

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: P331852-940

Luminaire Tested: **S122RDIW-S1005D710U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331852-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S1005D710U940-4F0-1E-UDD-F1
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, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5301.5 lumens
Efficiency: N/A
Efficacy: 88.7 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

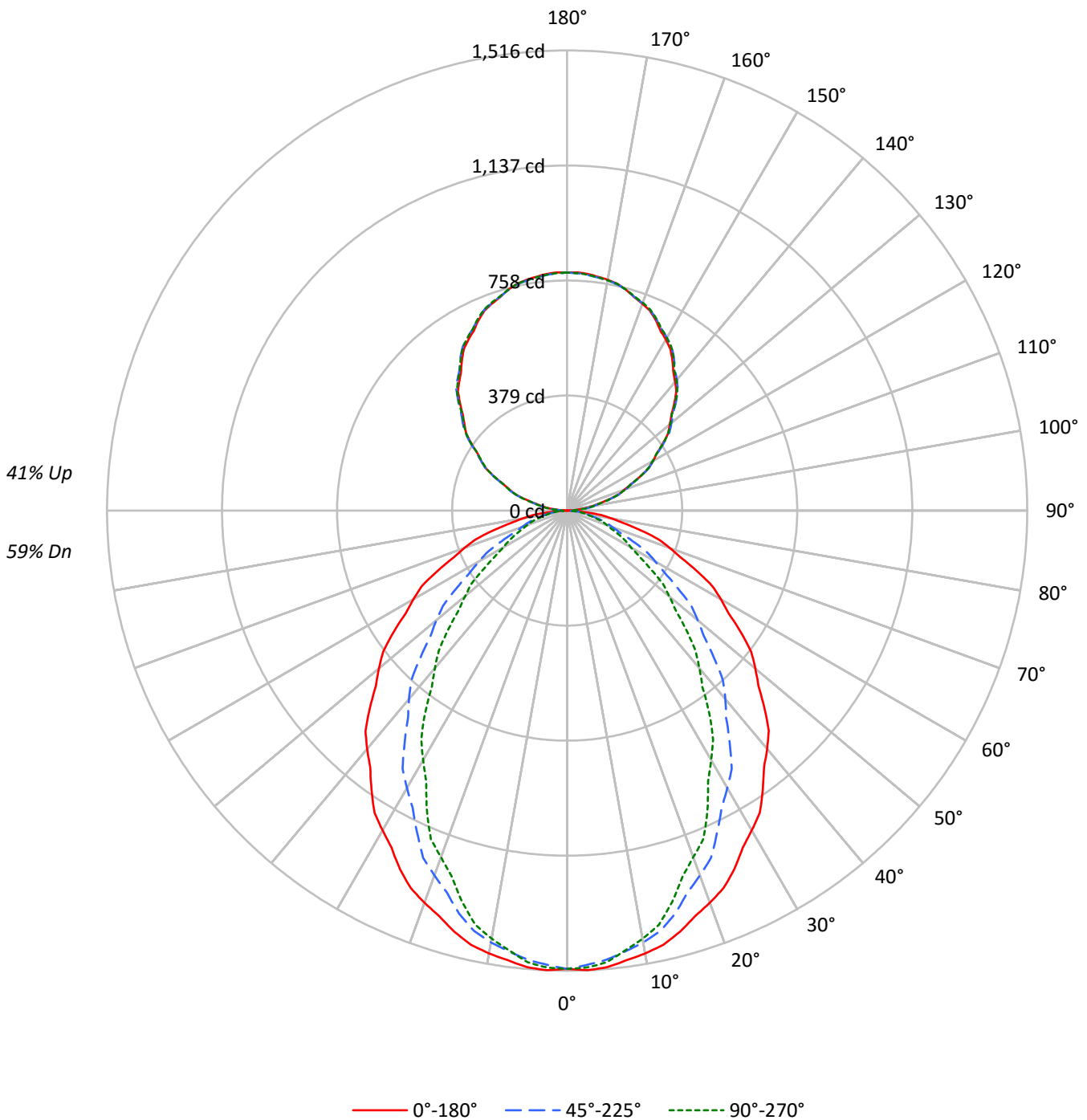
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	100	96	92	89	93	90	87	84	78	76	74	67	66	64	57	56	55	50
2	92	85	79	74	85	79	74	70	69	65	62	60	57	54	51	49	47	43
3	84	75	68	62	78	70	64	59	62	57	53	53	50	47	46	43	41	37
4	77	67	59	53	72	63	56	50	55	50	45	48	44	41	41	38	36	32
5	71	60	52	46	66	56	49	44	50	44	40	43	39	36	38	34	32	29
6	66	54	46	40	61	51	44	38	45	39	35	39	35	31	34	31	28	25
7	61	49	41	36	57	46	39	34	41	35	31	36	32	28	32	28	25	23
8	57	45	37	32	53	42	35	30	38	32	28	33	29	25	29	25	23	21
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	27	23	21	19
10	50	38	30	26	46	36	29	25	32	27	23	28	24	21	25	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24380	24380	24380
5°	24473	24076	24209
10°	24287	23682	23481
15°	24008	22980	22318
20°	23622	21978	20874
25°	23225	20838	19475
30°	22676	19669	17682
35°	22141	18398	16109
40°	21602	17081	14286
45°	20970	15602	12638
50°	20321	14109	11017
55°	19657	12504	9464
60°	18887	10811	7857
65°	18010	9085	7156
70°	16966	7482	6581
75°	15689	6818	6138
80°	13845	6100	5588
85°	10893	4798	4798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	2.7
10°-20°	388.1	7.3
20°-30°	545.0	10.3
30°-40°	594.3	11.2
40°-50°	546.4	10.3
50°-60°	429.2	8.1
60°-70°	279.8	5.3
70°-80°	144.3	2.7
80°-90°	40.5	0.8
90°-100°	49.7	0.9
100°-110°	154.3	2.9
110°-120°	263.8	5.0
120°-130°	346.9	6.5
130°-140°	389.3	7.3
140°-150°	381.7	7.2
150°-160°	320.2	6.0
160°-170°	212.4	4.0
170°-180°	74.2	1.4
0°-30°	1074.4	20.3
0°-40°	1668.7	31.5
0°-60°	2644.3	49.9
0°-90°	3108.9	58.6
90°-120°	467.8	8.8
90°-150°	1585.7	29.9
90°-180°	2193.0	41.4
0°-180°	5301.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1510	1510	1510	1510	1510	
5°	1510	1503	1486	1497	1494	143
15°	1436	1419	1375	1350	1335	404
25°	1304	1257	1170	1116	1093	599
35°	1123	1051	933	850	817	703
45°	918	824	683	590	554	709
55°	698	589	444	365	336	624
65°	471	360	238	194	187	467
75°	252	158	109	100	98	266
