

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: P333073-930

Luminaire Tested: **S124RDIW-S795D1560U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333073-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S795D1560U930-4F0-1E-UDD-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7706.4 lumens
Efficiency: N/A
Efficacy: 113.2 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

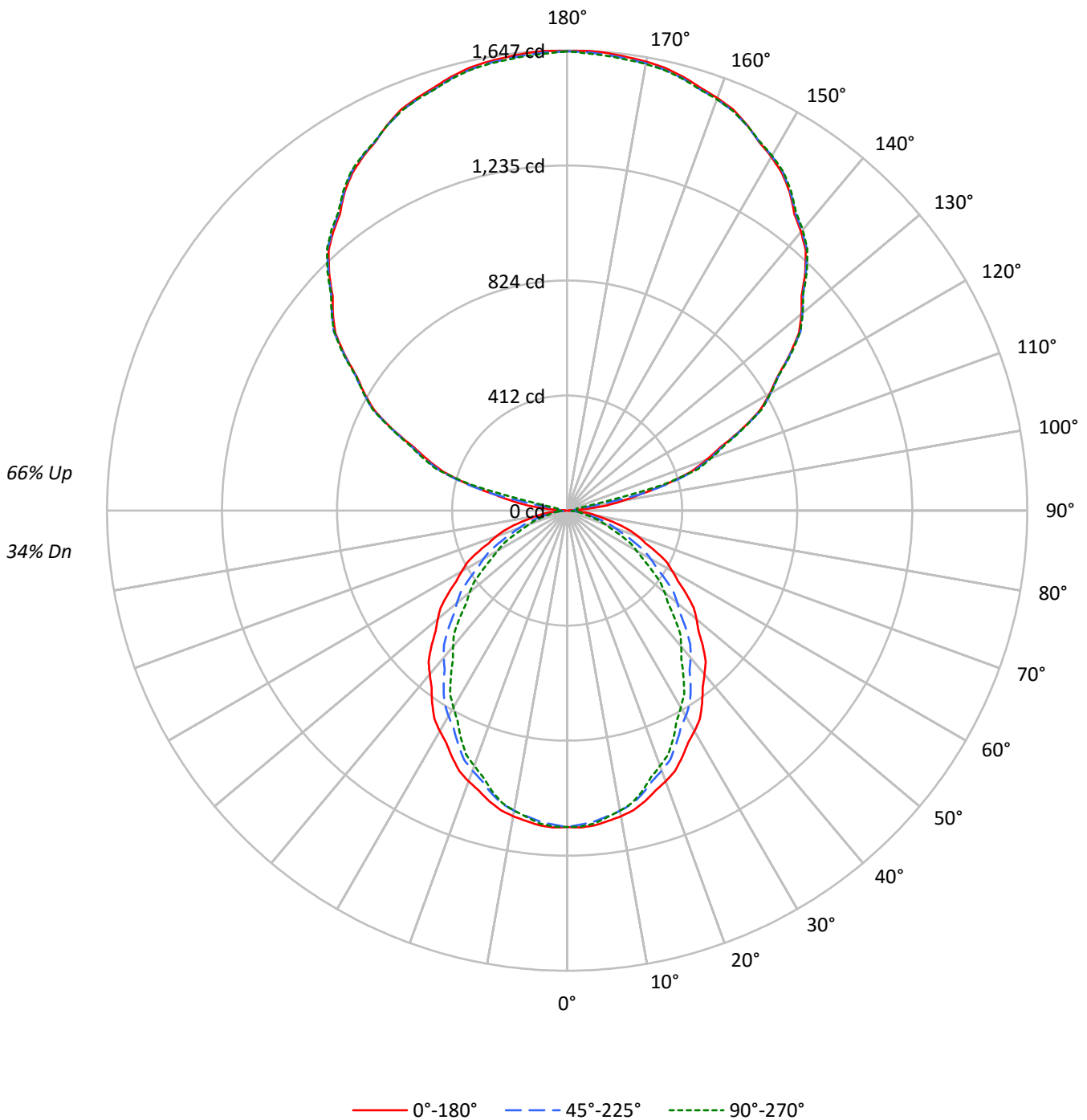
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41
1	94	90	87	83	85	82	78	76	65	63	61	51	49	48	37	36	35
2	86	79	73	68	77	71	67	62	57	54	51	45	42	40	33	31	30
3	79	69	62	57	71	63	57	52	51	47	43	40	37	34	29	27	26
4	72	62	54	48	65	56	49	44	45	40	37	35	32	29	26	24	22
5	66	55	47	41	59	50	43	38	40	35	32	32	28	25	24	21	19
6	61	49	41	36	55	45	38	33	36	31	28	29	25	22	21	19	17
7	56	44	37	31	51	40	34	29	33	28	24	26	22	20	20	17	15
8	52	40	33	27	47	37	30	25	30	25	22	24	20	18	18	16	14
9	48	37	29	24	44	33	27	23	27	23	19	22	18	16	17	14	12
10	45	33	26	22	41	31	24	20	25	21	17	20	17	14	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9143	9143	9143
5°	9164	9052	9108
10°	9107	8943	8943
15°	9002	8756	8690
20°	8858	8508	8352
25°	8675	8219	8011
30°	8496	7914	7582
35°	8298	7597	7154
40°	8061	7238	6690
45°	7841	6882	6218
50°	7592	6469	5718
55°	7323	6042	5175
60°	7030	5572	4621
65°	6758	4988	4076
70°	6366	4338	3460
75°	5870	3599	2813
80°	5119	2738	2580
85°	4335	2492	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	1.4
10°-20°	296.7	3.8
20°-30°	428.4	5.6
30°-40°	485.6	6.3
40°-50°	468.9	6.1
50°-60°	389.9	5.1
60°-70°	269.3	3.5
70°-80°	136.5	1.8
80°-90°	39.8	0.5
90°-100°	56.2	0.7
100°-110°	358.5	4.7
110°-120°	685.8	8.9
120°-130°	870.5	11.3
130°-140°	931.4	12.1
140°-150°	871.0	11.3
150°-160°	702.4	9.1
160°-170°	453.0	5.9
170°-180°	156.1	2.0
0°-30°	831.5	10.8
0°-40°	1317.1	17.1
0°-60°	2176.0	28.2
0°-90°	2621.5	34.0
90°-120°	1100.5	14.3
90°-150°	3773.4	49.0
90°-180°	5085.0	66.0
0°-180°	7706.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1131	1127	1117	1125	1124	107
