

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: P1037504

Luminaire Tested: S123RDS-B1165DB2750-4F0-XX-W2A-A_4000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1037504
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_4000K
Description: Define 3 Regressed Direct Surface with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

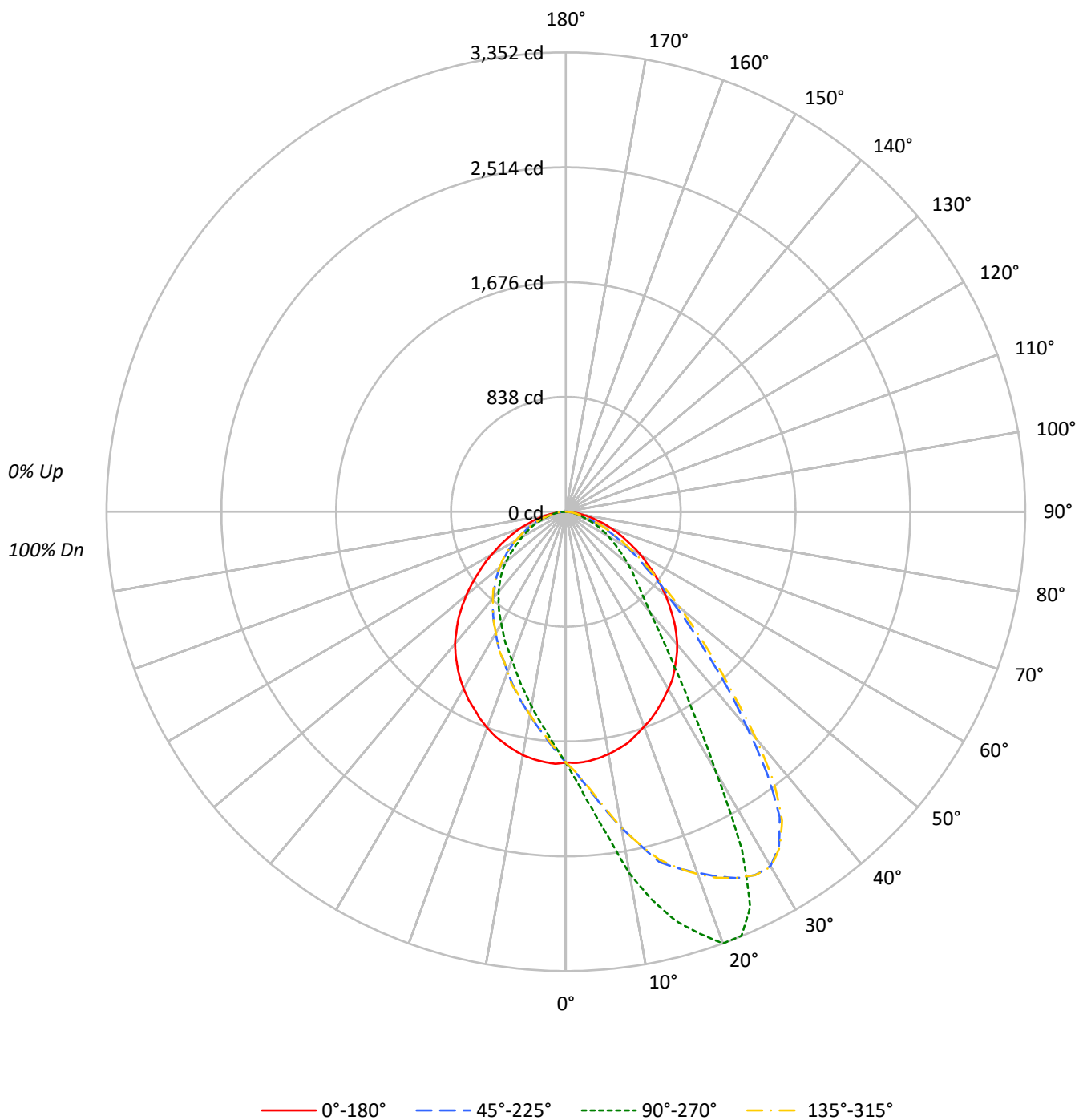
Lumens per Lamp: N/A
Luminaire Lumens: 4556.0 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.34
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

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				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	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°	19695	19695	19695	19695
5°	19753	23476	19803	17417
10°	19621	29313	19707	15735
15°	19465	34407	19465	14350
20°	19110	38400	19218	13171
25°	18865	37787	18828	12447
30°	18574	27161	18536	11702
35°	18218	18135	18135	11218
40°	17764	13361	17675	10720
45°	16930	11208	16908	10230
50°	15897	9890	15845	9548
55°	14728	8672	14611	8614
60°	13591	7722	13455	7892
65°	12248	6783	12330	7340
70°	11043	5325	11339	6703
75°	9578	4691	9969	6126
80°	7965	4079	8641	6019
85°	6385	3285	6966	6385

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 30°

Vertical Angle: 45°

Luminance: 32121 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.7	3.9
10°-20°	562.5	12.3
20°-30°	885.9	19.4
30°-40°	921.2	20.2
40°-50°	788.1	17.3
50°-60°	600.8	13.2
60°-70°	384.9	8.4
70°-80°	184.4	4.0
80°-90°	48.5	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°	1628.0	35.7
0°-40°	2549.2	56.0
0°-60°	3938.1	86.4
0°-90°	4556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4556.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1830	1830	1830	1830	1830	
5°	1828	2173	1833	1612	1828	173
15°	1747	3088	1747	1288	1747	491
25°	1588	3182	1585	1048	1588	732
35°	1386	1380	1380	854	1386	868
45°	1112	736	1111	672	1112	856
55°	785	462	779	459	785	703
65°	481	266	484	288	481	480
75°	230	113	240	147	230	249
85°	52	27	56	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°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1834.4	1846.9	1856.3	1862.6	1878.2	1887.6	1895.5	1909.6	1909.6	1912.7	1919.0
5°	1828.1	1854.7	1873.5	1898.6	1931.5	1947.2	1969.1	1987.9	2014.5	2028.6	2042.7
7.5°	1814.0	1851.6	1890.8	1928.4	1976.9	2008.3	2030.2	2078.8	2113.2	2155.5	2188.4
10°	1795.2	1846.9	1897.0	1955.0	2020.8	2067.8	2100.7	2164.9	2230.7	2290.2	2340.4
12.5°	1771.7	1834.4	1906.4	1976.9	2069.4	2116.3	2169.6	2249.5	2343.5	2418.7	2486.0
15°	1746.7	1818.7	1900.2	1986.3	2102.3	2168.0	2244.8	2341.9	2446.9	2555.0	2647.4
17.5°	1707.5	1798.3	1889.2	2014.5	2150.8	2190.0	2255.8	2388.9	2518.9	2616.1	2728.9
20°	1668.3	1770.2	1884.5	1997.3	2144.5	2235.4	2296.5	2437.5	2576.9	2694.4	2802.5
