

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: P994941

Luminaire Tested: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P994941
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: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K
Description: Define 3 Regressed Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

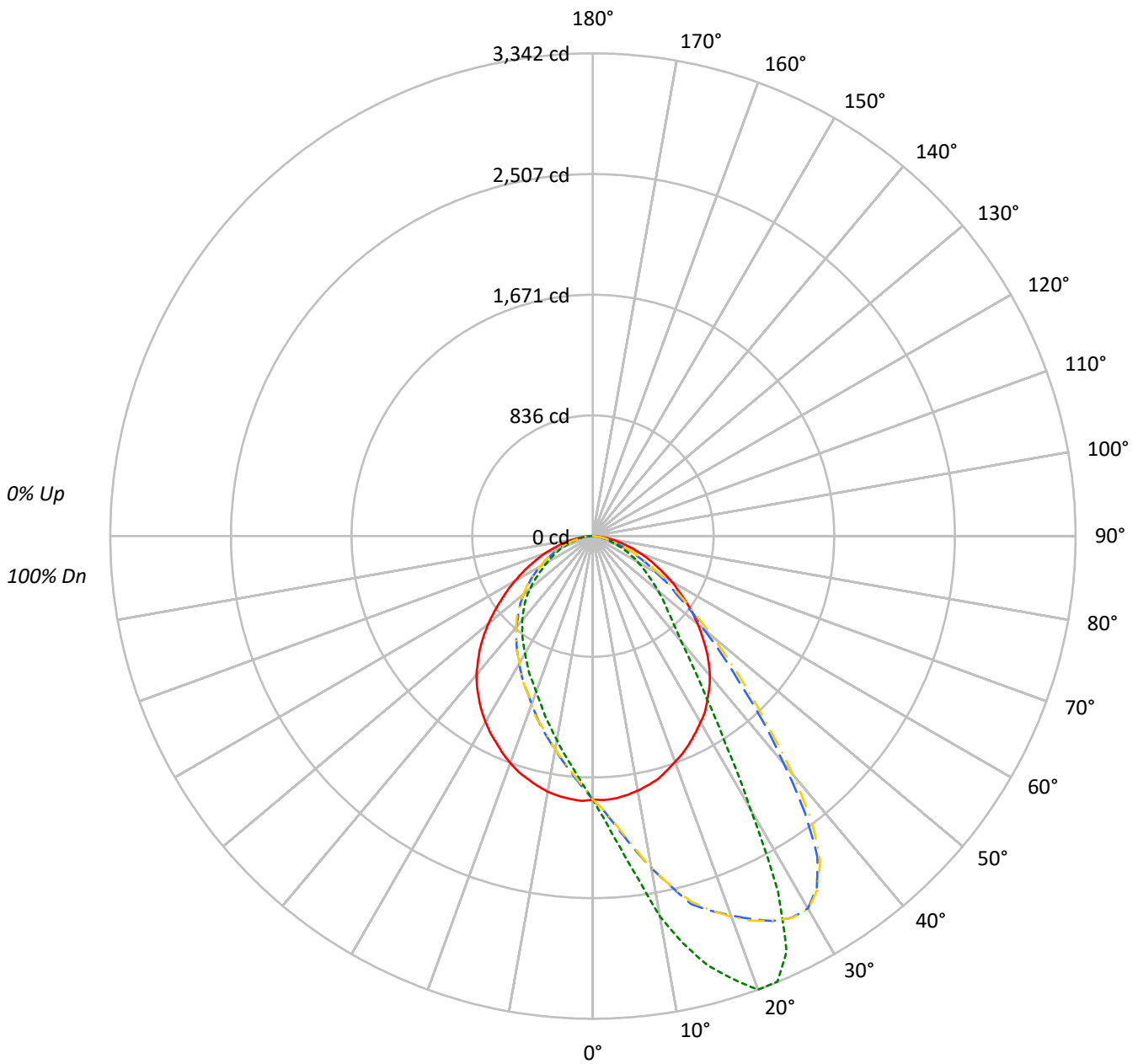
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4542.0 lumens
Efficiency: N/A
Efficacy: 74.1 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): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - · - 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	102	102	102	100	
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	89	89	89	87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	74	
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	66	66	66	64	
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	58	58	58	56	
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52	52	52	52	50	
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	46	46	46	44	
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	41	41	41	39	
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37	37	37	37	36	
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	34	34	34	32	
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	31	31	31	29	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	19634	19634	19634	19634
5°	19692	23405	19743	17364
10°	19561	29222	19647	15687
15°	19404	34301	19404	14305
20°	19051	38282	19159	13131
25°	18808	37670	18770	12409
30°	18518	27078	18478	11666
35°	18161	18080	18080	11184
40°	17709	13319	17620	10686
45°	16879	11173	16854	10199
50°	15848	9860	15796	9520
55°	14683	8646	14566	8587
60°	13550	7698	13414	7866
65°	12210	6762	12292	7320
70°	11009	5309	11305	6685
75°	9549	4675	9936	6105
80°	7941	4066	8616	6000
85°	6360	3273	6941	6360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 30°
 Vertical Angle: 45°
 Luminance: 32022 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.1	3.9
10°-20°	560.7	12.3
20°-30°	883.2	19.4
30°-40°	918.3	20.2
40°-50°	785.7	17.3
50°-60°	599.0	13.2
60°-70°	383.8	8.4
70°-80°	183.9	4.0
80°-90°	48.4	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°	1623.0	35.7
0°-40°	2541.4	56.0
0°-60°	3926.0	86.4
0°-90°	4542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4542.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1824	1824	1824	1824	1824	
5°	1822	2166	1827	1607	1822	173
15°	1741	3078	1741	1284	1741	490
25°	1584	3172	1580	1045	1584	729
35°	1382	1376	1376	851	1382	865
45°	1109	734	1107	670	1109	854
55°	782	461	776	458	782	701
65°	479	266	483	287	479	479
75°	230	112	239	147	230	248
85°	52	26	56	52	52	60
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°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1828.7	1841.2	1850.6	1856.9	1872.5	1881.8	1889.6	1903.7	1903.7	1906.8	1913.1
