

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: P332321-840

Luminaire Tested: **S123RDIP-S775D1025U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332321-840
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-S775D1025U840-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7086.6 lumens
Efficiency: N/A
Efficacy: 136.3 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

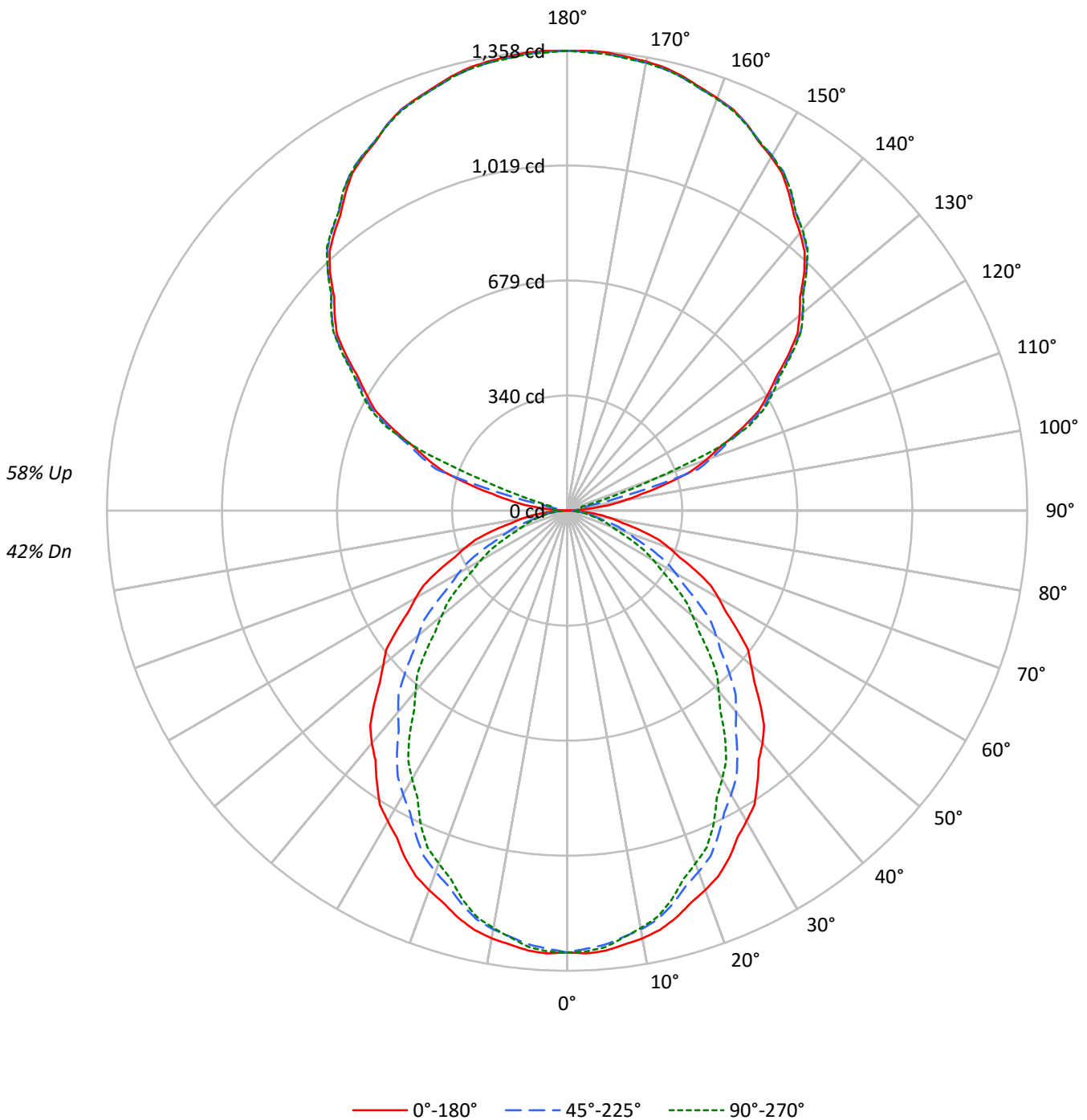
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	88	81	75	70	80	74	69	64	61	57	54	49	47	45	38	37	35	30
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26
4	73	63	55	50	67	58	51	46	48	43	39	39	36	33	31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20
6	62	50	43	37	57	46	40	34	39	34	30	32	28	25	25	23	20	17
7	57	46	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	21	18	16	14
9	50	38	30	26	45	35	28	24	30	24	21	24	21	18	20	17	15	13
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14034	14034	14034
5°	14088	13894	13973
10°	14008	13719	13672
15°	13857	13397	13256
20°	13651	12997	12693
25°	13438	12545	12144
30°	13155	12026	11368
35°	12867	11506	10657
40°	12600	10891	9777
45°	12250	10286	8983
50°	11863	9597	8092
55°	11470	8811	7263
60°	11108	7967	6351
65°	10639	7055	5440
70°	10049	5923	4393
75°	9191	4662	4134
80°	8195	4135	3800
85°	6916	3656	3396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	1.7
10°-20°	340.6	4.8
20°-30°	490.5	6.9
30°-40°	552.5	7.8
40°-50°	528.6	7.5
50°-60°	432.9	6.1
60°-70°	292.0	4.1
70°-80°	146.9	2.1
80°-90°	42.7	0.6
90°-100°	49.3	0.7
100°-110°	235.1	3.3
110°-120°	564.7	8.0
120°-130°	719.1	10.1
130°-140°	768.3	10.8
140°-150°	718.5	10.1
150°-160°	579.5	8.2
160°-170°	374.0	5.3
170°-180°	128.9	1.8
0°-30°	953.6	13.5
0°-40°	1506.1	21.3
0°-60°	2467.5	34.8
0°-90°	2949.2	41.6
90°-120°	849.1	12.0
90°-150°	3055.0	43.1
90°-180°	4137.0	58.4
0°-180°	7086.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1304	1298	1286	1295	1293	124
15°	1244	1231	1202	1197	1190	350
25°	1132	1104	1056	1035	1022	520