85°	59	31	26	26	26	69
90°	1	9	23	22	22	4
95°	34	41	42	42	41	39
105°	142	144	146	147	147	150
115°	265	268	267	267	265	262
125°	385	391	389	387	386	344
135°	498	505	507	506	504	385
145°	605	609	613	614	611	378
155°	691	693	695	698	697	318
165°	752	752	752	756	753	212
175°	783	781	779	784	780	74
180°	784	784	784	784	784	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0
2.5°	1515.6	1514.3	1513.1	1511.9	1510.6	1508.7	1506.0	1503.4	1500.7	1498.1	1500.5
5°	1510.0	1508.5	1507.0	1505.5	1504.0	1501.3	1497.3	1493.3	1489.4	1485.5	1488.2
7.5°	1494.5	1492.6	1490.8	1488.8	1486.9	1483.7	1479.1	1474.4	1469.9	1465.3	1466.1
10°	1481.4	1479.3	1477.1	1475.0	1472.8	1468.7	1462.7	1456.6	1450.5	1444.5	1443.6
12.5°	1465.0	1462.3	1459.7	1457.1	1454.6	1449.3	1441.5	1433.8	1426.0	1418.3	1416.6
15°	1436.3	1432.9	1429.6	1426.2	1422.9	1416.0	1405.8	1395.4	1385.1	1374.8	1369.0
17.5°	1401.0	1395.9	1390.8	1385.7	1380.6	1371.5	1358.2	1345.0	1331.7	1318.5	1311.6
20°	1374.8	1368.7	1362.6	1356.6	1350.5	1339.9	1324.6	1309.5	1294.3	1279.1	1271.5
22.5°	1346.3	1339.5	1332.8	1326.0	1319.1	1307.2	1290.0	1272.9	1255.8	1238.7	1228.9
25°	1303.7	1294.0	1284.2	1274.5	1264.8	1250.0	1229.9	1209.9	1189.8	1169.7	1157.4
27.5°	1252.3	1241.8	1231.2	1220.7	1210.1	1193.5	1170.9	1148.3	1125.7	1103.1	1088.6
30°	1216.3	1204.7	1193.2	1181.6	1170.1	1152.2	1127.8	1103.6	1079.3	1055.0	1039.5
32.5°	1181.2	1167.8	1154.3	1140.9	1127.3	1108.2	1083.4	1058.6	1033.8	1009.1	991.4
35°	1123.3	1107.9	1092.3	1076.8	1061.4	1040.3	1013.5	986.9	960.1	933.4	914.3
37.5°	1065.4	1048.4	1031.4	1014.3	997.4	974.6	946.1	917.7	889.1	860.7	839.6
40°	1024.9	1006.7	988.5	970.3	952.1	928.2	898.8	869.3	839.8	810.4	788.8
42.5°	983.4	964.2	945.0	925.8	906.6	881.8	851.4	820.9	790.5	760.1	737.8
45°	918.4	898.0	877.6	857.3	837.0	810.8	778.9	747.1	715.2	683.3	661.7
47.5°	854.9	833.4	811.8	790.2	768.7	741.5	708.6	675.6	642.7	609.8	588.4
50°	809.0	787.5	765.9	744.3	722.7	695.3	661.9	628.5	595.0	561.7	540.7
52.5°	764.2	741.6	719.2	696.6	674.0	646.5	613.8	581.1	548.4	515.8	495.5
55°	698.3	674.7	650.9	627.2	603.6	575.3	542.5	509.7	477.0	444.2	425.9
57.5°	630.8	606.5	582.2	557.9	533.6	505.7	474.2	442.6	411.2	379.6	362.9
60°	584.9	560.6	536.3	512.0	487.7	459.9	428.6	397.3	366.0	334.8	319.3
62.5°	540.1	515.8	491.5	467.2	442.9	415.8	386.0	356.1	326.4	296.6	281.8
65°	471.4	446.8	422.3	397.7	373.1	347.1	319.8	292.5	265.1	237.8	227.5
