909.0	853.9	801.9
52.5°	1545.5	1454.1	1340.7	1221.0	1039.8	942.1	891.7	869.6	838.1	786.1	742.0
55°	1339.1	1299.7	1222.5	1104.4	935.8	855.5	811.4	783.0	759.4	721.6	683.7
57.5°	1154.8	1135.9	1082.3	991.0	849.2	765.7	727.9	709.0	690.0	661.7	623.9
60°	964.2	984.7	929.5	883.8	754.6	682.2	649.1	628.6	619.1	593.9	570.3
62.5°	798.8	817.7	786.1	751.5	660.1	595.5	575.0	556.1	549.8	527.8	504.1
65°	649.1	672.7	649.1	630.2	575.0	521.5	496.3	486.8	480.5	466.3	447.4
67.5°	516.7	540.4	529.3	505.7	488.4	444.3	430.1	420.6	417.5	406.5	390.7
70°	389.1	422.2	425.4	411.2	395.4	375.0	365.5	362.4	354.5	345.0	335.6
72.5°	280.4	318.2	319.8	319.8	310.4	310.4	300.9	296.2	296.2	286.7	275.7
75°	206.4	231.6	234.7	237.9	242.6	247.3	241.0	241.0	239.5	230.0	225.3
77.5°	137.1	159.1	167.0	178.0	184.3	184.3	187.5	190.6	187.5	182.8	179.6
80°	88.2	104.0	113.4	119.7	129.2	133.9	138.6	140.2	137.1	135.5	130.8
82.5°	58.3	63.0	67.7	75.6	86.6	94.5	94.5	93.0	96.1	94.5	93.0
85°	33.1	36.2	37.8	39.4	45.7	53.6	55.1	56.7	59.9	56.7	53.6
87.5°	12.6	14.2	14.2	14.2	17.3	18.9	23.6	29.9	28.4	25.2	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: P1037502

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1816.5	1808.6	1805.5	1797.6	1778.7	1766.1	1751.9	1742.4	1744.0	1736.1	1740.9
5°	1759.8	1758.2	1747.2	1731.4	1704.6	1690.5	1665.2	1652.6	1646.3	1647.9	1638.5
7.5°	1712.5	1698.3	1690.5	1665.2	1640.0	1610.1	1589.6	1578.6	1569.1	1559.7	1553.4
10°	1658.9	1646.3	1633.7	1607.0	1572.3	1543.9	1515.6	1504.6	1490.4	1484.1	1479.3
12.5°	1602.2	1594.4	1578.6	1547.1	1507.7	1480.9	1447.8	1441.5	1422.6	1410.0	1406.9
15°	1550.2	1545.5	1517.2	1480.9	1441.5	1414.7	1386.4	1367.5	1336.0	1342.3	1331.3
17.5°	1495.1	1474.6	1457.3	1408.4	1389.5	1348.6	1315.5	1306.0	1284.0	1269.8	1255.6
20°	1433.7	1421.1	1399.0	1367.5	1321.8	1274.5	1249.3	1233.6	1221.0	1198.9	1192.6
22.5°	1375.4	1359.6	1340.7	1299.7	1260.4	1221.0	1186.3	1172.1	1156.4	1140.6	1131.2
25°	1329.7	1306.0	1285.6	1235.1	1195.8	1162.7	1140.6	1117.0	1094.9	1085.5	1082.3
27.5°	1258.8	1244.6	1224.1	1176.9	1140.6	1104.4	1083.9	1068.2	1044.5	1033.5	1024.0
30°	1213.1	1184.7	1161.1	1123.3	1087.1	1047.7	1028.8	1009.9	995.7	981.5	970.5
32.5°	1151.7	1129.6	1110.7	1072.9	1036.6	1000.4	979.9	951.6	943.7	932.7	920.1
35°	1091.8	1077.6	1057.1	1016.2	976.8	951.6	929.5	902.7	893.3	885.4	874.4
37.5°	1035.1	1014.6	1000.4	961.0	926.4	896.4	879.1	857.0	850.7	841.3	833.4
40°	986.2	965.7	951.6	912.2	875.9	844.4	833.4	811.4	801.9	790.9	786.1
42.5°	931.1	913.8	894.9	866.5	828.7	797.2	775.1	762.5	749.9	745.2	735.7
45°	872.8	857.0	842.9	811.4	772.0	749.9	731.0	713.7	704.2	696.3	690.0
