

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332369

Luminaire Tested: **S123RDIP-S1165D585U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332369
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1165D585U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6721.7 lumens
Efficiency: N/A
Efficacy: 122.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

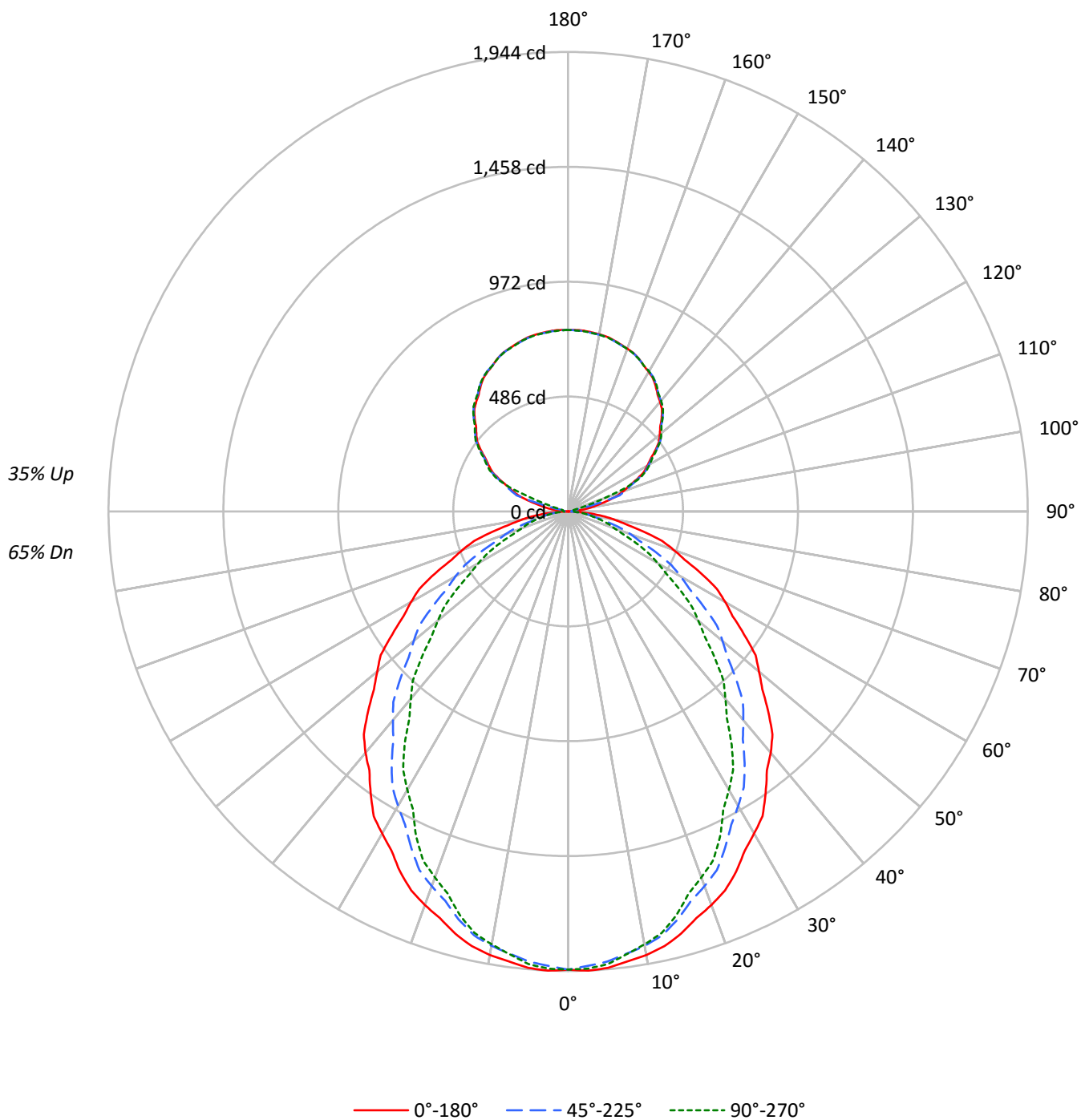
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65		
1	102	97	94	90	95	92	88	85	81	79	76	72	70	68	63	61	60	56		
2	93	86	79	74	87	81	75	71	72	68	64	63	60	57	56	53	51	47		
3	85	76	68	62	80	71	65	60	64	58	54	56	52	49	50	47	44	41		
4	78	67	59	53	73	64	57	51	57	51	47	50	46	42	45	41	38	35		
5	72	60	52	46	67	57	50	44	51	45	41	46	41	37	40	37	34	31		
6	66	54	46	40	62	51	44	39	46	40	36	41	36	33	37	33	30	27		
7	62	49	41	36	58	47	39	34	42	36	32	38	33	29	34	30	27	24		
8	57	45	37	32	54	43	35	31	39	33	28	35	30	26	31	27	24	22		
9	53	41	33	28	50	39	32	27	35	30	26	32	27	24	29	25	22	20		
10	50	38	31	26	47	36	29	25	33	27	23	30	25	22	27	23	20	18		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20863	20863	20863
5°	20942	20653	20772
10°	20824	20394	20325
15°	20600	19917	19706
20°	20292	19321	18871
25°	19975	18650	18053
30°	19557	17877	16900
35°	19127	17102	15843
40°	18730	16190	14533
45°	18209	15289	13352
50°	17637	14267	12030
55°	17051	13097	10796
60°	16514	11845	9442
65°	15814	10488	8087
70°	14940	8806	6530
75°	13662	6929	6147
80°	12180	6137	5653
85°	10288	5434	5051

