

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: P994943

Luminaire Tested: S123RDR-B1165DB2750-4F0-XX-W2A-A_3500K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P994943
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_3500K
Description: Define 3 Regressed Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

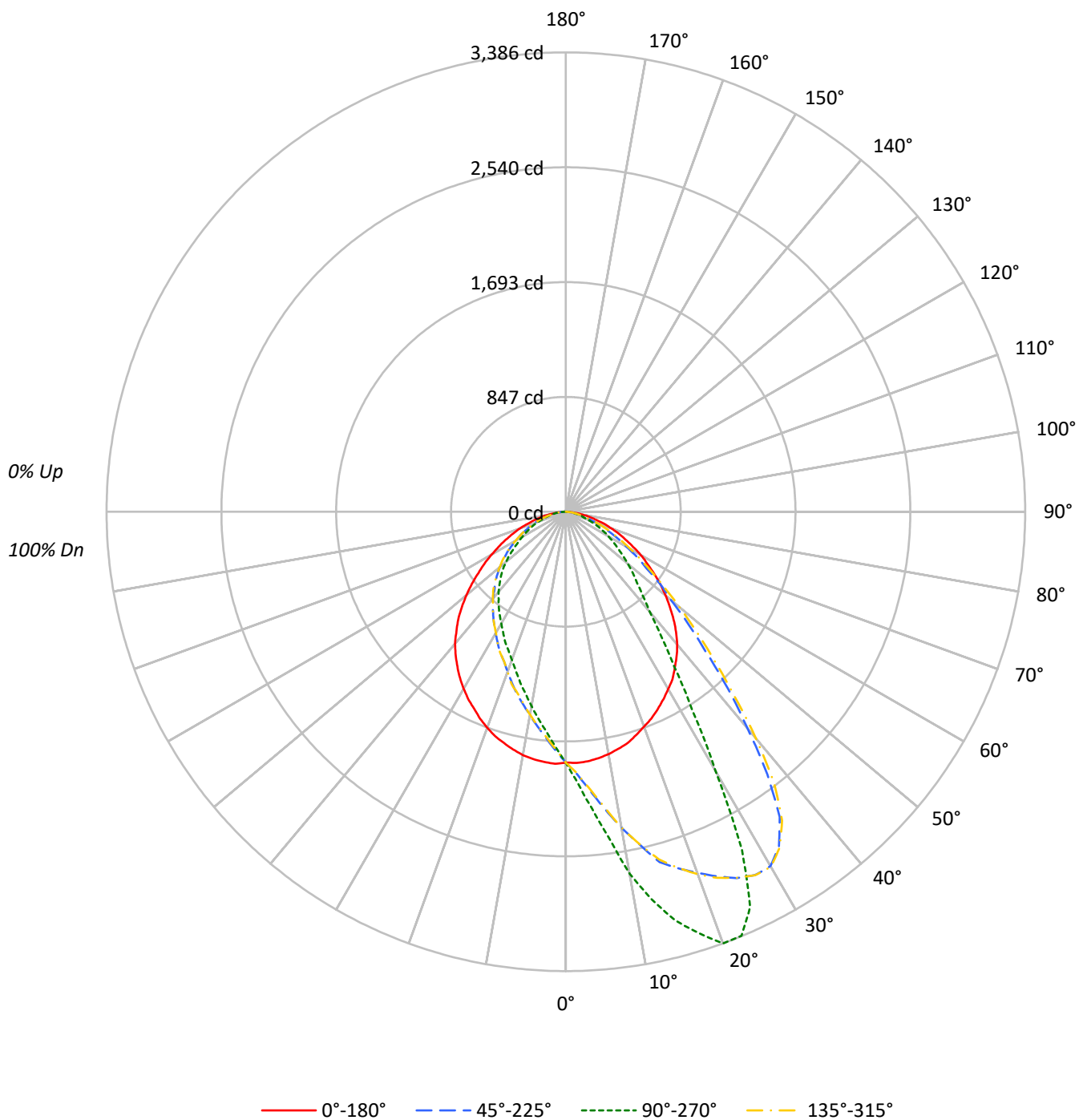
Lumens per Lamp: N/A
Luminaire Lumens: 4602.0 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.34
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
Input Voltage (V):
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°	19894	19894	19894	19894
5°	19953	23714	20003	17593
10°	19819	29608	19907	15894
15°	19661	34755	19661	14495
20°	19303	38788	19412	13304
25°	19056	38168	19018	12573
30°	18762	27435	18723	11820
35°	18402	18318	18318	11332
40°	17942	13496	17854	10828
45°	17101	11321	17078	10333
50°	16057	9989	16004	9646
55°	14876	8760	14758	8700
60°	13728	7802	13591	7972
65°	12373	6851	12452	7414
70°	11154	5378	11453	6773
75°	9674	4737	10069	6184
80°	8046	4122	8728	6081
85°	6447	3322	7040	6447

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 30°

Vertical Angle: 45°

Luminance: 32445 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.5	3.9
10°-20°	568.1	12.3
20°-30°	894.8	19.4
30°-40°	930.5	20.2
40°-50°	796.0	17.3
50°-60°	606.9	13.2
60°-70°	388.8	8.4
70°-80°	186.3	4.0
80°-90°	49.0	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°	1644.5	35.7
0°-40°	2574.9	56.0
0°-60°	3977.9	86.4
0°-90°	4602.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4602.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1848	1848	1848	1848	1848	
5°	1847	2195	1851	1628	1847	175
15°	1764	3119	1764	1301	1764	496
25°	1604	3214	1601	1059	1604	739
35°	1400	1394	1394	862	1400	876
45°	1123	744	1122	679	1123	865
55°	793	467	786	464	793	710
65°	486	269	489	291	486	485
75°	233	114	242	149	233	251
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°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1852.9	1865.6	1875.1	1881.4	1897.2	1906.7	1914.6	1928.9	1928.9	1932.0	1938.3
5°	1846.6	1873.5	1892.5	1917.8	1951.0	1966.8	1989.0	2008.0	2034.9	2049.1	2063.3
7.5°	1832.3	1870.3	1909.9	1947.8	1996.9	2028.5	2050.7	2099.7	2134.6	2177.3	2210.5
10°	1813.3	1865.6	1916.2	1974.7	2041.2	2088.7	2121.9	2186.8	2253.2	2313.4	2364.0
12.5°	1789.6	1852.9	1925.7	1996.9	2090.2	2137.7	2191.5	2272.2	2367.2	2443.1	2511.1
15°	1764.3	1837.1	1919.4	2006.4	2123.5	2189.9	2267.5	2365.6	2471.6	2580.8	2674.1
17.5°	1724.7	1816.5	1908.3	2034.9	2172.5	2212.1	2278.5	2413.0	2544.4	2642.5	2756.4
20°	1685.2	1788.0	1903.5	2017.5	2166.2	2258.0	2319.7	2462.1	2602.9	2721.6	2830.8
22.5°	1648.8	1756.4	1876.6	2020.6	2159.9	2251.6	2329.2	2477.9	2640.9	2773.8	2908.3
25°	1604.5	1721.6	1854.5	1990.6	2159.9	2229.5	2314.9	2487.4	2659.9	2813.4	2979.5
