

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: P332798-830

Luminaire Tested: **S124DIW-S795D1340U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332798-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1340U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7600.5 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

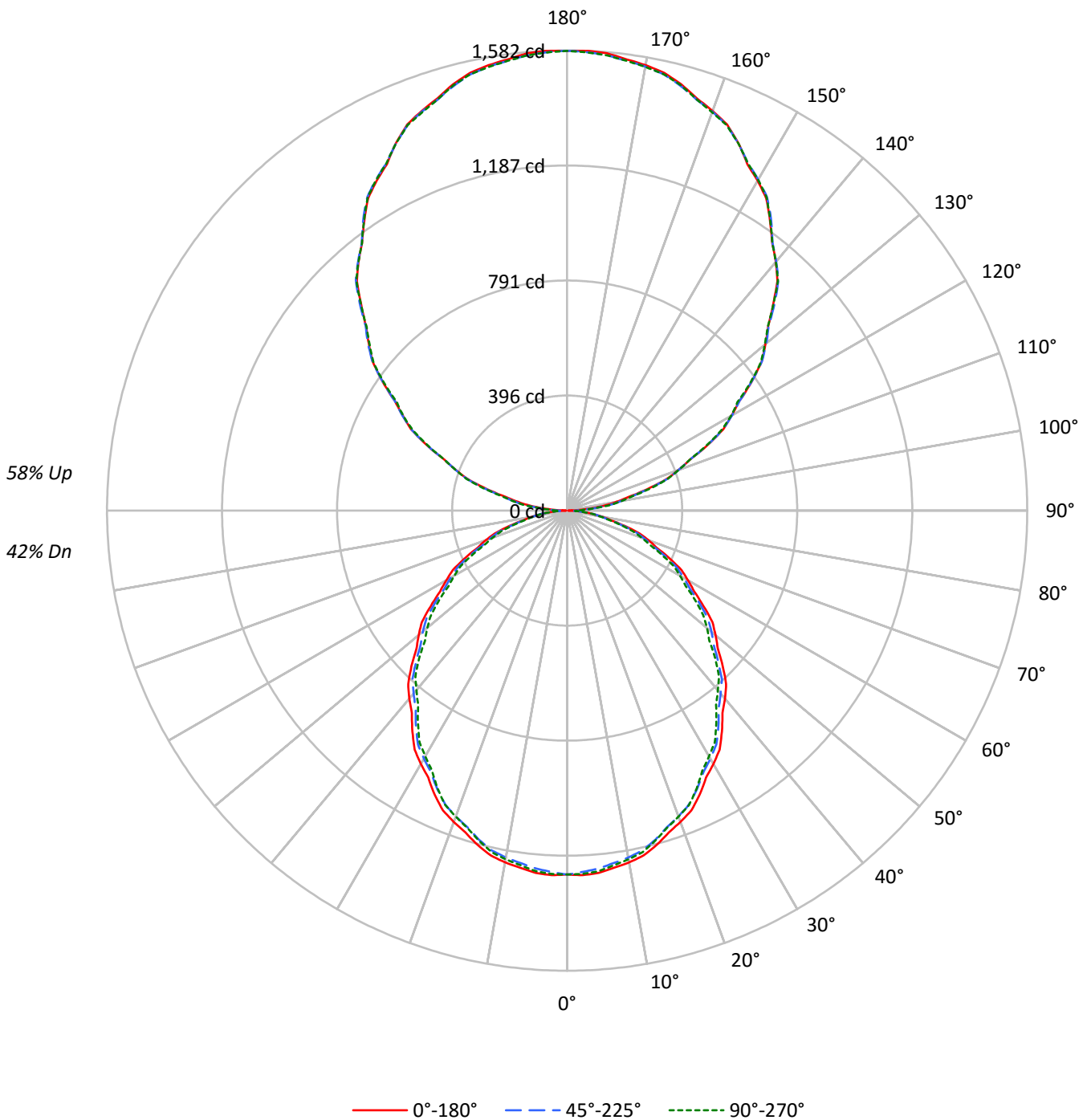
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	34	31	30	25
4	73	62	54	48	66	57	50	45	47	42	38	38	35	32	30	28	25	22
5	67	55	47	41	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	33	38	33	29	31	27	24	25	22	20	16
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	22	20	17	15
8	53	41	33	28	48	37	31	26	31	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	21	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10101	10101	10101
5°	10131	10009	10083
10°	10067	9928	9977
15°	9947	9787	9812
20°	9784	9613	9620
25°	9600	9413	9386
30°	9374	9177	9093
35°	9140	8932	8814
40°	8896	8652	8495
45°	8643	8379	8218
50°	8361	8133	7882
55°	8058	7817	7562
60°	7753	7463	7237
65°	7412	7125	6837
70°	7027	6675	6413
75°	6441	6129	5973
80°	5732	5500	5360
85°	5011	4826	4733



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	1.6
10°-20°	332.0	4.4
20°-30°	488.6	6.4
30°-40°	568.1	7.5
40°-50°	568.1	7.5
50°-60°	496.9	6.5
60°-70°	369.0	4.9
70°-80°	209.7	2.8
80°-90°	65.2	0.9
90°-100°	104.3	1.4
100°-110°	308.8	4.1
110°-120°	524.1	6.9
120°-130°	691.1	9.1
130°-140°	776.2	10.2
140°-150°	762.7	10.0
150°-160°	641.5	8.4
160°-170°	426.8	5.6
170°-180°	149.5	2.0
0°-30°	938.5	12.3
0°-40°	1506.5	19.8
0°-60°	2571.5	33.8
0°-90°	3215.5	42.3
90°-120°	937.2	12.3
90°-150°	3167.3	41.7
90°-180°	4385.0	57.7
0°-180°	7600.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1250	1246	1235	1245	1244	119
15°	1190	1185	1171	1176	1174	335
25°	1078	1070	1057	1057	1054	496
35°	927	920	906	899	894	580
45°	757	749	734	723	720	583
55°	572	569	555	544	537	513
65°	388	383	373	363	358	384
75°	206	202	196	193	192	219
85°	54	54	52	52	51	60
90°	4	17	27	34	37	8
95°	73	84	93	96	97	82
105°	285	286	291	295	298	302
115°	533	533	530	529	528	525
125°	776	776	775	772	770	692
135°	1001	1008	1008	1006	1002	774
145°	1216	1221	1222	1221	1218	761
155°	1394	1393	1392	1397	1392	641
165°	1517	1513	1511	1518	1513	427
175°	1578	1572	1571	1578	1571	150
180°	1580	1580	1580	1580	1580	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1254.4	1253.9	1253.3	1252.8	1252.3	1251.0	1249.1	1247.1	1245.1	1243.2	1244.9
