

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: P331815-840

Luminaire Tested: **S122RDIW-S675D970U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331815-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S675D970U840-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 970 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6254.3 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

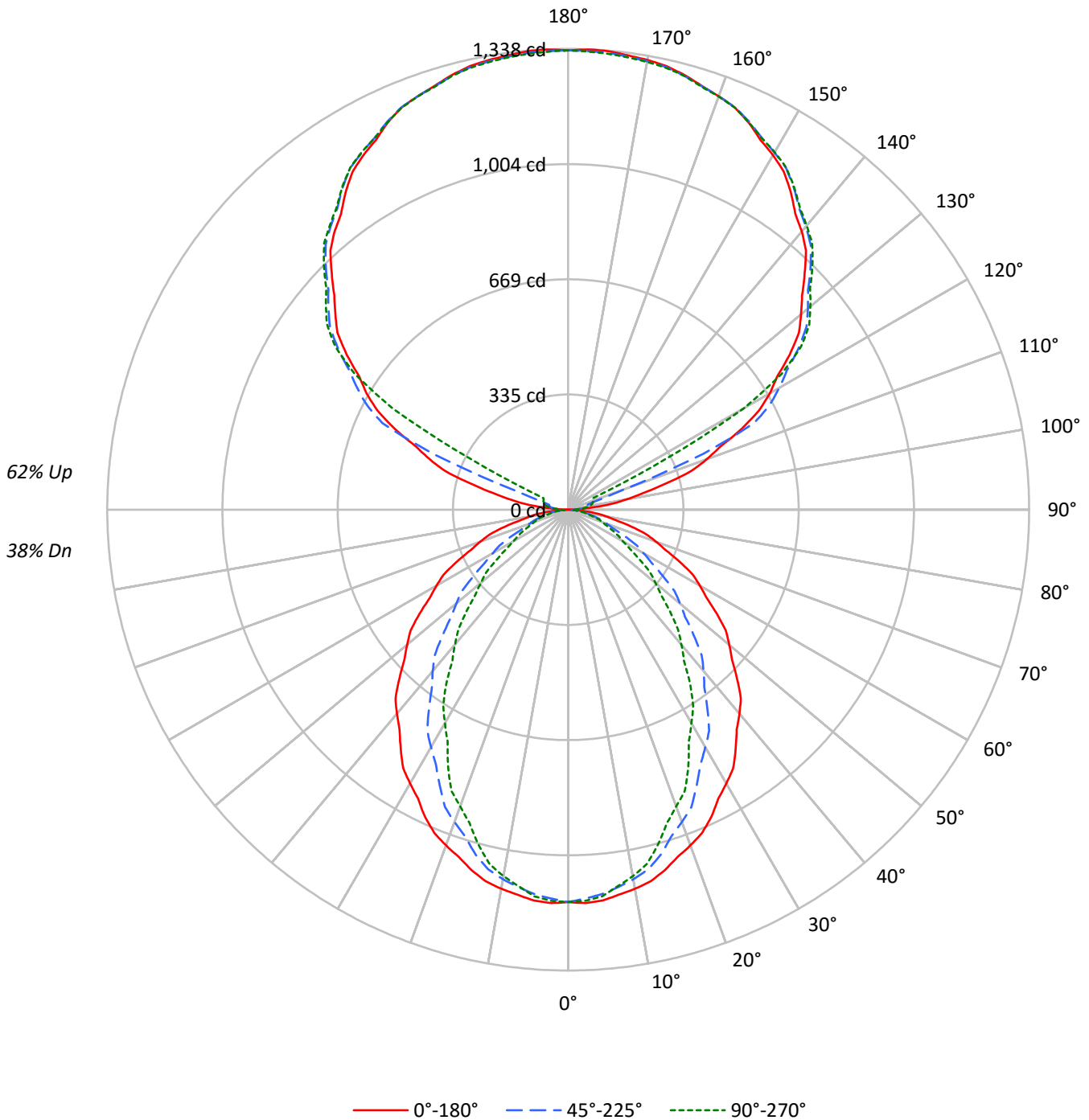
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	38	38	38	38	38	38	38		
1	95	91	88	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32	32	32	32	32	32	32		
2	87	80	74	69	79	73	68	64	59	56	53	47	45	43	36	34	33	28	28	28	28	28	28	28		
3	80	71	64	58	72	64	58	54	53	48	45	42	39	36	32	30	28	24	24	24	24	24	24	24		
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21	21	21	21	21	21	21		
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	18	18	18	18	18	18	18		
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16	16	16	16	16	16	16		
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15	15	15	15	15	15	15		
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	17	16	13	13	13	13	13	13	13		
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12	12	12	12	12	12	12		
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11	11	11	11	11	11	11		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18392	18392	18392
5°	18462	18162	18263
10°	18321	17864	17713
15°	18111	17336	16836
20°	17819	16579	15747
25°	17521	15720	14694
30°	17107	14838	13340
35°	16703	13878	12151
40°	16297	12886	10777
45°	15819	11768	9533
50°	15330	10643	8312
55°	14829	9433	7139
60°	14247	8157	5926
65°	13589	6854	5398
70°	12798	5646	4961
75°	11834	5147	4629
80°	10451	4603	4212
85°	8207	3631	3631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	1.7
10°-20°	292.8	4.7
20°-30°	411.1	6.6
30°-40°	448.3	7.2
40°-50°	412.2	6.6
50°-60°	323.8	5.2
60°-70°	211.1	3.4
70°-80°	108.8	1.7
80°-90°	31.5	0.5
90°-100°	44.5	0.7
100°-110°	163.1	2.6
110°-120°	436.1	7.0
120°-130°	719.8	11.5
130°-140°	765.5	12.2
140°-150°	711.5	11.4