22.5°	1632.3	1738.8	1857.9	2000.4	2138.3	2229.1	2305.9	2453.1	2614.5	2746.1	2879.2
25°	1588.4	1704.4	1835.9	1970.7	2138.3	2207.2	2291.8	2462.5	2633.3	2785.2	2949.7
27.5°	1541.4	1658.9	1788.9	1926.8	2080.3	2182.1	2265.2	2448.4	2656.8	2819.7	2988.9
30°	1494.4	1615.1	1740.4	1864.1	2036.5	2133.6	2229.1	2431.2	2669.3	2855.7	2985.8
32.5°	1449.0	1550.8	1674.6	1795.2	1966.0	2072.5	2180.6	2414.0	2674.0	2830.7	2893.3
35°	1386.4	1492.9	1593.1	1721.6	1893.9	1998.9	2125.7	2412.4	2653.7	2750.8	2719.5
37.5°	1328.4	1417.7	1513.2	1627.6	1804.6	1940.9	2072.5	2371.7	2586.3	2592.6	2415.6
40°	1264.2	1337.8	1417.7	1538.3	1729.4	1864.1	2006.7	2309.0	2464.1	2371.7	2060.0
42.5°	1190.5	1256.3	1319.0	1436.5	1644.8	1795.2	1948.7	2230.7	2287.1	2074.1	1749.8
45°	1112.2	1165.5	1223.4	1347.2	1555.5	1704.4	1857.9	2110.1	2052.1	1751.4	1442.8
47.5°	1030.8	1076.2	1132.6	1245.4	1460.0	1611.9	1757.6	1937.8	1790.5	1467.8	1209.3
50°	949.3	985.3	1040.2	1156.1	1362.9	1500.7	1635.4	1752.9	1546.1	1259.5	999.4
52.5°	869.4	897.6	954.0	1052.7	1253.2	1384.8	1481.9	1527.3	1317.4	1040.2	867.8
55°	784.8	816.1	853.7	954.0	1152.9	1250.1	1314.3	1312.7	1096.6	881.9	717.5
57.5°	703.4	731.6	764.5	864.7	1026.1	1091.9	1146.7	1120.1	914.8	722.2	615.6
60°	631.3	647.0	683.0	767.6	889.8	946.2	977.5	932.1	747.2	609.4	509.1
62.5°	553.0	568.6	598.4	678.3	753.5	783.3	809.9	751.9	617.2	496.6	435.5
65°	480.9	501.3	520.1	584.3	625.0	661.1	657.9	609.4	482.5	404.2	354.0
67.5°	418.3	426.1	441.8	480.9	499.7	526.3	527.9	473.1	388.5	329.0	299.2
70°	350.9	358.7	369.7	388.5	401.0	407.3	404.2	355.6	292.9	256.9	230.3
72.5°	292.9	291.4	299.2	299.2	311.7	310.2	300.8	263.2	222.4	192.7	177.0
75°	230.3	231.8	233.4	230.3	225.6	219.3	211.5	183.3	156.7	142.6	128.5
77.5°	180.1	177.0	178.6	167.6	161.4	155.1	144.1	130.0	108.1	105.0	98.7
80°	128.5	126.9	125.3	120.6	106.5	100.3	92.4	84.6	79.9	76.8	75.2
82.5°	86.2	86.2	83.0	73.6	65.8	61.1	59.5	56.4	51.7	51.7	50.1
85°	51.7	50.1	47.0	37.6	32.9	32.9	32.9	32.9	29.8	29.8	28.2
87.5°	20.4	18.8	14.1	14.1	12.5	12.5	12.5	11.0	11.0	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°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1931.5	1931.5	1945.6	1959.7	1951.9	1956.6	1973.8	1967.5	1980.1	1978.5	1983.2
5°	2077.2	2094.4	2108.5	2138.3	2143.0	2138.3	2168.0	2175.9	2190.0	2172.7	2180.6
7.5°	2241.7	2277.7	2312.2	2356.0	2370.1	2373.3	2388.9	2410.9	2429.6	2395.2	2412.4
10°	2401.5	2456.3	2526.8	2565.9	2600.4	2612.9	2625.5	2639.6	2661.5	2681.9	2666.2
12.5°	2573.8	2653.7	2721.0	2791.5	2833.8	2829.1	2865.1	2874.5	2891.8	2896.5	2902.7
15°	2714.8	2827.5	2869.8	2974.8	2984.2	3015.5	3056.3	3092.3	3097.0	3087.6	3087.6
17.5°	2849.5	2946.6	3021.8	3106.4	3123.6	3150.2	3201.9	3219.2	3225.4	3223.9	3223.9
20°	2959.1	3023.4	3150.2	3220.7	3248.9	3283.4	3319.4	3341.4	3346.1	3352.3	3342.9
22.5°	3031.2	3128.3	3231.7	3289.7	3313.2	3325.7	3349.2	3355.5	3347.6	3349.2	3350.8