27.5°	1557.0	1675.7	1807.0	1946.3	2101.3	2204.2	2288.0	2473.2	2683.6	2848.2	3019.1
30°	1509.5	1631.4	1758.0	1883.0	2057.0	2155.1	2251.6	2455.8	2696.3	2884.6	3015.9
32.5°	1463.6	1566.5	1691.5	1813.3	1985.8	2093.4	2202.6	2438.4	2701.0	2859.3	2922.5
35°	1400.4	1508.0	1609.2	1739.0	1913.0	2019.0	2147.2	2436.8	2680.5	2778.6	2746.9
37.5°	1341.8	1432.0	1528.5	1644.0	1822.8	1960.5	2093.4	2395.6	2612.4	2618.7	2439.9
40°	1276.9	1351.3	1432.0	1553.8	1746.9	1883.0	2027.0	2332.3	2489.0	2395.6	2080.8
42.5°	1202.6	1269.0	1332.3	1451.0	1661.4	1813.3	1968.4	2253.2	2310.2	2095.0	1767.5
45°	1123.4	1177.2	1235.8	1360.8	1571.2	1721.6	1876.6	2131.4	2072.8	1769.0	1457.3
47.5°	1041.2	1087.1	1144.0	1257.9	1474.7	1628.2	1775.4	1957.3	1808.6	1482.6	1221.6
50°	958.9	995.3	1050.7	1167.8	1376.6	1515.9	1651.9	1770.6	1561.8	1272.2	1009.5
52.5°	878.2	906.7	963.6	1063.3	1265.9	1398.8	1496.9	1542.8	1330.7	1050.7	876.6
55°	792.7	824.4	862.4	963.6	1164.6	1262.7	1327.6	1326.0	1107.6	890.8	724.7
57.5°	710.5	738.9	772.2	873.4	1036.4	1102.9	1158.3	1131.4	924.1	729.5	621.9
60°	637.7	653.5	689.9	775.3	898.8	955.7	987.4	941.5	754.8	615.5	514.3
62.5°	558.6	574.4	604.4	685.1	761.1	791.2	818.1	759.5	623.4	501.6	439.9
65°	485.8	506.3	525.3	590.2	631.3	667.7	664.6	615.5	487.4	408.2	357.6
67.5°	422.5	430.4	446.2	485.8	504.8	531.7	533.2	477.9	392.4	332.3	302.2
70°	354.4	362.4	373.4	392.4	405.1	411.4	408.2	359.2	295.9	259.5	232.6
72.5°	295.9	294.3	302.2	302.2	314.9	313.3	303.8	265.8	224.7	194.6	178.8
75°	232.6	234.2	235.8	232.6	227.9	221.5	213.6	185.1	158.2	144.0	129.8
77.5°	182.0	178.8	180.4	169.3	163.0	156.6	145.6	131.3	109.2	106.0	99.7
80°	129.8	128.2	126.6	121.8	107.6	101.3	93.4	85.4	80.7	77.5	76.0
82.5°	87.0	87.0	83.9	74.4	66.5	61.7	60.1	57.0	52.2	52.2	50.6
85°	52.2	50.6	47.5	38.0	33.2	33.2	33.2	33.2	30.1	30.1	28.5
87.5°	20.6	19.0	14.2	14.2	12.7	12.7	12.7	11.1	11.1	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°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1951.0	1951.0	1965.2	1979.5	1971.6	1976.3	1993.7	1987.4	2000.1	1998.5	2003.2
5°	2098.2	2115.6	2129.8	2159.9	2164.6	2159.9	2189.9	2197.8	2212.1	2194.7	2202.6
7.5°	2264.3	2300.7	2335.5	2379.8	2394.1	2397.2	2413.0	2435.2	2454.2	2419.4	2436.8
10°	2425.7	2481.1	2552.3	2591.8	2626.7	2639.3	2652.0	2666.2	2688.4	2708.9	2693.1
12.5°	2599.8	2680.5	2748.5	2819.7	2862.4	2857.7	2894.1	2903.6	2921.0	2925.7	2932.0
15°	2742.2	2856.1	2898.8	3004.8	3014.3	3046.0	3087.1	3123.5	3128.3	3118.8	3118.8
17.5°	2878.2	2976.3	3052.3	3137.7	3155.1	3182.0	3234.3	3251.7	3258.0	3256.4	3256.4
20°	2989.0	3053.9	3182.0	3253.3	3281.7	3316.5	3352.9	3375.1	3379.8	3386.2	3376.7
22.5°	3061.8	3159.9	3264.3	3322.9	3346.6	3359.3	3383.0	3389.3	3381.4	3383.0	3384.6
25°	3118.8	3215.3	3278.6	3294.4	3292.8	3277.0	3259.6	3229.5	3226.4	3213.7	3188.4
27.5°	3134.6	3171.0	3163.1	3098.2	3033.3	3027.0	2922.5	2865.6	2800.7	2810.2	2773.8
