

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: P331851-930

Luminaire Tested: **S122RDIW-S1005D710U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331851-930
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-S1005D710U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5153.2 lumens
Efficiency: N/A
Efficacy: 86.2 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: General Diffuse

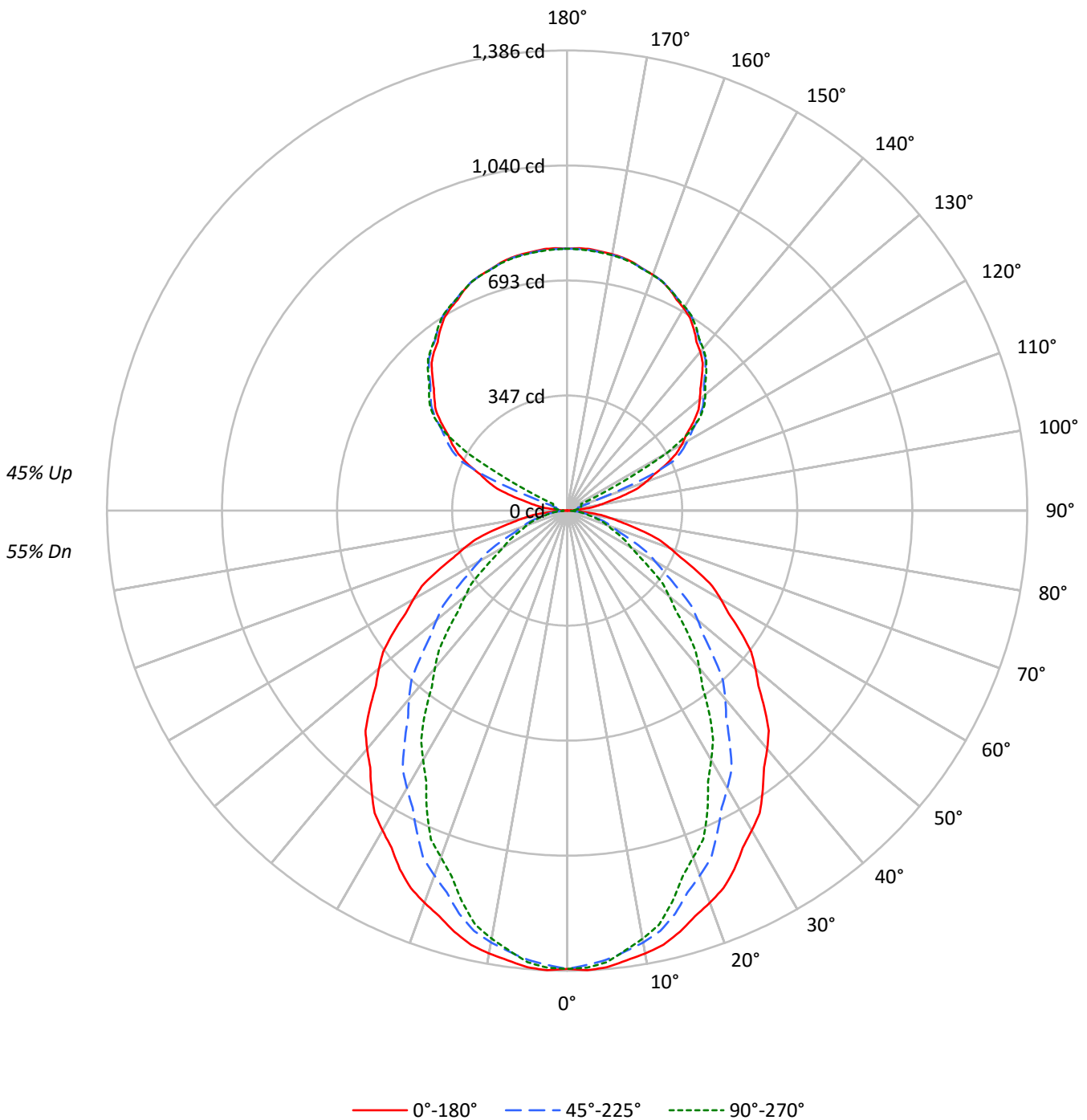
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	92	88	92	89	85	83	76	74	72	65	63	62	55	53	52	47
2	91	84	78	73	84	78	73	69	68	64	60	58	55	52	49	47	45	41
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	41	39	35
4	77	66	58	52	71	62	55	50	54	48	44	46	42	39	39	36	34	31
5	70	59	51	45	65	55	48	43	48	43	39	42	38	34	36	33	30	27
6	65	53	45	40	60	50	43	38	44	38	34	38	34	30	33	29	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	26	24	21
8	56	44	36	31	52	41	35	30	37	31	27	32	28	24	28	24	22	19
9	52	40	33	28	49	38	31	27	34	28	24	29	25	22	26	22	20	18
10	49	37	30	25	46	35	29	24	31	26	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22291	22291	22291
5°	22376	22013	22135
10°	22207	21653	21469
15°	21951	21010	20404
20°	21596	20094	19086
25°	21235	19053	17808
30°	20734	17984	16168
35°	20243	16821	14728
40°	19751	15616	13061
45°	19173	14266	11556
50°	18580	12901	10073
55°	17973	11431	8653
60°	17270	9884	7182
65°	16466	8306	6541
70°	15512	6845	6014
75°	14342	6238	5608
80°	12664	5579	5114
85°	9948	4390	4390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.2	2.5
10°-20°	354.8	6.9
20°-30°	498.3	9.7
30°-40°	543.4	10.5
40°-50°	499.6	9.7
50°-60°	392.4	7.6
60°-70°	255.8	5.0
70°-80°	131.9	2.6
80°-90°	36.2	0.7
90°-100°	26.3	0.5
100°-110°	96.5	1.9
110°-120°	257.9	5.0
120°-130°	425.7	8.3
130°-140°	452.8	8.8
140°-150°	420.8	8.2
150°-160°	338.4	6.6
160°-170°	218.0	4.2
170°-180°	75.1	1.5
0°-30°	982.4	19.1
0°-40°	1525.7	29.6
0°-60°	2417.7	46.9
0°-90°	2841.6	55.1
90°-120°	380.7	7.4
90°-150°	1680.1	32.6
90°-180°	2312.0	44.9
0°-180°	5153.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1381	1381	1381	1381	1381	
5°	1381	1374	1358	1369	1366	131
15°	1313	1298	1257	1234	1221	370
25°	1192	1150	1070	1020	1000	548
35°	1027	961	853	778	747	642
45°	840	753	625	539	506	648
55°	638	539	406	334	307	570
65°	431	329	217	177	171	427
75°	230	145	100	92	90	243
85°	54	29	24	24	24	63
90°	1	7	11	14	15	4