25°	3087.6	3183.1	3245.8	3261.5	3259.9	3244.2	3227.0	3197.2	3194.1	3181.6	3156.5
27.5°	3103.2	3139.3	3131.4	3067.2	3003.0	2996.7	2893.3	2836.9	2772.7	2782.1	2746.1
30°	3018.7	2971.7	2860.4	2697.5	2630.2	2520.5	2404.6	2284.0	2237.0	2185.3	2280.8
32.5°	2811.9	2644.3	2446.9	2235.4	2122.6	2025.5	1901.7	1814.0	1763.9	1721.6	1803.0
35°	2500.1	2238.5	1976.9	1776.4	1684.0	1596.3	1480.3	1436.5	1373.8	1380.1	1387.9
37.5°	2099.1	1810.9	1613.5	1416.1	1355.0	1319.0	1234.4	1167.0	1145.1	1138.8	1138.8
40°	1723.2	1486.6	1311.2	1156.1	1109.1	1079.3	1012.0	980.6	957.1	950.9	958.7
42.5°	1425.5	1223.4	1087.2	983.8	950.9	913.3	885.1	845.9	841.2	830.2	844.3
45°	1196.8	1021.4	919.5	844.3	816.1	802.1	770.7	747.2	737.8	736.3	747.2
47.5°	1015.1	878.8	789.5	742.5	720.6	706.5	679.9	670.5	661.1	664.2	659.5
50°	852.2	750.4	692.4	650.1	636.0	621.9	604.7	595.3	590.6	590.6	589.0
52.5°	731.6	647.0	609.4	570.2	563.9	556.1	537.3	531.0	523.2	521.6	527.9
55°	626.6	568.6	531.0	507.5	501.3	485.6	477.8	470.0	465.3	462.1	463.7
57.5°	535.7	491.9	466.8	446.5	435.5	429.2	415.1	413.6	410.4	410.4	408.9
60°	460.6	429.2	399.5	386.9	379.1	371.3	369.7	360.3	355.6	358.7	357.2
62.5°	390.1	365.0	347.8	333.7	329.0	322.7	318.0	314.9	310.2	311.7	311.7
65°	325.8	305.5	292.9	280.4	278.8	272.6	271.0	267.9	267.9	266.3	269.4
67.5°	267.9	253.8	242.8	235.0	230.3	231.8	225.6	220.9	220.9	219.3	224.0
70°	213.0	205.2	194.2	184.8	178.6	178.6	170.7	169.2	169.2	169.2	167.6
72.5°	164.5	150.4	145.7	142.6	142.6	142.6	139.4	139.4	137.9	139.4	137.9
75°	122.2	120.6	117.5	115.9	115.9	114.4	112.8	112.8	112.8	112.8	112.8
77.5°	95.6	95.6	92.4	90.9	90.9	90.9	89.3	89.3	87.7	87.7	87.7
80°	70.5	70.5	67.4	67.4	67.4	65.8	65.8	65.8	67.4	65.8	65.8
82.5°	48.6	48.6	47.0	48.6	47.0	45.4	45.4	45.4	43.9	45.4	45.4
85°	28.2	28.2	26.6	25.1	26.6	26.6	25.1	26.6	25.1	26.6	25.1
87.5°	11.0	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°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1975.4	1966.0	1959.7	1955.0	1950.3	1964.4	1945.6	1925.2	1911.1	1901.7	1898.6
5°	2182.1	2161.8	2144.5	2130.4	2133.6	2133.6	2100.7	2064.7	2033.3	2016.1	1997.3
7.5°	2421.8	2399.9	2365.4	2357.6	2351.3	2312.2	2279.3	2213.5	2174.3	2135.1	2100.7
10°	2659.9	2631.7	2598.8	2587.9	2572.2	2523.6	2473.5	2388.9	2340.4	2268.3	2222.9
12.5°	2882.4	2847.9	2815.0	2807.2	2783.7	2741.4	2655.2	2567.5	2484.5	2407.7	2327.8
15°	3068.8	3059.4	3009.3	2977.9	2926.2	2868.3	2849.5	2730.4	2625.5	2545.6	2401.5
17.5°	3225.4	3181.6	3134.6	3114.2	3093.8	3026.5	2959.1	2836.9	2724.2	2606.7	2514.2
20°	3350.8	3302.2	3269.3	3239.5	3230.1	3153.4	3046.9	2938.8	2815.0	2683.4	2562.8
22.5°	3357.0	3350.8	3328.8	3311.6	3292.8	3242.7	3158.1	3023.4	2891.8	2747.7	2589.4
25°	3227.0	3217.6	3280.3	3264.6	3277.1	3258.3	3212.9	3100.1	2946.6	2777.4	2617.6