5°	1822.5	1849.0	1867.8	1892.8	1925.6	1941.2	1963.0	1981.8	2008.3	2022.4	2036.4
7.5°	1808.4	1845.9	1885.0	1922.4	1970.9	2002.1	2024.0	2072.4	2106.7	2148.9	2181.7
10°	1789.7	1841.2	1891.2	1949.0	2014.6	2061.4	2094.2	2158.3	2223.8	2283.2	2333.2
12.5°	1766.3	1828.7	1900.6	1970.9	2063.0	2109.8	2162.9	2242.6	2336.3	2411.3	2478.4
15°	1741.3	1813.1	1894.3	1980.2	2095.8	2161.4	2237.9	2334.7	2439.4	2547.1	2639.3
17.5°	1702.2	1792.8	1883.4	2008.3	2144.2	2183.2	2248.8	2381.6	2511.2	2608.0	2720.5
20°	1663.2	1764.7	1878.7	1991.2	2138.0	2228.5	2289.4	2430.0	2569.0	2686.1	2793.9
22.5°	1627.3	1733.5	1852.2	1994.3	2131.7	2222.3	2298.8	2445.6	2606.5	2737.6	2870.4
25°	1583.6	1699.1	1830.3	1964.6	2131.7	2200.4	2284.8	2455.0	2625.2	2776.7	2940.7
27.5°	1536.7	1653.8	1783.5	1920.9	2073.9	2175.4	2258.2	2440.9	2648.6	2811.0	2979.7
30°	1489.9	1610.1	1735.0	1858.4	2030.2	2127.0	2222.3	2423.7	2661.1	2847.0	2976.6
32.5°	1444.6	1546.1	1669.4	1789.7	1959.9	2066.1	2173.9	2406.6	2665.8	2822.0	2884.4
35°	1382.1	1488.3	1588.2	1716.3	1888.1	1992.7	2119.2	2405.0	2645.5	2742.3	2711.1
37.5°	1324.3	1413.3	1508.6	1622.6	1799.1	1934.9	2066.1	2364.4	2578.4	2584.6	2408.1
40°	1260.3	1333.7	1413.3	1533.6	1724.1	1858.4	2000.5	2301.9	2456.5	2364.4	2053.6
42.5°	1186.9	1252.5	1314.9	1432.1	1639.8	1789.7	1942.7	2223.8	2280.1	2067.7	1744.4
45°	1108.8	1161.9	1219.7	1343.1	1550.8	1699.1	1852.2	2103.6	2045.8	1746.0	1438.3
47.5°	1027.6	1072.9	1129.1	1241.5	1455.5	1607.0	1752.2	1931.8	1785.0	1463.3	1205.6
50°	946.4	982.3	1037.0	1152.5	1358.7	1496.1	1630.4	1747.5	1541.4	1255.6	996.4
52.5°	866.7	894.8	951.1	1049.5	1249.4	1380.5	1477.4	1522.6	1313.4	1037.0	865.2
55°	782.4	813.6	851.1	951.1	1149.4	1246.2	1310.3	1308.7	1093.2	879.2	715.3
57.5°	701.2	729.3	762.1	862.1	1022.9	1088.5	1143.2	1116.6	912.0	719.9	613.7
60°	629.4	645.0	680.9	765.2	887.0	943.3	974.5	929.2	744.9	607.5	507.5
62.5°	551.3	566.9	596.6	676.2	751.2	780.8	807.4	749.6	615.3	495.1	434.2
65°	479.4	499.7	518.5	582.5	623.1	659.0	655.9	607.5	481.0	402.9	352.9
67.5°	417.0	424.8	440.4	479.4	498.2	524.7	526.3	471.6	387.3	328.0	298.3
70°	349.8	357.6	368.6	387.3	399.8	406.0	402.9	354.5	292.0	256.1	229.6
72.5°	292.0	290.5	298.3	298.3	310.8	309.2	299.8	262.4	221.8	192.1	176.5
75°	229.6	231.1	232.7	229.6	224.9	218.6	210.8	182.7	156.2	142.1	128.1
77.5°	179.6	176.5	178.0	167.1	160.9	154.6	143.7	129.6	107.8	104.6	98.4
80°	128.1	126.5	124.9	120.3	106.2	99.9	92.1	84.3	79.6	76.5	75.0
82.5°	85.9	85.9	82.8	73.4	65.6	60.9	59.3	56.2	51.5	51.5	50.0
85°	51.5	50.0	46.9	37.5	32.8	32.8	32.8	32.8	29.7	29.7	28.1
87.5°	20.3	18.7	14.1	14.1	12.5	12.5	12.5	10.9	10.9	9.4	9.4
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°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1925.6	1925.6	1939.6	1953.7	1945.9	1950.6	1967.7	1961.5	1974.0	1972.4	1977.1
5°	2070.8	2088.0	2102.0	2131.7	2136.4	2131.7	2161.4	2169.2	2183.2	2166.1	2173.9