150°-160°	572.1	9.1
160°-170°	368.6	5.9
170°-180°	126.9	2.0
0°-30°	810.5	13.0
0°-40°	1258.9	20.1
0°-60°	1994.8	31.9
0°-90°	2346.3	37.5
90°-120°	643.7	10.3
90°-150°	2840.5	45.4
90°-180°	3908.0	62.5
0°-180°	6254.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1139	1139	1139	1139	1139	
5°	1139	1134	1121	1129	1127	108
15°	1084	1071	1037	1018	1007	305
25°	984	949	882	842	825	452
35°	847	793	704	642	616	530
45°	693	622	515	445	418	535
55°	527	445	335	276	254	471
65°	356	272	179	146	141	352
75°	190	120	82	76	74	201
85°	44	24	20	20	20	52
90°	1	11	19	24	26	5
95°	63	33	38	42	42	77
105°	293	306	59	69	73	313
115°	555	572	595	170	79	546
125°	784	797	815	822	825	699
135°	971	986	995	1004	1003	750
145°	1126	1126	1142	1148	1144	704
155°	1240	1232	1243	1248	1241	571
165°	1307	1301	1304	1310	1304	369
175°	1336	1330	1332	1338	1329	127
180°	1334	1334	1334	1334	1334	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1143.3	1142.4	1141.5	1140.5	1139.6	1138.1	1136.1	1134.1	1132.2	1130.1	1132.0
5°	1139.1	1138.0	1136.9	1135.7	1134.6	1132.6	1129.5	1126.6	1123.6	1120.6	1122.7
7.5°	1127.4	1126.0	1124.6	1123.2	1121.8	1119.2	1115.8	1112.4	1108.8	1105.4	1105.9
10°	1117.5	1115.9	1114.3	1112.7	1111.1	1108.0	1103.4	1098.8	1094.3	1089.6	1089.0
12.5°	1105.1	1103.2	1101.2	1099.2	1097.2	1093.4	1087.5	1081.7	1075.7	1069.9	1068.6
15°	1083.5	1081.0	1078.4	1075.9	1073.4	1068.2	1060.5	1052.7	1044.9	1037.1	1032.8
17.5°	1056.9	1053.1	1049.2	1045.3	1041.5	1034.6	1024.6	1014.6	1004.6	994.6	989.5
20°	1037.1	1032.5	1027.9	1023.4	1018.8	1010.8	999.3	987.8	976.4	964.9	959.2
22.5°	1015.6	1010.6	1005.4	1000.3	995.1	986.1	973.2	960.3	947.4	934.4	927.1
25°	983.5	976.1	968.9	961.5	954.2	942.9	927.9	912.7	897.6	882.4	873.0
27.5°	944.7	936.8	928.8	920.8	912.8	900.3	883.3	866.3	849.2	832.1	821.2
30°	917.6	908.8	900.1	891.4	882.7	869.2	850.8	832.5	814.2	795.9	784.2
32.5°	891.1	880.9	870.8	860.6	850.4	836.0	817.3	798.6	779.9	761.2	747.9
35°	847.4	835.8	824.0	812.3	800.7	784.8	764.6	744.5	724.3	704.1	689.6
37.5°	803.8	790.8	778.0	765.2	752.3	735.2	713.8	692.3	670.8	649.2	633.4