27.5°	2835.4	2930.9	3029.6	3064.1	3087.6	3154.9	3176.9	3114.2	2990.5	2810.3	2631.7
30°	2302.8	2429.6	2589.4	2675.6	2741.4	2866.7	3029.6	3050.0	2992.0	2847.9	2628.6
32.5°	1807.7	1923.7	2052.1	2153.9	2241.7	2498.6	2717.9	2876.1	2904.3	2829.1	2636.4
35°	1456.8	1507.0	1629.2	1726.3	1845.3	2064.7	2323.1	2578.5	2750.8	2760.2	2612.9
37.5°	1201.5	1228.1	1334.7	1389.5	1460.0	1652.7	1893.9	2227.6	2495.4	2622.3	2547.1
40°	994.7	1055.8	1116.9	1148.2	1198.4	1331.5	1563.4	1825.0	2157.1	2392.1	2445.3
42.5°	863.1	889.8	928.9	972.8	1004.1	1120.1	1275.1	1514.8	1814.0	2141.4	2288.7
45°	761.3	770.7	811.4	839.6	872.5	954.0	1063.7	1264.2	1527.3	1850.0	2100.7
47.5°	676.7	695.5	717.5	734.7	756.6	819.3	913.3	1059.0	1290.8	1579.0	1848.5
50°	601.5	612.5	640.7	648.5	664.2	708.1	780.1	891.3	1082.5	1312.7	1591.6
52.5°	531.0	551.4	562.4	573.3	587.4	623.5	670.5	761.3	905.4	1121.6	1358.2
55°	476.2	482.5	498.1	507.5	518.5	543.6	584.3	651.7	764.5	936.8	1160.8
57.5°	423.0	423.0	438.6	446.5	457.4	476.2	512.2	563.9	645.4	773.9	979.1
60°	366.6	368.1	380.7	390.1	393.2	412.0	441.8	482.5	545.1	639.1	806.8
62.5°	316.4	324.3	330.5	333.7	344.6	355.6	380.7	408.9	452.7	535.7	654.8
65°	274.1	275.7	280.4	283.5	288.2	300.8	319.6	338.4	376.0	437.1	534.2
67.5°	225.6	231.8	238.1	238.1	242.8	249.1	267.9	283.5	311.7	347.8	413.6
70°	169.2	172.3	181.7	186.4	192.7	203.6	213.0	222.4	244.4	271.0	321.1
72.5°	141.0	141.0	144.1	145.7	145.7	153.5	167.6	177.0	188.0	206.8	241.2
75°	112.8	112.8	117.5	115.9	119.1	122.2	123.8	130.0	136.3	150.4	170.7
77.5°	89.3	90.9	90.9	92.4	92.4	94.0	95.6	98.7	101.8	109.7	119.1
80°	65.8	67.4	67.4	68.9	68.9	70.5	72.1	73.6	76.8	79.9	84.6
82.5°	45.4	47.0	47.0	48.6	47.0	48.6	50.1	50.1	51.7	54.8	56.4
85°	26.6	26.6	28.2	26.6	26.6	26.6	28.2	28.2	29.8	34.5	34.5
87.5°	7.8	9.4	7.8	9.4	9.4	9.4	9.4	11.0	11.0	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: P1037504

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1893.9	1886.1	1878.2	1878.2	1861.0	1845.3	1837.5	1840.6	1831.2	1818.7	1806.2
5°	1976.9	1945.6	1939.3	1922.1	1898.6	1865.7	1848.5	1832.8	1814.0	1788.9	1765.5
7.5°	2053.7	2013.0	1991.0	1973.8	1928.4	1882.9	1845.3	1820.3	1787.4	1749.8	1721.6
10°	2153.9	2078.8	2055.3	2016.1	1951.9	1887.6	1843.8	1803.0	1757.6	1713.8	1676.2
12.5°	2233.8	2147.7	2103.8	2064.7	1981.6	1900.2	1826.5	1776.4	1721.6	1673.0	1624.5
15°	2324.7	2227.6	2150.8	2103.8	1998.9	1900.2	1817.1	1746.7	1685.6	1626.0	1583.7
17.5°	2368.6	2246.4	2211.9	2144.5	1992.6	1893.9	1792.1	1716.9	1643.3	1574.3	1524.2
20°	2437.5	2294.9	2208.8	2163.3	2028.6	1882.9	1763.9	1677.7	1601.0	1527.3	1474.1
22.5°	2442.2	2287.1	2230.7	2144.5	1978.5	1850.0	1738.8	1633.9	1544.6	1475.6	1420.8
25°	2431.2	2273.0	2194.7	2125.7	1987.9	1831.2	1688.7	1585.3	1497.6	1417.7	1353.5
27.5°	2426.5	2232.3	2158.6	2089.7	1934.6	1776.4	1658.9	1541.4	1441.2	1370.7	1304.9