7.5°	2234.8	2270.7	2305.1	2348.8	2362.8	2366.0	2381.6	2403.4	2422.2	2387.8	2405.0
10°	2394.1	2448.7	2519.0	2558.1	2592.4	2604.9	2617.4	2631.5	2653.3	2673.6	2658.0
12.5°	2565.9	2645.5	2712.7	2782.9	2825.1	2820.4	2856.3	2865.7	2882.9	2887.6	2893.8
15°	2706.4	2818.9	2861.0	2965.7	2975.0	3006.3	3046.9	3082.8	3087.5	3078.1	3078.1
17.5°	2840.7	2937.5	3012.5	3096.8	3114.0	3140.6	3192.1	3209.3	3215.5	3214.0	3214.0
20°	2950.0	3014.1	3140.6	3210.8	3238.9	3273.3	3309.2	3331.1	3335.8	3342.0	3332.7
22.5°	3021.9	3118.7	3221.8	3279.6	3303.0	3315.5	3338.9	3345.1	3337.3	3338.9	3340.5
25°	3078.1	3173.4	3235.8	3251.4	3249.9	3234.3	3217.1	3187.4	3184.3	3171.8	3146.8
27.5°	3093.7	3129.6	3121.8	3057.8	2993.8	2987.5	2884.4	2828.2	2764.2	2773.6	2737.6
30°	3009.4	2962.5	2851.6	2689.2	2622.1	2512.8	2397.2	2276.9	2230.1	2178.6	2273.8
32.5°	2803.2	2636.1	2439.4	2228.5	2116.1	2019.3	1895.9	1808.4	1758.5	1716.3	1797.5
35°	2492.5	2231.7	1970.9	1771.0	1678.8	1591.4	1475.8	1432.1	1369.6	1375.9	1383.7
37.5°	2092.7	1805.3	1608.5	1411.8	1350.9	1314.9	1230.6	1163.5	1141.6	1135.3	1135.3
40°	1717.9	1482.0	1307.1	1152.5	1105.7	1076.0	1008.9	977.6	954.2	947.9	955.8
42.5°	1421.1	1219.7	1083.8	980.7	947.9	910.5	882.4	843.3	838.6	827.7	841.8
45°	1193.1	1018.2	916.7	841.8	813.6	799.6	768.4	744.9	735.6	734.0	744.9
47.5°	1012.0	876.1	787.1	740.2	718.4	704.3	677.8	668.4	659.0	662.2	657.5
50°	849.6	748.1	690.3	648.1	634.0	620.0	602.8	593.4	588.8	588.8	587.2
52.5°	729.3	645.0	607.5	568.5	562.2	554.4	535.7	529.4	521.6	520.0	526.3
55°	624.7	566.9	529.4	506.0	499.7	484.1	476.3	468.5	463.8	460.7	462.3
57.5°	534.1	490.4	465.4	445.1	434.2	427.9	413.8	412.3	409.2	409.2	407.6
60°	459.1	427.9	398.2	385.7	377.9	370.1	368.6	359.2	354.5	357.6	356.1
62.5°	388.9	363.9	346.7	332.6	328.0	321.7	317.0	313.9	309.2	310.8	310.8
65°	324.8	304.5	292.0	279.5	278.0	271.7	270.2	267.0	267.0	265.5	268.6
67.5°	267.0	253.0	242.1	234.3	229.6	231.1	224.9	220.2	220.2	218.6	223.3
70°	212.4	204.6	193.6	184.3	178.0	178.0	170.2	168.7	168.7	168.7	167.1
72.5°	164.0	149.9	145.2	142.1	142.1	142.1	139.0	139.0	137.4	139.0	137.4
75°	121.8	120.3	117.1	115.6	115.6	114.0	112.4	112.4	112.4	112.4	112.4
77.5°	95.3	95.3	92.1	90.6	90.6	90.6	89.0	89.0	87.5	87.5	87.5
80°	70.3	70.3	67.2	67.2	67.2	65.6	65.6	65.6	67.2	65.6	65.6
82.5°	48.4	48.4	46.9	48.4	46.9	45.3	45.3	45.3	43.7	45.3	45.3
85°	28.1	28.1	26.5	25.0	26.5	26.5	25.0	26.5	25.0	26.5	25.0
87.5°	10.9	9.4	9.4	9.4	7.8	9.4	7.8	7.8	9.4	7.8	9.4
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°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1969.3	1959.9	1953.7	1949.0	1944.3	1958.4	1939.6	1919.3	1905.3	1895.9	1892.8
5°	2175.4	2155.1	2138.0	2123.9	2127.0	2127.0	2094.2	2058.3	2027.1	2009.9	1991.2
7.5°	2414.4	2392.5	2358.2	2350.3	2344.1	2305.1	2272.3	2206.7	2167.6	2128.6	2094.2
10°	2651.8	2623.6	2590.8	2579.9	2564.3	2515.9	2465.9	2381.6	2333.2	2261.3	2216.0
12.5°	2873.5	2839.2	2806.4	2798.6	2775.1	2733.0	2647.1	2559.6	2476.8	2400.3	2320.7