95°	37	20	22	25	24	45
105°	174	181	35	41	43	185
115°	328	338	352	100	47	323
125°	464	472	482	486	488	414
135°	574	583	588	594	593	443
145°	666	666	675	679	676	416
155°	733	729	735	738	734	338
165°	773	770	771	775	771	218
175°	790	787	788	791	786	75
180°	789	789	789	789	789	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6
2.5°	1385.7	1384.5	1383.4	1382.3	1381.2	1379.4	1377.0	1374.6	1372.1	1369.7	1371.9
5°	1380.6	1379.2	1377.9	1376.5	1375.1	1372.6	1369.0	1365.4	1361.8	1358.2	1360.7
7.5°	1366.4	1364.7	1363.0	1361.2	1359.5	1356.6	1352.3	1348.1	1343.9	1339.7	1340.4
10°	1354.5	1352.5	1350.5	1348.6	1346.6	1342.9	1337.3	1331.8	1326.2	1320.7	1319.9
12.5°	1339.5	1337.0	1334.6	1332.3	1329.9	1325.1	1318.0	1310.9	1303.8	1296.7	1295.2
15°	1313.2	1310.1	1307.1	1304.0	1301.0	1294.7	1285.3	1275.9	1266.4	1256.9	1251.7
17.5°	1280.9	1276.3	1271.6	1267.0	1262.3	1253.9	1241.8	1229.7	1217.6	1205.5	1199.2
20°	1256.9	1251.4	1245.9	1240.3	1234.8	1225.1	1211.1	1197.3	1183.4	1169.5	1162.5
22.5°	1230.9	1224.7	1218.5	1212.4	1206.1	1195.1	1179.5	1163.8	1148.2	1132.5	1123.6
25°	1192.0	1183.1	1174.2	1165.3	1156.4	1142.9	1124.5	1106.2	1087.9	1069.5	1058.2
27.5°	1145.0	1135.4	1125.7	1116.1	1106.4	1091.2	1070.6	1049.9	1029.2	1008.6	995.3
30°	1112.1	1101.5	1091.0	1080.4	1069.8	1053.4	1031.2	1009.0	986.8	964.6	950.4
32.5°	1080.0	1067.7	1055.4	1043.1	1030.7	1013.3	990.6	967.9	945.3	922.6	906.4
35°	1027.0	1012.9	998.7	984.6	970.5	951.1	926.7	902.3	877.8	853.4	835.9
37.5°	974.1	958.5	943.0	927.4	911.9	891.1	865.0	839.0	812.9	786.9	767.7
40°	937.1	920.5	903.8	887.1	870.5	848.6	821.7	794.8	767.8	740.9	721.2
42.5°	899.1	881.6	864.1	846.4	828.9	806.2	778.4	750.6	722.8	695.0	674.6
45°	839.7	821.0	802.4	783.8	765.2	741.4	712.2	683.1	653.9	624.8	605.0
47.5°	781.6	762.0	742.2	722.5	702.8	677.9	647.8	617.7	587.6	557.5	537.9
50°	739.7	720.0	700.3	680.5	660.8	635.7	605.2	574.6	544.0	513.6	494.4
52.5°	698.7	678.1	657.5	636.9	616.3	591.1	561.2	531.3	501.4	471.6	453.1
55°	638.5	616.9	595.2	573.5	551.9	526.0	496.0	466.0	436.1	406.1	389.4
57.5°	576.7	554.6	532.3	510.1	487.9	462.4	433.6	404.7	375.9	347.1	331.8
60°	534.8	512.6	490.3	468.1	445.9	420.5	391.9	363.3	334.7	306.1	292.0
62.5°	493.8	471.6	449.4	427.1	405.0	380.2	352.9	325.6	298.4	271.2	257.6
65°	431.0	408.5	386.1	363.6	341.1	317.4	292.4	267.4	242.4	217.4	208.0
67.5°	370.6	348.3	326.0	303.6	281.3	258.9	236.4	213.9	191.4	168.9	164.6
