

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: P331455-930

Luminaire Tested: **SA2XXDIP-C1005D925U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331455-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D925U930-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

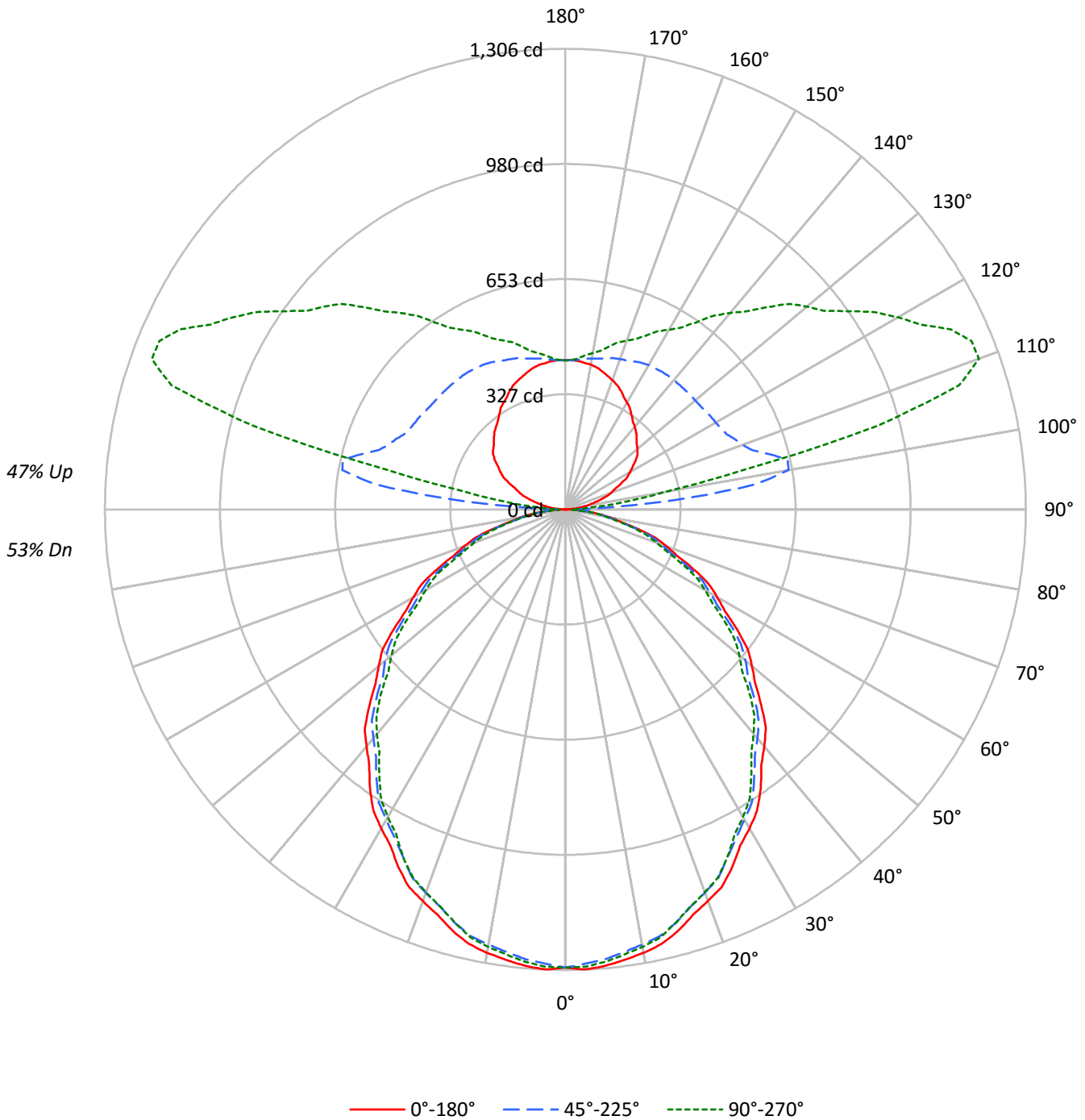
Lumens per Lamp: N/A
Luminaire Lumens: 6254.1 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): 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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	98	94	90	87	91	87	84	81	74	72	70	63	61	59	52	51	50	45
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	37
3	82	72	65	59	75	67	61	55	58	53	49	49	45	42	41	38	36	32
4	75	64	56	50	69	60	52	47	51	46	41	43	39	36	36	33	31	27
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	24
6	63	51	43	37	58	48	40	35	41	36	31	35	31	27	30	26	24	21
7	59	46	38	33	54	43	36	31	37	32	28	32	28	24	27	24	21	18
8	54	42	34	29	50	39	32	27	34	29	24	29	25	22	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20980	20980	20980
5°	21060	20757	20879
10°	20935	20546	20649
15°	20677	20279	20259
20°	20309	19880	19859
25°	19946	19388	19388
30°	19475	18938	18776
35°	19036	18398	18126
40°	18487	17856	17513
45°	17945	17317	16890
50°	17357	16759	16164
55°	16743	16110	15510
60°	16059	15332	14767
65°	15320	14560	13891
70°	14389	13624	12977
75°	13094	12545	12239
80°	11623	11269	10693
85°	9485	9040	8096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	2.0
10°-20°	343.8	5.5
20°-30°	505.4	8.1
30°-40°	587.0	9.4
40°-50°	586.4	9.4
50°-60°	511.4	8.2
60°-70°	378.1	6.0
70°-80°	214.2	3.4
80°-90°	61.4	1.0
90°-100°	169.2	2.7
100°-110°	574.1	9.2
110°-120°	609.9	9.8
120°-130°	502.1	8.0
130°-140°	403.2	6.4
140°-150°	304.7	4.9
150°-160°	214.1	3.4
160°-170°	126.0	2.0
170°-180°	41.0	0.7
0°-30°	971.4	15.5
0°-40°	1558.4	24.9
0°-60°	2656.1	42.5
0°-90°	3309.8	52.9
90°-120°	1353.2	21.6
90°-150°	2563.1	41.0
90°-180°	2944.0	47.1
0°-180°	6254.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1299	1294	1281	1290	1288	123
15°	1237	1229	1213	1218	1212	348
25°	1120	1109	1088	1090	1088	515
35°	966	953	933	926	920	603
45°	786	777	758	745	740	606
55°	595	587	572	558	551	532
65°	401	393	381	370	364	397
75°	210	207	201	194	196	224
85°	51	50	49	45	44	59
90°	1	11	28	26	27	4
95°	28	70	319	120	93	30
105°	99	150	603	1078	917	106
115°	175	221	504	1041	1207	173
125°	244	289	485	843	979	217