15°	3059.4	3050.0	3000.0	2968.8	2917.2	2859.5	2840.7	2722.0	2617.4	2537.7	2394.1
17.5°	3215.5	3171.8	3124.9	3104.6	3084.3	3017.2	2950.0	2828.2	2715.8	2598.7	2506.5
20°	3340.5	3292.0	3259.3	3229.6	3220.2	3143.7	3037.5	2929.7	2806.4	2675.2	2554.9
22.5°	3346.7	3340.5	3318.6	3301.4	3282.7	3232.7	3148.4	3014.1	2882.9	2739.2	2581.5
25°	3217.1	3207.7	3270.2	3254.6	3267.1	3248.3	3203.0	3090.6	2937.5	2768.9	2609.6
27.5°	2826.7	2921.9	3020.3	3054.7	3078.1	3145.2	3167.1	3104.6	2981.3	2801.7	2623.6
30°	2295.7	2422.2	2581.5	2667.4	2733.0	2857.9	3020.3	3040.6	2982.8	2839.2	2620.5
32.5°	1802.2	1917.8	2045.8	2147.3	2234.8	2490.9	2709.5	2867.3	2895.4	2820.4	2628.3
35°	1452.4	1502.3	1624.2	1721.0	1839.7	2058.3	2316.0	2570.5	2742.3	2751.7	2604.9
37.5°	1197.8	1224.4	1330.6	1385.2	1455.5	1647.6	1888.1	2220.7	2487.8	2614.3	2539.3
40°	991.7	1052.6	1113.5	1144.7	1194.7	1327.4	1558.6	1819.4	2150.4	2384.7	2437.8
42.5°	860.5	887.0	926.1	969.8	1001.0	1116.6	1271.2	1510.2	1808.4	2134.8	2281.6
45°	759.0	768.4	809.0	837.1	869.9	951.1	1060.4	1260.3	1522.6	1844.4	2094.2
47.5°	674.7	693.4	715.3	732.4	754.3	816.8	910.5	1055.7	1286.8	1574.2	1842.8
50°	599.7	610.6	638.7	646.5	662.2	705.9	777.7	888.6	1079.1	1308.7	1586.7
52.5°	529.4	549.7	560.6	571.6	585.6	621.6	668.4	759.0	902.7	1118.2	1354.0
55°	474.8	481.0	496.6	506.0	516.9	541.9	582.5	649.7	762.1	933.9	1157.2
57.5°	421.7	421.7	437.3	445.1	456.0	474.8	510.7	562.2	643.4	771.5	976.1
60°	365.4	367.0	379.5	388.9	392.0	410.7	440.4	481.0	543.5	637.2	804.3
62.5°	315.5	323.3	329.5	332.6	343.6	354.5	379.5	407.6	451.3	534.1	652.8
65°	273.3	274.9	279.5	282.7	287.4	299.8	318.6	337.3	374.8	435.7	532.5
67.5°	224.9	231.1	237.4	237.4	242.1	248.3	267.0	282.7	310.8	346.7	412.3
70°	168.7	171.8	181.2	185.8	192.1	203.0	212.4	221.8	243.6	270.2	320.1
72.5°	140.6	140.6	143.7	145.2	145.2	153.0	167.1	176.5	187.4	206.1	240.5
75°	112.4	112.4	117.1	115.6	118.7	121.8	123.4	129.6	135.9	149.9	170.2
77.5°	89.0	90.6	90.6	92.1	92.1	93.7	95.3	98.4	101.5	109.3	118.7
80°	65.6	67.2	67.2	68.7	68.7	70.3	71.8	73.4	76.5	79.6	84.3
82.5°	45.3	46.9	46.9	48.4	46.9	48.4	50.0	50.0	51.5	54.7	56.2
85°	26.5	26.5	28.1	26.5	26.5	26.5	28.1	28.1	29.7	34.4	34.4
87.5°	7.8	9.4	7.8	9.4	9.4	9.4	9.4	10.9	10.9	12.5	14.1
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: P994941

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1888.1	1880.3	1872.5	1872.5	1855.3	1839.7	1831.9	1835.0	1825.6	1813.1	1800.6
5°	1970.9	1939.6	1933.4	1916.2	1892.8	1860.0	1842.8	1827.2	1808.4	1783.5	1760.0
7.5°	2047.4	2006.8	1984.9	1967.7	1922.4	1877.2	1839.7	1814.7	1781.9	1744.4	1716.3
10°	2147.3	2072.4	2048.9	2009.9	1945.9	1881.8	1838.1	1797.5	1752.2	1708.5	1671.0
12.5°	2227.0	2141.1	2097.4	2058.3	1975.5	1894.3	1820.9	1771.0	1716.3	1667.9	1619.5
15°	2317.6	2220.7	2144.2	2097.4	1992.7	1894.3	1811.6	1741.3	1680.4	1621.0	1578.9
