

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: P333074-935

Luminaire Tested: **S124RDIW-S795D1560U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333074-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S795D1560U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7425.7 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

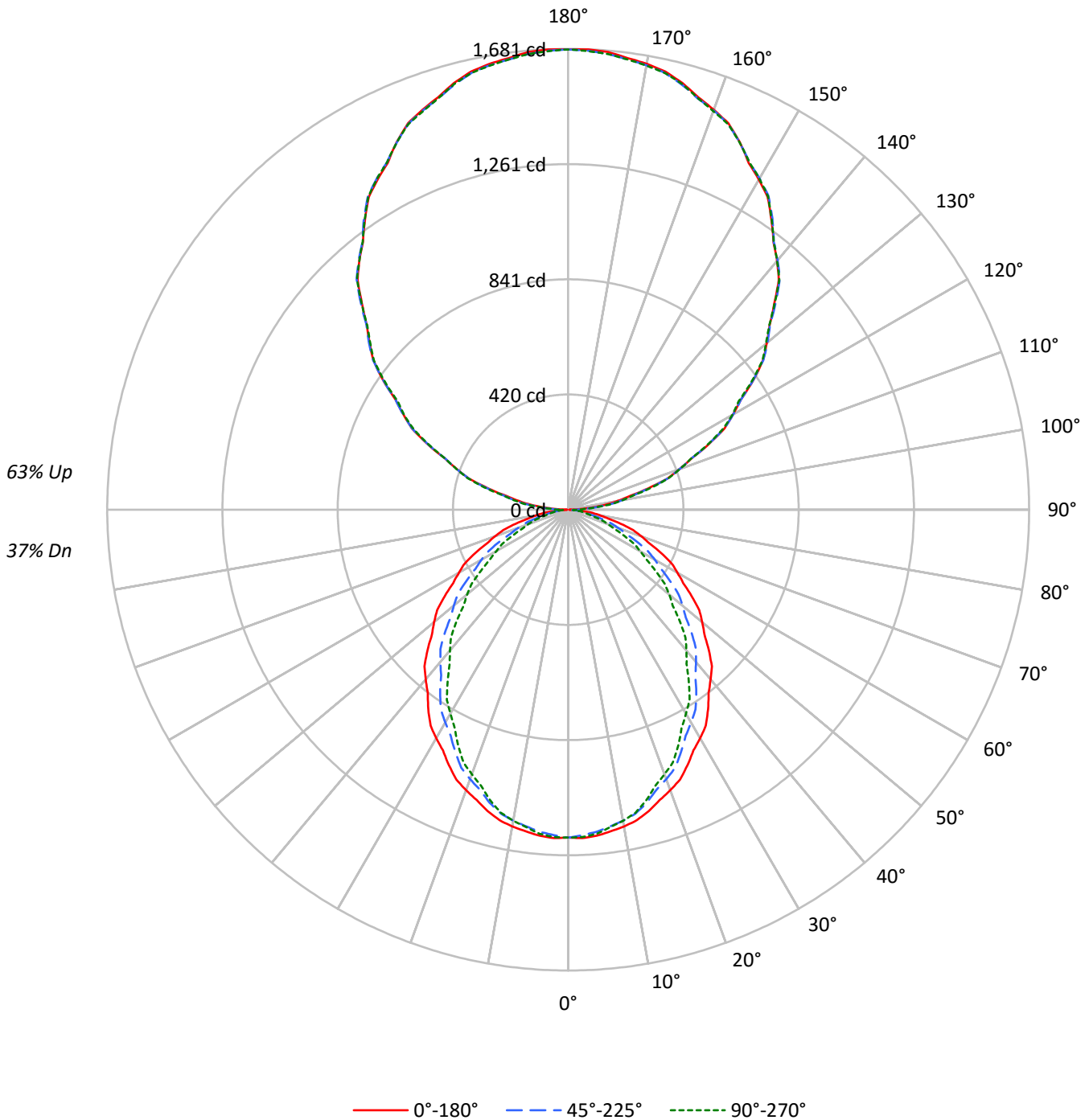
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	91	87	84	86	83	79	77	67	65	63	53	51	50	40	39	38	32
2	87	80	74	69	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	73	62	54	49	66	57	50	45	46	42	38	37	33	31	28	26	24	20
5	67	55	47	42	60	51	44	39	42	36	33	33	29	27	25	23	21	17
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	20	18	15
7	57	45	37	32	51	41	34	29	34	29	25	27	23	21	21	18	16	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	18	19	17	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	1.5
10°-20°	313.3	4.2
20°-30°	452.4	6.1
30°-40°	512.8	6.9
40°-50°	495.2	6.7
50°-60°	411.8	5.5
60°-70°	284.4	3.8
70°-80°	144.1	1.9
80°-90°	42.0	0.6
90°-100°	110.7	1.5
100°-110°	328.0	4.4
110°-120°	556.7	7.5
120°-130°	734.0	9.9
130°-140°	824.4	11.1
140°-150°	810.1	10.9
150°-160°	681.3	9.2
160°-170°	453.3	6.1
170°-180°	158.7	2.1
0°-30°	878.1	11.8
0°-40°	1390.9	18.7
0°-60°	2297.9	30.9
0°-90°	2768.4	37.3
90°-120°	995.4	13.4
90°-150°	3363.9	45.3
90°-180°	4657.0	62.7
0°-180°	7425.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	4	18	29	36	39	7
95°	78	89	99	102	102	87
105°	302	304	309	313	317	321
115°	566	566	563	562	561	558
125°	824	824	823	820	818	734
135°	1063	1071	1071	1068	1064	822
145°	1292	1297	1298	1297	1293	808
155°	1480	1480	1479	1483	1479	681
165°	1611	1607	1605	1612	1607	454
175°	1676	1670	1668	1676	1668	159
180°	1679	1679	1679	1679	1679	