40°	773.2	759.4	745.7	732.0	718.2	700.2	678.0	655.8	633.6	611.4	595.1
42.5°	741.8	727.4	712.9	698.4	684.0	665.2	642.3	619.4	596.3	573.4	556.5
45°	692.8	677.4	662.1	646.7	631.4	611.7	587.6	563.6	539.5	515.4	499.2
47.5°	644.9	628.6	612.4	596.1	579.9	559.4	534.5	509.7	484.8	460.0	443.8
50°	610.3	594.0	577.7	561.5	545.2	524.5	499.3	474.1	448.9	423.7	407.9
52.5°	576.5	559.5	542.5	525.5	508.5	487.7	463.0	438.4	413.7	389.1	373.9
55°	526.8	509.0	491.1	473.2	455.3	434.0	409.3	384.6	359.8	335.1	321.3
57.5°	475.8	457.6	439.2	420.9	402.5	381.5	357.7	334.0	310.1	286.4	273.8
60°	441.2	422.9	404.6	386.3	367.9	347.0	323.4	299.7	276.2	252.6	240.9
62.5°	407.4	389.1	370.7	352.4	334.1	313.7	291.2	268.7	246.2	223.7	212.6
65°	355.7	337.1	318.5	300.0	281.4	261.9	241.3	220.7	200.0	179.4	171.6
67.5°	305.8	287.3	268.9	250.5	232.1	213.6	195.0	176.5	157.9	139.4	135.8
70°	271.1	253.3	235.4	217.5	199.7	182.8	167.0	151.2	135.4	119.6	117.2
72.5°	238.1	221.0	203.9	186.7	169.6	154.7	142.0	129.3	116.6	103.9	102.0
75°	189.7	173.7	157.6	141.6	125.5	113.6	105.8	98.1	90.3	82.5	80.9
77.5°	142.1	127.9	113.9	99.9	85.8	76.9	73.1	69.4	65.6	61.9	60.9
80°	112.4	100.7	89.0	77.4	65.6	58.7	56.4	54.0	51.8	49.5	48.6
82.5°	85.1	76.0	67.0	57.8	48.7	43.3	41.8	40.2	38.7	37.2	36.6
85°	44.3	39.5	34.7	29.9	25.0	22.3	21.6	21.0	20.3	19.6	19.6
87.5°	13.4	12.4	11.4	10.4	9.4	9.1	9.4	9.8	10.1	10.5	10.5
90°	1.0	3.3	5.7	8.1	10.4	12.4	14.1	15.9	17.6	19.3	20.4
92.5°	19.5	19.3	19.1	18.9	18.7	19.0	19.8	20.7	21.5	22.4	22.9
95°	62.7	55.6	48.6	41.5	34.4	31.6	33.1	34.6	36.2	37.7	38.7
97.5°	124.5	104.5	84.6	64.6	44.7	36.5	40.0	43.4	46.9	50.4	51.2
100°	170.8	141.4	112.0	82.7	53.3	40.4	44.0	47.7	51.4	55.0	56.8
102.5°	221.8	215.5	209.3	203.1	196.8	178.5	148.0	117.5	87.1	56.6	58.8
105°	293.4	299.8	306.2	312.7	319.1	293.1	234.5	175.9	117.4	58.9	61.2
107.5°	375.0	380.2	385.4	390.5	395.8	363.2	293.1	222.8	152.6	82.4	80.0
110°	427.5	432.0	436.5	441.0	445.5	416.8	354.8	292.9	230.9	168.8	147.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	476.9	480.9	484.8	488.9	492.8	487.2	471.9	456.6	441.2	426.0	347.7