TEST NUMBER: P332369

CATALOG NUMBER: S123RDIP-S1165D585U835-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	2.7
10°-20°	506.4	7.5
20°-30°	729.2	10.8
30°-40°	821.3	12.2
40°-50°	785.8	11.7
50°-60°	643.5	9.6
60°-70°	434.1	6.5
70°-80°	218.4	3.2
80°-90°	59.9	0.9
90°-100°	27.9	0.4
100°-110°	133.0	2.0
110°-120°	319.5	4.8
120°-130°	406.9	6.1
130°-140°	434.7	6.5
140°-150°	406.5	6.0
150°-160°	327.9	4.9
160°-170°	211.6	3.1
170°-180°	72.9	1.1
0°-30°	1417.6	21.1
0°-40°	2238.9	33.3
0°-60°	3668.1	54.6
0°-90°	4380.6	65.2
90°-120°	480.5	7.1
90°-150°	1728.6	25.7
90°-180°	2341.0	34.8
0°-180°	6721.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1938	1938	1938	1938	1938	
5°	1938	1930	1911	1925	1922	184
15°	1849	1830	1787	1779	1768	521
25°	1682	1641	1570	1538	1520	773
35°	1456	1397	1302	1236	1206	911
45°	1196	1123	1004	918	877	923
55°	909	828	698	610	575	814
65°	621	532	412	338	318	614
75°	328	252	167	152	148	350
85°	83	50	44	41	41	94
90°	1	6	14	16	17	6
95°	35	13	18	21	22	43
105°	170	173	125	30	25	180
115°	319	322	327	333	335	315
125°	449	454	456	457	459	401
135°	560	563	565	567	565	431
145°	646	650	651	652	652	404
155°	711	710	711	713	710	328
165°	750	748	748	752	748	212
175°	768	765	765	769	765	73
180°	768	768	768	768	768	