30°	2420.3	2188.4	2099.1	2019.2	1876.7	1734.1	1593.1	1491.3	1395.8	1306.5	1240.7
32.5°	2379.5	2128.9	2038.0	1953.4	1799.9	1657.4	1546.1	1438.1	1334.7	1251.6	1192.1
35°	2367.0	2074.1	1955.0	1864.1	1713.8	1586.9	1469.4	1380.1	1283.0	1199.9	1129.5
37.5°	2331.0	2017.7	1889.2	1773.3	1616.6	1496.0	1409.9	1320.6	1226.6	1137.3	1080.9
40°	2268.3	1951.9	1806.2	1687.1	1525.8	1403.6	1323.7	1257.9	1165.5	1085.6	1016.7
42.5°	2175.9	1884.5	1727.9	1602.5	1424.0	1309.6	1243.8	1181.1	1102.8	1019.8	963.4
45°	2069.4	1795.2	1649.5	1510.1	1328.4	1217.2	1148.2	1110.7	1038.6	968.1	902.3
47.5°	1923.7	1702.8	1558.7	1414.6	1229.7	1121.6	1066.8	1029.2	979.1	902.3	849.0
50°	1740.4	1583.7	1447.5	1319.0	1132.6	1029.2	974.4	946.2	903.9	849.0	797.4
52.5°	1536.7	1445.9	1333.1	1214.0	1033.9	936.8	886.6	864.7	833.4	781.7	737.8
55°	1331.5	1292.4	1215.6	1098.1	930.5	850.6	806.8	778.6	755.1	717.5	679.9
57.5°	1148.2	1129.5	1076.2	985.3	844.3	761.3	723.7	704.9	686.1	657.9	620.3
60°	958.7	979.1	924.2	878.8	750.4	678.3	645.4	625.0	615.6	590.6	567.1
62.5°	794.2	813.0	781.7	747.2	656.4	592.1	571.8	553.0	546.7	524.8	501.3
65°	645.4	668.9	645.4	626.6	571.8	518.5	493.4	484.1	477.8	463.7	444.9
67.5°	513.8	537.3	526.3	502.8	485.6	441.8	427.7	418.3	415.1	404.2	388.5
70°	386.9	419.8	423.0	408.9	393.2	372.8	363.4	360.3	352.5	343.1	333.7
72.5°	278.8	316.4	318.0	318.0	308.6	308.6	299.2	294.5	294.5	285.1	274.1
75°	205.2	230.3	233.4	236.5	241.2	245.9	239.7	239.7	238.1	228.7	224.0
77.5°	136.3	158.2	166.0	177.0	183.3	183.3	186.4	189.5	186.4	181.7	178.6
80°	87.7	103.4	112.8	119.1	128.5	133.2	137.9	139.4	136.3	134.7	130.0
82.5°	58.0	62.7	67.4	75.2	86.2	94.0	94.0	92.4	95.6	94.0	92.4
85°	32.9	36.0	37.6	39.2	45.4	53.3	54.8	56.4	59.5	56.4	53.3
87.5°	12.5	14.1	14.1	14.1	17.2	18.8	23.5	29.8	28.2	25.1	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: P1037504

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1806.2	1798.3	1795.2	1787.4	1768.6	1756.1	1742.0	1732.6	1734.1	1726.3	1731.0
5°	1749.8	1748.2	1737.3	1721.6	1695.0	1680.9	1655.8	1643.3	1637.0	1638.6	1629.2
7.5°	1702.8	1688.7	1680.9	1655.8	1630.7	1601.0	1580.6	1569.6	1560.2	1550.8	1544.6
10°	1649.5	1637.0	1624.5	1597.8	1563.4	1535.2	1507.0	1496.0	1481.9	1475.6	1470.9
12.5°	1593.1	1585.3	1569.6	1538.3	1499.1	1472.5	1439.6	1433.4	1414.6	1402.0	1398.9
15°	1541.4	1536.7	1508.5	1472.5	1433.4	1406.7	1378.5	1359.7	1328.4	1334.7	1323.7
17.5°	1486.6	1466.2	1449.0	1400.5	1381.7	1340.9	1308.0	1298.6	1276.7	1262.6	1248.5
20°	1425.5	1413.0	1391.1	1359.7	1314.3	1267.3	1242.2	1226.6	1214.0	1192.1	1185.8
22.5°	1367.6	1351.9	1333.1	1292.4	1253.2	1214.0	1179.6	1165.5	1149.8	1134.1	1124.8
25°	1322.1	1298.6	1278.3	1228.1	1189.0	1156.1	1134.1	1110.7	1088.7	1079.3	1076.2
27.5°	1251.6	1237.5	1217.2	1170.2	1134.1	1098.1	1077.8	1062.1	1038.6	1027.6	1018.2