35°	979	940	876	832	811	613
45°	805	755	676	617	590	621
55°	611	557	470	410	387	548
65°	418	358	277	227	214	413
75°	221	170	112	102	99	236
85°	56	34	30	28	28	63
90°	1	11	24	28	30	6
95°	62	23	31	38	38	76
105°	300	306	221	52	44	318
115°	564	570	579	588	593	556
125°	794	802	806	808	810	709
135°	989	995	999	1002	999	761
145°	1141	1148	1150	1152	1152	714
155°	1257	1255	1256	1260	1255	579
165°	1326	1323	1322	1329	1322	374
175°	1357	1352	1353	1359	1352	129
180°	1357	1357	1357	1357	1357	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1308.0	1307.3	1306.5	1305.8	1305.0	1303.5	1301.2	1299.0	1296.8	1294.4	1296.6
5°	1303.8	1302.6	1301.4	1300.3	1299.1	1297.1	1294.2	1291.4	1288.6	1285.9	1287.9
7.5°	1291.7	1290.5	1289.2	1287.9	1286.7	1284.1	1280.5	1276.9	1273.2	1269.5	1270.7
10°	1281.6	1279.9	1278.3	1276.7	1275.0	1272.0	1267.8	1263.6	1259.4	1255.2	1255.4
12.5°	1267.2	1265.4	1263.5	1261.7	1259.9	1256.4	1251.2	1246.1	1240.8	1235.7	1235.6
15°	1243.5	1240.9	1238.3	1235.8	1233.1	1228.6	1222.0	1215.5	1208.8	1202.2	1201.1
17.5°	1213.7	1210.7	1207.7	1204.7	1201.6	1196.0	1187.6	1179.2	1170.8	1162.6	1160.0
20°	1191.7	1187.9	1184.2	1180.4	1176.7	1170.3	1161.3	1152.5	1143.6	1134.6	1131.6
22.5°	1167.2	1162.9	1158.5	1154.2	1149.8	1143.0	1133.5	1124.0	1114.5	1105.0	1101.2
25°	1131.5	1125.6	1119.6	1113.8	1107.9	1099.5	1088.7	1077.9	1067.1	1056.3	1051.4
27.5°	1088.0	1081.6	1075.1	1068.6	1062.2	1052.9	1040.9	1028.9	1016.7	1004.7	997.8
30°	1058.4	1051.4	1044.4	1037.3	1030.3	1020.2	1007.0	993.8	980.7	967.6	959.6
32.5°	1028.9	1020.9	1012.9	1004.9	996.9	985.9	972.0	958.2	944.2	930.3	921.6
35°	979.2	970.7	962.2	953.8	945.3	933.8	919.3	904.6	890.1	875.6	865.5
37.5°	928.9	919.4	910.0	900.6	891.2	878.8	863.2	847.7	832.1	816.6	805.1
40°	896.7	886.4	876.0	865.7	855.4	841.8	825.2	808.5	791.7	775.1	762.9
42.5°	860.3	850.0	839.6	829.3	819.0	805.2	787.9	770.6	753.5	736.2	722.9
45°	804.7	794.2	783.6	773.0	762.3	748.1	729.9	711.9	693.8	675.7	662.3
47.5°	749.1	737.5	725.9	714.3	702.7	687.8	669.7	651.6	633.5	615.4	600.9