5°	1250.2	1249.3	1248.4	1247.5	1246.6	1244.9	1242.5	1240.0	1237.6	1235.1	1237.6
7.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1233.2	1230.5	1227.8	1225.0	1222.3	1224.3
10°	1228.1	1227.3	1226.3	1225.5	1224.6	1222.7	1219.7	1216.9	1214.0	1211.1	1212.9
12.5°	1214.5	1213.6	1212.7	1211.8	1211.0	1208.9	1205.9	1202.8	1199.8	1196.7	1198.6
15°	1190.1	1189.1	1188.3	1187.3	1186.5	1184.4	1181.0	1177.7	1174.3	1171.0	1172.3
17.5°	1160.6	1159.4	1158.3	1157.3	1156.1	1154.0	1150.8	1147.6	1144.4	1141.3	1142.2
20°	1138.9	1137.7	1136.7	1135.6	1134.4	1132.2	1128.9	1125.5	1122.2	1118.9	1119.6
22.5°	1115.7	1114.2	1112.7	1111.3	1109.7	1107.4	1104.0	1100.7	1097.3	1094.0	1095.2
25°	1077.7	1076.2	1074.6	1073.1	1071.5	1069.1	1066.0	1062.9	1059.8	1056.7	1056.9
27.5°	1034.4	1032.8	1031.2	1029.6	1028.0	1025.8	1022.8	1020.0	1017.1	1014.2	1013.6
30°	1005.6	1003.8	1002.0	1000.2	998.4	996.1	993.2	990.3	987.4	984.5	983.6
32.5°	975.1	973.5	971.9	970.3	968.7	966.3	963.3	960.2	957.2	954.0	953.0
35°	927.4	925.8	924.3	922.7	921.1	918.8	915.7	912.6	909.5	906.3	904.7
37.5°	877.0	875.6	874.2	872.8	871.3	868.9	865.6	862.2	858.9	855.5	853.8
40°	844.1	842.4	840.6	838.8	837.0	834.4	831.1	827.7	824.4	821.0	818.9
42.5°	808.9	807.8	806.7	805.7	804.6	802.2	798.5	794.8	791.1	787.4	784.9
45°	757.0	755.4	753.8	752.2	750.7	748.1	744.6	741.0	737.4	733.9	731.4
47.5°	702.6	701.5	700.5	699.4	698.3	696.2	692.9	689.6	686.3	683.0	680.1
50°	665.7	664.8	663.9	663.0	662.1	660.2	657.0	653.9	650.7	647.6	644.5
52.5°	629.6	628.6	627.5	626.4	625.3	623.1	619.8	616.5	613.2	609.9	607.2
55°	572.5	571.7	571.1	570.4	569.8	567.9	564.8	561.7	558.6	555.4	552.7
57.5°	517.9	517.2	516.4	515.7	514.9	512.9	509.9	506.8	503.8	500.7	498.1
60°	480.2	479.1	478.0	476.9	475.8	473.7	470.9	468.0	465.1	462.2	460.1
62.5°	443.4	442.4	441.5	440.5	439.6	437.6	434.5	431.4	428.4	425.3	423.5
65°	388.0	386.9	385.8	384.7	383.5	381.8	379.7	377.4	375.1	373.0	370.7
67.5°	332.2	331.2	330.2	329.1	328.2	326.6	324.4	322.3	320.2	318.0	315.8
70°	297.7	296.2	294.6	293.0	291.5	289.8	288.0	286.3	284.5	282.8	281.0
72.5°	260.9	259.3	257.8	256.2	254.6	253.2	251.8	250.2	248.8	247.4	246.0
75°	206.5	205.4	204.3	203.2	202.1	201.0	199.8	198.7	197.7	196.5	195.6
77.5°	154.6	154.1	153.6	153.2	152.6	151.9	150.9	150.0	148.9	148.0	147.7
80°	123.3	122.6	122.0	121.3	120.6	120.1	119.6	119.2	118.8	118.3	117.8