30°	1206.2	1178.0	1154.5	1116.9	1080.9	1041.7	1022.9	1004.1	990.0	975.9	965.0
32.5°	1145.1	1123.2	1104.4	1066.8	1030.8	994.7	974.4	946.2	938.3	927.4	914.8
35°	1085.6	1071.5	1051.1	1010.4	971.2	946.2	924.2	897.6	888.2	880.4	869.4
37.5°	1029.2	1008.8	994.7	955.6	921.1	891.3	874.1	852.2	845.9	836.5	828.7
40°	980.6	960.3	946.2	907.0	871.0	839.6	828.7	806.8	797.4	786.4	781.7
42.5°	925.8	908.6	889.8	861.6	824.0	792.7	770.7	758.2	745.7	741.0	731.6
45°	867.8	852.2	838.1	806.8	767.6	745.7	726.9	709.6	700.2	692.4	686.1
47.5°	817.7	803.6	784.8	750.4	719.0	698.7	679.9	662.6	653.2	643.8	636.0
50°	759.8	751.9	731.6	698.7	668.9	645.4	628.2	612.5	606.2	595.3	582.7
52.5°	708.1	694.0	676.7	650.1	623.5	595.3	571.8	562.4	551.4	545.1	534.2
55°	647.0	637.6	618.8	595.3	567.1	543.6	526.3	513.8	499.7	493.4	479.4
57.5°	595.3	578.0	568.6	538.9	512.2	488.7	476.2	463.7	448.0	438.6	432.4
60°	538.9	523.2	509.1	484.1	465.3	440.2	421.4	410.4	399.5	386.9	380.7
62.5°	484.1	471.5	454.3	433.9	410.4	390.1	376.0	360.3	354.0	341.5	336.8
65°	424.5	415.1	401.0	377.5	358.7	341.5	327.4	314.9	308.6	303.9	300.8
67.5°	371.3	358.7	349.3	329.0	308.6	294.5	286.7	278.8	271.0	266.3	261.6
70°	316.4	307.0	297.6	278.8	264.7	252.2	245.9	239.7	235.0	230.3	225.6
72.5°	260.0	255.3	245.9	233.4	222.4	213.0	208.3	200.5	195.8	188.0	184.8
75°	214.6	206.8	202.1	191.1	181.7	173.9	167.6	158.2	152.0	148.8	147.3
77.5°	169.2	166.0	159.8	150.4	145.7	137.9	128.5	125.3	122.2	122.2	120.6
80°	126.9	122.2	117.5	109.7	105.0	98.7	98.7	98.7	97.1	98.7	97.1
82.5°	86.2	83.0	79.9	75.2	73.6	73.6	75.2	75.2	75.2	75.2	75.2
85°	50.1	50.1	50.1	51.7	50.1	50.1	51.7	53.3	51.7	51.7	50.1
87.5°	23.5	23.5	25.1	25.1	26.6	26.6	26.6	26.6	26.6	26.6	28.2
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: P1037504

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1729.4	1731.0	1726.3	1716.9	1715.3	1718.5	1727.9	1724.7	1716.9	1731.0	1718.5
5°	1633.9	1626.0	1622.9	1626.0	1616.6	1611.9	1621.3	1616.6	1621.3	1622.9	1627.6
7.5°	1541.4	1543.0	1533.6	1535.2	1522.6	1525.8	1525.8	1525.8	1530.5	1533.6	1539.9
10°	1461.5	1464.7	1453.7	1455.3	1445.9	1439.6	1444.3	1453.7	1453.7	1453.7	1456.8
12.5°	1397.3	1383.2	1375.4	1373.8	1362.9	1359.7	1369.1	1372.3	1380.1	1380.1	1384.8
15°	1317.4	1314.3	1308.0	1308.0	1281.4	1287.7	1290.8	1301.8	1317.4	1304.9	1308.0
17.5°	1245.4	1237.5	1229.7	1226.6	1223.4	1214.0	1226.6	1225.0	1234.4	1236.0	1240.7
20°	1181.1	1174.9	1159.2	1160.8	1163.9	1149.8	1157.6	1157.6	1167.0	1176.4	1187.4
22.5°	1118.5	1112.2	1104.4	1107.5	1098.1	1095.0	1095.0	1102.8	1113.8	1121.6	1120.1
25°	1069.9	1059.0	1054.3	1049.6	1044.9	1048.0	1043.3	1051.1	1059.0	1063.7	1059.0
27.5°	1015.1	1010.4	1001.0	996.3	988.5	991.6	994.7	1001.0	1005.7	1005.7	1010.4
30°	961.8	955.6	952.4	947.7	947.7	941.5	943.0	949.3	954.0	958.7	965.0