17.5°	2361.3	2239.5	2205.1	2138.0	1986.5	1888.1	1786.6	1711.6	1638.2	1569.5	1519.5
20°	2430.0	2287.9	2202.0	2156.7	2022.4	1877.2	1758.5	1672.6	1596.0	1522.6	1469.6
22.5°	2434.7	2280.1	2223.8	2138.0	1972.4	1844.4	1733.5	1628.8	1539.8	1471.1	1416.5
25°	2423.7	2266.0	2187.9	2119.2	1981.8	1825.6	1683.5	1580.4	1493.0	1413.3	1349.3
27.5°	2419.1	2225.4	2152.0	2083.3	1928.7	1771.0	1653.8	1536.7	1436.8	1366.5	1300.9
30°	2412.8	2181.7	2092.7	2013.0	1870.9	1728.8	1588.2	1486.7	1391.5	1302.5	1236.9
32.5°	2372.2	2122.3	2031.8	1947.4	1794.4	1652.3	1541.4	1433.6	1330.6	1247.8	1188.4
35°	2359.7	2067.7	1949.0	1858.4	1708.5	1582.0	1464.9	1375.9	1279.0	1196.3	1126.0
37.5°	2323.8	2011.5	1883.4	1767.8	1611.7	1491.4	1405.5	1316.5	1222.8	1133.8	1077.6
40°	2261.3	1945.9	1800.6	1681.9	1521.1	1399.3	1319.6	1254.0	1161.9	1082.3	1013.5
42.5°	2169.2	1878.7	1722.5	1597.6	1419.6	1305.6	1240.0	1177.5	1099.4	1016.7	960.4
45°	2063.0	1789.7	1644.5	1505.5	1324.3	1213.4	1144.7	1107.2	1035.4	965.1	899.5
47.5°	1917.8	1697.6	1553.9	1410.2	1225.9	1118.2	1063.5	1026.0	976.1	899.5	846.4
50°	1735.0	1578.9	1443.0	1314.9	1129.1	1026.0	971.4	943.3	901.1	846.4	794.9
52.5°	1532.0	1441.4	1329.0	1210.3	1030.7	933.9	883.9	862.1	830.8	779.3	735.6
55°	1327.4	1288.4	1211.9	1094.7	927.6	848.0	804.3	776.2	752.7	715.3	677.8
57.5°	1144.7	1126.0	1072.9	982.3	841.8	759.0	721.5	702.8	684.0	655.9	618.4
60°	955.8	976.1	921.4	876.1	748.1	676.2	643.4	623.1	613.7	588.8	565.3
62.5°	791.8	810.5	779.3	744.9	654.3	590.3	570.0	551.3	545.0	523.2	499.7
65°	643.4	666.8	643.4	624.7	570.0	516.9	491.9	482.6	476.3	462.3	443.5
67.5°	512.2	535.7	524.7	501.3	484.1	440.4	426.3	417.0	413.8	402.9	387.3
70°	385.7	418.5	421.7	407.6	392.0	371.7	362.3	359.2	351.4	342.0	332.6
72.5°	278.0	315.5	317.0	317.0	307.7	307.7	298.3	293.6	293.6	284.2	273.3
75°	204.6	229.6	232.7	235.8	240.5	245.2	238.9	238.9	237.4	228.0	223.3
77.5°	135.9	157.7	165.5	176.5	182.7	182.7	185.8	189.0	185.8	181.2	178.0
80°	87.5	103.1	112.4	118.7	128.1	132.7	137.4	139.0	135.9	134.3	129.6
82.5°	57.8	62.5	67.2	75.0	85.9	93.7	93.7	92.1	95.3	93.7	92.1
85°	32.8	35.9	37.5	39.0	45.3	53.1	54.7	56.2	59.3	56.2	53.1
87.5°	12.5	14.1	14.1	14.1	17.2	18.7	23.4	29.7	28.1	25.0	25.0
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: P994941

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1800.6	1792.8	1789.7	1781.9	1763.1	1750.7	1736.6	1727.2	1728.8	1721.0	1725.7
5°	1744.4	1742.8	1731.9	1716.3	1689.8	1675.7	1650.7	1638.2	1632.0	1633.5	1624.2
7.5°	1697.6	1683.5	1675.7	1650.7	1625.7	1596.0	1575.7	1564.8	1555.4	1546.1	1539.8
10°	1644.5	1632.0	1619.5	1592.9	1558.6	1530.5	1502.3	1491.4	1477.4	1471.1	1466.4
12.5°	1588.2	1580.4	1564.8	1533.6	1494.5	1468.0	1435.2	1428.9	1410.2	1397.7	1394.6
15°	1536.7	1532.0	1503.9	1468.0	1428.9	1402.4	1374.3	1355.5	1324.3	1330.6	1319.6
17.5°	1482.0	1461.7	1444.6	1396.2	1377.4	1336.8	1304.0	1294.6	1272.8	1258.7	1244.7
