

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: P331436-930

Luminaire Tested: **SA2XXDIP-C1005D530U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

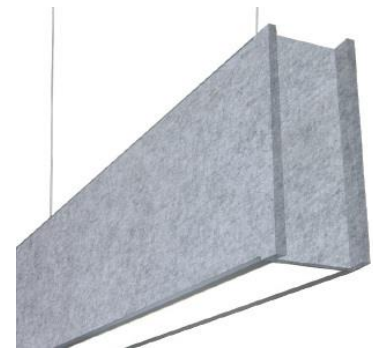
Test Information

Test Method: LM-79-08
Report Number: P331436-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D530U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4848.7 lumens
Efficiency: N/A
Efficacy: 88.0 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: Semi-Direct

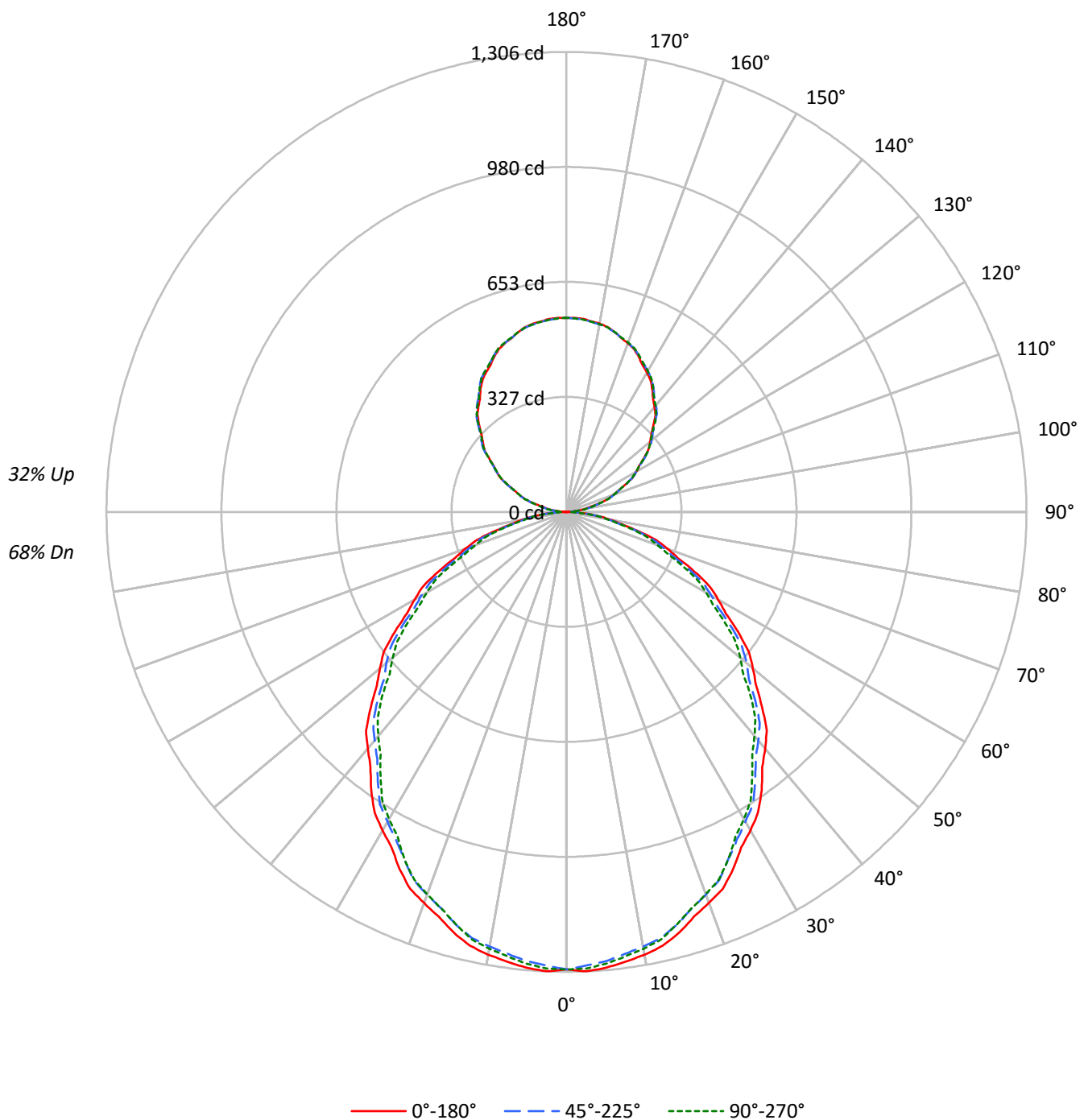
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	105	105	105	105	93	93	93	83	83	83	73	73	73
1	102	97	93	90	96	92	89	85	82	79	77	73	71	69	64	63	62
2	93	85	79	73	87	81	75	70	72	68	64	64	61	58	57	54	52
3	85	75	67	61	80	71	64	59	64	58	54	57	52	49	50	47	44
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	45	41	38
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	41	36	33
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	33	29
7	61	48	40	34	57	46	38	33	42	35	31	37	32	28	34	29	26
8	57	44	36	30	53	42	35	29	38	32	27	34	29	25	31	27	23
9	53	40	32	27	50	38	31	26	35	29	25	32	27	23	29	24	21
10	49	37	30	25	47	35	28	24	32	26	22	29	24	21	27	22	19