115°	554.8	558.5	562.2	565.8	569.5	573.9	579.3	584.6	590.1	595.4	496.0
117.5°	624.5	628.6	632.7	636.7	640.9	644.7	648.4	652.1	655.8	659.4	635.4
120°	675.5	678.7	681.9	685.1	688.3	691.9	695.7	699.6	703.5	707.3	709.9
122.5°	718.7	722.1	725.5	728.8	732.3	736.1	740.2	744.5	748.6	752.9	754.4
125°	784.5	787.3	790.1	792.8	795.7	799.1	803.1	807.3	811.3	815.4	816.9
127.5°	844.1	847.3	850.3	853.4	856.5	859.6	862.6	865.7	868.7	871.7	873.9
130°	882.0	885.4	888.9	892.2	895.6	898.6	900.9	903.3	905.6	908.1	910.4
132.5°	920.6	923.5	926.5	929.3	932.2	934.8	937.3	939.6	941.9	944.3	946.3
135°	970.8	974.2	977.7	981.1	984.5	987.1	989.1	991.0	992.9	994.9	997.0
137.5°	1021.5	1023.9	1026.3	1028.7	1031.1	1033.4	1035.6	1037.7	1040.0	1042.2	1044.3
140°	1054.7	1056.4	1058.1	1059.9	1061.6	1063.6	1065.9	1068.3	1070.7	1073.1	1075.0
142.5°	1082.5	1084.0	1085.6	1087.1	1088.6	1090.8	1093.5	1096.2	1098.9	1101.6	1103.4
145°	1126.1	1125.9	1125.7	1125.5	1125.3	1127.0	1130.6	1134.3	1137.9	1141.6	1143.1
147.5°	1164.2	1163.3	1162.5	1161.6	1160.8	1162.3	1165.9	1169.4	1173.1	1176.7	1177.8
150°	1188.8	1187.3	1185.8	1184.4	1182.9	1183.8	1187.2	1190.6	1194.1	1197.5	1198.8
152.5°	1209.7	1208.0	1206.3	1204.7	1203.0	1203.8	1207.0	1210.3	1213.6	1216.8	1218.1
155°	1240.0	1238.0	1236.1	1234.2	1232.2	1232.5	1235.2	1237.7	1240.3	1242.8	1244.2
157.5°	1263.7	1262.1	1260.4	1258.8	1257.2	1257.3	1259.1	1260.9	1262.6	1264.5	1266.0
160°	1277.6	1276.4	1275.1	1273.7	1272.4	1272.4	1273.7	1275.1	1276.4	1277.6	1278.9
162.5°	1290.0	1288.7	1287.4	1286.1	1284.9	1284.8	1285.9	1287.0	1288.1	1289.2	1290.6
165°	1306.6	1305.3	1303.9	1302.7	1301.4	1301.1	1301.7	1302.3	1303.0	1303.6	1305.1
167.5°	1318.9	1317.6	1316.4	1315.0	1313.7	1313.4	1314.0	1314.6	1315.2	1315.9	1317.3
170°	1325.9	1324.5	1323.3	1322.0	1320.7	1320.3	1320.7	1321.1	1321.6	1322.0	1323.5
172.5°	1330.5	1329.2	1327.9	1326.7	1325.3	1324.9	1325.3	1325.8	1326.2	1326.7	1328.2
175°	1336.5	1334.9	1333.4	1332.0	1330.5	1329.9	1330.4	1330.8	1331.2	1331.6	1333.1
177.5°	1337.5	1336.3	1335.0	1333.8	1332.6	1332.1	1332.3	1332.4	1332.6	1332.8	1334.0