30°	3049.1	3001.7	2889.3	2724.8	2656.7	2546.0	2428.9	2307.0	2259.6	2207.3	2303.9
32.5°	2840.3	2671.0	2471.6	2258.0	2144.0	2045.9	1920.9	1832.3	1781.7	1739.0	1821.3
35°	2525.4	2261.1	1996.9	1794.4	1701.0	1612.4	1495.3	1451.0	1387.7	1394.0	1401.9
37.5°	2120.3	1829.2	1629.8	1430.4	1368.7	1332.3	1246.9	1178.8	1156.7	1150.3	1150.3
40°	1740.6	1501.6	1324.4	1167.8	1120.3	1090.2	1022.2	990.5	966.8	960.5	968.4
42.5°	1439.9	1235.8	1098.1	993.7	960.5	922.5	894.0	854.5	849.7	838.6	852.9
45°	1208.9	1031.7	928.8	852.9	824.4	810.1	778.5	754.8	745.3	743.7	754.8
47.5°	1025.3	887.7	797.5	750.0	727.9	713.6	686.7	677.2	667.7	670.9	666.2
50°	860.8	757.9	699.4	656.7	642.4	628.2	610.8	601.3	596.5	596.5	595.0
52.5°	738.9	653.5	615.5	576.0	569.6	561.7	542.7	536.4	528.5	526.9	533.2
55°	632.9	574.4	536.4	512.7	506.3	490.5	482.6	474.7	469.9	466.8	468.4
57.5°	541.2	496.8	471.5	451.0	439.9	433.6	419.3	417.7	414.6	414.6	413.0
60°	465.2	433.6	403.5	390.8	382.9	375.0	373.4	363.9	359.2	362.4	360.8
62.5°	394.0	368.7	351.3	337.0	332.3	326.0	321.2	318.0	313.3	314.9	314.9
65°	329.1	308.6	295.9	283.2	281.7	275.3	273.7	270.6	270.6	269.0	272.2
67.5°	270.6	256.3	245.3	237.3	232.6	234.2	227.9	223.1	223.1	221.5	226.3
70°	215.2	207.3	196.2	186.7	180.4	180.4	172.5	170.9	170.9	170.9	169.3
72.5°	166.1	151.9	147.2	144.0	144.0	144.0	140.8	140.8	139.2	140.8	139.2
75°	123.4	121.8	118.7	117.1	117.1	115.5	113.9	113.9	113.9	113.9	113.9
77.5°	96.5	96.5	93.4	91.8	91.8	91.8	90.2	90.2	88.6	88.6	88.6
80°	71.2	71.2	68.0	68.0	68.0	66.5	66.5	66.5	68.0	66.5	66.5
82.5°	49.1	49.1	47.5	49.1	47.5	45.9	45.9	45.9	44.3	45.9	45.9
85°	28.5	28.5	26.9	25.3	26.9	26.9	25.3	26.9	25.3	26.9	25.3
87.5°	11.1	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°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1995.3	1985.8	1979.5	1974.7	1970.0	1984.2	1965.2	1944.7	1930.4	1920.9	1917.8
5°	2204.2	2183.6	2166.2	2152.0	2155.1	2155.1	2121.9	2085.5	2053.9	2036.4	2017.5
7.5°	2446.3	2424.1	2389.3	2381.4	2375.1	2335.5	2302.3	2235.8	2196.3	2156.7	2121.9
10°	2686.8	2658.3	2625.1	2614.0	2598.2	2549.1	2498.5	2413.0	2364.0	2291.2	2245.3
12.5°	2911.5	2876.7	2843.4	2835.5	2811.8	2769.1	2682.0	2593.4	2509.6	2432.0	2351.3
15°	3099.8	3090.3	3039.6	3008.0	2955.8	2897.2	2878.2	2758.0	2652.0	2571.3	2425.7
17.5°	3258.0	3213.7	3166.2	3145.7	3125.1	3057.0	2989.0	2865.6	2751.7	2633.0	2539.6
20°	3384.6	3335.5	3302.3	3272.2	3262.7	3185.2	3077.6	2968.4	2843.4	2710.5	2588.7
22.5°	3390.9	3384.6	3362.4	3345.0	3326.0	3275.4	3190.0	3053.9	2921.0	2775.4	2615.6
25°	3259.6	3250.1	3313.4	3297.6	3310.2	3291.2	3245.3	3131.4	2976.3	2805.5	2644.1
27.5°	2864.0	2960.5	3060.2	3095.0	3118.8	3186.8	3208.9	3145.7	3020.7	2838.7	2658.3
30°	2326.0	2454.2	2615.6	2702.6	2769.1	2895.6	3060.2	3080.8	3022.2	2876.7	2655.1