135°	286	342	479	709	811	221
145°	327	376	477	592	648	205
155°	372	402	463	524	544	171
165°	405	417	443	470	478	114
175°	422	423	426	432	430	40
180°	423	423	423	423	423	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4
2.5°	1305.5	1304.3	1303.3	1302.1	1301.0	1299.3	1296.8	1294.4	1291.9	1289.5	1291.7
5°	1299.4	1298.4	1297.2	1296.1	1295.0	1292.9	1289.9	1286.8	1283.8	1280.7	1283.0
7.5°	1287.9	1286.2	1284.5	1282.8	1281.1	1278.6	1275.5	1272.4	1269.3	1266.2	1268.4
10°	1276.9	1275.0	1273.1	1271.1	1269.2	1266.6	1263.2	1259.9	1256.5	1253.2	1255.5
12.5°	1262.0	1260.2	1258.5	1256.8	1255.1	1252.5	1249.2	1245.9	1242.6	1239.3	1240.8
15°	1237.0	1235.3	1233.6	1232.0	1230.3	1227.7	1224.1	1220.4	1216.8	1213.2	1214.4
17.5°	1205.0	1203.3	1201.7	1200.0	1198.3	1195.6	1192.0	1188.3	1184.6	1181.0	1182.3
20°	1182.0	1180.3	1178.7	1177.0	1175.3	1172.6	1168.7	1164.8	1160.9	1157.0	1157.8
22.5°	1159.0	1156.7	1154.4	1152.0	1149.7	1146.7	1143.0	1139.4	1135.7	1132.0	1132.2
25°	1119.6	1117.3	1115.1	1112.9	1110.7	1107.2	1102.4	1097.7	1093.0	1088.3	1088.8
27.5°	1074.6	1072.5	1070.6	1068.5	1066.6	1063.7	1060.0	1056.2	1052.6	1048.8	1048.0
30°	1044.6	1042.4	1040.1	1037.9	1035.7	1032.5	1028.3	1024.2	1020.0	1015.8	1015.0
32.5°	1012.6	1010.8	1009.0	1007.2	1005.4	1002.4	998.0	993.6	989.2	984.8	983.3
35°	965.8	963.0	960.3	957.5	954.7	951.1	946.6	942.2	937.8	933.4	931.7
37.5°	913.1	910.7	908.2	905.8	903.4	899.9	895.4	891.0	886.6	882.2	880.0
40°	877.1	874.9	872.7	870.5	868.2	865.0	860.5	856.1	851.6	847.2	844.7
42.5°	842.1	839.9	837.7	835.5	833.2	829.9	825.5	821.0	816.6	812.1	809.4
45°	785.9	784.0	782.0	780.1	778.1	775.1	770.9	766.8	762.6	758.4	755.4
47.5°	729.9	728.1	726.3	724.5	722.6	719.5	715.2	710.9	706.5	702.2	699.0
50°	691.0	689.6	688.2	686.8	685.4	682.7	678.9	675.0	671.1	667.2	663.3
52.5°	653.0	651.2	649.3	647.5	645.6	642.9	639.2	635.5	631.9	628.3	625.0
55°	594.8	593.0	591.4	589.8	588.1	585.5	582.3	578.9	575.6	572.3	568.9
57.5°	536.3	534.9	533.6	532.3	530.9	528.5	524.8	521.1	517.5	513.8	510.5
60°	497.3	496.2	495.0	494.0	492.8	490.3	486.5	482.6	478.7	474.8	471.7
62.5°	459.3	457.5	455.8	454.0	452.2	449.8	446.8	443.8	440.8	437.8	435.0
65°	401.0	399.4	397.8	396.1	394.4	392.2	389.4	386.6	383.8	381.1	378.6
67.5°	341.9	340.6	339.2	337.9	336.6	334.6	332.1	329.6	327.1	324.7	322.7
70°	304.8	303.8	302.6	301.6	300.4	298.6	296.1	293.6	291.1	288.6	286.7