180°	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1133.8	1135.6	1137.4	1138.1	1137.8	1137.4	1137.1	1136.7
5°	1124.7	1126.8	1128.8	1129.5	1128.8	1128.1	1127.5	1126.8
7.5°	1106.5	1107.1	1107.7	1107.4	1106.2	1105.1	1103.9	1102.7
10°	1088.3	1087.6	1086.9	1085.9	1084.5	1083.2	1081.8	1080.4
12.5°	1067.4	1066.2	1064.9	1063.2	1060.9	1058.6	1056.3	1054.0
15°	1028.4	1024.0	1019.7	1016.3	1014.1	1011.8	1009.5	1007.2
17.5°	984.3	979.1	973.9	969.4	965.4	961.5	957.6	953.6
20°	953.5	947.8	942.0	936.6	931.6	926.6	921.5	916.5
22.5°	919.7	912.3	904.9	899.4	895.5	891.8	888.1	884.3
25°	863.6	854.2	844.9	838.5	835.1	831.6	828.2	824.8
27.5°	810.2	799.3	788.4	780.1	774.7	769.2	763.8	758.3
30°	772.5	760.8	749.1	740.2	734.0	727.8	721.6	715.5
32.5°	734.6	721.2	707.9	698.3	692.5	686.7	680.9	675.1
35°	675.3	660.9	646.4	636.6	631.6	626.5	621.6	616.5
37.5°	617.4	601.6	585.7	574.8	569.1	563.3	557.5	551.8
40°	578.8	562.5	546.2	535.1	529.2	523.2	517.3	511.3
42.5°	539.8	522.9	506.1	494.8	489.1	483.3	477.6	471.7
45°	482.9	466.7	450.4	439.5	434.0	428.5	423.0	417.5
47.5°	427.7	411.5	395.3	384.8	379.7	374.8	369.7	364.8
50°	392.1	376.3	360.5	350.1	345.4	340.5	335.8	330.9
52.5°	358.6	343.3	328.0	318.2	313.8	309.3	304.9	300.4
55°	307.6	293.8	280.0	271.0	266.7	262.3	257.9	253.6
57.5°	261.2	248.6	236.0	227.8	224.2	220.6	216.8	213.2
60°	229.2	217.5	205.8	198.1	194.5	190.9	187.1	183.5
62.5°	201.5	190.3	179.2	172.5	170.3	168.1	165.9	163.7
65°	163.8	156.0	148.2	144.0	143.3	142.6	141.9	141.3
67.5°	132.2	128.7	125.1	122.9	122.2	121.5	120.8	120.0
70°	115.0	112.7	110.4	108.9	107.9	106.9	106.0	105.1
72.5°	100.1	98.2	96.2	95.0	94.4	93.9	93.3	92.8
75°	79.3	77.7	76.0	75.1	74.9	74.7	74.4	74.2
77.5°	60.0	59.1	58.2	57.6	57.2	56.9	56.5	56.0
80°	47.7	46.8	45.8	45.3	45.3	45.3	45.3	45.3
82.5°	36.1	35.4	34.9	34.6	34.6	34.6	34.6	34.6
85°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
87.5°	10.5	10.5	10.6	10.6	10.7	10.8	10.9	11.0
90°	21.4	22.5	23.6	24.3	24.7	25.1	25.7	26.1
92.5°	23.5	24.0	24.6	25.0	25.2	25.5	25.8	26.1
95°	39.8	40.9	41.9	42.3	42.1	41.9	41.7	41.5