32.5°	1826.0	1943.1	2072.8	2175.7	2264.3	2523.8	2745.3	2905.1	2933.6	2857.7	2663.0
35°	1471.6	1522.2	1645.6	1743.7	1864.0	2085.5	2346.6	2604.5	2778.6	2788.1	2639.3
37.5°	1213.6	1240.5	1348.1	1403.5	1474.7	1669.3	1913.0	2250.1	2520.6	2648.8	2572.9
40°	1004.8	1066.5	1128.2	1159.8	1210.5	1345.0	1579.2	1843.4	2178.9	2416.2	2470.0
42.5°	871.9	898.8	938.3	982.6	1014.3	1131.4	1288.0	1530.1	1832.3	2163.0	2311.8
45°	769.0	778.5	819.6	848.1	881.4	963.6	1074.4	1276.9	1542.8	1868.7	2121.9
47.5°	683.6	702.6	724.7	742.1	764.3	827.6	922.5	1069.6	1303.8	1595.0	1867.1
50°	607.6	618.7	647.2	655.1	670.9	715.2	788.0	900.3	1093.4	1326.0	1607.6
52.5°	536.4	557.0	568.1	579.1	593.4	629.8	677.2	769.0	914.6	1132.9	1371.9
55°	481.0	487.4	503.2	512.7	523.7	549.1	590.2	658.2	772.2	946.2	1172.5
57.5°	427.2	427.2	443.1	451.0	462.0	481.0	517.4	569.6	651.9	781.7	989.0
60°	370.3	371.8	384.5	394.0	397.2	416.2	446.2	487.4	550.6	645.6	814.9
62.5°	319.6	327.5	333.9	337.0	348.1	359.2	384.5	413.0	457.3	541.2	661.4
65°	276.9	278.5	283.2	286.4	291.1	303.8	322.8	341.8	379.8	441.5	539.6
67.5°	227.9	234.2	240.5	240.5	245.3	251.6	270.6	286.4	314.9	351.3	417.7
70°	170.9	174.1	183.5	188.3	194.6	205.7	215.2	224.7	246.8	273.7	324.4
72.5°	142.4	142.4	145.6	147.2	147.2	155.1	169.3	178.8	189.9	208.9	243.7
75°	113.9	113.9	118.7	117.1	120.3	123.4	125.0	131.3	137.7	151.9	172.5
77.5°	90.2	91.8	91.8	93.4	93.4	94.9	96.5	99.7	102.9	110.8	120.3
80°	66.5	68.0	68.0	69.6	69.6	71.2	72.8	74.4	77.5	80.7	85.4
82.5°	45.9	47.5	47.5	49.1	47.5	49.1	50.6	50.6	52.2	55.4	57.0
85°	26.9	26.9	28.5	26.9	26.9	26.9	28.5	28.5	30.1	34.8	34.8
87.5°	7.9	9.5	7.9	9.5	9.5	9.5	9.5	11.1	11.1	12.7	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: P994943

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_3500K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1913.0	1905.1	1897.2	1897.2	1879.8	1864.0	1856.1	1859.2	1849.7	1837.1	1824.4
5°	1996.9	1965.2	1958.9	1941.5	1917.8	1884.5	1867.1	1851.3	1832.3	1807.0	1783.3
7.5°	2074.4	2033.3	2011.1	1993.7	1947.8	1902.0	1864.0	1838.7	1805.4	1767.5	1739.0
10°	2175.7	2099.7	2076.0	2036.4	1971.6	1906.7	1862.4	1821.3	1775.4	1731.1	1693.1
12.5°	2256.4	2169.4	2125.1	2085.5	2001.6	1919.4	1845.0	1794.4	1739.0	1689.9	1640.9
15°	2348.2	2250.1	2172.5	2125.1	2019.0	1919.4	1835.5	1764.3	1702.6	1642.4	1599.7
17.5°	2392.5	2269.0	2234.2	2166.2	2012.7	1913.0	1810.2	1734.2	1659.9	1590.2	1539.6
20°	2462.1	2318.1	2231.1	2185.2	2049.1	1902.0	1781.7	1694.7	1617.1	1542.8	1489.0
22.5°	2466.8	2310.2	2253.2	2166.2	1998.5	1868.7	1756.4	1650.4	1560.2	1490.5	1435.2
25°	2455.8	2295.9	2216.8	2147.2	2008.0	1849.7	1705.7	1601.3	1512.7	1432.0	1367.1
27.5°	2451.0	2254.8	2180.4	2110.8	1954.2	1794.4	1675.7	1557.0	1455.7	1384.5	1318.1
30°	2444.7	2210.5	2120.3	2039.6	1895.6	1751.6	1609.2	1506.4	1409.8	1319.7	1253.2
32.5°	2403.5	2150.4	2058.6	1973.2	1818.1	1674.1	1561.8	1452.6	1348.1	1264.3	1204.1
