

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: P332347-940

Luminaire Tested: **S123RDIP-S1000D805U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332347-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1000D805U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5974.3 lumens
Efficiency: N/A
Efficacy: 109.8 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

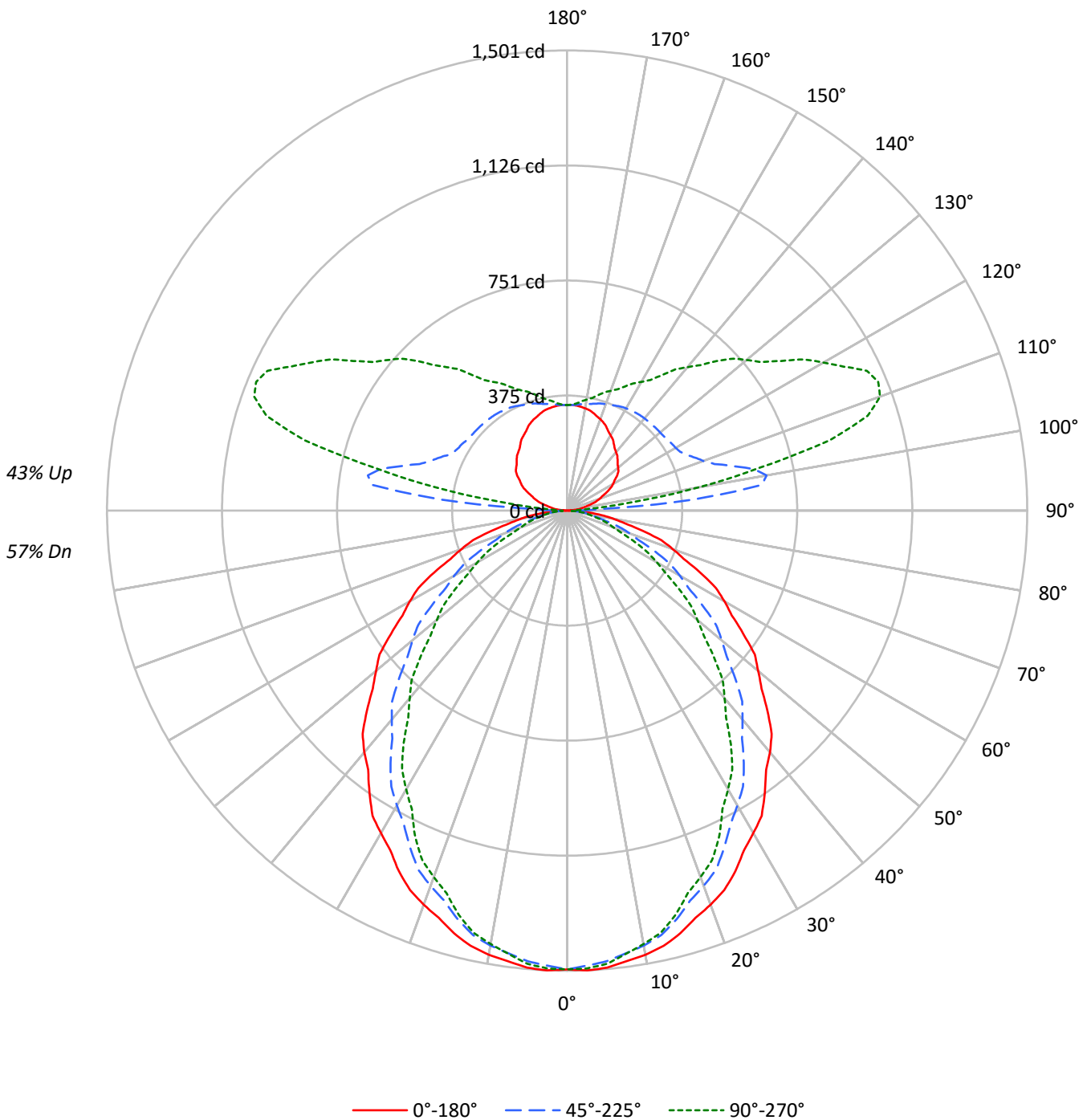
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	100	95	92	88	93	89	86	83	77	74	72	66	64	62	56	54	53	48
2	91	84	78	73	84	78	73	68	68	64	60	58	55	53	49	47	45	41
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	41	39	35
4	76	66	58	52	71	62	55	49	54	48	44	46	42	39	40	36	34	31
5	70	59	51	45	65	55	48	43	48	43	38	42	37	34	36	32	30	27
6	65	53	45	39	60	50	42	37	44	38	33	38	33	30	33	29	26	24
7	60	48	40	34	56	45	38	33	40	34	30	35	30	27	30	26	24	21
8	56	44	36	31	52	41	34	29	36	31	26	32	27	24	27	24	21	19
9	52	40	32	27	48	38	31	26	33	28	24	29	25	22	25	22	19	17
10	49	37	29	25	45	35	28	24	31	25	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16108	16108	16108
5°	16170	15946	16038
10°	16078	15746	15692
15°	15905	15377	15216
20°	15668	14917	14569
25°	15423	14400	13938
30°	15100	13803	13048
35°	14767	13205	12232
40°	14462	12500	11221
45°	14059	11805	10310
50°	13618	11015	9287
55°	13165	10113	8336
60°	12751	9145	7289
65°	12210	8099	6243
70°	11534	6801	5042
75°	10551	5352	4741
80°	9403	4736	4364
85°	7941	4199	3903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	2.4
10°-20°	391.0	6.5
20°-30°	563.0	9.4
30°-40°	634.1	10.6
40°-50°	606.7	10.2
50°-60°	496.8	8.3
60°-70°	335.2	5.6
70°-80°	168.6	2.8
80°-90°	47.3	0.8
90°-100°	191.7	3.2
100°-110°	542.7	9.1
110°-120°	533.9	8.9
120°-130°	425.8	7.1
130°-140°	335.7	5.6
140°-150°	250.6	4.2
150°-160°	174.7	2.9
160°-170°	102.6	1.7
170°-180°	33.4	0.6
0°-30°	1094.5	18.3
0°-40°	1728.6	28.9
0°-60°	2832.1	47.4
0°-90°	3383.3	56.6
90°-120°	1268.2	21.2
90°-150°	2280.4	38.2
90°-180°	2591.0	43.4
0°-180°	5974.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1496	1490	1476	1486	1484	142
15°	1427	1413	1380	1374	1365	402
25°	1299	1267	1212	1188	1174	597
35°	1124	1078	1005	954	931	703
45°	924	867	776	709	677	712
55°	702	640	539	471	444	629
65°	479	411	318	261	245	474
75°	254	195	129	117	114	270
85°	64	39	34	32	32	72
90°	1	8	17	20	20	5
95°	24	77	413	121	81	26
105°	81	120	560	980	887	86
115°	143	178	429	940	1078	141