TEST NUMBER: P332369

CATALOG NUMBER: S123RDIP-S1165D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2
2.5°	1944.5	1943.3	1942.2	1941.1	1940.0	1937.7	1934.4	1931.0	1927.7	1924.3	1927.4
5°	1938.2	1936.4	1934.7	1932.9	1931.2	1928.2	1924.0	1919.8	1915.6	1911.4	1914.6
7.5°	1920.2	1918.4	1916.5	1914.6	1912.7	1909.0	1903.6	1898.1	1892.7	1887.2	1889.0
10°	1905.2	1902.7	1900.3	1897.8	1895.4	1891.0	1884.7	1878.4	1872.1	1865.9	1866.2
12.5°	1883.8	1881.1	1878.3	1875.6	1872.9	1867.7	1860.0	1852.3	1844.6	1836.9	1836.7
15°	1848.6	1844.7	1840.9	1837.0	1833.2	1826.4	1816.6	1806.8	1797.0	1787.3	1785.5
17.5°	1804.2	1799.8	1795.3	1790.8	1786.4	1777.9	1765.5	1753.0	1740.6	1728.2	1724.5
20°	1771.5	1766.0	1760.4	1754.8	1749.2	1739.8	1726.5	1713.2	1699.9	1686.7	1682.1
22.5°	1735.1	1728.6	1722.2	1715.8	1709.4	1699.1	1685.0	1670.9	1656.8	1642.6	1637.0
25°	1681.9	1673.2	1664.5	1655.7	1647.0	1634.6	1618.5	1602.5	1586.4	1570.3	1563.0
27.5°	1617.5	1607.9	1598.2	1588.6	1578.9	1565.2	1547.3	1529.4	1511.5	1493.6	1483.4
30°	1573.5	1563.0	1552.5	1542.0	1531.6	1516.5	1497.0	1477.4	1457.9	1438.3	1426.4
32.5°	1529.5	1517.6	1505.7	1493.8	1482.0	1465.7	1445.0	1424.3	1403.6	1383.0	1370.0
35°	1455.6	1443.0	1430.4	1417.9	1405.3	1388.2	1366.5	1344.9	1323.2	1301.5	1286.5
37.5°	1380.8	1366.8	1352.8	1338.8	1324.9	1306.3	1283.2	1260.1	1237.0	1213.8	1196.8
40°	1333.0	1317.6	1302.2	1286.9	1271.5	1251.4	1226.6	1201.8	1177.0	1152.2	1134.0
42.5°	1278.9	1263.5	1248.2	1232.8	1217.4	1196.9	1171.3	1145.6	1120.0	1094.4	1074.5
45°	1196.2	1180.5	1164.8	1149.1	1133.3	1112.0	1085.1	1058.2	1031.3	1004.4	984.5
47.5°	1113.5	1096.3	1079.0	1061.8	1044.5	1022.4	995.5	968.6	941.7	914.9	893.2
50°	1053.2	1036.8	1020.3	1003.9	987.5	965.2	936.9	908.6	880.3	852.0	830.3
52.5°	999.1	981.3	963.5	945.7	927.8	904.9	876.9	848.9	820.9	792.9	770.4
55°	908.6	891.4	874.3	857.2	840.1	816.7	787.0	757.3	727.6	697.9	677.7
57.5°	824.9	806.3	787.6	769.0	750.3	726.1	696.3	666.4	636.6	606.8	587.6
60°	767.1	747.9	728.7	709.5	690.2	666.1	637.1	608.2	579.2	550.2	531.3
62.5°	709.2	690.0	670.8	651.6	632.4	608.3	579.3	550.3	521.3	492.3	474.6
65°	620.9	601.7	582.5	563.3	544.1	520.8	493.6	466.3	439.1	411.8	394.7
67.5°	532.6	513.1	493.7	474.3	454.9	432.1	406.0	379.8	353.7	327.6	314.8
70°	474.7	455.9	437.0	418.1	399.3	377.6	353.2	328.7	304.3	279.8	267.6
72.5°	416.9	398.3	379.7	361.1	342.5	322.1	299.9	277.7	255.5	233.3	223.3
75°	328.5	311.8	295.0	278.2	261.5	243.5	224.3	205.0	185.8	166.6	163.1
77.5°	248.0	232.9	217.7	202.6	187.4	173.6	161.3	148.9	136.5	124.2	122.3
80°	196.5	182.2	167.8	153.5	139.2	128.4	121.0	113.7	106.4	99.0	98.0
82.5°	147.4	135.1	122.7	110.3	98.0	90.1	86.7	83.2	79.8	76.4	75.3
85°	83.3	75.6	67.9	60.3	52.6	48.2	47.2	46.1	45.1	44.0	43.3
87.5°	30.3	27.5	24.7	21.8	19.0	17.8	18.1	18.4	18.8	19.1	18.9
90°	0.6	1.8	3.1	4.4	5.6	7.1	8.7	10.4	12.0	13.7	14.2
92.5°	10.6	10.3	9.9	9.5	9.2	9.6	10.9	12.1	13.4	14.6	15.4
95°	34.8	29.6	24.4	19.2	14.0	12.1	13.5	14.9	16.3	17.7	18.6
97.5°	69.9	67.6	65.3	62.9	60.6	54.9	45.7	36.6	27.5	18.4	19.4
100°	96.4	98.9	101.5	104.0	106.5	97.9	78.1	58.4	38.6	18.8	19.8
102.5°	126.5	128.3	130.2	132.0	133.8	123.9	102.3	80.7	59.1	37.5	34.4
105°	170.0	171.4	172.8	174.1	175.5	170.5	159.1	147.7	136.3	124.9	102.5
107.5°	215.8	216.9	218.1	219.2	220.3	221.7	223.5	225.3	227.1	228.9	212.5
110°	246.4	247.4	248.4	249.4	250.4	251.7	253.0	254.4	255.8	257.2	253.0