35°	2390.9	2095.0	1974.7	1883.0	1731.1	1602.9	1484.2	1394.0	1295.9	1212.1	1140.9
37.5°	2354.5	2038.0	1908.3	1791.2	1633.0	1511.1	1424.1	1333.9	1239.0	1148.8	1091.8
40°	2291.2	1971.6	1824.4	1704.2	1541.2	1417.8	1337.1	1270.6	1177.2	1096.5	1026.9
42.5°	2197.8	1903.5	1745.3	1618.7	1438.3	1322.8	1256.4	1193.1	1114.0	1030.1	973.1
45°	2090.2	1813.3	1666.2	1525.4	1341.8	1229.5	1159.8	1121.9	1049.1	977.9	911.4
47.5°	1943.1	1720.0	1574.4	1428.8	1242.1	1132.9	1077.6	1039.6	989.0	911.4	857.6
50°	1758.0	1599.7	1462.1	1332.3	1144.0	1039.6	984.2	955.7	913.0	857.6	805.4
52.5°	1552.3	1460.5	1346.6	1226.3	1044.3	946.2	895.6	873.4	841.8	789.6	745.3
55°	1345.0	1305.4	1227.9	1109.2	939.9	859.2	814.9	786.4	762.7	724.7	686.7
57.5°	1159.8	1140.9	1087.1	995.3	852.9	769.0	731.0	712.0	693.1	664.6	626.6
60°	968.4	989.0	933.6	887.7	757.9	685.1	651.9	631.3	621.9	596.5	572.8
62.5°	802.2	821.2	789.6	754.8	663.0	598.1	577.5	558.6	552.2	530.1	506.3
65°	651.9	675.7	651.9	632.9	577.5	523.7	498.4	488.9	482.6	468.4	449.4
67.5°	519.0	542.7	531.7	507.9	490.5	446.2	432.0	422.5	419.3	408.2	392.4
70°	390.8	424.1	427.2	413.0	397.2	376.6	367.1	363.9	356.0	346.5	337.0
72.5°	281.7	319.6	321.2	321.2	311.7	311.7	302.2	297.5	297.5	288.0	276.9
75°	207.3	232.6	235.8	238.9	243.7	248.4	242.1	242.1	240.5	231.0	226.3
77.5°	137.7	159.8	167.7	178.8	185.1	185.1	188.3	191.5	188.3	183.5	180.4
80°	88.6	104.4	113.9	120.3	129.8	134.5	139.2	140.8	137.7	136.1	131.3
82.5°	58.5	63.3	68.0	76.0	87.0	94.9	94.9	93.4	96.5	94.9	93.4
85°	33.2	36.4	38.0	39.6	45.9	53.8	55.4	57.0	60.1	57.0	53.8
87.5°	12.7	14.2	14.2	14.2	17.4	19.0	23.7	30.1	28.5	25.3	25.3
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: P994943

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_3500K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1824.4	1816.5	1813.3	1805.4	1786.4	1773.8	1759.5	1750.0	1751.6	1743.7	1748.5
5°	1767.5	1765.9	1754.8	1739.0	1712.1	1697.8	1672.5	1659.9	1653.5	1655.1	1645.6
7.5°	1720.0	1705.7	1697.8	1672.5	1647.2	1617.1	1596.6	1585.5	1576.0	1566.5	1560.2
10°	1666.2	1653.5	1640.9	1614.0	1579.2	1550.7	1522.2	1511.1	1496.9	1490.5	1485.8
12.5°	1609.2	1601.3	1585.5	1553.8	1514.3	1487.4	1454.2	1447.8	1428.8	1416.2	1413.0
15°	1557.0	1552.3	1523.8	1487.4	1447.8	1420.9	1392.4	1373.5	1341.8	1348.1	1337.1
17.5°	1501.6	1481.1	1463.6	1414.6	1395.6	1354.5	1321.2	1311.7	1289.6	1275.4	1261.1
20°	1439.9	1427.3	1405.1	1373.5	1327.6	1280.1	1254.8	1239.0	1226.3	1204.1	1197.8
22.5°	1381.4	1365.5	1346.6	1305.4	1265.9	1226.3	1191.5	1177.2	1161.4	1145.6	1136.1
25°	1335.5	1311.7	1291.2	1240.5	1201.0	1167.8	1145.6	1121.9	1099.7	1090.2	1087.1
27.5°	1264.3	1250.0	1229.5	1182.0	1145.6	1109.2	1088.6	1072.8	1049.1	1038.0	1028.5
30°	1218.4	1189.9	1166.2	1128.2	1091.8	1052.2	1033.3	1014.3	1000.0	985.8	974.7