97.5°	52.1	52.9	53.8	54.3	54.6	54.8	55.1	55.3
100°	58.5	60.2	61.9	62.9	63.3	63.8	64.2	64.6
102.5°	61.0	63.2	65.4	66.9	67.5	68.1	68.7	69.3
105°	63.6	65.9	68.3	69.9	70.8	71.6	72.5	73.3
107.5°	77.6	75.2	72.8	72.0	72.9	73.7	74.6	75.4
110°	125.9	104.5	83.1	72.8	73.6	74.5	75.3	76.2



TEST NUMBER: P331815-840

CATALOG NUMBER: S122RDIW-S675D970U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	269.4	191.3	113.0	74.2	74.9	75.6	76.3	77.1
115°	396.8	297.5	198.2	140.9	125.4	110.0	94.5	79.2
117.5°	611.4	587.4	563.4	526.0	475.2	424.5	373.9	323.1
120°	712.5	715.0	717.6	704.4	675.5	646.5	617.5	588.7
122.5°	756.0	757.5	759.0	757.0	751.3	745.8	740.1	734.6
125°	818.4	819.9	821.4	822.4	823.1	823.7	824.4	825.1
127.5°	876.2	878.3	880.5	881.6	881.8	881.9	882.0	882.1
130°	912.7	915.1	917.5	918.6	918.3	918.1	917.9	917.7
132.5°	948.4	950.4	952.4	953.3	953.0	952.8	952.6	952.4
135°	999.2	1001.3	1003.4	1004.3	1003.9	1003.4	1003.0	1002.6
137.5°	1046.3	1048.4	1050.6	1051.3	1050.6	1049.8	1049.0	1048.3
140°	1076.9	1078.8	1080.8	1081.2	1080.2	1079.0	1077.9	1076.9
142.5°	1105.1	1106.9	1108.6	1108.9	1107.9	1106.8	1105.8	1104.7
145°	1144.6	1146.1	1147.5	1147.8	1146.7	1145.6	1144.6	1143.5
147.5°	1178.9	1180.0	1181.1	1181.2	1180.3	1179.4	1178.5	1177.6
150°	1200.1	1201.3	1202.6	1202.7	1201.7	1200.6	1199.5	1198.5
152.5°	1219.4	1220.6	1221.9	1221.9	1220.5	1219.1	1217.7	1216.3
155°	1245.5	1246.7	1248.0	1247.8	1246.1	1244.4	1242.6	1240.9
157.5°	1267.4	1268.9	1270.3	1270.2	1268.5	1266.9	1265.2	1263.5
160°	1280.2	1281.4	1282.7	1282.6	1281.1	1279.6	1278.2	1276.7
162.5°	1292.1	1293.5	1295.1	1294.8	1292.9	1291.1	1289.3	1287.5
165°	1306.7	1308.2	1309.7	1309.7	1308.2	1306.7	1305.1	1303.6
167.5°	1318.8	1320.3	1321.8	1321.6	1319.7	1317.8	1315.9	1313.9
170°	1325.0	1326.5	1328.0	1327.8	1325.9	1323.9	1322.0	1320.1
172.5°	1329.6	1331.1	1332.6	1332.4	1330.5	1328.6	1326.7	1324.7
175°	1334.6	1336.2	1337.7	1337.4	1335.1	1333.0	1330.9	1328.8
177.5°	1335.2	1336.4	1337.6	1337.5	1335.8	1334.3	1332.8	1331.3
180°	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5	1333.5

(END OF REPORT)