32.5°	910.1	905.4	900.7	900.7	897.6	896.0	894.5	903.9	903.9	913.3	913.3
35°	867.8	860.0	860.0	852.2	855.3	853.7	850.6	856.9	858.4	864.7	863.1
37.5°	820.8	820.8	817.7	809.9	803.6	805.2	813.0	813.0	817.7	816.1	820.8
40°	773.9	770.7	770.7	766.0	764.5	762.9	764.5	766.0	773.9	772.3	773.9
42.5°	726.9	728.4	720.6	720.6	720.6	715.9	717.5	719.0	722.2	725.3	730.0
45°	681.4	678.3	676.7	673.6	670.5	672.0	670.5	676.7	675.2	678.3	683.0
47.5°	632.9	628.2	626.6	620.3	620.3	623.5	621.9	626.6	628.2	632.9	629.7
50°	585.9	579.6	574.9	576.5	567.1	570.2	570.2	574.9	579.6	581.2	584.3
52.5°	531.0	529.5	527.9	520.1	518.5	516.9	518.5	520.1	526.3	531.0	532.6
55°	477.8	476.2	466.8	463.7	459.0	459.0	462.1	463.7	474.7	476.2	482.5
57.5°	429.2	424.5	413.6	412.0	412.0	412.0	407.3	413.6	416.7	424.5	424.5
60°	376.0	376.0	366.6	366.6	368.1	366.6	366.6	368.1	368.1	374.4	377.5
62.5°	333.7	332.1	332.1	329.0	327.4	329.0	327.4	327.4	329.0	333.7	338.4
65°	296.1	294.5	292.9	291.4	288.2	288.2	289.8	292.9	292.9	296.1	297.6
67.5°	260.0	260.0	256.9	256.9	255.3	253.8	255.3	253.8	260.0	260.0	261.6
70°	224.0	222.4	217.7	216.2	211.5	213.0	213.0	217.7	219.3	222.4	225.6
72.5°	180.1	180.1	177.0	173.9	175.4	172.3	172.3	173.9	173.9	178.6	180.1
75°	148.8	145.7	144.1	145.7	144.1	147.3	144.1	144.1	147.3	147.3	147.3
77.5°	122.2	122.2	120.6	120.6	122.2	120.6	122.2	122.2	122.2	120.6	122.2
80°	100.3	98.7	98.7	98.7	97.1	97.1	97.1	97.1	97.1	97.1	97.1
82.5°	75.2	75.2	73.6	75.2	75.2	73.6	75.2	73.6	73.6	75.2	75.2
85°	50.1	53.3	50.1	50.1	51.7	51.7	53.3	51.7	53.3	50.1	51.7
87.5°	26.6	28.2	28.2	26.6	26.6	28.2	28.2	28.2	29.8	26.6	28.2
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: P1037504

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1731.0	1737.3	1731.0	1718.5	1731.0	1738.8	1746.7	1759.2	1765.5	1765.5	1774.9
5°	1632.3	1644.8	1640.1	1637.0	1649.5	1657.4	1669.9	1685.6	1702.8	1713.8	1726.3
7.5°	1544.6	1552.4	1560.2	1560.2	1572.8	1590.0	1608.8	1627.6	1649.5	1665.2	1674.6
10°	1467.8	1474.1	1478.8	1485.0	1503.8	1522.6	1547.7	1571.2	1590.0	1607.2	1622.9
12.5°	1394.2	1403.6	1414.6	1419.3	1433.4	1456.8	1480.3	1508.5	1538.3	1555.5	1571.2
15°	1323.7	1328.4	1340.9	1355.0	1367.6	1392.6	1422.4	1452.2	1477.2	1503.8	1517.9
17.5°	1251.6	1253.2	1286.1	1278.3	1319.0	1342.5	1358.2	1386.4	1427.1	1449.0	1470.9
20°	1181.1	1196.8	1210.9	1218.7	1240.7	1267.3	1312.7	1334.7	1367.6	1387.9	1406.7
22.5°	1126.3	1149.8	1149.8	1168.6	1179.6	1204.6	1237.5	1279.8	1315.9	1330.0	1356.6
25°	1077.8	1088.7	1107.5	1113.8	1134.1	1156.1	1178.0	1223.4	1262.6	1281.4	1300.2
27.5°	1015.1	1029.2	1054.3	1054.3	1080.9	1104.4	1131.0	1160.8	1199.9	1226.6	1246.9
30°	966.5	980.6	991.6	1008.8	1019.8	1041.7	1088.7	1110.7	1145.1	1168.6	1193.7
32.5°	921.1	932.1	941.5	960.3	972.8	997.9	1022.9	1062.1	1091.9	1113.8	1140.4
35°	871.0	881.9	894.5	908.6	927.4	950.9	974.4	1007.3	1037.0	1057.4	1079.3