125°	199	235	400	725	850	176
135°	233	278	395	597	690	180
145°	266	304	390	490	539	166
155°	302	326	377	429	447	139
165°	330	339	361	383	390	93
175°	344	344	346	351	351	33
180°	344	344	344	344	344	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1501.3	1500.4	1499.6	1498.7	1497.8	1496.1	1493.5	1490.9	1488.4	1485.8	1488.1
5°	1496.5	1495.0	1493.7	1492.4	1491.0	1488.7	1485.5	1482.3	1479.1	1475.8	1478.2
7.5°	1482.6	1481.1	1479.7	1478.2	1476.8	1473.9	1469.7	1465.5	1461.3	1457.1	1458.5
10°	1471.0	1469.1	1467.1	1465.3	1463.4	1460.0	1455.2	1450.3	1445.5	1440.6	1440.9
12.5°	1454.5	1452.3	1450.3	1448.1	1446.0	1442.0	1436.1	1430.1	1424.2	1418.3	1418.1
15°	1427.3	1424.3	1421.3	1418.4	1415.4	1410.2	1402.6	1395.0	1387.5	1379.9	1378.6
17.5°	1393.0	1389.6	1386.2	1382.7	1379.2	1372.7	1363.1	1353.5	1343.9	1334.3	1331.4
20°	1367.8	1363.5	1359.1	1354.9	1350.5	1343.3	1333.0	1322.8	1312.5	1302.3	1298.8
22.5°	1339.6	1334.7	1329.7	1324.7	1319.8	1311.9	1300.9	1290.0	1279.2	1268.3	1263.9
25°	1298.6	1291.9	1285.1	1278.4	1271.7	1262.0	1249.6	1237.2	1224.9	1212.5	1206.8
27.5°	1248.8	1241.4	1233.9	1226.5	1219.1	1208.4	1194.6	1180.8	1167.0	1153.2	1145.3
30°	1214.9	1206.8	1198.7	1190.6	1182.5	1170.9	1155.8	1140.7	1125.6	1110.5	1101.4
32.5°	1180.9	1171.7	1162.5	1153.3	1144.2	1131.7	1115.7	1099.7	1083.7	1067.7	1057.7
35°	1123.8	1114.1	1104.4	1094.8	1085.0	1071.7	1055.1	1038.3	1021.6	1004.9	993.3
37.5°	1066.0	1055.3	1044.5	1033.7	1022.9	1008.6	990.8	972.9	955.0	937.2	924.0
40°	1029.2	1017.4	1005.4	993.5	981.7	966.2	947.1	927.9	908.7	889.6	875.6
42.5°	987.4	975.5	963.7	951.8	940.0	924.2	904.4	884.6	864.8	845.0	829.6
45°	923.6	911.4	899.3	887.2	875.0	858.6	837.9	817.1	796.3	775.5	760.2
47.5°	859.8	846.4	833.1	819.7	806.5	789.4	768.7	747.9	727.1	706.3	689.6
50°	813.2	800.5	787.8	775.2	762.4	745.2	723.4	701.5	679.7	657.8	641.1
52.5°	771.4	757.7	743.9	730.1	716.4	698.7	677.1	655.4	633.8	612.2	594.8
55°	701.5	688.3	675.0	661.8	648.6	630.5	607.6	584.7	561.8	538.9	523.3
57.5°	636.9	622.5	608.1	593.7	579.3	560.6	537.5	514.5	491.5	468.5	453.7
60°	592.3	577.5	562.6	547.8	532.9	514.3	492.0	469.6	447.2	424.8	410.2
62.5°	547.6	532.8	517.9	503.1	488.3	469.7	447.3	424.9	402.5	380.1	366.4
65°	479.4	464.6	449.7	434.9	420.1	402.2	381.1	360.1	339.0	318.0	304.8
67.5°	411.2	396.2	381.2	366.2	351.2	333.6	313.4	293.3	273.1	252.9	243.1
70°	366.5	352.0	337.4	322.8	308.3	291.6	272.7	253.8	234.9	216.1	206.6
