

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: P332476

Luminaire Tested: **S123RDIW-S1165D755U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332476
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: S123RDIW-S1165D755U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7401.7 lumens
Efficiency: N/A
Efficacy: 123.8 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: General Diffuse

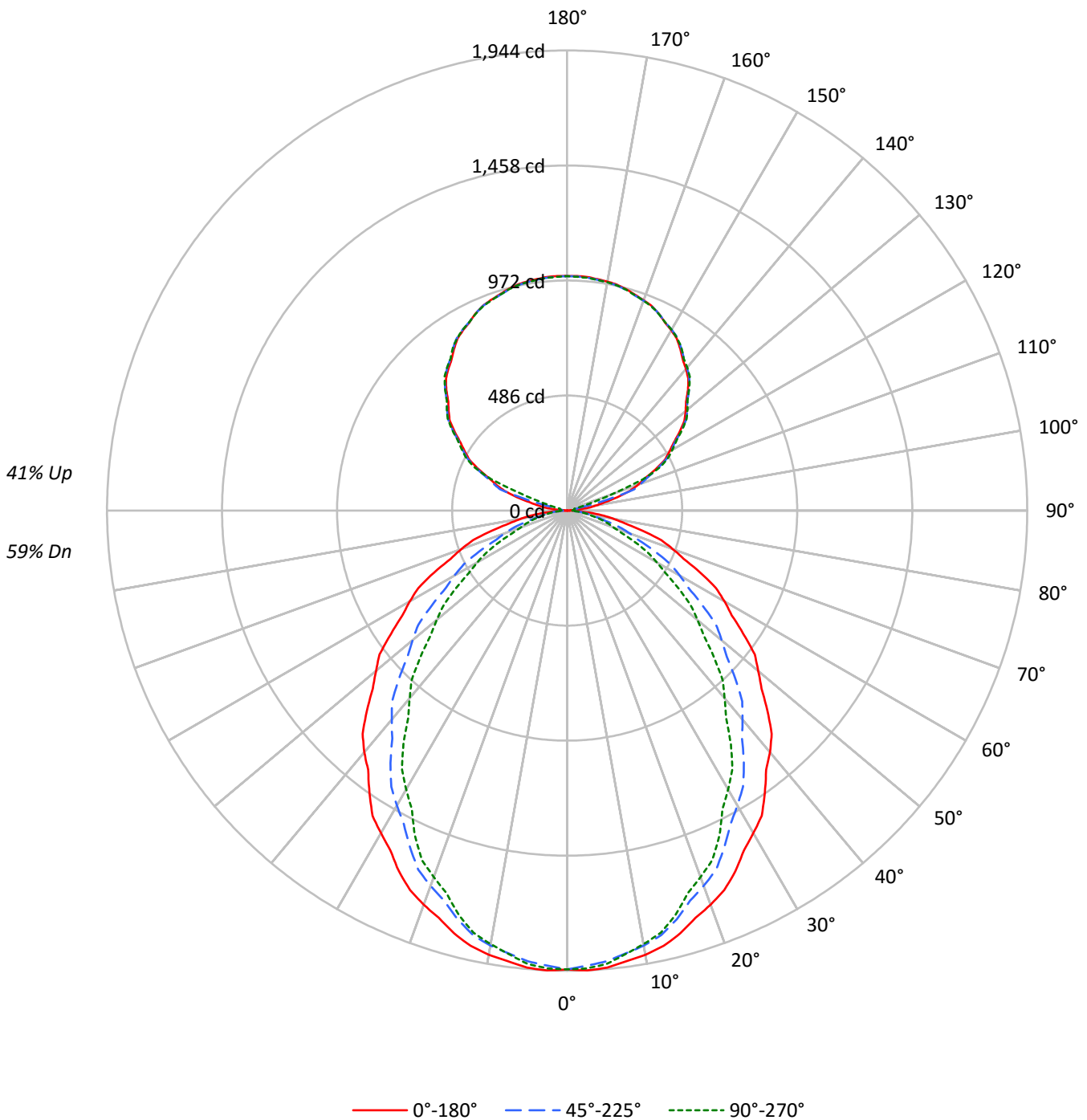
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-UDD-F

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	0
RCR																		
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	93	90	87	84	78	76	74	68	66	64	58	56	55	51
2	92	84	78	73	85	79	74	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	43	40	41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39	43	38	35	37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	27	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	27	24	22
8	56	44	36	31	52	42	34	30	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	27	34	28	24	30	25	22	26	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