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	2.5
10°-20°	343.8	7.1
20°-30°	505.4	10.4
30°-40°	587.0	12.1
40°-50°	586.4	12.1
50°-60°	511.4	10.5
60°-70°	378.1	7.8
70°-80°	214.2	4.4
80°-90°	59.8	1.2
90°-100°	34.9	0.7
100°-110°	108.4	2.2
110°-120°	185.3	3.8
120°-130°	243.7	5.0
130°-140°	273.5	5.6
140°-150°	268.2	5.5
150°-160°	225.0	4.6
160°-170°	149.2	3.1
170°-180°	52.2	1.1
0°-30°	971.4	20.0
0°-40°	1558.4	32.1
0°-60°	2656.1	54.8
0°-90°	3308.2	68.2
90°-120°	328.7	6.8
90°-150°	1114.2	23.0
90°-180°	1540.0	31.8
0°-180°	4848.7	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°	0	6	16	15	16	4
95°	24	29	30	30	29	28
105°	100	101	102	103	103	106
115°	186	189	188	187	186	184
125°	271	274	273	272	272	242
135°	350	355	356	356	354	270
145°	425	428	431	431	430	265
155°	486	487	489	491	490	224
165°	529	528	528	531	529	149
175°	550	549	548	551	548	52
180°	551	551	551	551	551	

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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°	18.1	17.9	17.7	17.5	17.3	17.2	17.2	17.2	17.2	17.3	16.6
90°	0.5	1.7	2.9	4.2	5.5	7.2	9.5	11.7	14.0	16.3	16.1
92.5°	8.3	9.2	10.1	11.0	11.9	12.6	13.2	13.7	14.3	14.8	14.8
95°	24.2	25.2	26.3	27.3	28.3	28.9	29.1	29.4	29.5	29.8	29.8
97.5°	44.2	45.1	46.0	46.9	47.8	48.4	48.8	49.2	49.7	50.1	50.1
100°	59.0	59.8	60.7	61.6	62.4	62.9	63.3	63.5	63.8	64.2	64.2
102.5°	74.7	75.3	76.0	76.6	77.3	77.9	78.3	78.6	79.0	79.4	79.5
105°	100.0	100.3	100.6	100.9	101.2	101.4	101.7	101.8	102.1	102.3	102.5
107.5°	125.5	125.9	126.4	126.8	127.3	127.5	127.5	127.5	127.5	127.5	127.6
110°	141.8	142.4	143.0	143.7	144.3	144.6	144.6	144.6	144.6	144.6	144.6

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	159.6	160.3	160.9	161.5	162.2	162.4	162.3	162.2	162.2	162.1	161.8
115°	186.0	186.6	187.2	187.8	188.4	188.7	188.4	188.3	188.0	187.8	187.8
117.5°	212.2	213.0	213.9	214.7	215.5	215.6	215.1	214.4	213.9	213.3	213.0
120°	229.7	230.5	231.3	232.1	233.0	233.0	232.1	231.3	230.5	229.7	229.7
122.5°	245.6	246.6	247.7	248.7	249.6	249.8	249.2	248.7	248.1	247.5	247.3
125°	270.6	271.5	272.5	273.4	274.3	274.6	274.3	274.0	273.7	273.4	273.0
127.5°	294.8	296.0	297.2	298.4	299.5	299.9	299.6	299.2	298.9	298.5	298.1
130°	310.1	311.4	312.7	314.1	315.4	316.0	315.8	315.6	315.4	315.2	315.0
132.5°	327.2	328.3	329.4	330.5	331.6	332.2	332.2	332.2	332.3	332.3	331.9
135°	350.1	351.2	352.4	353.5	354.7	355.3	355.5	355.7	356.0	356.1	356.0
137.5°	374.1	375.1	376.0	377.0	377.9	378.5	378.8	379.0	379.3	379.5	379.4
140°	388.7	389.6	390.5	391.4	392.4	393.1	393.6	394.1	394.7	395.2	395.2
142.5°	403.6	404.5	405.4	406.3	407.2	407.9	408.3	408.6	409.0	409.3	409.4
145°	424.9	425.7	426.4	427.1	427.9	428.5	429.1	429.7	430.4	431.0	431.0
147.5°	444.0	444.8	445.7	446.6	447.4	448.1	448.5	448.9	449.3	449.8	450.0
150°	457.1	457.6	458.3	458.9	459.5	460.0	460.4	460.8	461.2	461.7	461.9
152.5°	468.6	469.2	469.8	470.4	471.0	471.6	472.1	472.5	473.0	473.6	473.9
155°	485.8	486.2	486.5	486.7	487.1	487.4	487.7	488.0	488.3	488.6	489.2
157.5°	500.6	500.8	501.0	501.2	501.5	501.7	501.8	502.1	502.2	502.4	503.1
160°	509.6	509.7	510.0	510.1	510.4	510.5	510.6	510.7	510.9	510.9	511.6
162.5°	517.7	517.8	517.8	517.9	517.9	518.0	518.0	518.2	518.3	518.4	519.1
165°	528.6	528.5	528.4	528.3	528.2	528.2	528.2	528.2	528.2	528.2	528.9
167.5°	537.7	537.4	537.1	536.8	536.5	536.3	536.3	536.3	536.2	536.2	537.0
170°	542.6	542.3	541.9	541.6	541.4	541.1	541.0	540.9	540.8	540.7	541.4
172.5°	545.9	545.6	545.3	544.9	544.7	544.5	544.4	544.3	544.1	544.0	544.8
175°	550.0	549.7	549.3	549.1	548.8	548.5	548.3	548.1	547.9	547.6	548.4
177.5°	551.7	551.4	551.1	550.9	550.7	550.5	550.3	550.2	550.0	549.8	550.3
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9