TEST NUMBER: P333074-935

CATALOG NUMBER: S124RDIW-S795D1560U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.7	17.0	16.3	15.6	15.0	14.8	15.1	15.4	15.7	15.9	16.2
90°	3.9	7.1	10.2	13.4	16.6	19.4	21.6	23.9	26.3	28.6	30.3
92.5°	27.8	31.4	35.0	38.7	42.4	44.9	46.6	48.2	49.8	51.4	52.4
95°	77.9	80.5	83.1	85.7	88.3	90.6	92.6	94.6	96.7	98.7	99.5
97.5°	136.0	138.1	140.2	142.3	144.4	146.6	149.0	151.3	153.7	156.0	157.0
100°	181.8	182.9	184.1	185.2	186.4	188.2	190.9	193.5	196.0	198.6	199.2
102.5°	229.5	230.0	230.5	230.9	231.4	232.8	235.1	237.5	239.9	242.3	243.1
105°	302.5	302.8	303.1	303.3	303.7	304.4	305.5	306.7	307.8	309.0	309.9
107.5°	379.1	379.4	379.8	380.1	380.5	380.7	380.9	381.1	381.3	381.4	382.2
110°	431.0	431.6	432.1	432.7	433.3	433.5	433.2	432.9	432.6	432.3	431.7



TEST NUMBER: P333074-935

CATALOG NUMBER: S124RDIW-S795D1560U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	485.0	485.2	485.3	485.3	485.5	485.3	484.7	484.2	483.7	483.2	483.1
115°	566.0	566.0	566.0	566.0	566.0	565.8	565.2	564.6	564.0	563.4	563.2
117.5°	642.4	642.6	642.8	643.1	643.3	643.3	642.8	642.4	642.0	641.6	640.6
120°	693.3	694.4	695.6	696.7	697.8	698.0	697.2	696.3	695.4	694.6	693.1
122.5°	746.2	746.7	747.2	747.6	748.0	748.1	747.7	747.3	746.9	746.5	745.5
125°	824.4	824.4	824.4	824.4	824.4	824.2	824.0	823.6	823.4	823.1	822.5
127.5°	895.3	896.1	897.0	897.9	898.7	899.0	898.5	898.0	897.6	897.1	896.5
130°	945.1	946.0	946.8	947.7	948.6	949.0	949.0	949.0	949.0	949.0	948.5
132.5°	996.0	996.7	997.3	997.9	998.6	998.8	998.5	998.3	998.1	997.8	997.3
135°	1063.2	1065.0	1066.7	1068.5	1070.2	1071.1	1071.1	1071.1	1071.1	1071.1	1070.5
137.5°	1136.5	1137.3	1138.1	1138.9	1139.7	1140.4	1140.8	1141.3	1141.8	1142.2	1141.4
140°	1185.3	1185.9	1186.5	1187.1	1187.6	1187.9	1187.9	1187.9	1187.9	1187.9	1187.6
142.5°	1229.9	1230.5	1231.1	1231.7	1232.3	1232.4	1232.2	1232.0	1231.7	1231.5	1231.5
145°	1291.8	1292.9	1294.1	1295.2	1296.4	1297.1	1297.4	1297.7	1298.0	1298.2	1298.0
147.5°	1353.1	1354.4	1355.8	1357.2	1358.6	1359.2	1358.9	1358.7	1358.5	1358.2	1358.0
150°	1390.4	1391.5	1392.8	1393.9	1395.1	1395.6	1395.6	1395.6	1395.6	1395.6	1395.6
152.5°	1425.7	1426.4	1427.1	1427.8	1428.5	1429.0	1429.2	1429.4	1429.7	1429.9	1430.6
155°	1480.0	1480.0	1480.0	1480.0	1480.0	1479.9	1479.5	1479.3	1479.0	1478.7	1479.9
157.5°	1525.7	1525.2	1524.7	1524.1	1523.6	1523.4	1523.3	1523.2	1523.2	1523.1	1524.0
160°	1552.7	1552.4	1552.1	1551.9	1551.5	1551.3	1551.0	1550.7	1550.4	1550.1	1551.0
162.5°	1577.6	1576.9	1576.1	1575.4	1574.6	1574.1	1573.8	1573.6	1573.2	1573.0	1574.5
165°	1611.1	1610.2	1609.4	1608.5	1607.7	1607.0	1606.4	1605.8	1605.2	1604.6	1606.4
167.5°	1636.8	1635.6	1634.4	1633.2	1632.0	1631.4	1631.5	1631.5	1631.6	1631.7	1633.4
170°	1651.4	1649.9	1648.5	1647.0	1645.6	1645.0	1645.3	1645.6	1645.9	1646.1	1647.9
172.5°	1661.7	1660.5	1659.3	1658.1	1656.9	1656.3	1656.4	1656.5	1656.5	1656.6	1658.5
175°	1676.0	1674.6	1673.2	1671.7	1670.3	1669.4	1669.1	1668.8	1668.5	1668.3	1670.3
177.5°	1680.7	1679.6	1678.4	1677.2	1676.1	1675.5	1675.5	1675.5	1675.5	1675.5	1677.1
180°	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6