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: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	2.5
10°-20°	506.4	6.8
20°-30°	729.2	9.9
30°-40°	821.3	11.1
40°-50°	785.8	10.6
50°-60°	643.5	8.7
60°-70°	434.1	5.9
70°-80°	218.4	3.0
80°-90°	60.6	0.8
90°-100°	36.0	0.5
100°-110°	171.6	2.3
110°-120°	412.3	5.6
120°-130°	525.0	7.1
130°-140°	560.9	7.6
140°-150°	524.5	7.1
150°-160°	423.1	5.7
160°-170°	273.1	3.7
170°-180°	94.1	1.3
0°-30°	1417.6	19.2
0°-40°	2238.9	30.2
0°-60°	3668.1	49.6
0°-90°	4381.3	59.2
90°-120°	619.9	8.4
90°-150°	2230.2	30.1
90°-180°	3020.0	40.8
0°-180°	7401.7	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	8	18	21	22	6
95°	45	17	23	28	28	55
105°	219	223	161	38	32	232
115°	411	416	422	430	433	406
125°	580	586	589	590	592	518
135°	722	726	729	731	729	555
145°	833	838	840	841	841	521
155°	918	916	917	920	916	423
165°	968	966	965	970	965	273
175°	990	987	988	992	987	94
180°	990	990	990	990	990	



TEST NUMBER: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-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	27.6	24.8	22.1	19.3	18.2	18.6	19.0	19.5	19.9	19.7
90°	0.7	2.4	4.0	5.6	7.3	9.2	11.3	13.4	15.5	17.7	18.3
92.5°	13.7	13.2	12.8	12.3	11.9	12.4	14.0	15.6	17.2	18.8	19.9
95°	44.9	38.2	31.5	24.8	18.1	15.6	17.4	19.2	21.0	22.8	24.0
97.5°	90.2	87.2	84.2	81.2	78.2	70.8	59.0	47.2	35.5	23.7	25.0
100°	124.4	127.6	130.9	134.2	137.4	126.3	100.8	75.3	49.8	24.3	25.6
102.5°	163.2	165.6	167.9	170.3	172.6	159.9	132.0	104.1	76.3	48.4	44.4
105°	219.3	221.1	222.9	224.7	226.5	220.0	205.3	190.6	175.9	161.2	132.2
107.5°	278.4	279.9	281.3	282.8	284.2	286.1	288.4	290.7	293.1	295.4	274.1
110°	317.9	319.2	320.5	321.8	323.1	324.7	326.5	328.3	330.1	331.9	326.5



TEST NUMBER: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	355.6	356.7	357.9	359.1	360.3	361.8	363.6	365.4	367.2	369.0	369.1
115°	411.3	412.3	413.3	414.3	415.3	416.5	418.0	419.4	420.9	422.4	424.0
117.5°	465.4	466.6	467.8	469.0	470.2	471.2	471.9	472.7	473.4	474.2	475.5
120°	498.9	500.4	501.9	503.3	504.8	505.8	506.3	506.8	507.3	507.7	509.1
122.5°	533.1	534.3	535.5	536.7	537.9	538.8	539.4	540.1	540.7	541.3	542.2
125°	579.9	581.2	582.5	583.8	585.1	586.1	586.7	587.4	588.0	588.7	589.0
127.5°	625.2	626.5	627.8	629.1	630.4	631.5	632.3	633.0	633.8	634.6	635.1
130°	653.4	654.8	656.1	657.4	658.7	659.7	660.3	661.0	661.6	662.3	662.9
132.5°	680.5	681.8	683.1	684.4	685.8	686.7	687.2	687.7	688.2	688.8	689.4
135°	721.9	722.9	723.8	724.8	725.8	726.6	727.3	727.9	728.6	729.2	729.7
137.5°	757.2	758.4	759.7	760.9	762.2	763.0	763.3	763.7	764.1	764.4	765.2
140°	780.7	781.7	782.7	783.7	784.7	785.4	785.9	786.4	786.9	787.4	788.0
142.5°	802.5	803.5	804.5	805.5	806.5	807.2	807.7	808.2	808.7	809.2	809.7
145°	833.0	834.1	835.3	836.4	837.6	838.3	838.6	839.0	839.3	839.6	839.9
147.5°	861.7	862.4	863.2	863.9	864.7	865.2	865.6	865.9	866.2	866.5	866.9
150°	879.4	879.8	880.3	880.8	881.3	881.7	882.1	882.4	882.7	883.0	883.4
152.5°	895.2	895.5	895.7	895.9	896.2	896.4	896.6	896.8	897.0	897.2	897.7
155°	917.6	917.3	917.0	916.6	916.3	916.2	916.4	916.6	916.7	916.9	917.7
157.5°	935.0	935.0	934.9	934.9	934.9	934.8	934.6	934.4	934.3	934.1	935.1
160°	945.6	945.4	945.3	945.1	944.9	944.8	944.6	944.4	944.3	944.1	945.1
162.5°	955.6	955.2	954.7	954.3	953.9	953.6	953.4	953.3	953.1	952.9	954.1
165°	967.7	967.2	966.7	966.2	965.7	965.4	965.2	965.0	964.9	964.7	966.0
167.5°	977.1	976.4	975.8	975.1	974.5	974.1	974.1	974.1	974.1	974.1	975.4
170°	982.4	981.7	981.1	980.4	979.8	979.4	979.4	979.4	979.4	979.4	980.7
172.5°	985.9	985.1	984.3	983.6	982.8	982.4	982.6	982.7	982.8	983.0	984.3
175°	990.5	989.6	988.8	988.0	987.2	986.9	987.0	987.2	987.4	987.5	988.7
177.5°	991.6	991.0	990.3	989.7	989.0	988.8	988.9	989.0	989.2	989.3	990.3
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5