20°	1421.1	1408.6	1386.8	1355.5	1310.3	1263.4	1238.4	1222.8	1210.3	1188.4	1182.2
22.5°	1363.4	1347.7	1329.0	1288.4	1249.4	1210.3	1176.0	1161.9	1146.3	1130.7	1121.3
25°	1318.1	1294.6	1274.3	1224.4	1185.3	1152.5	1130.7	1107.2	1085.4	1076.0	1072.9
27.5°	1247.8	1233.7	1213.4	1166.6	1130.7	1094.7	1074.4	1058.8	1035.4	1024.5	1015.1
30°	1202.5	1174.4	1151.0	1113.5	1077.6	1038.5	1019.8	1001.0	987.0	972.9	962.0
32.5°	1141.6	1119.7	1101.0	1063.5	1027.6	991.7	971.4	943.3	935.5	924.5	912.0
35°	1082.3	1068.2	1047.9	1007.3	968.2	943.3	921.4	894.8	885.5	877.7	866.7
37.5°	1026.0	1005.7	991.7	952.6	918.3	888.6	871.4	849.6	843.3	833.9	826.1
40°	977.6	957.3	943.3	904.2	868.3	837.1	826.1	804.3	794.9	784.0	779.3
42.5°	923.0	905.8	887.0	858.9	821.4	790.2	768.4	755.9	743.4	738.7	729.3
45°	865.2	849.6	835.5	804.3	765.2	743.4	724.6	707.4	698.1	690.3	684.0
47.5°	815.2	801.1	782.4	748.1	716.8	696.5	677.8	660.6	651.2	641.9	634.0
50°	757.4	749.6	729.3	696.5	666.8	643.4	626.2	610.6	604.4	593.4	580.9
52.5°	705.9	691.8	674.7	648.1	621.6	593.4	570.0	560.6	549.7	543.5	532.5
55°	645.0	635.6	616.9	593.4	565.3	541.9	524.7	512.2	498.2	491.9	477.9
57.5°	593.4	576.3	566.9	537.2	510.7	487.2	474.8	462.3	446.6	437.3	431.0
60°	537.2	521.6	507.5	482.6	463.8	438.8	420.1	409.2	398.2	385.7	379.5
62.5°	482.6	470.1	452.9	432.6	409.2	388.9	374.8	359.2	352.9	340.4	335.8
65°	423.2	413.8	399.8	376.4	357.6	340.4	326.4	313.9	307.7	303.0	299.8
67.5°	370.1	357.6	348.3	328.0	307.7	293.6	285.8	278.0	270.2	265.5	260.8
70°	315.5	306.1	296.7	278.0	263.9	251.4	245.2	238.9	234.3	229.6	224.9
72.5°	259.2	254.6	245.2	232.7	221.8	212.4	207.7	199.9	195.2	187.4	184.3
75°	214.0	206.1	201.5	190.5	181.2	173.3	167.1	157.7	151.5	148.4	146.8
77.5°	168.7	165.5	159.3	149.9	145.2	137.4	128.1	124.9	121.8	121.8	120.3
80°	126.5	121.8	117.1	109.3	104.6	98.4	98.4	98.4	96.8	98.4	96.8
82.5°	85.9	82.8	79.6	75.0	73.4	73.4	75.0	75.0	75.0	75.0	75.0
85°	50.0	50.0	50.0	51.5	50.0	50.0	51.5	53.1	51.5	51.5	50.0
87.5°	23.4	23.4	25.0	25.0	26.5	26.5	26.5	26.5	26.5	26.5	28.1
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: P994941

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1724.1	1725.7	1721.0	1711.6	1710.1	1713.2	1722.5	1719.4	1711.6	1725.7	1713.2
5°	1628.8	1621.0	1617.9	1621.0	1611.7	1607.0	1616.4	1611.7	1616.4	1617.9	1622.6
7.5°	1536.7	1538.3	1528.9	1530.5	1518.0	1521.1	1521.1	1521.1	1525.8	1528.9	1535.1
10°	1457.1	1460.2	1449.2	1450.8	1441.4	1435.2	1439.9	1449.2	1449.2	1449.2	1452.4
12.5°	1393.0	1379.0	1371.2	1369.6	1358.7	1355.5	1364.9	1368.0	1375.9	1375.9	1380.5
15°	1313.4	1310.3	1304.0	1304.0	1277.5	1283.7	1286.8	1297.8	1313.4	1300.9	1304.0
17.5°	1241.5	1233.7	1225.9	1222.8	1219.7	1210.3	1222.8	1221.2	1230.6	1232.2	1236.9
20°	1177.5	1171.3	1155.7	1157.2	1160.3	1146.3	1154.1	1154.1	1163.5	1172.8	1183.8
22.5°	1115.0	1108.8	1101.0	1104.1	1094.7	1091.6	1091.6	1099.4	1110.4	1118.2	1116.6
25°	1066.6	1055.7	1051.0	1046.3	1041.6	1044.8	1040.1	1047.9	1055.7	1060.4	1055.7