TEST NUMBER: P333074-935

CATALOG NUMBER: S124RDIW-S795D1560U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	16.4	16.5	16.7	17.0	17.2	17.5	17.7	18.1
90°	32.0	33.8	35.5	36.7	37.2	37.8	38.4	38.9
92.5°	53.5	54.5	55.5	56.2	56.6	56.9	57.3	57.6
95°	100.4	101.3	102.1	102.5	102.5	102.5	102.5	102.5
97.5°	158.2	159.2	160.2	160.7	160.7	160.7	160.7	160.7
100°	199.8	200.4	201.0	201.2	201.2	201.2	201.2	201.2
102.5°	243.8	244.7	245.5	246.0	246.2	246.5	246.7	246.9
105°	310.7	311.6	312.5	313.3	314.2	315.0	315.9	316.8
107.5°	383.1	383.8	384.7	385.0	385.0	385.0	384.9	384.8
110°	431.2	430.6	430.0	430.2	431.0	431.9	432.7	433.6



TEST NUMBER: P333074-935

CATALOG NUMBER: S124RDIW-S795D1560U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	482.9	482.8	482.8	482.8	482.9	483.1	483.3	483.5
115°	562.8	562.6	562.3	562.0	561.7	561.5	561.1	560.9
117.5°	639.6	638.7	637.7	636.9	636.3	635.8	635.2	634.6
120°	691.6	690.3	688.8	688.4	689.0	689.5	690.1	690.7
122.5°	744.5	743.6	742.6	741.6	740.5	739.5	738.5	737.4
125°	821.9	821.4	820.8	820.2	819.6	819.1	818.5	817.9
127.5°	896.0	895.4	894.8	894.2	893.8	893.4	892.9	892.4
130°	947.9	947.3	946.7	945.8	944.7	943.6	942.4	941.2
132.5°	996.7	996.1	995.5	995.0	994.5	994.1	993.6	993.2
135°	1069.9	1069.4	1068.8	1068.0	1067.1	1066.3	1065.4	1064.5
137.5°	1140.7	1140.0	1139.2	1138.9	1139.1	1139.3	1139.4	1139.6
140°	1187.3	1187.1	1186.7	1186.5	1186.2	1185.9	1185.6	1185.3
142.5°	1231.4	1231.3	1231.3	1231.2	1231.1	1231.1	1231.1	1231.0
145°	1297.7	1297.4	1297.1	1296.5	1295.6	1294.8	1293.9	1293.0
147.5°	1357.8	1357.5	1357.3	1357.0	1356.8	1356.5	1356.2	1355.9
150°	1395.6	1395.6	1395.6	1395.5	1395.2	1394.9	1394.6	1394.3
152.5°	1431.2	1431.9	1432.6	1432.6	1431.8	1431.2	1430.4	1429.6
155°	1481.0	1482.1	1483.3	1483.3	1482.1	1481.0	1479.9	1478.7
157.5°	1524.8	1525.7	1526.6	1526.5	1525.5	1524.6	1523.5	1522.6
160°	1551.9	1552.7	1553.6	1553.2	1551.9	1550.4	1548.9	1547.5
162.5°	1576.1	1577.6	1579.2	1579.2	1577.8	1576.4	1574.9	1573.5
165°	1608.1	1609.8	1611.5	1611.9	1610.7	1609.6	1608.3	1607.2
167.5°	1635.1	1636.8	1638.6	1638.6	1636.8	1635.0	1633.1	1631.3
170°	1649.7	1651.4	1653.1	1652.9	1651.0	1648.9	1646.9	1644.9
172.5°	1660.5	1662.4	1664.4	1664.4	1662.3	1660.4	1658.3	1656.3
175°	1672.3	1674.3	1676.4	1676.4	1674.3	1672.3	1670.3	1668.3
177.5°	1678.8	1680.3	1682.0	1681.9	1680.0	1678.2	1676.4	1674.5
180°	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6	1678.6

(END OF REPORT)