50°	708.4	697.4	686.4	675.3	664.3	649.2	630.3	611.2	592.2	573.1	558.6
52.5°	672.1	660.1	648.1	636.1	624.2	608.7	589.9	571.1	552.2	533.3	518.3
55°	611.2	599.7	588.1	576.6	565.1	549.4	529.4	509.5	489.5	469.5	455.9
57.5°	554.9	542.4	529.9	517.3	504.7	488.5	468.4	448.3	428.2	408.2	395.3
60°	516.0	503.1	490.2	477.3	464.3	448.1	428.6	409.1	389.6	370.1	357.4
62.5°	477.1	464.1	451.2	438.3	425.5	409.2	389.7	370.2	350.7	331.1	319.2
65°	417.7	404.8	391.8	378.9	366.0	350.3	332.0	313.7	295.4	277.0	265.5
67.5°	358.3	345.2	332.1	319.0	306.0	290.6	273.1	255.5	237.9	220.4	211.8
70°	319.3	306.7	294.0	281.2	268.6	254.0	237.5	221.2	204.7	188.2	180.0
72.5°	280.4	267.9	255.4	242.9	230.5	216.7	201.8	186.8	171.9	156.9	150.2
75°	221.0	209.7	198.4	187.1	175.9	163.8	150.9	137.9	125.0	112.1	109.8
77.5°	166.8	156.6	146.4	136.2	126.0	116.8	108.5	100.2	91.9	83.5	82.3
80°	132.2	122.5	112.9	103.3	93.6	86.3	81.4	76.4	71.6	66.7	65.9
82.5°	99.2	90.9	82.5	74.2	65.9	60.6	58.3	55.9	53.7	51.4	50.7
85°	56.0	50.9	45.7	40.5	35.3	32.4	31.7	31.0	30.3	29.6	29.2
87.5°	20.5	18.9	17.3	15.7	14.0	13.5	14.1	14.6	15.2	15.9	15.9
90°	1.0	3.2	5.5	7.8	10.0	12.5	15.5	18.4	21.3	24.2	25.0
92.5°	18.8	18.1	17.5	16.9	16.3	17.1	19.2	21.4	23.6	25.9	27.3
95°	61.5	52.3	43.1	33.9	24.7	21.4	23.8	26.4	28.8	31.2	32.8
97.5°	123.6	119.5	115.3	111.2	107.0	96.9	80.9	64.7	48.6	32.4	34.2
100°	170.4	174.8	179.4	183.8	188.2	173.0	138.0	103.1	68.2	33.2	35.0
102.5°	223.6	226.8	230.0	233.3	236.5	219.0	180.9	142.7	104.5	66.3	60.8
105°	300.3	302.9	305.3	307.8	310.2	301.3	281.2	261.1	241.0	220.8	181.1
107.5°	381.4	383.4	385.4	387.4	389.3	391.9	395.1	398.3	401.4	404.7	375.6
110°	435.5	437.3	439.0	440.8	442.6	444.7	447.2	449.7	452.1	454.6	447.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	487.1	488.7	490.3	491.9	493.5	495.5	498.1	500.5	502.9	505.4	505.5
115°	563.5	564.8	566.1	567.5	568.9	570.6	572.5	574.5	576.5	578.6	580.9
117.5°	637.4	639.1	640.8	642.5	644.1	645.4	646.4	647.5	648.5	649.5	651.4
120°	683.4	685.4	687.4	689.4	691.5	692.9	693.5	694.2	694.9	695.5	697.3