72.5°	266.8	265.8	264.6	263.6	262.4	261.1	259.5	257.9	256.2	254.6	252.7
75°	209.9	209.4	208.8	208.2	207.7	206.7	205.3	203.9	202.5	201.1	199.5
77.5°	158.9	158.0	157.0	156.1	155.2	154.4	153.8	153.3	152.7	152.2	151.3
80°	125.0	124.7	124.4	124.1	123.8	123.4	122.9	122.3	121.7	121.2	120.3
82.5°	92.9	92.9	92.9	92.8	92.7	92.5	92.2	91.9	91.6	91.2	90.2
85°	51.2	51.0	50.7	50.4	50.1	49.8	49.6	49.2	49.0	48.8	47.9
87.5°	18.2	18.2	18.4	18.3	18.2	18.2	18.6	19.2	19.8	19.6	18.7
90°	0.8	3.3	6.5	8.2	9.8	12.2	16.3	21.9	26.8	27.6	26.8
92.5°	9.9	14.3	20.2	23.7	29.3	36.9	55.4	81.2	104.3	105.7	89.4
95°	28.5	31.7	39.9	47.2	60.3	79.7	117.2	187.9	282.3	318.9	279.1
97.5°	46.4	50.8	59.4	70.4	85.4	107.5	154.6	253.2	410.1	544.5	571.2
100°	62.6	65.1	72.4	85.4	101.7	124.5	167.6	266.9	442.6	642.8	760.0
102.5°	77.6	79.4	86.7	99.8	116.7	139.5	179.4	267.6	430.3	646.0	830.3
105°	99.3	102.6	108.2	120.4	138.4	161.1	199.3	271.7	406.0	602.9	819.4
107.5°	122.7	125.3	130.9	142.1	159.8	182.8	219.9	283.0	394.0	556.8	748.0
110°	138.4	141.6	146.4	157.0	174.1	197.7	233.5	292.1	391.4	534.6	703.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.6	155.9	161.4	171.4	187.8	212.1	246.5	301.9	392.0	520.2	671.8
115°	175.0	179.0	183.9	193.6	209.9	231.9	266.9	316.5	395.4	504.5	633.1
117.5°	198.0	201.3	206.2	214.8	230.4	253.2	285.6	332.2	401.3	496.8	608.6
120°	212.4	215.6	220.5	227.8	244.1	266.9	298.6	342.6	405.2	492.3	595.7
122.5°	226.1	228.6	233.5	241.5	257.8	281.2	311.0	351.6	409.8	489.7	584.6
125°	244.1	246.5	251.4	261.2	277.4	300.3	329.5	366.2	416.6	484.9	568.8
127.5°	258.4	261.7	268.5	279.2	294.9	318.3	346.8	379.7	423.6	482.2	554.2
130°	266.9	270.1	278.3	289.7	306.0	328.7	357.2	388.2	428.8	480.9	544.4
132.5°	274.7	278.6	287.4	299.5	316.3	339.2	366.3	396.6	434.0	480.2	536.5
135°	286.4	289.7	299.5	311.6	330.4	353.1	379.2	407.6	440.2	479.2	525.6
137.5°	297.5	301.4	311.1	324.2	342.8	363.9	389.6	416.1	445.7	479.1	518.0
140°	306.0	309.2	318.9	332.0	349.9	371.0	395.4	420.7	448.3	478.4	513.5
142.5°	314.4	317.0	326.1	339.2	356.4	376.3	400.0	424.6	450.3	478.4	508.9
145°	327.1	330.4	338.5	350.7	367.0	384.9	406.8	429.7	452.4	476.8	502.9
147.5°	340.8	343.2	351.0	362.2	375.8	391.8	412.4	432.4	453.1	473.9	496.7
150°	349.9	352.3	358.8	369.4	381.6	396.2	415.0	433.7	452.4	472.0	491.5
152.5°	359.0	360.1	366.6	375.9	387.5	400.8	417.6	434.3	451.1	468.7	486.9
155°	371.9	372.7	377.6	386.5	395.4	407.6	421.5	435.3	449.1	463.0	478.4