70°	328.6	307.0	285.3	263.7	242.0	221.6	202.4	183.3	164.1	145.0	142.2
72.5°	288.6	267.8	247.1	226.3	205.5	187.4	172.1	156.7	141.3	126.0	123.6
75°	229.9	210.4	191.0	171.6	152.1	137.7	128.2	118.9	109.4	100.0	98.0
77.5°	172.2	155.2	138.1	121.1	104.0	93.2	88.6	84.1	79.5	75.0	73.9
80°	136.2	122.1	107.9	93.7	79.6	71.1	68.3	65.6	62.8	60.0	58.9
82.5°	103.2	92.1	81.1	70.0	59.0	52.5	50.6	48.8	46.9	45.0	44.4
85°	53.7	47.9	42.1	36.2	30.4	27.1	26.3	25.4	24.5	23.7	23.7
87.5°	16.1	14.6	13.1	11.6	10.1	9.5	9.7	9.9	10.1	10.3	10.2
90°	0.6	2.0	3.3	4.7	6.1	7.3	8.4	9.4	10.4	11.4	12.1
92.5°	11.5	11.4	11.3	11.2	11.0	11.3	11.7	12.2	12.7	13.2	13.5
95°	37.1	32.9	28.7	24.5	20.4	18.7	19.6	20.5	21.4	22.3	22.9
97.5°	73.6	61.8	50.1	38.2	26.4	21.6	23.6	25.7	27.7	29.8	30.3
100°	101.0	83.6	66.3	48.9	31.6	23.9	26.1	28.2	30.4	32.5	33.5
102.5°	131.2	127.5	123.8	120.1	116.4	105.6	87.6	69.5	51.4	33.4	34.7
105°	173.5	177.3	181.2	184.9	188.7	173.3	138.7	104.0	69.5	34.8	36.2
107.5°	221.8	224.9	228.0	231.0	234.1	214.8	173.3	131.8	90.3	48.8	47.3
110°	252.8	255.5	258.2	260.8	263.5	246.5	209.9	173.2	136.6	99.9	87.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	282.1	284.5	286.8	289.1	291.5	288.1	279.1	270.0	261.0	251.9	205.7
115°	328.2	330.4	332.5	334.7	336.8	339.5	342.7	345.8	348.9	352.1	293.4
117.5°	369.4	371.8	374.2	376.6	379.0	381.3	383.5	385.7	387.8	390.0	375.9
120°	399.5	401.5	403.3	405.2	407.2	409.2	411.5	413.8	416.0	418.3	419.9
122.5°	425.1	427.1	429.1	431.1	433.1	435.4	437.8	440.3	442.8	445.3	446.2
125°	464.0	465.7	467.3	469.0	470.6	472.6	475.1	477.4	479.9	482.2	483.1
127.5°	499.3	501.1	503.0	504.8	506.6	508.4	510.2	512.0	513.8	515.6	516.9
130°	521.6	523.7	525.7	527.7	529.8	531.5	532.9	534.3	535.7	537.1	538.5
132.5°	544.5	546.3	548.0	549.7	551.4	552.9	554.3	555.7	557.2	558.6	559.7
135°	574.2	576.2	578.2	580.2	582.3	583.9	585.1	586.2	587.3	588.5	589.7
137.5°	604.2	605.6	607.1	608.5	609.8	611.2	612.5	613.8	615.1	616.4	617.7
140°	623.9	624.8	625.8	626.9	627.9	629.1	630.5	631.9	633.2	634.7	635.9
142.5°	640.3	641.2	642.1	643.0	643.9	645.1	646.8	648.4	650.0	651.6	652.6
145°	666.1	665.9	665.9	665.7	665.5	666.6	668.7	670.9	673.0	675.2	676.1
147.5°	688.5	688.1	687.6	687.1	686.6	687.5	689.6	691.7	693.8	695.9	696.7
150°	703.2	702.3	701.4	700.5	699.6	700.2	702.2	704.3	706.3	708.3	709.1
152.5°	715.5	714.5	713.5	712.5	711.5	712.0	714.0	715.8	717.8	719.7	720.5