TEST NUMBER: P332369

CATALOG NUMBER: S123RDIP-S1165D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.6	276.5	277.4	278.3	279.2	280.4	281.8	283.2	284.6	286.0	286.1
115°	318.8	319.6	320.3	321.1	321.9	322.8	324.0	325.1	326.2	327.4	328.7
117.5°	360.7	361.6	362.6	363.5	364.4	365.2	365.8	366.4	367.0	367.5	368.6
120°	386.7	387.8	389.0	390.1	391.3	392.0	392.4	392.8	393.2	393.5	394.6
122.5°	413.2	414.1	415.0	416.0	416.9	417.6	418.1	418.6	419.1	419.6	420.3
125°	449.4	450.5	451.5	452.5	453.5	454.3	454.8	455.3	455.8	456.3	456.5
127.5°	484.6	485.6	486.6	487.6	488.6	489.4	490.0	490.7	491.3	491.9	492.3
130°	506.5	507.5	508.5	509.5	510.5	511.3	511.8	512.3	512.8	513.3	513.8
132.5°	527.5	528.5	529.5	530.5	531.5	532.2	532.6	533.0	533.4	533.9	534.4
135°	559.5	560.3	561.0	561.8	562.6	563.2	563.7	564.2	564.7	565.2	565.6
137.5°	586.9	587.9	588.8	589.8	590.7	591.4	591.6	591.9	592.2	592.5	593.1
140°	605.1	605.9	606.7	607.4	608.2	608.8	609.1	609.5	609.9	610.3	610.8
142.5°	622.0	622.8	623.6	624.3	625.1	625.6	626.0	626.4	626.8	627.2	627.6
145°	645.6	646.5	647.4	648.3	649.2	649.8	650.0	650.3	650.5	650.8	651.0
147.5°	667.9	668.5	669.1	669.6	670.2	670.6	670.9	671.1	671.4	671.7	671.9
150°	681.6	682.0	682.3	682.7	683.1	683.4	683.7	683.9	684.2	684.4	684.7
152.5°	693.9	694.1	694.2	694.4	694.6	694.8	694.9	695.1	695.2	695.4	695.8
155°	711.2	711.0	710.7	710.5	710.2	710.2	710.3	710.4	710.5	710.7	711.3
157.5°	724.7	724.7	724.6	724.6	724.6	724.5	724.4	724.3	724.1	724.0	724.8
160°	732.9	732.8	732.7	732.5	732.4	732.3	732.1	732.0	731.9	731.8	732.5
162.5°	740.7	740.3	740.0	739.7	739.3	739.1	739.0	738.9	738.7	738.6	739.5
165°	750.0	749.6	749.3	748.9	748.5	748.2	748.1	748.0	747.9	747.7	748.8
167.5°	757.3	756.8	756.3	755.8	755.3	755.0	755.0	755.0	755.0	755.0	756.1
170°	761.4	760.9	760.4	759.9	759.4	759.1	759.1	759.1	759.1	759.1	760.2
172.5°	764.2	763.6	762.9	762.3	761.7	761.5	761.6	761.7	761.8	761.9	762.9
175°	767.7	767.1	766.4	765.8	765.2	764.9	765.0	765.2	765.3	765.4	766.3
177.5°	768.6	768.1	767.6	767.1	766.6	766.4	766.5	766.6	766.7	766.8	767.6
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7