157.5°	382.6	383.4	387.3	395.1	402.3	412.5	424.3	435.3	445.4	457.1	470.5
160°	389.8	390.6	393.8	400.3	406.8	415.8	425.6	435.3	443.4	453.2	464.6
162.5°	396.9	396.4	399.7	404.9	410.7	417.8	426.2	434.6	441.5	450.0	459.4
165°	405.2	404.4	406.0	410.9	415.0	419.9	427.2	432.9	437.7	443.4	450.8
167.5°	412.1	411.1	412.5	415.6	418.6	421.7	427.1	431.8	434.0	437.7	442.3
170°	416.6	415.0	415.8	418.2	419.9	422.3	426.4	430.5	432.1	434.5	437.7
172.5°	419.2	418.2	417.8	420.2	421.2	423.0	425.7	428.5	429.5	430.6	433.3
175°	422.3	421.5	420.7	422.3	422.3	423.1	424.8	426.4	425.6	426.4	427.2
177.5°	423.8	422.5	421.8	423.1	423.1	423.1	423.8	425.1	423.8	423.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4
2.5°	1293.9	1296.1	1298.4	1299.3	1298.8	1298.4	1297.9	1297.5
5°	1285.2	1287.4	1289.6	1290.5	1289.9	1289.3	1288.7	1288.2
7.5°	1270.6	1272.8	1275.1	1275.9	1275.3	1274.7	1274.1	1273.5
10°	1257.7	1259.9	1262.1	1262.8	1262.0	1261.1	1260.3	1259.5
12.5°	1242.4	1243.9	1245.5	1245.9	1245.3	1244.7	1244.1	1243.5
15°	1215.4	1216.6	1217.6	1217.6	1216.2	1214.8	1213.4	1212.0
17.5°	1183.6	1184.9	1186.1	1186.1	1184.7	1183.4	1182.1	1180.7
20°	1158.7	1159.5	1160.3	1160.2	1159.1	1158.0	1156.9	1155.8
22.5°	1132.4	1132.5	1132.7	1132.5	1131.8	1131.1	1130.4	1129.8
25°	1089.4	1090.0	1090.5	1090.5	1090.0	1089.4	1088.8	1088.3
27.5°	1047.2	1046.3	1045.5	1044.4	1043.1	1041.7	1040.4	1039.1
30°	1014.2	1013.3	1012.5	1011.5	1010.4	1009.3	1008.2	1007.1
32.5°	981.9	980.3	978.8	977.5	976.4	975.3	974.2	973.1
35°	930.0	928.4	926.7	925.2	923.8	922.4	921.0	919.6
37.5°	878.0	876.0	873.9	872.2	870.9	869.5	868.2	866.9
40°	842.1	839.7	837.1	835.4	834.2	833.2	832.0	830.9
42.5°	806.7	804.0	801.3	799.2	797.6	796.1	794.5	792.9
45°	752.4	749.3	746.2	744.1	743.0	741.9	740.8	739.7
47.5°	695.8	692.5	689.3	686.9	685.3	683.7	682.1	680.4
50°	659.4	655.6	651.7	649.1	647.7	646.3	644.9	643.5
52.5°	621.8	618.6	615.4	612.9	611.0	609.2	607.3	605.5
55°	565.6	562.2	559.0	556.6	555.2	553.8	552.4	551.0
57.5°	507.2	503.9	500.7	498.5	497.5	496.4	495.4	494.3
60°	468.7	465.6	462.6	460.6	459.8	459.0	458.1	457.3
62.5°	432.2	429.3	426.5	424.5	423.5	422.4	421.3	420.3
65°	376.1	373.6	371.1	369.2	367.8	366.4	365.0	363.6
67.5°	320.7	318.8	316.8	315.3	314.2	313.1	312.0	310.9
70°	284.7	282.8	280.9	279.3	278.2	277.1	276.0	274.9
72.5°	250.8	248.8	246.9	245.5	244.6	243.7	242.8	241.9
75°	197.9	196.2	194.5	194.0	194.5	195.0	195.6	196.2