122.5°	730.2	731.8	733.5	735.2	736.8	738.1	738.9	739.8	740.6	741.4	742.8
125°	794.3	796.1	797.9	799.7	801.4	802.8	803.8	804.6	805.5	806.4	806.9
127.5°	856.4	858.2	860.0	861.7	863.5	864.9	866.1	867.2	868.2	869.3	870.0
130°	895.1	896.9	898.7	900.5	902.3	903.6	904.5	905.4	906.3	907.2	908.1
132.5°	932.2	934.0	935.7	937.6	939.4	940.6	941.3	942.0	942.8	943.5	944.4
135°	988.9	990.2	991.5	992.9	994.2	995.3	996.2	997.1	998.0	999.0	999.6
137.5°	1037.2	1038.9	1040.7	1042.4	1044.0	1045.1	1045.6	1046.1	1046.6	1047.1	1048.1
140°	1069.4	1070.9	1072.2	1073.5	1074.9	1075.9	1076.5	1077.2	1077.9	1078.5	1079.4
142.5°	1099.3	1100.7	1102.0	1103.4	1104.7	1105.7	1106.4	1107.0	1107.7	1108.4	1109.1
145°	1141.0	1142.7	1144.2	1145.8	1147.3	1148.3	1148.8	1149.2	1149.6	1150.1	1150.5
147.5°	1180.3	1181.4	1182.5	1183.5	1184.5	1185.2	1185.7	1186.1	1186.6	1187.0	1187.5
150°	1204.6	1205.3	1205.9	1206.6	1207.2	1207.8	1208.2	1208.7	1209.1	1209.6	1210.0
152.5°	1226.3	1226.7	1227.0	1227.3	1227.6	1227.9	1228.1	1228.4	1228.7	1228.9	1229.7
155°	1257.0	1256.5	1256.1	1255.7	1255.2	1255.1	1255.3	1255.5	1255.8	1256.0	1257.1
157.5°	1280.7	1280.7	1280.7	1280.6	1280.6	1280.4	1280.2	1280.0	1279.8	1279.5	1280.9
160°	1295.3	1295.1	1294.8	1294.6	1294.3	1294.1	1293.9	1293.7	1293.4	1293.2	1294.6
162.5°	1309.0	1308.4	1307.8	1307.3	1306.7	1306.3	1306.1	1305.8	1305.6	1305.4	1306.9
165°	1325.5	1324.8	1324.1	1323.5	1322.8	1322.4	1322.1	1321.9	1321.7	1321.5	1323.2
167.5°	1338.4	1337.6	1336.7	1335.7	1334.8	1334.3	1334.3	1334.3	1334.3	1334.3	1336.2
170°	1345.6	1344.7	1343.9	1343.0	1342.1	1341.6	1341.6	1341.6	1341.6	1341.6	1343.4
172.5°	1350.5	1349.5	1348.4	1347.3	1346.3	1345.7	1345.9	1346.2	1346.3	1346.5	1348.3
175°	1356.8	1355.6	1354.5	1353.4	1352.3	1351.8	1352.0	1352.3	1352.5	1352.7	1354.3
177.5°	1358.4	1357.5	1356.6	1355.6	1354.8	1354.4	1354.6	1354.8	1354.9	1355.1	1356.6
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1298.6	1300.7	1302.7	1303.6	1303.2	1302.8	1302.4	1302.1
5°	1290.0	1292.1	1294.2	1295.1	1294.6	1294.1	1293.6	1293.2