TEST NUMBER: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-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°	19.6	19.4	19.3	19.1	18.9	18.7	18.5	18.2
90°	19.0	19.6	20.3	20.8	21.1	21.4	21.7	22.1
92.5°	20.9	22.0	23.0	23.6	23.8	24.0	24.2	24.4
95°	25.1	26.2	27.4	28.0	28.0	28.0	28.0	28.0
97.5°	26.3	27.6	28.9	29.7	29.8	30.0	30.2	30.3
100°	26.9	28.2	29.5	30.3	30.4	30.6	30.7	30.9
102.5°	40.3	36.3	32.2	30.3	30.6	30.9	31.2	31.5
105°	103.3	74.3	45.4	31.1	31.4	31.7	32.1	32.4
107.5°	252.9	231.7	210.5	189.0	167.1	145.3	123.5	101.7
110°	321.1	315.7	310.3	295.9	272.5	249.1	225.7	202.4



TEST NUMBER: P332476

CATALOG NUMBER: S123RDIW-S1165D755U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	369.2	369.3	369.4	366.9	362.0	357.1	352.1	347.2
115°	425.7	427.3	428.9	430.1	430.7	431.4	432.0	432.7
117.5°	476.8	478.1	479.4	480.1	480.3	480.4	480.5	480.7
120°	510.4	511.7	513.0	513.6	513.6	513.6	513.6	513.6
122.5°	543.1	544.0	545.0	545.5	545.6	545.7	545.9	546.0
125°	589.3	589.7	590.0	590.3	590.7	591.0	591.3	591.6
127.5°	635.7	636.2	636.7	636.8	636.5	636.1	635.8	635.5
130°	663.6	664.2	664.9	665.1	664.7	664.4	664.1	663.7
132.5°	690.1	690.7	691.4	691.5	691.0	690.6	690.1	689.6
135°	730.2	730.7	731.2	731.2	730.7	730.2	729.7	729.2
137.5°	766.0	766.8	767.6	767.8	767.5	767.1	766.8	766.5
140°	788.7	789.3	790.0	790.2	789.8	789.5	789.2	788.8
142.5°	810.2	810.7	811.2	811.3	810.8	810.4	809.9	809.4
145°	840.3	840.6	840.9	841.1	841.1	841.1	841.1	841.1
147.5°	867.2	867.5	867.9	867.6	866.9	866.1	865.4	864.6
150°	883.7	884.0	884.3	884.3	883.8	883.3	882.8	882.3
152.5°	898.3	898.9	899.5	899.4	898.7	897.9	897.2	896.4
155°	918.5	919.3	920.2	920.1	919.1	918.1	917.1	916.1
157.5°	936.1	937.0	938.0	937.9	936.6	935.3	934.1	932.8
160°	946.1	947.1	948.0	948.0	946.8	945.7	944.5	943.4
162.5°	955.2	956.3	957.4	957.4	956.4	955.4	954.4	953.4
165°	967.3	968.6	969.9	970.0	968.9	967.7	966.6	965.4
167.5°	976.7	978.1	979.4	979.4	978.1	976.7	975.4	974.1
170°	982.0	983.4	984.7	984.7	983.4	982.0	980.7	979.4
172.5°	985.6	986.9	988.2	988.1	986.7	985.3	983.8	982.4
175°	989.8	991.0	992.1	992.0	990.7	989.4	988.1	986.8
177.5°	991.4	992.4	993.5	993.3	992.0	990.7	989.4	988.1
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5

(END OF REPORT)