15°	1077	1069	1048	1046	1040	303
25°	974	957	923	908	899	449
35°	842	813	771	742	726	526
45°	687	654	603	562	545	529
55°	520	484	429	386	368	465
65°	354	316	261	225	213	349
75°	188	156	115	96	90	199
85°	47	30	27	25	25	53
90°	4	17	27	34	37	5
95°	68	28	27	34	36	87
105°	370	377	384	392	350	387
115°	691	694	693	696	696	680
125°	971	976	974	977	979	867
135°	1205	1204	1209	1211	1214	928
145°	1389	1393	1393	1394	1397	868
155°	1523	1524	1521	1525	1522	702
165°	1607	1601	1601	1610	1600	454
175°	1644	1637	1638	1647	1634	156
180°	1644	1644	1644	1644	1644	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1135.4	1134.7	1134.1	1133.5	1132.9	1131.7	1130.0	1128.4	1126.7	1124.9	1126.7
5°	1130.8	1130.1	1129.3	1128.5	1127.7	1126.3	1123.9	1121.6	1119.2	1117.0	1118.9
7.5°	1120.6	1119.8	1119.0	1118.2	1117.4	1115.5	1112.5	1109.5	1106.4	1103.4	1104.6
10°	1110.9	1109.9	1109.0	1108.0	1107.0	1104.8	1101.4	1097.9	1094.5	1091.0	1091.7
12.5°	1098.4	1097.3	1096.2	1095.0	1094.0	1091.4	1087.3	1083.1	1079.0	1075.0	1075.5
15°	1077.1	1075.4	1073.6	1071.9	1070.2	1066.9	1062.0	1057.2	1052.4	1047.6	1047.2
17.5°	1051.2	1048.7	1046.2	1043.7	1041.2	1037.1	1031.3	1025.5	1019.7	1013.9	1012.8
20°	1031.1	1028.6	1026.1	1023.6	1021.1	1016.6	1010.0	1003.5	996.9	990.3	988.8
22.5°	1008.9	1006.1	1003.3	1000.5	997.7	992.7	985.7	978.7	971.7	964.7	962.4
25°	973.9	970.4	966.9	963.4	960.0	954.3	946.4	938.5	930.6	922.7	919.4
27.5°	937.1	932.8	928.4	924.1	919.7	913.3	904.8	896.4	887.9	879.5	875.5
30°	911.4	906.6	901.8	897.0	892.2	885.3	876.2	867.2	858.0	849.0	844.2
32.5°	884.4	879.0	873.5	868.0	862.7	855.2	845.9	836.5	827.1	817.7	812.2
35°	842.0	835.9	829.7	823.5	817.4	809.5	799.9	790.2	780.6	770.9	764.4
37.5°	796.8	790.4	784.1	777.7	771.4	762.9	752.2	741.5	730.8	720.2	712.8
40°	764.9	758.6	752.2	745.8	739.5	730.8	719.7	708.8	697.8	686.8	678.7
42.5°	734.3	727.7	721.1	714.4	707.7	698.6	687.2	675.7	664.3	652.8	644.6
45°	686.8	679.7	672.5	665.4	658.3	649.0	637.4	625.8	614.2	602.8	593.3
47.5°	637.7	630.4	623.1	615.6	608.3	598.6	586.6	574.5	562.6	550.5	540.7