7.5°	1271.9	1273.0	1274.2	1274.4	1273.6	1272.8	1272.0	1271.2
10°	1255.7	1255.9	1256.1	1255.7	1254.5	1253.2	1252.1	1250.9
12.5°	1235.4	1235.3	1235.2	1234.4	1233.0	1231.6	1230.3	1228.9
15°	1199.9	1198.7	1197.6	1196.2	1194.6	1192.9	1191.2	1189.6
17.5°	1157.5	1155.1	1152.6	1150.1	1147.6	1145.2	1142.8	1140.3
20°	1128.5	1125.4	1122.4	1119.4	1116.6	1113.8	1111.0	1108.1
22.5°	1097.4	1093.6	1089.7	1086.5	1083.9	1081.3	1078.6	1076.0
25°	1046.5	1041.6	1036.6	1032.9	1030.3	1027.6	1025.1	1022.5
27.5°	991.0	984.2	977.3	971.9	968.0	964.0	960.1	956.1
30°	951.6	943.5	935.5	929.7	925.9	922.2	918.4	914.6
32.5°	912.8	904.1	895.3	889.0	885.0	881.1	877.2	873.2
35°	855.4	845.3	835.2	828.0	823.7	819.5	815.3	811.0
37.5°	793.6	782.1	770.6	762.3	757.1	751.8	746.7	741.4
40°	750.6	738.4	726.2	717.4	712.0	706.6	701.1	695.8
42.5°	709.4	696.1	682.8	673.7	668.8	664.0	659.1	654.3
45°	648.9	635.5	622.1	612.6	606.9	601.3	595.7	590.1
47.5°	586.2	571.7	557.1	547.3	542.3	537.2	532.3	527.3
50°	544.0	529.4	514.8	504.8	499.5	494.0	488.7	483.2
52.5°	503.1	488.0	472.8	462.8	458.0	453.1	448.3	443.4
55°	442.2	428.6	415.0	405.8	401.1	396.4	391.7	387.0
57.5°	382.4	369.5	356.7	348.2	344.3	340.2	336.2	332.2
60°	344.7	332.0	319.3	311.0	307.0	303.0	299.0	295.0
62.5°	307.3	295.4	283.5	275.4	271.1	267.0	262.9	258.6
65°	254.0	242.5	231.0	223.9	221.4	218.7	216.2	213.6
67.5°	203.2	194.6	185.9	180.3	177.5	174.7	172.0	169.2
70°	171.8	163.5	155.3	150.0	147.3	144.7	142.2	139.6
72.5°	143.5	136.7	130.1	126.1	125.0	124.0	122.9	121.8
75°	107.3	105.0	102.7	101.3	100.8	100.4	99.9	99.4
77.5°	81.0	79.7	78.5	77.6	77.2	76.6	76.1	75.7
80°	65.2	64.5	63.8	63.2	62.7	62.3	61.8	61.3
82.5°	50.0	49.3	48.6	48.2	48.1	48.0	47.9	47.8
85°	28.7	28.2	27.8	27.5	27.5	27.5	27.5	27.5
87.5°	15.9	15.9	15.8	15.8	15.7	15.6	15.5	15.3
90°	26.0	26.9	27.8	28.5	28.9	29.4	29.8	30.2
92.5°	28.7	30.1	31.5	32.4	32.6	32.9	33.2	33.4
95°	34.3	36.0	37.6	38.3	38.3	38.3	38.3	38.3
97.5°	36.1	37.9	39.6	40.6	40.9	41.1	41.3	41.5
100°	36.9	38.7	40.4	41.4	41.7	41.9	42.1	42.3