82.5°	92.8	92.6	92.2	91.9	91.6	91.4	91.3	91.2	91.1	91.0	90.8
85°	54.1	54.1	54.1	54.1	54.1	53.9	53.4	53.1	52.6	52.1	52.1
87.5°	21.6	22.0	22.4	22.8	23.3	23.6	23.8	24.1	24.4	24.6	25.0
90°	3.7	6.7	9.6	12.6	15.6	18.2	20.4	22.5	24.7	26.9	28.6
92.5°	26.2	29.6	33.0	36.4	39.9	42.3	43.8	45.3	46.8	48.4	49.4
95°	73.3	75.8	78.2	80.7	83.1	85.3	87.2	89.1	91.0	92.9	93.7
97.5°	128.1	130.1	132.1	133.9	135.9	138.0	140.3	142.5	144.7	146.9	147.9
100°	171.2	172.2	173.3	174.4	175.5	177.2	179.6	182.1	184.5	187.0	187.6
102.5°	216.1	216.6	217.0	217.4	217.8	219.1	221.4	223.7	225.8	228.1	228.8
105°	284.8	285.1	285.4	285.6	285.9	286.5	287.7	288.8	289.8	291.0	291.7
107.5°	356.9	357.2	357.6	357.9	358.3	358.4	358.6	358.8	359.0	359.1	359.9
110°	405.9	406.3	406.9	407.5	408.0	408.1	407.8	407.6	407.4	407.1	406.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	456.7	456.8	456.9	457.0	457.1	456.9	456.5	455.9	455.4	455.0	454.9
115°	532.9	532.9	532.9	532.9	532.9	532.7	532.2	531.6	531.0	530.5	530.3
117.5°	604.8	605.0	605.3	605.5	605.7	605.6	605.2	604.8	604.5	604.1	603.1
120°	652.7	653.8	654.9	656.0	657.0	657.2	656.4	655.6	654.8	653.9	652.6
122.5°	702.6	703.0	703.5	703.9	704.4	704.4	704.0	703.6	703.2	702.9	701.9
125°	776.2	776.2	776.2	776.2	776.2	776.1	775.8	775.5	775.2	775.0	774.4
127.5°	842.9	843.8	844.6	845.4	846.2	846.4	845.9	845.6	845.1	844.6	844.1
130°	889.9	890.7	891.6	892.3	893.2	893.5	893.5	893.5	893.5	893.5	893.0
132.5°	937.8	938.4	939.0	939.6	940.2	940.4	940.2	939.9	939.7	939.5	939.0
135°	1001.1	1002.8	1004.4	1006.0	1007.7	1008.4	1008.4	1008.4	1008.4	1008.4	1008.0
137.5°	1070.1	1070.8	1071.6	1072.3	1073.1	1073.7	1074.1	1074.6	1075.0	1075.4	1074.7
140°	1116.1	1116.5	1117.1	1117.7	1118.2	1118.4	1118.4	1118.4	1118.4	1118.4	1118.2
142.5°	1158.1	1158.6	1159.1	1159.7	1160.3	1160.4	1160.2	1160.0	1159.8	1159.5	1159.5
145°	1216.3	1217.4	1218.4	1219.6	1220.6	1221.3	1221.5	1221.8	1222.1	1222.4	1222.1
147.5°	1273.9	1275.3	1276.6	1277.9	1279.1	1279.7	1279.5	1279.3	1279.0	1278.8	1278.7
150°	1309.2	1310.2	1311.4	1312.4	1313.5	1314.0	1314.0	1314.0	1314.0	1314.0	1314.0
152.5°	1342.4	1343.0	1343.7	1344.3	1345.0	1345.5	1345.7	1345.9	1346.1	1346.3	1347.0
155°	1393.5	1393.5	1393.5	1393.5	1393.5	1393.4	1393.1	1392.8	1392.5	1392.3	1393.4
157.5°	1436.5	1436.1	1435.6	1435.0	1434.5	1434.3	1434.3	1434.2	1434.2	1434.1	1434.9
160°	1462.0	1461.7	1461.4	1461.1	1460.8	1460.6	1460.3	1460.1	1459.8	1459.5	1460.3