50°	604.5	597.0	589.4	581.9	574.4	564.4	552.1	539.8	527.4	515.1	505.5
52.5°	570.5	563.1	555.7	548.4	541.0	531.0	518.4	505.7	493.1	480.5	470.7
55°	520.3	512.6	504.9	497.2	489.5	479.4	466.8	454.3	441.8	429.3	419.2
57.5°	470.8	462.7	454.7	446.7	438.6	428.4	416.1	403.8	391.5	379.1	369.0
60°	435.4	427.6	420.0	412.2	404.5	394.5	382.1	369.8	357.5	345.1	335.1
62.5°	403.4	395.4	387.4	379.4	371.4	361.0	348.4	335.7	323.1	310.5	301.2
65°	353.8	345.5	337.2	329.0	320.7	310.4	298.0	285.7	273.4	261.1	252.7
67.5°	302.3	294.4	286.4	278.5	270.5	260.9	249.4	238.0	226.5	215.1	207.9
70°	269.7	261.6	253.5	245.4	237.3	227.8	216.8	205.8	194.9	183.8	177.5
72.5°	235.1	227.7	220.4	213.0	205.7	196.9	186.5	176.1	165.8	155.4	149.9
75°	188.2	181.1	173.9	166.8	159.6	151.6	142.5	133.5	124.4	115.4	110.9
77.5°	140.6	134.6	128.6	122.5	116.4	109.7	102.5	95.1	87.8	80.5	77.9
80°	110.1	104.5	99.0	93.4	87.8	82.1	76.3	70.5	64.7	58.9	58.4
82.5°	83.8	78.7	73.5	68.4	63.3	59.0	55.8	52.4	49.1	45.8	45.3
85°	46.8	43.0	39.1	35.3	31.4	29.2	28.6	28.0	27.5	26.9	26.5
87.5°	16.7	16.1	15.4	14.8	14.2	14.0	14.3	14.6	14.8	15.1	15.3
90°	3.7	6.7	9.7	12.7	15.7	18.3	20.5	22.7	24.9	27.1	28.7
92.5°	15.5	15.7	15.8	16.0	16.1	17.3	19.5	21.7	23.9	26.1	27.7
95°	67.6	58.3	49.1	39.8	30.5	25.9	26.3	26.5	26.7	27.1	28.7
97.5°	143.6	149.4	155.2	161.0	166.8	154.4	123.9	93.4	62.9	32.4	32.6
100°	201.6	206.6	211.5	216.4	221.3	204.9	167.2	129.5	91.8	54.1	49.5
102.5°	266.5	270.2	273.8	277.4	281.0	280.3	275.4	270.5	265.5	260.7	210.5
105°	370.1	371.7	373.3	375.0	376.7	378.1	379.5	380.9	382.2	383.6	386.0
107.5°	466.2	467.1	467.9	468.7	469.5	470.8	472.7	474.6	476.4	478.3	479.5
110°	531.2	532.0	532.8	533.6	534.4	535.7	537.3	538.9	540.5	542.2	542.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	594.1	595.6	597.0	598.5	600.0	601.1	601.9	602.7	603.4	604.2	604.1
115°	691.0	691.8	692.6	693.4	694.2	694.6	694.2	694.0	693.7	693.4	694.0
117.5°	778.3	779.3	780.5	781.5	782.7	783.5	784.1	784.7	785.3	785.9	785.8
120°	837.3	838.4	839.5	840.6	841.6	842.0	841.8	841.6	841.2	841.0	841.6