155°	733.4	732.3	731.2	730.0	728.9	729.0	730.6	732.1	733.6	735.2	735.9
157.5°	747.5	746.5	745.5	744.5	743.6	743.6	744.7	745.8	746.8	747.9	748.8
160°	755.7	754.9	754.2	753.4	752.6	752.6	753.4	754.2	754.9	755.7	756.4
162.5°	763.0	762.2	761.5	760.7	759.9	759.9	760.5	761.2	761.9	762.5	763.4
165°	772.8	772.0	771.3	770.5	769.7	769.6	770.0	770.3	770.7	771.1	772.0
167.5°	780.1	779.3	778.6	777.8	777.1	776.9	777.2	777.6	778.0	778.3	779.2
170°	784.2	783.4	782.7	782.0	781.1	780.9	781.1	781.5	781.7	782.0	782.9
172.5°	786.9	786.2	785.5	784.6	783.9	783.7	783.9	784.2	784.4	784.6	785.5
175°	790.5	789.6	788.7	787.8	786.9	786.6	786.8	787.2	787.4	787.7	788.6
177.5°	791.1	790.4	789.6	789.0	788.2	787.9	788.0	788.1	788.2	788.3	789.0
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6
2.5°	1374.1	1376.3	1378.6	1379.4	1379.0	1378.6	1378.1	1377.7
5°	1363.2	1365.7	1368.2	1369.0	1368.2	1367.3	1366.5	1365.7
7.5°	1341.1	1341.8	1342.6	1342.2	1340.8	1339.3	1337.9	1336.4
10°	1319.0	1318.2	1317.4	1316.1	1314.4	1312.8	1311.1	1309.5
12.5°	1293.7	1292.2	1290.7	1288.6	1285.8	1283.0	1280.3	1277.5
15°	1246.4	1241.1	1235.8	1231.8	1229.1	1226.3	1223.5	1220.7
17.5°	1192.9	1186.7	1180.4	1174.8	1170.1	1165.3	1160.5	1155.8
20°	1155.6	1148.7	1141.7	1135.2	1129.1	1123.0	1116.9	1110.8
22.5°	1114.7	1105.7	1096.7	1090.0	1085.5	1080.9	1076.4	1071.8
25°	1046.8	1035.4	1024.0	1016.3	1012.0	1007.9	1003.7	999.6
27.5°	982.0	968.7	955.4	945.5	938.9	932.3	925.7	919.1
30°	936.3	922.1	907.9	897.2	889.7	882.2	874.7	867.2
32.5°	890.3	874.2	857.9	846.4	839.4	832.3	825.2	818.2
35°	818.4	801.0	783.4	771.6	765.5	759.4	753.3	747.2
37.5°	748.4	729.1	709.8	696.7	689.7	682.7	675.7	668.7
40°	701.5	681.8	662.1	648.7	641.4	634.1	627.0	619.7
42.5°	654.2	633.8	613.4	599.7	592.7	585.7	578.8	571.8
45°	585.3	565.6	545.8	532.7	526.0	519.3	512.7	506.1
47.5°	518.3	498.7	479.1	466.3	460.2	454.2	448.1	442.1
50°	475.2	456.1	436.9	424.4	418.6	412.7	406.9	401.0
52.5°	434.6	416.0	397.6	385.6	380.3	374.9	369.5	364.1
55°	372.8	356.1	339.4	328.5	323.2	317.9	312.7	307.4
57.5°	316.6	301.3	286.0	276.1	271.7	267.3	262.9	258.4
60°	277.8	263.7	249.5	240.2	235.7	231.3	226.8	222.4
62.5°	244.2	230.6	217.2	209.0	206.4	203.7	201.1	198.4
65°	198.5	189.1	179.6	174.5	173.7	172.8	172.0	171.2
67.5°	160.3	156.0	151.6	149.0	148.1	147.2	146.3	145.4
70°	139.4	136.6	133.9	131.9	130.8	129.6	128.6	127.4