72.5°	321.8	307.6	293.2	278.8	264.5	248.7	231.6	214.5	197.2	180.1	172.4
75°	253.7	240.7	227.7	214.8	201.9	188.0	173.2	158.3	143.5	128.7	125.9
77.5°	191.5	179.8	168.1	156.4	144.7	134.0	124.5	114.9	105.4	95.9	94.4
80°	151.7	140.6	129.6	118.5	107.5	99.2	93.5	87.7	82.1	76.4	75.6
82.5°	113.9	104.3	94.8	85.2	75.6	69.6	66.9	64.3	61.6	58.9	58.1
85°	64.3	58.4	52.4	46.5	40.6	37.2	36.4	35.6	34.8	34.0	33.4
87.5°	23.5	21.5	19.4	17.5	15.3	14.4	14.9	15.2	15.7	16.1	15.8
90°	1.4	2.8	4.2	6.2	7.7	9.1	11.1	13.3	15.3	17.4	16.8
92.5°	8.6	12.8	18.7	24.2	30.0	40.3	58.6	88.5	118.0	107.2	80.9
95°	23.7	25.8	33.4	45.3	63.4	90.6	149.9	253.8	368.1	413.4	335.4
97.5°	40.4	41.1	47.2	57.4	75.3	104.7	161.3	278.5	469.0	640.7	685.5
100°	51.6	52.3	57.2	67.0	83.6	110.8	159.6	262.8	446.2	660.2	797.5
102.5°	63.3	64.6	68.8	78.1	93.2	118.1	161.8	249.4	412.7	623.9	803.2
105°	80.9	82.9	87.1	95.5	108.8	130.4	168.0	239.8	371.6	560.5	760.6
107.5°	99.5	101.7	105.7	113.9	126.4	146.4	179.4	239.2	345.4	504.4	686.2
110°	113.0	115.0	118.5	126.2	138.0	157.6	189.0	241.9	335.4	472.7	639.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	125.2	127.3	130.8	138.5	150.3	169.2	198.4	247.4	329.8	451.5	598.6
115°	142.9	145.7	149.9	156.9	168.7	187.5	214.0	256.5	327.7	428.7	549.4
117.5°	160.6	163.8	167.3	173.7	187.0	204.4	230.6	268.6	329.0	415.4	519.7
120°	172.9	175.0	178.4	185.5	198.7	216.2	241.2	277.5	331.2	409.2	504.1
122.5°	183.5	185.6	189.0	196.6	209.3	227.8	252.4	285.8	335.0	405.4	491.2
125°	198.7	200.1	204.3	212.0	225.2	244.0	268.4	299.1	340.9	400.2	474.7
127.5°	210.3	212.3	217.5	225.3	240.0	258.8	282.3	310.0	347.6	397.7	460.3
130°	217.5	219.6	225.9	234.3	248.9	267.7	290.7	317.2	352.0	396.0	452.5
132.5°	223.1	225.8	232.6	242.6	257.3	275.5	297.9	323.9	355.4	395.4	445.2
135°	232.8	235.7	243.3	253.8	268.4	287.2	308.8	332.5	360.4	394.6	435.7
137.5°	242.0	245.0	252.5	263.7	278.1	295.6	316.4	338.9	363.8	393.1	427.5
140°	248.2	251.6	258.7	269.8	283.7	301.1	321.4	342.3	366.0	392.5	422.5
142.5°	254.9	257.8	265.4	275.4	289.4	305.6	325.3	345.6	367.7	391.4	418.0
145°	265.6	267.7	274.0	284.5	296.3	312.4	330.5	349.3	368.8	389.7	412.1
147.5°	276.5	277.8	283.9	292.9	304.3	318.1	334.7	351.5	368.8	387.1	406.2
150°	283.7	284.5	290.0	299.1	308.8	321.4	337.4	352.0	368.8	384.9	402.3
152.5°	291.0	291.1	296.7	304.7	313.3	325.3	339.1	353.2	367.1	382.0	397.8
155°	301.8	301.8	306.0	313.0	320.7	330.5	342.3	353.5	365.3	377.2	391.1