TEST NUMBER: P332369

CATALOG NUMBER: S123RDIP-S1165D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2
2.5°	1930.5	1933.6	1936.6	1937.9	1937.3	1936.8	1936.2	1935.6
5°	1917.7	1920.9	1924.0	1925.2	1924.5	1923.8	1923.1	1922.4
7.5°	1890.7	1892.5	1894.2	1894.5	1893.3	1892.1	1890.9	1889.7
10°	1866.6	1866.9	1867.3	1866.6	1864.8	1863.1	1861.3	1859.6
12.5°	1836.5	1836.3	1836.1	1835.0	1833.0	1830.9	1828.9	1826.9
15°	1783.8	1782.0	1780.3	1778.2	1775.7	1773.3	1770.8	1768.4
17.5°	1720.8	1717.0	1713.3	1709.7	1706.0	1702.4	1698.8	1695.1
20°	1677.6	1673.0	1668.5	1664.1	1659.9	1655.7	1651.6	1647.4
22.5°	1631.3	1625.7	1620.0	1615.2	1611.3	1607.4	1603.5	1599.6
25°	1555.7	1548.3	1541.0	1535.4	1531.6	1527.7	1523.9	1520.0
27.5°	1473.2	1463.0	1452.8	1444.8	1438.9	1433.1	1427.2	1421.3
30°	1414.5	1402.7	1390.8	1382.1	1376.5	1370.9	1365.3	1359.7
32.5°	1357.0	1344.0	1331.0	1321.6	1315.7	1309.8	1304.0	1298.1
35°	1271.5	1256.5	1241.5	1230.8	1224.5	1218.2	1211.9	1205.7
37.5°	1179.7	1162.7	1145.6	1133.2	1125.5	1117.7	1110.0	1102.2
40°	1115.9	1097.7	1079.6	1066.5	1058.4	1050.4	1042.4	1034.3
42.5°	1054.7	1034.8	1015.0	1001.5	994.3	987.1	979.9	972.7
45°	964.6	944.7	924.8	910.7	902.3	893.9	885.5	877.1
47.5°	871.5	849.9	828.2	813.7	806.2	798.7	791.2	783.8
50°	808.7	787.0	765.3	750.5	742.5	734.4	726.4	718.4
52.5°	747.9	725.4	702.9	688.0	680.8	673.7	666.5	659.3
55°	657.4	637.1	616.9	603.3	596.3	589.3	582.3	575.3
57.5°	568.5	549.3	530.2	517.6	511.7	505.8	499.8	493.9
60°	512.4	493.6	474.7	462.3	456.4	450.4	444.5	438.6
62.5°	456.8	439.1	421.3	409.4	403.1	396.9	390.7	384.5
65°	377.6	360.5	343.4	332.9	329.1	325.2	321.4	317.5
67.5°	302.0	289.2	276.4	268.0	263.9	259.7	255.6	251.5
70°	255.3	243.1	230.9	222.9	219.0	215.2	211.3	207.5
72.5°	213.3	203.3	193.3	187.5	185.9	184.3	182.7	181.1
75°	159.6	156.1	152.6	150.6	149.9	149.2	148.5	147.8
77.5°	120.4	118.5	116.6	115.3	114.6	113.9	113.2	112.5
80°	96.9	95.9	94.8	94.0	93.3	92.6	91.9	91.2
82.5°	74.3	73.3	72.2	71.6	71.5	71.3	71.2	71.1
85°	42.6	41.9	41.2	40.9	40.9	40.9	40.9	40.9
87.5°	18.7	18.6	18.4	18.2	17.9	17.7	17.5	17.3
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	16.2	17.0	17.8	18.3	18.5	18.6	18.8	18.9
95°	19.5	20.3	21.2	21.7	21.7	21.7	21.7	21.7
97.5°	20.4	21.4	22.4	23.0	23.1	23.2	23.4	23.5
100°	20.8	21.9	22.9	23.4	23.6	23.7	23.8	24.0
102.5°	31.2	28.1	25.0	23.5	23.7	24.0	24.2	24.4
105°	80.0	57.6	35.2	24.1	24.3	24.6	24.8	25.1
107.5°	196.0	179.6	163.1	146.5	129.5	112.6	95.7	78.8
110°	248.9	244.7	240.5	229.3	211.2	193.1	175.0	156.8