77.5°	150.5	149.7	148.9	148.1	147.2	146.5	145.7	145.0
80°	119.5	118.7	117.9	117.2	116.6	116.1	115.5	115.0
82.5°	89.1	88.1	87.0	86.4	86.3	86.2	86.1	85.9
85°	47.0	46.2	45.4	44.8	44.6	44.3	44.0	43.7
87.5°	17.9	16.9	16.6	16.2	16.1	15.8	15.6	15.3
90°	26.0	24.4	26.0	26.8	26.8	26.8	26.8	26.8
92.5°	70.9	60.9	54.1	49.0	48.3	45.7	46.4	45.1
95°	213.2	163.5	129.4	111.5	100.9	94.4	92.0	92.8
97.5°	497.5	407.0	318.9	260.2	221.4	201.3	189.4	182.6
100°	742.9	642.0	530.5	432.1	364.5	329.5	306.0	291.3
102.5°	903.7	880.9	799.4	695.0	621.7	561.9	532.5	512.7
105°	988.6	1080.6	1091.2	1064.3	1013.8	963.4	928.4	917.0
107.5°	927.5	1065.9	1150.6	1189.9	1196.3	1193.5	1186.5	1171.4
110°	874.7	1020.3	1124.5	1191.2	1226.2	1241.7	1249.0	1248.2



TEST NUMBER: P331455-930

CATALOG NUMBER: SA2XXDIP-C1005D925U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	826.6	966.4	1077.7	1154.1	1202.8	1228.7	1242.5	1246.9
115°	767.3	892.6	999.2	1083.0	1140.8	1178.2	1199.4	1206.7
117.5°	722.7	832.7	929.4	1008.0	1066.9	1106.4	1128.8	1134.9
120°	700.6	801.5	887.7	961.8	1018.7	1057.0	1080.6	1088.8
122.5°	683.0	775.4	857.1	924.1	975.1	1012.7	1033.7	1040.6
125°	657.5	741.3	812.9	873.9	921.1	952.0	972.3	978.8
127.5°	632.3	708.1	775.6	831.9	873.1	902.0	919.7	924.9
130°	616.0	685.9	750.2	804.0	843.8	871.5	887.7	894.2
132.5°	600.3	665.1	724.1	774.6	813.8	841.6	856.5	862.3
135°	578.5	632.3	685.9	731.5	766.5	793.4	808.0	811.2
137.5°	561.1	606.0	648.7	688.4	720.3	743.4	756.3	761.2
140°	550.1	589.1	626.6	662.3	688.4	709.6	721.8	726.6
142.5°	541.0	574.1	606.3	636.3	661.0	680.3	691.1	692.1
145°	528.1	555.0	580.2	603.7	623.3	637.2	645.2	647.7
147.5°	518.1	539.3	559.0	576.3	592.4	603.4	608.9	610.4
150°	511.0	528.9	546.0	560.6	572.8	582.6	587.5	588.3
152.5°	503.9	520.4	534.9	547.6	557.2	565.7	569.2	569.4
155°	493.9	507.0	519.1	528.1	537.0	542.7	546.0	544.4
157.5°	482.3	493.3	503.5	510.5	516.8	521.5	523.0	523.0
160°	475.2	484.1	493.1	498.8	504.5	508.6	509.4	509.4
162.5°	468.1	475.6	483.3	487.7	493.4	496.2	497.0	496.4
165°	457.3	463.0	468.7	472.0	475.2	478.4	478.4	477.6
167.5°	447.0	451.4	455.3	458.3	459.7	461.5	461.4	460.4
170°	441.8	444.3	447.5	449.1	450.0	452.4	451.6	450.0
172.5°	435.9	437.7	440.3	441.3	442.1	443.3	442.5	441.5
175°	429.7	430.5	431.3	432.1	432.1	432.9	432.1	430.5
177.5°	425.1	425.1	425.7	425.7	425.7	425.7	425.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1

(END OF REPORT)