27.5°	1012.0	1007.3	997.9	993.2	985.4	988.6	991.7	997.9	1002.6	1002.6	1007.3
30°	958.9	952.6	949.5	944.8	944.8	938.6	940.1	946.4	951.1	955.8	962.0
32.5°	907.3	902.7	898.0	898.0	894.8	893.3	891.7	901.1	901.1	910.5	910.5
35°	865.2	857.4	857.4	849.6	852.7	851.1	848.0	854.2	855.8	862.1	860.5
37.5°	818.3	818.3	815.2	807.4	801.1	802.7	810.5	810.5	815.2	813.6	818.3
40°	771.5	768.4	768.4	763.7	762.1	760.5	762.1	763.7	771.5	769.9	771.5
42.5°	724.6	726.2	718.4	718.4	718.4	713.7	715.3	716.8	719.9	723.1	727.7
45°	679.3	676.2	674.7	671.5	668.4	670.0	668.4	674.7	673.1	676.2	680.9
47.5°	630.9	626.2	624.7	618.4	618.4	621.6	620.0	624.7	626.2	630.9	627.8
50°	584.1	577.8	573.1	574.7	565.3	568.5	568.5	573.1	577.8	579.4	582.5
52.5°	529.4	527.9	526.3	518.5	516.9	515.4	516.9	518.5	524.7	529.4	531.0
55°	476.3	474.8	465.4	462.3	457.6	457.6	460.7	462.3	473.2	474.8	481.0
57.5°	427.9	423.2	412.3	410.7	410.7	410.7	406.0	412.3	415.4	423.2	423.2
60°	374.8	374.8	365.4	365.4	367.0	365.4	365.4	367.0	367.0	373.2	376.4
62.5°	332.6	331.1	331.1	328.0	326.4	328.0	326.4	326.4	328.0	332.6	337.3
65°	295.2	293.6	292.0	290.5	287.4	287.4	288.9	292.0	292.0	295.2	296.7
67.5°	259.2	259.2	256.1	256.1	254.6	253.0	254.6	253.0	259.2	259.2	260.8
70°	223.3	221.8	217.1	215.5	210.8	212.4	212.4	217.1	218.6	221.8	224.9
72.5°	179.6	179.6	176.5	173.3	174.9	171.8	171.8	173.3	173.3	178.0	179.6
75°	148.4	145.2	143.7	145.2	143.7	146.8	143.7	143.7	146.8	146.8	146.8
77.5°	121.8	121.8	120.3	120.3	121.8	120.3	121.8	121.8	121.8	120.3	121.8
80°	99.9	98.4	98.4	98.4	96.8	96.8	96.8	96.8	96.8	96.8	96.8
82.5°	75.0	75.0	73.4	75.0	75.0	73.4	75.0	73.4	73.4	75.0	75.0
85°	50.0	53.1	50.0	50.0	51.5	51.5	53.1	51.5	53.1	50.0	51.5
87.5°	26.5	28.1	28.1	26.5	26.5	28.1	28.1	28.1	29.7	26.5	28.1
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: P994941
 CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1	1824.1
2.5°	1725.7	1731.9	1725.7	1713.2	1725.7	1733.5	1741.3	1753.8	1760.0	1760.0	1769.4
5°	1627.3	1639.8	1635.1	1632.0	1644.5	1652.3	1664.8	1680.4	1697.6	1708.5	1721.0
7.5°	1539.8	1547.6	1555.4	1555.4	1567.9	1585.1	1603.9	1622.6	1644.5	1660.1	1669.4
10°	1463.3	1469.6	1474.2	1480.5	1499.2	1518.0	1543.0	1566.4	1585.1	1602.3	1617.9
12.5°	1389.9	1399.3	1410.2	1414.9	1428.9	1452.4	1475.8	1503.9	1533.6	1550.8	1566.4
15°	1319.6	1324.3	1336.8	1350.9	1363.4	1388.3	1418.0	1447.7	1472.7	1499.2	1513.3
17.5°	1247.8	1249.4	1282.1	1274.3	1314.9	1338.4	1354.0	1382.1	1422.7	1444.6	1466.4
20°	1177.5	1193.1	1207.2	1215.0	1236.9	1263.4	1308.7	1330.6	1363.4	1383.7	1402.4
22.5°	1122.9	1146.3	1146.3	1165.0	1176.0	1200.9	1233.7	1275.9	1311.8	1325.9	1352.4
25°	1074.4	1085.4	1104.1	1110.4	1130.7	1152.5	1174.4	1219.7	1258.7	1277.5	1296.2
27.5°	1012.0	1026.0	1051.0	1051.0	1077.6	1101.0	1127.5	1157.2	1196.3	1222.8	1243.1
30°	963.6	977.6	988.6	1005.7	1016.7	1038.5	1085.4	1107.2	1141.6	1165.0	1190.0