122.5°	892.3	893.0	893.6	894.3	895.0	895.5	895.9	896.3	896.7	897.1	897.4
125°	971.3	972.4	973.5	974.6	975.7	975.9	975.4	974.9	974.3	973.8	974.6
127.5°	1046.0	1046.4	1046.6	1046.8	1047.2	1047.9	1049.2	1050.4	1051.7	1053.0	1052.8
130°	1094.3	1094.5	1094.8	1095.1	1095.4	1095.9	1096.7	1097.6	1098.4	1099.2	1099.4
132.5°	1138.5	1139.0	1139.5	1140.0	1140.5	1141.3	1142.3	1143.3	1144.4	1145.4	1145.7
135°	1204.9	1204.6	1204.4	1204.1	1203.8	1204.2	1205.3	1206.4	1207.5	1208.6	1209.2
137.5°	1263.7	1263.8	1263.9	1264.0	1264.1	1264.8	1266.0	1267.2	1268.4	1269.6	1270.2
140°	1302.0	1302.6	1303.2	1303.7	1304.2	1304.8	1305.3	1305.9	1306.4	1306.9	1307.8
142.5°	1336.4	1337.4	1338.5	1339.5	1340.4	1341.1	1341.4	1341.7	1342.1	1342.4	1343.0
145°	1389.4	1390.2	1391.0	1391.8	1392.6	1393.0	1393.0	1393.0	1393.0	1393.0	1393.3
147.5°	1431.4	1432.9	1434.4	1436.0	1437.5	1438.1	1437.9	1437.6	1437.3	1437.0	1437.3
150°	1461.9	1463.0	1464.0	1465.2	1466.2	1466.6	1466.4	1466.2	1465.8	1465.6	1465.6
152.5°	1487.4	1488.3	1489.2	1490.0	1490.9	1491.2	1490.6	1490.1	1489.6	1489.1	1489.6
155°	1523.4	1523.6	1523.9	1524.2	1524.4	1524.2	1523.4	1522.6	1521.8	1520.9	1522.0
157.5°	1553.6	1553.5	1553.3	1553.1	1553.0	1552.4	1551.4	1550.5	1549.6	1548.7	1550.1
160°	1571.3	1570.5	1569.7	1568.9	1568.1	1567.5	1567.2	1566.9	1566.7	1566.4	1568.1
162.5°	1587.1	1586.0	1584.9	1584.0	1582.9	1582.3	1581.9	1581.7	1581.4	1581.1	1582.7
165°	1607.0	1605.6	1604.3	1602.9	1601.5	1600.8	1600.8	1600.8	1600.8	1600.8	1603.0
167.5°	1622.7	1621.3	1619.8	1618.5	1617.0	1616.2	1616.1	1615.9	1615.8	1615.6	1618.0
170°	1631.6	1629.9	1628.2	1626.6	1625.0	1624.3	1624.6	1624.9	1625.1	1625.4	1627.6
172.5°	1637.4	1635.8	1634.2	1632.6	1630.9	1630.2	1630.5	1630.8	1631.0	1631.3	1633.5
175°	1643.8	1642.2	1640.5	1638.9	1637.3	1636.6	1636.9	1637.1	1637.4	1637.7	1640.1
177.5°	1646.8	1645.3	1643.7	1642.2	1640.7	1640.1	1640.5	1641.0	1641.4	1641.8	1643.6
180°	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1128.4	1130.0	1131.7	1132.5	1132.4	1132.2	1132.0	1131.9