72.5°	121.3	119.0	116.6	115.1	114.5	113.8	113.1	112.4
75°	96.0	94.2	92.2	91.1	90.8	90.5	90.3	89.9
77.5°	72.7	71.7	70.5	69.7	69.3	68.9	68.4	68.0
80°	57.7	56.7	55.5	55.0	55.0	55.0	55.0	55.0
82.5°	43.6	43.0	42.3	42.0	42.0	42.0	42.0	42.0
85°	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7
87.5°	10.1	10.0	9.9	9.9	9.9	9.9	10.0	10.1
90°	12.7	13.3	13.9	14.4	14.7	14.9	15.2	15.4
92.5°	13.9	14.3	14.6	14.8	14.9	15.1	15.2	15.4
95°	23.6	24.1	24.8	25.0	24.9	24.8	24.7	24.5
97.5°	30.8	31.3	31.8	32.1	32.3	32.4	32.6	32.8
100°	34.6	35.5	36.6	37.3	37.5	37.7	38.0	38.2
102.5°	36.1	37.4	38.7	39.5	39.9	40.3	40.6	41.0
105°	37.6	39.0	40.4	41.3	41.8	42.4	42.9	43.4
107.5°	45.9	44.5	43.0	42.6	43.1	43.6	44.1	44.6
110°	74.5	61.8	49.2	43.0	43.5	44.1	44.6	45.1



TEST NUMBER: P331851-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	159.4	113.2	66.9	43.9	44.4	44.8	45.2	45.6
115°	234.7	175.9	117.2	83.3	74.2	65.1	55.9	46.8
117.5°	361.7	347.4	333.2	311.1	281.1	251.1	221.1	191.1
120°	421.4	422.9	424.4	416.6	399.5	382.4	365.3	348.1
122.5°	447.1	448.0	449.0	447.8	444.4	441.1	437.8	434.5
125°	484.0	484.9	485.8	486.5	486.8	487.2	487.6	488.0
127.5°	518.2	519.5	520.8	521.5	521.5	521.6	521.7	521.8
130°	539.9	541.3	542.7	543.3	543.2	543.1	542.9	542.8
132.5°	560.9	562.1	563.3	563.9	563.7	563.6	563.5	563.4
135°	591.0	592.2	593.5	594.0	593.8	593.5	593.3	593.0
137.5°	618.9	620.1	621.4	621.8	621.3	620.9	620.5	620.0
140°	637.0	638.1	639.3	639.5	638.9	638.2	637.6	637.0
142.5°	653.6	654.7	655.7	655.9	655.3	654.7	654.0	653.4
145°	676.9	677.8	678.7	678.9	678.2	677.6	676.9	676.4
147.5°	697.3	698.0	698.6	698.7	698.1	697.7	697.1	696.5
150°	709.8	710.6	711.3	711.4	710.8	710.1	709.5	708.9
152.5°	721.2	722.0	722.8	722.8	721.9	721.1	720.2	719.3
155°	736.6	737.4	738.2	738.0	737.0	736.1	735.0	734.0
157.5°	749.7	750.5	751.4	751.3	750.3	749.3	748.4	747.3
160°	757.2	758.0	758.7	758.6	757.7	756.8	756.0	755.1
162.5°	764.3	765.1	766.0	765.9	764.8	763.7	762.5	761.5
165°	772.9	773.7	774.6	774.6	773.7	772.9	772.0	771.1
167.5°	780.1	781.0	781.8	781.7	780.6	779.4	778.3	777.1
170°	783.7	784.6	785.5	785.4	784.2	783.1	782.0	780.8
172.5°	786.4	787.3	788.2	788.1	786.9	785.8	784.6	783.5
175°	789.5	790.3	791.2	791.0	789.7	788.5	787.2	785.9
177.5°	789.8	790.4	791.2	791.1	790.2	789.2	788.3	787.4
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8

(END OF REPORT)