32.5°	918.3	929.2	938.6	957.3	969.8	994.8	1019.8	1058.8	1088.5	1110.4	1136.9
35°	868.3	879.2	891.7	905.8	924.5	947.9	971.4	1004.2	1033.8	1054.1	1076.0
37.5°	821.4	829.3	848.0	857.4	873.0	894.8	924.5	958.9	985.4	1001.0	1022.9
40°	776.2	782.4	796.5	813.6	824.6	841.8	873.0	902.7	935.5	954.2	971.4
42.5°	727.7	735.6	748.1	765.2	782.4	801.1	818.3	852.7	882.4	898.0	916.7
45°	685.6	690.3	699.6	716.8	734.0	748.1	774.6	805.8	833.9	846.4	866.7
47.5°	635.6	640.3	654.3	662.2	680.9	699.6	726.2	757.4	782.4	794.9	813.6
50°	584.1	588.8	598.1	615.3	627.8	648.1	671.5	698.1	729.3	746.5	757.4
52.5°	534.1	543.5	551.3	565.3	580.9	601.3	623.1	648.1	674.7	691.8	704.3
55°	484.1	491.9	501.3	509.1	527.9	546.6	571.6	595.0	618.4	634.0	648.1
57.5°	427.9	438.8	448.2	463.8	477.9	493.5	521.6	540.3	568.5	579.4	591.9
60°	379.5	390.4	398.2	410.7	423.2	443.5	462.3	485.7	509.1	523.2	538.8
62.5°	338.9	343.6	348.3	360.8	373.2	392.0	410.7	434.2	459.1	466.9	479.4
65°	298.3	303.0	310.8	321.7	331.1	342.0	362.3	381.1	404.5	417.0	421.7
67.5°	263.9	268.6	270.2	278.0	285.8	298.3	309.2	328.0	349.8	357.6	367.0
70°	224.9	232.7	234.3	240.5	243.6	251.4	263.9	278.0	295.2	309.2	317.0
72.5°	179.6	190.5	193.6	203.0	207.7	215.5	224.9	235.8	246.7	253.0	259.2
75°	146.8	149.9	151.5	159.3	167.1	178.0	182.7	189.0	198.3	206.1	212.4
77.5°	121.8	123.4	124.9	124.9	126.5	132.7	142.1	149.9	156.2	159.3	164.0
80°	98.4	96.8	96.8	98.4	98.4	98.4	101.5	112.4	115.6	123.4	121.8
82.5°	76.5	73.4	75.0	73.4	73.4	73.4	73.4	75.0	75.0	79.6	82.8
85°	50.0	51.5	50.0	50.0	48.4	50.0	48.4	48.4	46.9	46.9	45.3
87.5°	26.5	28.1	26.5	26.5	25.0	26.5	25.0	25.0	23.4	23.4	20.3
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: P994941
 CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1824.1	1824.1	1824.1	1824.1
2.5°	1777.2	1788.1	1810.0	1828.7
5°	1739.7	1756.9	1789.7	1822.5
7.5°	1694.4	1721.0	1763.1	1808.4
10°	1650.7	1685.1	1736.6	1789.7
12.5°	1607.0	1642.9	1697.6	1766.3
15°	1555.4	1592.9	1658.5	1741.3
17.5°	1510.2	1560.1	1619.5	1702.2
20°	1461.7	1499.2	1575.7	1663.2
22.5°	1400.8	1463.3	1535.1	1627.3
25°	1352.4	1407.1	1478.9	1583.6
27.5°	1293.1	1357.1	1444.6	1536.7
30°	1244.7	1297.8	1379.0	1489.9
32.5°	1188.4	1250.9	1335.2	1444.6
35°	1138.5	1191.6	1271.2	1382.1
37.5°	1079.1	1136.9	1225.9	1324.3
40°	1027.6	1083.8	1168.1	1260.3
42.5°	965.1	1024.5	1108.8	1186.9
45°	915.2	969.8	1037.0	1108.8
47.5°	854.2	912.0	977.6	1027.6
50°	799.6	852.7	904.2	946.4
52.5°	740.2	788.7	835.5	866.7
55°	685.6	723.1	760.5	782.4
57.5°	621.6	657.5	688.7	701.2
60°	565.3	595.0	615.3	629.4
62.5°	506.0	527.9	543.5	551.3
65°	448.2	463.8	471.6	479.4
67.5°	388.9	402.9	407.6	417.0
70°	326.4	342.0	345.1	349.8
72.5°	279.5	279.5	285.8	292.0
75°	223.3	226.4	229.6	229.6
77.5°	174.9	174.9	178.0	179.6
80°	128.1	129.6	129.6	128.1
82.5°	87.5	90.6	87.5	85.9
85°	48.4	54.7	51.5	51.5
87.5°	20.3	20.3	23.4	20.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)