47.5°	822.4	808.2	789.3	754.6	723.1	702.6	683.7	666.4	657.0	647.5	639.6
50°	764.1	756.2	735.7	702.6	672.7	649.1	631.8	616.0	609.7	598.7	586.1
52.5°	712.1	697.9	680.6	653.8	627.0	598.7	575.0	565.6	554.6	548.3	537.2
55°	650.7	641.2	622.3	598.7	570.3	546.7	529.3	516.7	502.6	496.3	482.1
57.5°	598.7	581.3	571.9	542.0	515.2	491.5	478.9	466.3	450.6	441.1	434.8
60°	542.0	526.2	512.0	486.8	467.9	442.7	423.8	412.8	401.7	389.1	382.8
62.5°	486.8	474.2	456.9	436.4	412.8	392.3	378.1	362.4	356.1	343.4	338.7
65°	426.9	417.5	403.3	379.7	360.8	343.4	329.3	316.7	310.4	305.6	302.5
67.5°	373.4	360.8	351.3	330.8	310.4	296.2	288.3	280.4	272.6	267.8	263.1
70°	318.2	308.8	299.3	280.4	266.3	253.6	247.3	241.0	236.3	231.6	226.9
72.5°	261.5	256.8	247.3	234.7	223.7	214.3	209.5	201.7	196.9	189.1	185.9
75°	215.8	208.0	203.2	192.2	182.8	174.9	168.6	159.1	152.8	149.7	148.1
77.5°	170.1	167.0	160.7	151.2	146.5	138.6	129.2	126.0	122.9	122.9	121.3
80°	127.6	122.9	118.2	110.3	105.6	99.3	99.3	99.3	97.7	99.3	97.7
82.5°	86.6	83.5	80.3	75.6	74.0	74.0	75.6	75.6	75.6	75.6	75.6
85°	50.4	50.4	50.4	52.0	50.4	50.4	52.0	53.6	52.0	52.0	50.4
87.5°	23.6	23.6	25.2	25.2	26.8	26.8	26.8	26.8	26.8	26.8	28.4
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: P1037502

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1739.3	1740.9	1736.1	1726.7	1725.1	1728.3	1737.7	1734.6	1726.7	1740.9	1728.3
5°	1643.2	1635.3	1632.2	1635.3	1625.9	1621.1	1630.6	1625.9	1630.6	1632.2	1636.9
7.5°	1550.2	1551.8	1542.4	1543.9	1531.3	1534.5	1534.5	1534.5	1539.2	1542.4	1548.7
10°	1469.9	1473.0	1462.0	1463.6	1454.1	1447.8	1452.6	1462.0	1462.0	1462.0	1465.2
12.5°	1405.3	1391.1	1383.2	1381.7	1370.6	1367.5	1376.9	1380.1	1388.0	1388.0	1392.7
15°	1324.9	1321.8	1315.5	1315.5	1288.7	1295.0	1298.2	1309.2	1324.9	1312.3	1315.5
17.5°	1252.5	1244.6	1236.7	1233.6	1230.4	1221.0	1233.6	1232.0	1241.5	1243.0	1247.8
20°	1187.9	1181.6	1165.8	1167.4	1170.6	1156.4	1164.3	1164.3	1173.7	1183.2	1194.2
22.5°	1124.9	1118.6	1110.7	1113.8	1104.4	1101.2	1101.2	1109.1	1120.1	1128.0	1126.4
25°	1076.0	1065.0	1060.3	1055.5	1050.8	1054.0	1049.2	1057.1	1065.0	1069.7	1065.0
27.5°	1020.9	1016.2	1006.7	1002.0	994.1	997.3	1000.4	1006.7	1011.4	1011.4	1016.2
30°	967.3	961.0	957.9	953.1	953.1	946.8	948.4	954.7	959.4	964.2	970.5
32.5°	915.3	910.6	905.9	905.9	902.7	901.2	899.6	909.0	909.0	918.5	918.5
35°	872.8	864.9	864.9	857.0	860.2	858.6	855.5	861.8	863.3	869.6	868.1
37.5°	825.5	825.5	822.4	814.5	808.2	809.8	817.7	817.7	822.4	820.8	825.5
40°	778.3	775.1	775.1	770.4	768.8	767.2	768.8	770.4	778.3	776.7	778.3
42.5°	731.0	732.6	724.7	724.7	724.7	720.0	721.6	723.1	726.3	729.4	734.2