32.5°	1156.7	1134.5	1115.5	1077.6	1041.2	1004.8	984.2	955.7	947.8	936.7	924.1
35°	1096.5	1082.3	1061.7	1020.6	981.0	955.7	933.6	906.7	897.2	889.3	878.2
37.5°	1039.6	1019.0	1004.8	965.2	930.4	900.3	882.9	860.8	854.5	845.0	837.0
40°	990.5	970.0	955.7	916.2	879.8	848.1	837.0	814.9	805.4	794.3	789.6
42.5°	935.2	917.7	898.8	870.3	832.3	800.7	778.5	765.8	753.2	748.4	738.9
45°	876.6	860.8	846.5	814.9	775.3	753.2	734.2	716.8	707.3	699.4	693.1
47.5°	826.0	811.7	792.7	757.9	726.3	705.7	686.7	669.3	659.8	650.3	642.4
50°	767.4	759.5	738.9	705.7	675.7	651.9	634.5	618.7	612.4	601.3	588.6
52.5°	715.2	701.0	683.6	656.7	629.8	601.3	577.5	568.1	557.0	550.6	539.6
55°	653.5	644.0	625.0	601.3	572.8	549.1	531.7	519.0	504.8	498.4	484.2
57.5°	601.3	583.9	574.4	544.3	517.4	493.7	481.0	468.4	452.5	443.1	436.7
60°	544.3	528.5	514.3	488.9	469.9	444.6	425.6	414.6	403.5	390.8	384.5
62.5°	488.9	476.3	458.9	438.3	414.6	394.0	379.8	363.9	357.6	344.9	340.2
65°	428.8	419.3	405.1	381.3	362.4	344.9	330.7	318.0	311.7	307.0	303.8
67.5°	375.0	362.4	352.9	332.3	311.7	297.5	289.6	281.7	273.7	269.0	264.2
70°	319.6	310.1	300.6	281.7	267.4	254.8	248.4	242.1	237.3	232.6	227.9
72.5°	262.7	257.9	248.4	235.8	224.7	215.2	210.4	202.5	197.8	189.9	186.7
75°	216.8	208.9	204.1	193.0	183.5	175.6	169.3	159.8	153.5	150.3	148.7
77.5°	170.9	167.7	161.4	151.9	147.2	139.2	129.8	126.6	123.4	123.4	121.8
80°	128.2	123.4	118.7	110.8	106.0	99.7	99.7	99.7	98.1	99.7	98.1
82.5°	87.0	83.9	80.7	76.0	74.4	74.4	76.0	76.0	76.0	76.0	76.0
85°	50.6	50.6	50.6	52.2	50.6	50.6	52.2	53.8	52.2	52.2	50.6
87.5°	23.7	23.7	25.3	25.3	26.9	26.9	26.9	26.9	26.9	26.9	28.5
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: P994943

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_3500K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1746.9	1748.5	1743.7	1734.2	1732.6	1735.8	1745.3	1742.1	1734.2	1748.5	1735.8
5°	1650.4	1642.4	1639.3	1642.4	1633.0	1628.2	1637.7	1633.0	1637.7	1639.3	1644.0
7.5°	1557.0	1558.6	1549.1	1550.7	1538.0	1541.2	1541.2	1541.2	1545.9	1549.1	1555.4
10°	1476.3	1479.5	1468.4	1470.0	1460.5	1454.2	1458.9	1468.4	1468.4	1468.4	1471.6
12.5°	1411.4	1397.2	1389.3	1387.7	1376.6	1373.5	1382.9	1386.1	1394.0	1394.0	1398.8
15°	1330.7	1327.6	1321.2	1321.2	1294.3	1300.7	1303.8	1314.9	1330.7	1318.1	1321.2
17.5°	1257.9	1250.0	1242.1	1239.0	1235.8	1226.3	1239.0	1237.4	1246.9	1248.5	1253.2
20°	1193.1	1186.7	1170.9	1172.5	1175.7	1161.4	1169.3	1169.3	1178.8	1188.3	1199.4
22.5°	1129.8	1123.4	1115.5	1118.7	1109.2	1106.0	1106.0	1114.0	1125.0	1132.9	1131.4
25°	1080.7	1069.6	1064.9	1060.2	1055.4	1058.6	1053.8	1061.7	1069.6	1074.4	1069.6
27.5°	1025.3	1020.6	1011.1	1006.4	998.4	1001.6	1004.8	1011.1	1015.9	1015.9	1020.6
30°	971.5	965.2	962.1	957.3	957.3	951.0	952.6	958.9	963.6	968.4	974.7
32.5°	919.3	914.6	909.8	909.8	906.7	905.1	903.5	913.0	913.0	922.5	922.5