37.5°	824.0	831.8	850.6	860.0	875.7	897.6	927.4	961.8	988.5	1004.1	1026.1
40°	778.6	784.8	798.9	816.1	827.1	844.3	875.7	905.4	938.3	957.1	974.4
42.5°	730.0	737.8	750.4	767.6	784.8	803.6	820.8	855.3	885.1	900.7	919.5
45°	687.7	692.4	701.8	719.0	736.3	750.4	777.0	808.3	836.5	849.0	869.4
47.5°	637.6	642.3	656.4	664.2	683.0	701.8	728.4	759.8	784.8	797.4	816.1
50°	585.9	590.6	600.0	617.2	629.7	650.1	673.6	700.2	731.6	748.8	759.8
52.5°	535.7	545.1	553.0	567.1	582.7	603.1	625.0	650.1	676.7	694.0	706.5
55°	485.6	493.4	502.8	510.7	529.5	548.3	573.3	596.8	620.3	636.0	650.1
57.5°	429.2	440.2	449.6	465.3	479.4	495.0	523.2	542.0	570.2	581.2	593.7
60°	380.7	391.6	399.5	412.0	424.5	444.9	463.7	487.2	510.7	524.8	540.4
62.5°	339.9	344.6	349.3	361.9	374.4	393.2	412.0	435.5	460.6	468.4	480.9
65°	299.2	303.9	311.7	322.7	332.1	343.1	363.4	382.2	405.7	418.3	423.0
67.5°	264.7	269.4	271.0	278.8	286.7	299.2	310.2	329.0	350.9	358.7	368.1
70°	225.6	233.4	235.0	241.2	244.4	252.2	264.7	278.8	296.1	310.2	318.0
72.5°	180.1	191.1	194.2	203.6	208.3	216.2	225.6	236.5	247.5	253.8	260.0
75°	147.3	150.4	152.0	159.8	167.6	178.6	183.3	189.5	198.9	206.8	213.0
77.5°	122.2	123.8	125.3	125.3	126.9	133.2	142.6	150.4	156.7	159.8	164.5
80°	98.7	97.1	97.1	98.7	98.7	98.7	101.8	112.8	115.9	123.8	122.2
82.5°	76.8	73.6	75.2	73.6	73.6	73.6	73.6	75.2	75.2	79.9	83.0
85°	50.1	51.7	50.1	50.1	48.6	50.1	48.6	48.6	47.0	47.0	45.4
87.5°	26.6	28.2	26.6	26.6	25.1	26.6	25.1	25.1	23.5	23.5	20.4
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: P1037504

CATALOG NUMBER: S123RDS-B1165DB2750-4F0-XX-W2A-A_4000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1829.7	1829.7	1829.7	1829.7
2.5°	1782.7	1793.6	1815.6	1834.4
5°	1745.1	1762.3	1795.2	1828.1
7.5°	1699.7	1726.3	1768.6	1814.0
10°	1655.8	1690.3	1742.0	1795.2
12.5°	1611.9	1648.0	1702.8	1771.7
15°	1560.2	1597.8	1663.6	1746.7
17.5°	1514.8	1564.9	1624.5	1707.5
20°	1466.2	1503.8	1580.6	1668.3
22.5°	1405.2	1467.8	1539.9	1632.3
25°	1356.6	1411.4	1483.5	1588.4
27.5°	1297.1	1361.3	1449.0	1541.4
30°	1248.5	1301.8	1383.2	1494.4
32.5°	1192.1	1254.8	1339.4	1449.0
35°	1142.0	1195.2	1275.1	1386.4
37.5°	1082.5	1140.4	1229.7	1328.4
40°	1030.8	1087.2	1171.7	1264.2
42.5°	968.1	1027.6	1112.2	1190.5
45°	918.0	972.8	1040.2	1112.2
47.5°	856.9	914.8	980.6	1030.8
50°	802.1	855.3	907.0	949.3
52.5°	742.5	791.1	838.1	869.4
55°	687.7	725.3	762.9	784.8
57.5°	623.5	659.5	690.8	703.4
60°	567.1	596.8	617.2	631.3
62.5°	507.5	529.5	545.1	553.0
65°	449.6	465.3	473.1	480.9
67.5°	390.1	404.2	408.9	418.3
70°	327.4	343.1	346.2	350.9
72.5°	280.4	280.4	286.7	292.9
75°	224.0	227.1	230.3	230.3
77.5°	175.4	175.4	178.6	180.1
80°	128.5	130.0	130.0	128.5
82.5°	87.7	90.9	87.7	86.2
85°	48.6	54.8	51.7	51.7
87.5°	20.4	20.4	23.5	20.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)