162.5°	1485.4	1484.7	1484.0	1483.3	1482.6	1482.1	1481.9	1481.6	1481.3	1481.0	1482.5
165°	1516.9	1516.2	1515.3	1514.5	1513.7	1513.1	1512.5	1511.9	1511.4	1510.8	1512.5
167.5°	1541.2	1540.0	1538.9	1537.8	1536.6	1536.1	1536.2	1536.2	1536.3	1536.3	1537.9
170°	1554.8	1553.5	1552.2	1550.8	1549.4	1548.9	1549.2	1549.4	1549.7	1549.9	1551.6
172.5°	1564.6	1563.5	1562.4	1561.2	1560.1	1559.5	1559.6	1559.6	1559.7	1559.7	1561.6
175°	1578.1	1576.7	1575.4	1574.0	1572.6	1571.8	1571.6	1571.3	1571.0	1570.7	1572.6
177.5°	1582.4	1581.4	1580.3	1579.2	1578.1	1577.6	1577.6	1577.6	1577.6	1577.6	1579.1
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1246.7	1248.5	1250.3	1251.1	1250.9	1250.8	1250.6	1250.4
5°	1240.0	1242.5	1244.9	1245.9	1245.5	1245.1	1244.6	1244.2
7.5°	1226.2	1228.2	1230.1	1231.0	1230.8	1230.5	1230.2	1229.9
10°	1214.7	1216.4	1218.2	1218.9	1218.4	1218.0	1217.6	1217.1
12.5°	1200.6	1202.5	1204.5	1205.1	1204.6	1203.9	1203.2	1202.7
15°	1173.7	1175.0	1176.3	1176.7	1176.0	1175.4	1174.7	1174.0
17.5°	1143.0	1143.9	1144.7	1144.9	1144.4	1144.0	1143.6	1143.1
20°	1120.2	1120.9	1121.5	1121.6	1121.2	1120.8	1120.3	1119.8
22.5°	1096.4	1097.6	1098.8	1099.0	1098.2	1097.4	1096.6	1095.8
25°	1057.2	1057.3	1057.6	1057.2	1056.4	1055.5	1054.6	1053.7
27.5°	1013.1	1012.6	1012.0	1011.3	1010.1	1009.0	1007.9	1006.7
30°	982.7	981.8	980.9	980.0	978.8	977.7	976.6	975.5
32.5°	951.9	950.8	949.8	948.7	947.5	946.4	945.3	944.2
35°	903.2	901.6	900.0	898.7	897.6	896.5	895.4	894.3
37.5°	852.2	850.5	848.9	847.3	845.7	844.3	842.8	841.3
40°	816.6	814.5	812.2	810.5	809.4	808.3	807.2	806.1
42.5°	782.2	779.7	777.0	775.4	774.7	773.9	773.2	772.4
45°	729.0	726.5	724.1	722.6	721.8	721.1	720.5	719.8
47.5°	677.4	674.7	671.8	669.7	668.0	666.3	664.6	662.9
50°	641.4	638.3	635.2	632.9	631.6	630.3	629.0	627.6
52.5°	604.5	601.6	598.9	596.7	595.0	593.3	591.6	589.9
55°	550.1	547.4	544.7	542.7	541.4	540.1	538.7	537.3
57.5°	495.6	493.0	490.5	488.6	487.3	486.0	484.7	483.4
60°	458.2	456.2	454.1	452.6	451.5	450.3	449.2	448.2
62.5°	421.6	419.8	418.0	416.5	415.4	414.2	413.2	412.1
65°	368.5	366.3	364.0	362.4	361.3	360.1	359.0	357.9
67.5°	313.8	311.6	309.4	308.2	307.9	307.6	307.3	307.0
70°	279.2	277.4	275.6	274.4	273.7	273.1	272.4	271.7
72.5°	244.6	243.2	241.8	240.7	240.0	239.3	238.7	238.0
75°	194.7	193.8	192.9	192.4	192.2	191.9	191.7	191.5
77.5°	147.4	147.1	146.9	146.5	145.9	145.3	144.8	144.2