TEST NUMBER: P332369

CATALOG NUMBER: S123RDIP-S1165D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	286.1	286.2	286.3	284.4	280.6	276.7	272.9	269.1
115°	329.9	331.2	332.5	333.3	333.8	334.4	334.9	335.4
117.5°	369.6	370.6	371.6	372.2	372.3	372.4	372.5	372.6
120°	395.6	396.6	397.6	398.1	398.1	398.1	398.1	398.1
122.5°	421.0	421.7	422.4	422.8	422.9	423.0	423.1	423.2
125°	456.8	457.0	457.3	457.6	457.8	458.1	458.3	458.6
127.5°	492.7	493.1	493.5	493.6	493.3	493.1	492.8	492.6
130°	514.3	514.8	515.3	515.5	515.2	515.0	514.7	514.5
132.5°	534.9	535.4	535.9	536.0	535.6	535.2	534.9	534.5
135°	566.0	566.4	566.7	566.7	566.4	566.0	565.6	565.2
137.5°	593.7	594.3	594.9	595.1	594.8	594.6	594.3	594.1
140°	611.3	611.8	612.3	612.4	612.2	611.9	611.7	611.4
142.5°	628.0	628.4	628.8	628.8	628.5	628.1	627.7	627.4
145°	651.3	651.5	651.8	651.9	651.9	651.9	651.9	651.9
147.5°	672.2	672.4	672.7	672.5	671.9	671.3	670.8	670.2
150°	684.9	685.2	685.4	685.4	685.0	684.6	684.2	683.9
152.5°	696.3	696.7	697.2	697.1	696.6	696.0	695.4	694.8
155°	711.9	712.6	713.2	713.1	712.4	711.6	710.9	710.1
157.5°	725.5	726.3	727.1	726.9	725.9	725.0	724.0	723.0
160°	733.3	734.0	734.8	734.7	733.9	733.0	732.1	731.2
162.5°	740.3	741.2	742.1	742.1	741.3	740.5	739.7	739.0
165°	749.8	750.8	751.8	751.9	751.0	750.1	749.2	748.3
167.5°	757.1	758.1	759.1	759.1	758.1	757.1	756.1	755.0
170°	761.2	762.2	763.2	763.2	762.2	761.2	760.2	759.1
172.5°	763.9	764.9	765.9	765.9	764.8	763.7	762.5	761.4
175°	767.2	768.1	769.0	768.9	767.9	766.9	765.9	764.8
177.5°	768.4	769.2	770.0	769.9	768.9	767.9	766.9	765.9
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7

(END OF REPORT)