67.5°	405.3	380.9	356.5	332.1	307.6	283.1	258.6	234.0	209.4	184.8	180.0
70°	359.4	335.7	312.0	288.4	264.7	242.4	221.4	200.5	179.5	158.5	155.5
72.5°	315.7	292.9	270.3	247.5	224.8	205.0	188.2	171.4	154.5	137.8	135.2
75°	251.5	230.2	208.9	187.7	166.4	150.6	140.3	130.0	119.7	109.3	107.2
77.5°	188.3	169.7	151.1	132.4	113.7	101.9	96.9	91.9	86.9	82.0	80.8
80°	148.9	133.5	118.0	102.5	87.0	77.8	74.7	71.7	68.7	65.6	64.4
82.5°	112.9	100.8	88.7	76.6	64.6	57.4	55.4	53.3	51.3	49.2	48.5
85°	58.8	52.3	46.0	39.6	33.3	29.6	28.7	27.8	26.8	25.9	25.9
87.5°	17.7	16.1	14.4	12.8	11.2	10.8	11.4	12.1	12.8	13.4	13.1
90°	0.6	2.4	4.2	6.0	7.8	10.3	13.5	16.7	19.9	23.2	22.8
92.5°	11.8	13.1	14.4	15.7	16.9	18.0	18.7	19.5	20.2	21.0	21.1
95°	34.4	35.8	37.4	38.8	40.3	41.2	41.5	41.7	42.1	42.4	42.4
97.5°	62.9	64.1	65.5	66.7	68.0	68.9	69.6	70.1	70.6	71.2	71.2
100°	84.0	85.2	86.4	87.6	88.7	89.5	90.0	90.4	90.9	91.3	91.3
102.5°	106.3	107.2	108.2	109.1	110.0	110.8	111.4	111.9	112.4	113.0	113.2
105°	142.2	142.7	143.1	143.6	144.0	144.4	144.7	145.0	145.3	145.6	145.9
107.5°	178.5	179.1	179.9	180.5	181.1	181.5	181.5	181.5	181.5	181.5	181.6
110°	201.8	202.7	203.6	204.5	205.4	205.8	205.8	205.8	205.8	205.8	205.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	227.2	228.1	229.0	229.9	230.8	231.1	231.0	230.9	230.8	230.7	230.3
115°	264.7	265.6	266.4	267.3	268.2	268.5	268.2	267.9	267.6	267.3	267.2
117.5°	302.0	303.2	304.3	305.5	306.7	306.8	306.0	305.2	304.4	303.6	303.3
120°	326.9	328.1	329.2	330.4	331.5	331.5	330.4	329.2	328.1	326.9	326.9
122.5°	349.6	351.1	352.5	353.8	355.3	355.6	354.7	353.9	353.1	352.3	352.0
125°	385.1	386.5	387.7	389.1	390.4	390.8	390.4	389.9	389.5	389.1	388.6
127.5°	419.6	421.3	423.0	424.6	426.3	427.0	426.4	425.9	425.3	424.8	424.3
130°	441.3	443.3	445.1	447.1	449.0	449.8	449.5	449.2	448.9	448.6	448.4
132.5°	465.7	467.3	468.9	470.4	471.9	472.8	472.8	472.9	473.0	473.0	472.3
135°	498.3	499.9	501.5	503.1	504.7	505.7	506.0	506.3	506.6	506.8	506.7
137.5°	532.5	533.9	535.2	536.5	537.8	538.7	539.0	539.5	539.8	540.2	540.1
140°	553.2	554.5	555.8	557.1	558.5	559.5	560.3	561.0	561.7	562.4	562.4
142.5°	574.4	575.7	577.0	578.4	579.6	580.6	581.0	581.6	582.0	582.6	582.6
145°	604.8	605.8	606.8	607.9	608.9	609.8	610.7	611.6	612.5	613.4	613.5
147.5°	632.0	633.1	634.4	635.6	636.9	637.8	638.4	638.9	639.5	640.2	640.4
150°	650.4	651.3	652.2	653.1	654.0	654.7	655.3	655.9	656.5	657.1	657.5