35°	876.6	868.7	868.7	860.8	863.9	862.4	859.2	865.5	867.1	873.4	871.9
37.5°	829.1	829.1	826.0	818.1	811.7	813.3	821.2	821.2	826.0	824.4	829.1
40°	781.7	778.5	778.5	773.8	772.2	770.6	772.2	773.8	781.7	780.1	781.7
42.5°	734.2	735.8	727.9	727.9	727.9	723.1	724.7	726.3	729.5	732.6	737.4
45°	688.3	685.1	683.6	680.4	677.2	678.8	677.2	683.6	682.0	685.1	689.9
47.5°	639.3	634.5	632.9	626.6	626.6	629.8	628.2	632.9	634.5	639.3	636.1
50°	591.8	585.5	580.7	582.3	572.8	576.0	576.0	580.7	585.5	587.0	590.2
52.5°	536.4	534.8	533.2	525.3	523.7	522.2	523.7	525.3	531.7	536.4	538.0
55°	482.6	481.0	471.5	468.4	463.6	463.6	466.8	468.4	479.4	481.0	487.4
57.5°	433.6	428.8	417.7	416.2	416.2	416.2	411.4	417.7	420.9	428.8	428.8
60°	379.8	379.8	370.3	370.3	371.8	370.3	370.3	371.8	371.8	378.2	381.3
62.5°	337.0	335.5	335.5	332.3	330.7	332.3	330.7	330.7	332.3	337.0	341.8
65°	299.1	297.5	295.9	294.3	291.1	291.1	292.7	295.9	295.9	299.1	300.6
67.5°	262.7	262.7	259.5	259.5	257.9	256.3	257.9	256.3	262.7	262.7	264.2
70°	226.3	224.7	219.9	218.4	213.6	215.2	215.2	219.9	221.5	224.7	227.9
72.5°	182.0	182.0	178.8	175.6	177.2	174.1	174.1	175.6	175.6	180.4	182.0
75°	150.3	147.2	145.6	147.2	145.6	148.7	145.6	145.6	148.7	148.7	148.7
77.5°	123.4	123.4	121.8	121.8	123.4	121.8	123.4	123.4	123.4	121.8	123.4
80°	101.3	99.7	99.7	99.7	98.1	98.1	98.1	98.1	98.1	98.1	98.1
82.5°	76.0	76.0	74.4	76.0	76.0	74.4	76.0	74.4	74.4	76.0	76.0
85°	50.6	53.8	50.6	50.6	52.2	52.2	53.8	52.2	53.8	50.6	52.2
87.5°	26.9	28.5	28.5	26.9	26.9	28.5	28.5	28.5	30.1	26.9	28.5
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: P994943

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_3500K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2	1848.2
2.5°	1748.5	1754.8	1748.5	1735.8	1748.5	1756.4	1764.3	1776.9	1783.3	1783.3	1792.8
5°	1648.8	1661.4	1656.7	1653.5	1666.2	1674.1	1686.8	1702.6	1720.0	1731.1	1743.7
7.5°	1560.2	1568.1	1576.0	1576.0	1588.7	1606.1	1625.0	1644.0	1666.2	1682.0	1691.5
10°	1482.6	1489.0	1493.7	1500.0	1519.0	1538.0	1563.3	1587.1	1606.1	1623.5	1639.3
12.5°	1408.3	1417.8	1428.8	1433.6	1447.8	1471.6	1495.3	1523.8	1553.8	1571.2	1587.1
15°	1337.1	1341.8	1354.5	1368.7	1381.4	1406.7	1436.7	1466.8	1492.1	1519.0	1533.3
17.5°	1264.3	1265.9	1299.1	1291.2	1332.3	1356.0	1371.9	1400.4	1441.5	1463.6	1485.8
20°	1193.1	1208.9	1223.1	1231.0	1253.2	1280.1	1326.0	1348.1	1381.4	1401.9	1420.9
22.5°	1137.7	1161.4	1161.4	1180.4	1191.5	1216.8	1250.0	1292.8	1329.2	1343.4	1370.3
25°	1088.6	1099.7	1118.7	1125.0	1145.6	1167.8	1189.9	1235.8	1275.4	1294.3	1313.3
27.5°	1025.3	1039.6	1064.9	1064.9	1091.8	1115.5	1142.4	1172.5	1212.1	1239.0	1259.5
30°	976.3	990.5	1001.6	1019.0	1030.1	1052.2	1099.7	1121.9	1156.7	1180.4	1205.7
32.5°	930.4	941.5	951.0	970.0	982.6	1007.9	1033.3	1072.8	1102.9	1125.0	1151.9
35°	879.8	890.8	903.5	917.7	936.7	960.5	984.2	1017.4	1047.5	1068.1	1090.2