45°	685.3	682.2	680.6	677.4	674.3	675.9	674.3	680.6	679.0	682.2	686.9
47.5°	636.5	631.8	630.2	623.9	623.9	627.0	625.5	630.2	631.8	636.5	633.3
50°	589.2	582.9	578.2	579.8	570.3	573.5	573.5	578.2	582.9	584.5	587.6
52.5°	534.1	532.5	530.9	523.0	521.5	519.9	521.5	523.0	529.3	534.1	535.7
55°	480.5	478.9	469.5	466.3	461.6	461.6	464.8	466.3	477.4	478.9	485.2
57.5°	431.7	426.9	415.9	414.3	414.3	414.3	409.6	415.9	419.1	426.9	426.9
60°	378.1	378.1	368.7	368.7	370.2	368.7	368.7	370.2	370.2	376.5	379.7
62.5°	335.6	334.0	334.0	330.8	329.3	330.8	329.3	329.3	330.8	335.6	340.3
65°	297.8	296.2	294.6	293.0	289.9	289.9	291.5	294.6	294.6	297.8	299.3
67.5°	261.5	261.5	258.4	258.4	256.8	255.2	256.8	255.2	261.5	261.5	263.1
70°	225.3	223.7	219.0	217.4	212.7	214.3	214.3	219.0	220.6	223.7	226.9
72.5°	181.2	181.2	178.0	174.9	176.4	173.3	173.3	174.9	174.9	179.6	181.2
75°	149.7	146.5	144.9	146.5	144.9	148.1	144.9	144.9	148.1	148.1	148.1
77.5°	122.9	122.9	121.3	121.3	122.9	121.3	122.9	122.9	122.9	121.3	122.9
80°	100.8	99.3	99.3	99.3	97.7	97.7	97.7	97.7	97.7	97.7	97.7
82.5°	75.6	75.6	74.0	75.6	75.6	74.0	75.6	74.0	74.0	75.6	75.6
85°	50.4	53.6	50.4	50.4	52.0	52.0	53.6	52.0	53.6	50.4	52.0
87.5°	26.8	28.4	28.4	26.8	26.8	28.4	28.4	28.4	29.9	26.8	28.4
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: P1037502

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1740.9	1747.2	1740.9	1728.3	1740.9	1748.7	1756.6	1769.2	1775.5	1775.5	1785.0
5°	1641.6	1654.2	1649.5	1646.3	1658.9	1666.8	1679.4	1695.2	1712.5	1723.5	1736.1
7.5°	1553.4	1561.3	1569.1	1569.1	1581.7	1599.1	1618.0	1636.9	1658.9	1674.7	1684.2
10°	1476.2	1482.5	1487.2	1493.5	1512.4	1531.3	1556.5	1580.2	1599.1	1616.4	1632.2
12.5°	1402.1	1411.6	1422.6	1427.4	1441.5	1465.2	1488.8	1517.2	1547.1	1564.4	1580.2
15°	1331.3	1336.0	1348.6	1362.8	1375.4	1400.6	1430.5	1460.4	1485.6	1512.4	1526.6
17.5°	1258.8	1260.4	1293.4	1285.6	1326.5	1350.2	1365.9	1394.3	1435.2	1457.3	1479.3
20°	1187.9	1203.6	1217.8	1225.7	1247.8	1274.5	1320.2	1342.3	1375.4	1395.8	1414.7
22.5°	1132.7	1156.4	1156.4	1175.3	1186.3	1211.5	1244.6	1287.1	1323.4	1337.6	1364.3
25°	1083.9	1094.9	1113.8	1120.1	1140.6	1162.7	1184.7	1230.4	1269.8	1288.7	1307.6
27.5°	1020.9	1035.1	1060.3	1060.3	1087.1	1110.7	1137.5	1167.4	1206.8	1233.6	1254.1
30°	972.0	986.2	997.3	1014.6	1025.6	1047.7	1094.9	1117.0	1151.7	1175.3	1200.5
32.5°	926.4	937.4	946.8	965.7	978.4	1003.6	1028.8	1068.2	1098.1	1120.1	1146.9
35°	875.9	887.0	899.6	913.8	932.7	956.3	979.9	1013.0	1042.9	1063.4	1085.5
37.5°	828.7	836.6	855.5	864.9	880.7	902.7	932.7	967.3	994.1	1009.9	1031.9
40°	783.0	789.3	803.5	820.8	831.8	849.2	880.7	910.6	943.7	962.6	979.9