80°	117.4	117.0	116.5	116.2	115.9	115.7	115.6	115.3
82.5°	90.5	90.2	89.9	89.7	89.5	89.3	89.1	88.8
85°	52.1	52.1	52.1	52.0	51.8	51.6	51.4	51.1
87.5°	25.3	25.6	25.9	26.1	26.3	26.4	26.5	26.6
90°	30.2	31.8	33.4	34.5	35.1	35.6	36.1	36.7
92.5°	50.3	51.4	52.3	53.0	53.3	53.6	53.9	54.3
95°	94.5	95.4	96.1	96.6	96.6	96.6	96.6	96.6
97.5°	148.9	149.9	150.8	151.4	151.4	151.4	151.4	151.4
100°	188.1	188.7	189.2	189.5	189.5	189.5	189.5	189.5
102.5°	229.6	230.4	231.1	231.6	231.9	232.1	232.2	232.5
105°	292.6	293.4	294.2	295.0	295.8	296.6	297.5	298.2
107.5°	360.6	361.4	362.2	362.5	362.5	362.4	362.4	362.3
110°	406.0	405.4	404.9	405.0	405.9	406.6	407.5	408.3



TEST NUMBER: P332798-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	454.8	454.7	454.5	454.6	454.7	454.9	455.1	455.2
115°	530.0	529.7	529.4	529.1	528.9	528.6	528.3	528.1
117.5°	602.3	601.3	600.4	599.6	599.1	598.6	598.0	597.5
120°	651.3	649.9	648.6	648.1	648.7	649.2	649.8	650.3
122.5°	701.0	700.1	699.2	698.2	697.2	696.3	695.3	694.3
125°	773.9	773.4	772.8	772.2	771.8	771.2	770.6	770.1
127.5°	843.6	843.0	842.4	842.0	841.6	841.1	840.7	840.3
130°	892.5	891.9	891.4	890.6	889.5	888.3	887.3	886.2
132.5°	938.4	937.9	937.4	936.9	936.4	935.9	935.6	935.1
135°	1007.4	1006.8	1006.3	1005.6	1004.8	1004.0	1003.1	1002.3
137.5°	1074.0	1073.4	1072.6	1072.3	1072.5	1072.7	1072.8	1073.0
140°	1117.9	1117.7	1117.4	1117.1	1116.8	1116.5	1116.3	1116.1
142.5°	1159.4	1159.4	1159.3	1159.2	1159.2	1159.1	1159.1	1159.0
145°	1221.8	1221.5	1221.3	1220.8	1219.9	1219.1	1218.3	1217.5
147.5°	1278.4	1278.2	1278.0	1277.7	1277.4	1277.1	1277.0	1276.7
150°	1314.0	1314.0	1314.0	1313.9	1313.6	1313.3	1313.1	1312.9
152.5°	1347.6	1348.3	1349.0	1348.9	1348.2	1347.5	1346.8	1346.0
155°	1394.5	1395.5	1396.7	1396.7	1395.5	1394.5	1393.4	1392.3
157.5°	1435.7	1436.5	1437.4	1437.3	1436.3	1435.4	1434.5	1433.6
160°	1461.1	1462.0	1462.7	1462.4	1461.1	1459.8	1458.4	1457.1
162.5°	1483.9	1485.4	1486.9	1487.0	1485.5	1484.2	1482.9	1481.5
165°	1514.1	1515.7	1517.4	1517.7	1516.6	1515.4	1514.4	1513.3
167.5°	1539.5	1541.2	1542.8	1542.8	1541.1	1539.4	1537.8	1536.1
170°	1553.2	1554.8	1556.5	1556.3	1554.4	1552.6	1550.7	1548.8
172.5°	1563.4	1565.3	1567.2	1567.1	1565.2	1563.3	1561.4	1559.5
175°	1574.5	1576.4	1578.4	1578.4	1576.4	1574.5	1572.6	1570.7
177.5°	1580.6	1582.2	1583.7	1583.6	1581.9	1580.1	1578.4	1576.6
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5

(END OF REPORT)