37.5°	832.3	840.2	859.2	868.7	884.5	906.7	936.7	971.5	998.4	1014.3	1036.4
40°	786.4	792.7	807.0	824.4	835.5	852.9	884.5	914.6	947.8	966.8	984.2
42.5°	737.4	745.3	757.9	775.3	792.7	811.7	829.1	863.9	894.0	909.8	928.8
45°	694.6	699.4	708.9	726.3	743.7	757.9	784.8	816.5	845.0	857.6	878.2
47.5°	644.0	648.8	663.0	670.9	689.9	708.9	735.8	767.4	792.7	805.4	824.4
50°	591.8	596.5	606.0	623.4	636.1	656.7	680.4	707.3	738.9	756.3	767.4
52.5°	541.2	550.6	558.6	572.8	588.6	609.2	631.3	656.7	683.6	701.0	713.6
55°	490.5	498.4	507.9	515.8	534.8	553.8	579.1	602.9	626.6	642.4	656.7
57.5°	433.6	444.6	454.1	469.9	484.2	500.0	528.5	547.5	576.0	587.0	599.7
60°	384.5	395.6	403.5	416.2	428.8	449.4	468.4	492.1	515.8	530.1	545.9
62.5°	343.4	348.1	352.9	365.5	378.2	397.2	416.2	439.9	465.2	473.1	485.8
65°	302.2	307.0	314.9	326.0	335.5	346.5	367.1	386.1	409.8	422.5	427.2
67.5°	267.4	272.2	273.7	281.7	289.6	302.2	313.3	332.3	354.4	362.4	371.8
70°	227.9	235.8	237.3	243.7	246.8	254.8	267.4	281.7	299.1	313.3	321.2
72.5°	182.0	193.0	196.2	205.7	210.4	218.4	227.9	238.9	250.0	256.3	262.7
75°	148.7	151.9	153.5	161.4	169.3	180.4	185.1	191.5	201.0	208.9	215.2
77.5°	123.4	125.0	126.6	126.6	128.2	134.5	144.0	151.9	158.2	161.4	166.1
80°	99.7	98.1	98.1	99.7	99.7	99.7	102.9	113.9	117.1	125.0	123.4
82.5°	77.5	74.4	76.0	74.4	74.4	74.4	74.4	76.0	76.0	80.7	83.9
85°	50.6	52.2	50.6	50.6	49.1	50.6	49.1	49.1	47.5	47.5	45.9
87.5°	26.9	28.5	26.9	26.9	25.3	26.9	25.3	25.3	23.7	23.7	20.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P994943

CATALOG NUMBER: S123RDR-B1165DB2750-4F0-XX-W2A-A_3500K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1848.2	1848.2	1848.2	1848.2
2.5°	1800.7	1811.8	1833.9	1852.9
5°	1762.7	1780.1	1813.3	1846.6
7.5°	1716.8	1743.7	1786.4	1832.3
10°	1672.5	1707.3	1759.5	1813.3
12.5°	1628.2	1664.6	1720.0	1789.6
15°	1576.0	1614.0	1680.4	1764.3
17.5°	1530.1	1580.7	1640.9	1724.7
20°	1481.1	1519.0	1596.6	1685.2
22.5°	1419.3	1482.6	1555.4	1648.8
25°	1370.3	1425.7	1498.5	1604.5
27.5°	1310.2	1375.0	1463.6	1557.0
30°	1261.1	1314.9	1397.2	1509.5
32.5°	1204.1	1267.4	1352.9	1463.6
35°	1153.5	1207.3	1288.0	1400.4
37.5°	1093.4	1151.9	1242.1	1341.8
40°	1041.2	1098.1	1183.6	1276.9
42.5°	977.9	1038.0	1123.4	1202.6
45°	927.2	982.6	1050.7	1123.4
47.5°	865.5	924.1	990.5	1041.2
50°	810.1	863.9	916.2	958.9
52.5°	750.0	799.1	846.5	878.2
55°	694.6	732.6	770.6	792.7
57.5°	629.8	666.2	697.8	710.5
60°	572.8	602.9	623.4	637.7
62.5°	512.7	534.8	550.6	558.6
65°	454.1	469.9	477.9	485.8
67.5°	394.0	408.2	413.0	422.5
70°	330.7	346.5	349.7	354.4
72.5°	283.2	283.2	289.6	295.9
75°	226.3	229.4	232.6	232.6
77.5°	177.2	177.2	180.4	182.0
80°	129.8	131.3	131.3	129.8
82.5°	88.6	91.8	88.6	87.0
85°	49.1	55.4	52.2	52.2
87.5°	20.6	20.6	23.7	20.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)