102.5°	55.2	49.7	44.1	41.5	41.9	42.3	42.7	43.1
105°	141.5	101.8	62.2	42.5	43.0	43.4	43.9	44.3
107.5°	346.5	317.4	288.3	258.8	228.9	199.0	169.2	139.3
110°	439.8	432.4	425.1	405.4	373.2	341.2	309.2	277.2



TEST NUMBER: P332321-840

CATALOG NUMBER: S123RDIP-S775D1025U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	505.6	505.8	505.9	502.6	495.8	489.1	482.3	475.5
115°	583.1	585.3	587.5	589.2	590.0	590.9	591.8	592.7
117.5°	653.2	654.9	656.7	657.7	657.9	658.0	658.2	658.4
120°	699.1	700.8	702.7	703.6	703.6	703.6	703.6	703.6
122.5°	744.0	745.3	746.5	747.2	747.4	747.6	747.7	747.9
125°	807.3	807.7	808.2	808.6	809.1	809.5	810.0	810.4
127.5°	870.7	871.4	872.1	872.3	871.8	871.4	870.9	870.5
130°	909.0	909.9	910.8	911.0	910.6	910.1	909.7	909.2
132.5°	945.2	946.1	947.1	947.2	946.5	945.9	945.3	944.7
135°	1000.3	1001.0	1001.6	1001.6	1001.0	1000.3	999.6	999.0
137.5°	1049.2	1050.4	1051.4	1051.7	1051.3	1050.9	1050.4	1050.0
140°	1080.4	1081.3	1082.2	1082.4	1081.9	1081.5	1081.1	1080.6
142.5°	1109.8	1110.5	1111.3	1111.3	1110.6	1110.0	1109.4	1108.8
145°	1151.0	1151.4	1152.0	1152.2	1152.2	1152.2	1152.2	1152.2
147.5°	1187.9	1188.3	1188.8	1188.5	1187.5	1186.5	1185.4	1184.4
150°	1210.5	1210.9	1211.4	1211.2	1210.6	1209.9	1209.2	1208.6
152.5°	1230.5	1231.3	1232.1	1232.0	1231.0	1230.0	1229.0	1227.9
155°	1258.2	1259.3	1260.4	1260.3	1259.0	1257.7	1256.3	1255.0
157.5°	1282.2	1283.5	1285.0	1284.8	1282.9	1281.2	1279.5	1277.8
160°	1296.0	1297.3	1298.6	1298.5	1297.0	1295.4	1293.8	1292.2
162.5°	1308.4	1309.9	1311.4	1311.5	1310.1	1308.7	1307.4	1306.0
165°	1325.0	1326.9	1328.7	1328.8	1327.2	1325.6	1324.0	1322.5
167.5°	1338.0	1339.8	1341.5	1341.5	1339.8	1338.0	1336.2	1334.3
170°	1345.2	1347.1	1348.8	1348.8	1347.1	1345.2	1343.4	1341.6
172.5°	1350.1	1351.8	1353.6	1353.5	1351.6	1349.6	1347.7	1345.6
175°	1355.8	1357.5	1359.0	1358.9	1357.1	1355.3	1353.5	1351.7
177.5°	1358.0	1359.5	1360.9	1360.7	1358.9	1357.2	1355.3	1353.5
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8

(END OF REPORT)