152.5°	666.8	667.7	668.6	669.5	670.4	671.2	671.9	672.6	673.3	674.0	674.6
155°	691.4	691.9	692.3	692.8	693.2	693.7	694.1	694.6	695.0	695.4	696.2
157.5°	712.5	712.8	713.1	713.4	713.7	714.0	714.3	714.5	714.8	715.1	716.0
160°	725.2	725.5	725.8	726.1	726.4	726.7	726.7	726.9	727.0	727.2	728.1
162.5°	736.8	736.9	737.0	737.0	737.1	737.2	737.4	737.5	737.6	737.8	738.8
165°	752.3	752.2	752.1	751.9	751.8	751.7	751.7	751.7	751.7	751.7	752.7
167.5°	765.4	764.9	764.5	764.0	763.6	763.3	763.3	763.2	763.2	763.2	764.2
170°	772.2	771.8	771.3	770.9	770.4	770.2	770.0	769.8	769.7	769.5	770.6
172.5°	776.9	776.5	776.1	775.6	775.2	774.9	774.7	774.6	774.5	774.3	775.3
175°	782.7	782.4	781.9	781.5	781.0	780.7	780.3	780.1	779.8	779.4	780.5
177.5°	785.2	784.8	784.4	784.1	783.7	783.5	783.2	783.0	782.7	782.5	783.2
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0
2.5°	1502.9	1505.3	1507.8	1508.7	1508.2	1507.8	1507.3	1506.8
5°	1490.9	1493.7	1496.4	1497.3	1496.4	1495.5	1494.6	1493.7
7.5°	1466.8	1467.6	1468.4	1468.0	1466.4	1464.8	1463.3	1461.7
10°	1442.6	1441.7	1440.8	1439.5	1437.6	1435.8	1434.0	1432.2
12.5°	1415.0	1413.3	1411.7	1409.3	1406.3	1403.3	1400.3	1397.2
15°	1363.2	1357.5	1351.7	1347.3	1344.3	1341.2	1338.2	1335.2
17.5°	1304.8	1297.9	1291.0	1285.0	1279.8	1274.5	1269.3	1264.1
20°	1263.9	1256.3	1248.8	1241.6	1234.9	1228.2	1221.6	1214.9
22.5°	1219.1	1209.3	1199.5	1192.1	1187.2	1182.2	1177.2	1172.2
25°	1144.9	1132.5	1120.0	1111.5	1106.9	1102.3	1097.8	1093.2
27.5°	1074.1	1059.5	1045.0	1034.1	1026.9	1019.7	1012.4	1005.2
30°	1024.0	1008.5	993.0	981.2	973.0	964.8	956.6	948.4
32.5°	973.7	956.1	938.3	925.7	918.0	910.3	902.5	894.8
35°	895.1	876.0	856.8	843.9	837.2	830.5	823.9	817.3
37.5°	818.5	797.5	776.3	762.0	754.4	746.7	739.0	731.4
40°	767.2	745.6	724.2	709.4	701.5	693.6	685.7	677.8
42.5°	715.5	693.2	670.9	655.9	648.3	640.6	633.0	625.4
45°	640.2	618.6	597.0	582.6	575.3	568.0	560.7	553.5
47.5°	566.9	545.5	524.0	510.0	503.4	496.8	490.1	483.5
50°	519.8	498.8	477.9	464.1	457.8	451.4	445.1	438.6
52.5°	475.3	455.0	434.9	421.8	415.9	410.0	404.1	398.2
55°	407.7	389.5	371.2	359.3	353.5	347.7	342.0	336.2
57.5°	346.3	329.5	312.8	302.0	297.2	292.3	287.5	282.6
60°	303.8	288.4	272.9	262.7	257.8	253.0	248.1	243.3
62.5°	267.1	252.3	237.6	228.6	225.8	222.8	219.9	217.0
65°	217.1	206.8	196.4	190.8	189.9	189.0	188.2	187.3
67.5°	175.3	170.6	165.8	162.9	162.0	161.0	160.1	159.1
70°	152.5	149.5	146.4	144.3	143.0	141.8	140.6	139.4