5°	1120.8	1122.7	1124.7	1125.4	1125.0	1124.7	1124.3	1123.9
7.5°	1105.9	1107.2	1108.4	1108.6	1108.1	1107.4	1106.9	1106.2
10°	1092.5	1093.2	1094.1	1094.1	1093.2	1092.5	1091.7	1091.0
12.5°	1076.0	1076.4	1076.8	1076.5	1075.5	1074.4	1073.3	1072.2
15°	1046.8	1046.4	1046.0	1045.2	1043.8	1042.4	1041.1	1039.8
17.5°	1011.8	1010.7	1009.6	1008.0	1006.0	1004.0	1001.9	999.9
20°	987.2	985.7	984.1	982.2	979.7	977.1	974.6	972.2
22.5°	960.1	957.7	955.4	953.2	951.2	949.2	947.1	945.1
25°	916.2	912.9	909.6	907.0	905.1	903.2	901.2	899.3
27.5°	871.4	867.4	863.3	859.9	857.1	854.4	851.6	848.8
30°	839.4	834.5	829.7	825.7	822.7	819.6	816.5	813.4
32.5°	806.6	801.0	795.4	791.2	788.2	785.3	782.4	779.4
35°	757.8	751.3	744.8	739.7	736.3	732.8	729.3	725.9
37.5°	705.5	698.1	690.8	685.4	682.0	678.5	675.1	671.6
40°	670.7	662.5	654.4	648.7	645.2	641.7	638.3	634.8
42.5°	636.3	628.1	619.9	613.9	610.3	606.7	603.1	599.4
45°	583.8	574.4	564.9	558.5	555.0	551.5	548.0	544.6
47.5°	530.9	521.1	511.4	504.5	500.8	496.9	493.1	489.3
50°	495.9	486.2	476.5	469.9	466.3	462.6	458.9	455.3
52.5°	460.9	451.1	441.2	434.5	430.6	426.8	423.1	419.2
55°	409.2	399.2	389.2	382.4	378.7	375.0	371.4	367.7
57.5°	358.8	348.6	338.4	332.0	329.2	326.4	323.7	320.9
60°	325.1	315.1	305.1	298.5	295.5	292.4	289.3	286.2
62.5°	292.0	282.7	273.5	267.6	265.1	262.7	260.2	257.7
65°	244.4	236.2	227.9	222.6	220.3	217.9	215.6	213.4
67.5°	200.8	193.7	186.5	181.7	179.2	176.6	174.1	171.5
70°	171.1	164.8	158.4	154.3	152.4	150.4	148.5	146.6
72.5°	144.6	139.1	133.6	130.0	128.3	126.5	124.7	122.9
75°	106.5	102.1	97.6	94.8	93.7	92.5	91.3	90.2
77.5°	75.3	72.7	70.1	68.6	68.3	68.0	67.7	67.3
80°	57.8	57.2	56.7	56.3	56.1	55.8	55.7	55.5
82.5°	44.9	44.5	44.1	43.8	43.6	43.4	43.2	43.0
85°	26.1	25.8	25.4	25.1	25.1	25.1	25.1	25.1
87.5°	15.5	15.7	15.8	16.1	16.3	16.6	16.8	17.1
90°	30.3	32.0	33.6	34.7	35.2	35.8	36.4	36.9
92.5°	29.4	31.0	32.6	33.5	33.6	33.8	33.8	33.9
95°	30.3	32.0	33.6	34.6	34.8	35.1	35.4	35.6
97.5°	32.8	32.9	33.1	33.3	33.6	33.9	34.2	34.4
100°	44.8	40.2	35.5	33.3	33.6	33.9	34.2	34.4