157.5°	310.5	311.0	314.4	320.6	327.1	334.7	344.1	354.2	362.9	372.8	383.6
160°	317.2	317.2	320.0	325.6	330.5	337.4	345.8	354.2	361.9	369.5	378.5
162.5°	322.3	322.3	324.5	329.0	333.2	339.1	346.3	353.6	359.6	366.1	373.5
165°	329.8	329.0	330.5	333.9	336.7	341.6	347.1	352.0	356.2	361.1	366.7
167.5°	335.5	334.7	335.4	338.0	339.9	343.0	347.1	351.0	352.9	356.1	360.2
170°	338.9	337.4	338.1	340.2	341.6	343.0	346.5	349.3	350.7	352.8	356.2
172.5°	341.1	340.2	340.4	341.9	342.7	343.6	346.5	348.7	349.0	350.0	352.3
175°	343.7	343.0	342.3	343.7	343.7	344.4	345.8	347.1	346.5	346.5	347.9
177.5°	344.9	344.4	343.8	344.4	344.4	344.4	344.9	346.1	344.9	344.4	344.9
180°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1490.5	1492.9	1495.2	1496.2	1495.8	1495.4	1495.0	1494.5
5°	1480.7	1483.1	1485.5	1486.5	1485.9	1485.4	1484.9	1484.3
7.5°	1459.8	1461.2	1462.5	1462.8	1461.8	1460.9	1460.0	1459.0
10°	1441.2	1441.5	1441.7	1441.2	1439.8	1438.4	1437.1	1435.7
12.5°	1417.9	1417.8	1417.6	1416.8	1415.2	1413.6	1412.1	1410.5
15°	1377.2	1375.9	1374.6	1372.9	1371.0	1369.1	1367.3	1365.4
17.5°	1328.6	1325.7	1322.9	1320.0	1317.2	1314.4	1311.6	1308.8
20°	1295.2	1291.7	1288.3	1284.9	1281.7	1278.4	1275.1	1271.9
22.5°	1259.5	1255.2	1250.8	1247.1	1244.1	1241.1	1238.1	1235.0
25°	1201.1	1195.4	1189.8	1185.4	1182.5	1179.6	1176.6	1173.6
27.5°	1137.5	1129.6	1121.7	1115.5	1111.0	1106.4	1101.9	1097.4
30°	1092.2	1083.0	1073.8	1067.1	1062.7	1058.5	1054.1	1049.8
32.5°	1047.7	1037.7	1027.6	1020.4	1015.8	1011.3	1006.7	1002.2
35°	981.7	970.1	958.5	950.3	945.5	940.6	935.8	930.9
37.5°	910.9	897.7	884.6	874.9	869.0	863.0	857.0	851.0
40°	861.6	847.6	833.5	823.4	817.2	811.0	804.8	798.6
42.5°	814.3	799.0	783.6	773.2	767.7	762.1	756.5	751.0
45°	744.8	729.4	714.0	703.1	696.6	690.2	683.7	677.3
47.5°	672.9	656.2	639.4	628.2	622.4	616.7	610.9	605.1
50°	624.4	607.6	590.9	579.4	573.3	567.0	560.9	554.6
52.5°	577.5	560.1	542.7	531.2	525.7	520.1	514.6	509.0
55°	507.6	492.0	476.3	465.7	460.4	455.0	449.6	444.2
57.5°	438.9	424.1	409.4	399.7	395.1	390.5	385.9	381.3
60°	395.7	381.1	366.5	357.0	352.4	347.8	343.2	338.6
62.5°	352.7	339.0	325.3	316.0	311.3	306.5	301.7	296.9
65°	291.6	278.3	265.1	257.0	254.0	251.1	248.2	245.1
67.5°	233.2	223.3	213.5	206.9	203.8	200.5	197.3	194.2
70°	197.2	187.7	178.3	172.1	169.1	166.1	163.2	160.2
72.5°	164.7	156.9	149.3	144.8	143.6	142.3	141.1	139.8