42.5°	734.2	742.0	754.6	772.0	789.3	808.2	825.5	860.2	890.1	905.9	924.8
45°	691.6	696.3	705.8	723.1	740.5	754.6	781.4	812.9	841.3	853.9	874.4
47.5°	641.2	645.9	660.1	668.0	686.9	705.8	732.6	764.1	789.3	801.9	820.8
50°	589.2	593.9	603.4	620.7	633.3	653.8	677.4	704.2	735.7	753.1	764.1
52.5°	538.8	548.3	556.1	570.3	586.1	606.5	628.6	653.8	680.6	697.9	710.5
55°	488.4	496.3	505.7	513.6	532.5	551.4	576.6	600.2	623.9	639.6	653.8
57.5°	431.7	442.7	452.2	467.9	482.1	497.8	526.2	545.1	573.5	584.5	597.1
60°	382.8	393.9	401.7	414.3	426.9	447.4	466.3	490.0	513.6	527.8	543.5
62.5°	341.9	346.6	351.3	363.9	376.5	395.4	414.3	438.0	463.2	471.1	483.7
65°	300.9	305.6	313.5	324.5	334.0	345.0	365.5	384.4	408.0	420.6	425.4
67.5°	266.3	271.0	272.6	280.4	288.3	300.9	311.9	330.8	352.9	360.8	370.2
70°	226.9	234.7	236.3	242.6	245.8	253.6	266.3	280.4	297.8	311.9	319.8
72.5°	181.2	192.2	195.4	204.8	209.5	217.4	226.9	237.9	248.9	255.2	261.5
75°	148.1	151.2	152.8	160.7	168.6	179.6	184.3	190.6	200.1	208.0	214.3
77.5°	122.9	124.5	126.0	126.0	127.6	133.9	143.4	151.2	157.5	160.7	165.4
80°	99.3	97.7	97.7	99.3	99.3	99.3	102.4	113.4	116.6	124.5	122.9
82.5°	77.2	74.0	75.6	74.0	74.0	74.0	74.0	75.6	75.6	80.3	83.5
85°	50.4	52.0	50.4	50.4	48.8	50.4	48.8	48.8	47.3	47.3	45.7
87.5°	26.8	28.4	26.8	26.8	25.2	26.8	25.2	25.2	23.6	23.6	20.5
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: P1037502

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1840.1	1840.1	1840.1	1840.1
2.5°	1792.9	1803.9	1825.9	1844.8
5°	1755.0	1772.4	1805.5	1838.5
7.5°	1709.4	1736.1	1778.7	1824.4
10°	1665.2	1699.9	1751.9	1805.5
12.5°	1621.1	1657.4	1712.5	1781.8
15°	1569.1	1607.0	1673.1	1756.6
17.5°	1523.5	1573.9	1633.7	1717.2
20°	1474.6	1512.4	1589.6	1677.8
22.5°	1413.2	1476.2	1548.7	1641.6
25°	1364.3	1419.5	1491.9	1597.5
27.5°	1304.5	1369.1	1457.3	1550.2
30°	1255.6	1309.2	1391.1	1503.0
32.5°	1198.9	1261.9	1347.0	1457.3
35°	1148.5	1202.1	1282.4	1394.3
37.5°	1088.6	1146.9	1236.7	1336.0
40°	1036.6	1093.4	1178.4	1271.4
42.5°	973.6	1033.5	1118.6	1197.3
45°	923.2	978.4	1046.1	1118.6
47.5°	861.8	920.1	986.2	1036.6
50°	806.6	860.2	912.2	954.7
52.5°	746.8	795.6	842.9	874.4
55°	691.6	729.4	767.2	789.3
57.5°	627.0	663.3	694.8	707.4
60°	570.3	600.2	620.7	634.9
62.5°	510.4	532.5	548.3	556.1
65°	452.2	467.9	475.8	483.7
67.5°	392.3	406.5	411.2	420.6
70°	329.3	345.0	348.2	352.9
72.5°	282.0	282.0	288.3	294.6
75°	225.3	228.4	231.6	231.6
77.5°	176.4	176.4	179.6	181.2
80°	129.2	130.8	130.8	129.2
82.5°	88.2	91.4	88.2	86.6
85°	48.8	55.1	52.0	52.0
87.5°	20.5	20.5	23.6	20.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)