102.5°	160.5	110.3	60.3	35.2	35.2	35.3	35.4	35.4
105°	388.5	391.0	393.5	389.7	379.9	370.1	360.3	350.4
107.5°	480.7	481.9	483.1	484.2	485.3	486.2	487.3	488.4
110°	543.3	543.9	544.4	545.1	545.9	546.7	547.6	548.4



TEST NUMBER: P333073-930

CATALOG NUMBER: S124RDIW-S795D1560U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	604.0	603.8	603.7	604.2	605.3	606.3	607.3	608.4
115°	694.6	695.0	695.6	695.9	695.9	695.9	695.9	695.9
117.5°	785.7	785.5	785.5	785.4	785.2	785.1	785.1	784.9
120°	842.0	842.6	843.2	843.2	842.6	842.0	841.6	841.0
122.5°	897.7	898.1	898.4	898.2	897.7	897.2	896.6	896.1
125°	975.4	976.2	977.1	977.6	977.9	978.1	978.4	978.7
127.5°	1052.6	1052.5	1052.3	1052.1	1051.9	1051.7	1051.4	1051.2
130°	1099.8	1100.0	1100.2	1100.4	1100.4	1100.4	1100.4	1100.4
132.5°	1146.0	1146.2	1146.5	1146.6	1146.3	1146.1	1145.9	1145.7
135°	1209.7	1210.2	1210.8	1211.4	1211.9	1212.4	1213.0	1213.5
137.5°	1270.8	1271.4	1272.0	1272.2	1272.0	1271.9	1271.7	1271.5
140°	1308.6	1309.5	1310.3	1310.8	1311.1	1311.3	1311.6	1311.9
142.5°	1343.6	1344.2	1344.8	1345.1	1345.2	1345.2	1345.2	1345.3
145°	1393.6	1393.8	1394.1	1394.6	1395.1	1395.6	1396.2	1396.7
147.5°	1437.5	1437.7	1437.9	1438.2	1438.4	1438.7	1439.0	1439.2
150°	1465.6	1465.6	1465.6	1465.7	1466.0	1466.2	1466.6	1466.8
152.5°	1490.0	1490.4	1490.9	1491.0	1490.9	1490.7	1490.5	1490.4
155°	1523.1	1524.2	1525.3	1525.4	1524.6	1523.8	1523.0	1522.2
157.5°	1551.5	1553.0	1554.4	1554.4	1553.0	1551.5	1550.1	1548.7
160°	1569.7	1571.3	1573.0	1573.0	1571.3	1569.7	1568.1	1566.4
162.5°	1584.5	1586.1	1587.7	1587.6	1585.8	1583.9	1582.0	1580.1
165°	1605.2	1607.4	1609.6	1609.4	1607.0	1604.5	1602.1	1599.6
167.5°	1620.4	1622.8	1625.2	1625.1	1622.3	1619.6	1616.8	1614.1
170°	1629.8	1632.0	1634.2	1633.9	1631.2	1628.4	1625.7	1622.9
172.5°	1635.7	1637.9	1640.1	1639.6	1636.7	1633.8	1630.8	1627.8
175°	1642.6	1645.1	1647.6	1647.1	1643.8	1640.5	1637.3	1634.0
177.5°	1645.4	1647.1	1648.9	1648.5	1645.8	1643.2	1640.5	1637.9
180°	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8	1643.8

(END OF REPORT)