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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°	15.8	15.2	14.4	13.9	13.8	13.5	13.4	13.1
90°	15.9	15.7	15.4	15.4	15.5	15.6	15.7	15.8
92.5°	14.8	14.9	14.9	15.0	15.0	15.0	15.1	15.1
95°	29.8	29.8	29.8	29.7	29.4	29.3	29.0	28.9
97.5°	50.1	50.1	50.1	50.0	50.0	50.0	50.0	49.9
100°	64.2	64.2	64.2	64.1	64.0	63.9	63.8	63.7
102.5°	79.6	79.7	79.7	79.7	79.7	79.5	79.4	79.3
105°	102.7	102.9	103.1	103.2	103.2	103.2	103.2	103.2
107.5°	127.7	127.8	127.8	127.6	127.1	126.7	126.2	125.7
110°	144.6	144.6	144.6	144.5	144.1	143.8	143.5	143.2



TEST NUMBER: P331436-930

CATALOG NUMBER: SA2XXDIP-C1005D530U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	161.6	161.3	161.1	160.9	160.6	160.4	160.1	160.0
115°	187.6	187.5	187.4	187.2	186.9	186.6	186.3	186.0
117.5°	212.8	212.5	212.3	212.1	211.7	211.4	211.1	210.8
120°	229.7	229.7	229.7	229.5	229.2	228.9	228.6	228.3
122.5°	247.0	246.8	246.5	246.3	246.1	245.8	245.6	245.4
125°	272.7	272.5	272.1	271.9	271.8	271.7	271.6	271.5
127.5°	297.7	297.3	297.0	296.6	296.3	296.0	295.6	295.3
130°	314.8	314.6	314.4	314.1	313.6	313.2	312.8	312.4
132.5°	331.4	330.9	330.5	330.1	329.8	329.5	329.1	328.8
135°	356.0	355.8	355.7	355.5	355.2	354.9	354.6	354.2
137.5°	379.4	379.3	379.2	379.0	378.5	378.1	377.7	377.3
140°	395.2	395.2	395.2	395.0	394.5	394.1	393.7	393.3
142.5°	409.4	409.5	409.6	409.4	409.0	408.6	408.2	407.8
145°	431.2	431.3	431.4	431.2	430.8	430.4	430.0	429.6
147.5°	450.2	450.5	450.7	450.6	450.2	449.8	449.4	449.0
150°	462.3	462.6	462.9	462.9	462.6	462.3	461.9	461.7
152.5°	474.3	474.7	475.2	475.2	474.7	474.3	473.9	473.6
155°	489.7	490.2	490.7	490.8	490.5	490.2	489.8	489.6
157.5°	503.8	504.5	505.2	505.3	504.8	504.3	503.9	503.3
160°	512.2	512.8	513.4	513.6	513.1	512.7	512.3	511.8
162.5°	519.8	520.5	521.2	521.3	520.8	520.3	519.8	519.3
165°	529.6	530.4	531.0	531.2	530.6	530.1	529.6	529.0
167.5°	537.7	538.4	539.2	539.2	538.7	538.2	537.6	537.0
170°	542.2	542.9	543.6	543.6	543.0	542.4	541.8	541.2
172.5°	545.5	546.3	546.9	547.0	546.4	545.8	545.1	544.5
175°	549.1	549.8	550.6	550.7	550.0	549.3	548.8	548.1
177.5°	550.8	551.3	551.8	551.8	551.3	550.8	550.3	549.8
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9

(END OF REPORT)