72.5°	132.7	130.1	127.5	125.9	125.2	124.5	123.7	123.0
75°	105.0	103.0	100.9	99.6	99.3	99.0	98.7	98.4
77.5°	79.5	78.4	77.1	76.2	75.8	75.3	74.8	74.4
80°	63.1	62.0	60.7	60.1	60.1	60.1	60.1	60.1
82.5°	47.7	47.0	46.3	45.9	45.9	45.9	45.9	45.9
85°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
87.5°	12.8	12.5	12.1	12.0	12.0	12.1	12.1	12.1
90°	22.6	22.3	22.0	21.9	22.0	22.2	22.4	22.5
92.5°	21.1	21.2	21.3	21.3	21.3	21.4	21.4	21.4
95°	42.4	42.4	42.4	42.2	41.9	41.6	41.3	41.0
97.5°	71.2	71.2	71.2	71.2	71.2	71.2	71.1	71.1
100°	91.3	91.3	91.3	91.2	91.1	91.0	90.8	90.7
102.5°	113.2	113.3	113.5	113.5	113.3	113.2	113.1	112.9
105°	146.2	146.4	146.8	146.9	146.9	146.9	146.9	146.9
107.5°	181.6	181.8	181.9	181.6	180.9	180.3	179.6	179.0
110°	205.8	205.8	205.8	205.5	205.1	204.6	204.2	203.8



TEST NUMBER: P331852-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	230.0	229.6	229.3	228.9	228.6	228.3	227.9	227.7
115°	267.1	266.9	266.7	266.4	266.0	265.6	265.1	264.7
117.5°	302.9	302.6	302.2	301.8	301.3	300.9	300.4	300.0
120°	326.9	326.9	326.9	326.6	326.2	325.7	325.3	324.9
122.5°	351.6	351.2	350.9	350.5	350.2	349.9	349.6	349.3
125°	388.2	387.7	387.3	387.0	386.9	386.7	386.6	386.5
127.5°	423.7	423.2	422.7	422.2	421.7	421.2	420.8	420.4
130°	448.1	447.7	447.5	447.0	446.4	445.9	445.2	444.7
132.5°	471.7	471.0	470.4	469.8	469.4	468.9	468.4	468.0
135°	506.6	506.4	506.3	506.0	505.5	505.1	504.6	504.2
137.5°	539.9	539.8	539.8	539.4	538.8	538.2	537.6	537.0
140°	562.4	562.4	562.4	562.1	561.6	561.0	560.4	559.8
142.5°	582.8	582.9	583.0	582.8	582.2	581.6	581.0	580.4
145°	613.7	613.9	613.9	613.8	613.1	612.6	612.0	611.4
147.5°	640.8	641.1	641.4	641.3	640.8	640.2	639.6	639.1
150°	657.9	658.4	658.8	658.8	658.4	657.9	657.5	657.1
152.5°	675.1	675.6	676.3	676.3	675.6	675.1	674.6	674.0
155°	696.9	697.7	698.4	698.6	698.1	697.7	697.2	696.8
157.5°	717.0	718.0	719.0	719.2	718.5	717.7	717.0	716.3
160°	729.0	729.9	730.8	730.8	730.3	729.7	729.2	728.5
162.5°	739.8	740.8	741.8	741.9	741.2	740.6	739.9	739.1
165°	753.8	754.7	755.8	756.0	755.2	754.5	753.8	753.0
167.5°	765.3	766.2	767.3	767.4	766.7	765.9	765.2	764.4
170°	771.6	772.7	773.6	773.7	772.8	772.0	771.1	770.2
172.5°	776.4	777.4	778.5	778.5	777.7	776.8	775.9	775.0
175°	781.5	782.6	783.6	783.6	782.7	781.9	781.0	780.2
177.5°	783.9	784.6	785.3	785.3	784.6	783.9	783.2	782.5
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1

(END OF REPORT)