75°	123.2	120.6	117.9	116.3	115.7	115.1	114.6	114.0
77.5°	93.0	91.5	90.1	89.1	88.5	88.0	87.5	86.9
80°	74.8	74.0	73.2	72.6	72.1	71.5	70.9	70.4
82.5°	57.3	56.5	55.7	55.3	55.2	55.1	54.9	54.8
85°	32.9	32.4	31.8	31.6	31.6	31.6	31.6	31.6
87.5°	15.7	15.6	15.5	15.6	15.2	15.2	15.1	14.7
90°	17.4	18.1	18.8	20.2	19.5	20.2	21.0	20.2
92.5°	58.7	46.5	41.1	37.5	36.3	34.2	34.9	33.6
95°	251.0	170.1	133.1	108.1	94.8	88.5	83.6	80.9
97.5°	625.6	501.1	411.2	327.8	276.3	245.0	226.1	220.2
100°	822.0	765.4	683.9	584.9	514.5	463.6	436.4	437.1
102.5°	887.2	885.4	837.9	775.1	720.3	680.0	657.3	641.2
105°	906.3	976.0	989.3	971.2	939.1	912.6	890.3	886.8
107.5°	851.4	964.6	1025.6	1050.4	1051.1	1042.1	1034.6	1028.1
110°	799.0	927.2	1015.0	1063.9	1083.3	1089.0	1087.5	1086.2



TEST NUMBER: P332347-940

CATALOG NUMBER: S123RDIP-S1000D805U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	747.1	878.2	976.6	1039.3	1075.0	1092.3	1097.6	1097.9
115°	678.3	799.6	902.1	978.1	1030.4	1061.0	1075.0	1078.5
117.5°	628.6	733.3	825.3	902.4	956.9	992.0	1012.1	1016.9
120°	602.4	696.4	780.2	850.5	905.6	944.7	961.4	965.5
122.5°	581.8	666.9	744.4	809.9	858.7	893.9	912.3	917.6
125°	554.2	630.3	697.1	753.0	797.5	828.2	845.6	850.5
127.5°	530.3	598.0	658.4	709.2	748.9	775.1	790.9	795.3
130°	515.2	577.9	634.5	681.8	718.8	743.9	758.5	764.1
132.5°	501.2	559.0	611.5	656.7	691.4	716.6	729.5	733.4
135°	482.4	531.9	577.2	617.0	651.1	672.1	684.6	689.5
137.5°	465.3	505.9	544.9	579.3	608.1	629.3	639.9	643.1
140°	455.2	490.8	524.2	554.2	580.8	600.2	611.4	610.7
142.5°	445.8	476.3	505.3	531.4	553.9	571.2	581.3	580.6
145°	434.4	457.4	479.7	499.9	517.3	531.9	537.5	538.9
147.5°	425.0	443.3	461.3	475.6	488.8	498.7	504.1	504.6
150°	418.3	434.4	449.0	462.2	472.7	480.4	484.6	484.6
152.5°	412.1	426.0	438.9	450.0	458.2	465.3	467.8	467.8
155°	403.0	414.1	424.5	432.9	439.2	444.8	446.2	446.8
157.5°	393.2	402.5	410.6	417.1	422.6	426.8	427.9	427.8
160°	387.6	395.3	402.3	407.2	412.1	416.2	416.2	415.5
162.5°	380.9	387.4	393.9	398.2	401.4	405.0	405.0	404.4
165°	372.3	376.5	381.4	384.9	387.6	390.4	389.7	389.7
167.5°	364.7	367.9	370.8	373.3	374.5	376.5	375.8	375.8
170°	359.7	361.9	364.6	366.0	366.7	368.1	367.4	367.4
172.5°	355.3	356.8	359.0	359.9	360.0	361.4	360.2	359.6
175°	349.3	350.0	351.3	351.3	351.3	352.0	351.3	350.7
177.5°	345.5	346.1	346.6	346.6	346.1	346.6	345.5	345.5
180°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4

(END OF REPORT)