

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: P332940-830

Luminaire Tested: **S124RDIP-S795D810U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332940-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S795D810U830-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6075.8 lumens
Efficiency: N/A
Efficacy: 132.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

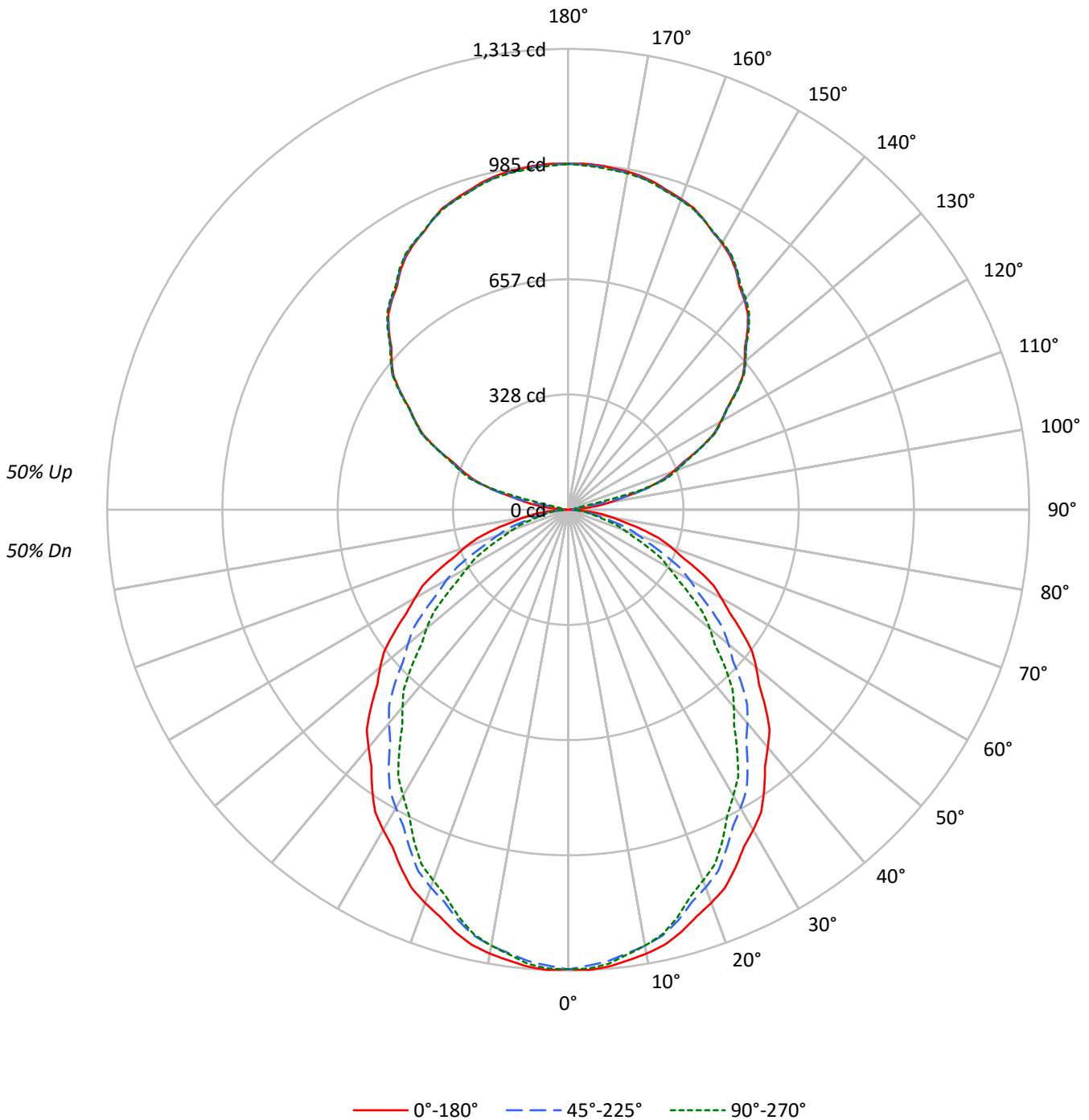
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	94	90	87	90	87	83	81	73	71	69	61	60	58	50	49	48	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	44	42	41	36
3	82	72	65	60	75	67	61	56	57	52	49	48	45	42	39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	33	30	27
5	69	57	49	43	63	53	46	41	46	40	36	39	34	31	32	29	26	23
6	63	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21
7	59	47	39	33	54	43	36	31	37	32	28	32	28	24	27	23	21	18
8	55	42	35	29	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	47	36	28	24	44	33	27	22	29	24	20	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10571	10571	10571
5°	10594	10464	10529
10°	10528	10339	10339
15°	10407	10122	10046
20°	10241	9836	9655
25°	10029	9502	9260
30°	9822	9149	8766
35°	9594	8784	8270
40°	9319	8368	7734
45°	9065	7955	7188
50°	8776	7479	6610
55°	8466	6984	5983
60°	8126	6442	5341
65°	7815	5765	4713
70°	7360	5016	4001
75°	6784	4161	3250
80°	5918	3166	2985
85°	5011	2881	2686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	2.0
10°-20°	343.0	5.6
20°-30°	495.3	8.2
30°-40°	561.4	9.2
40°-50°	542.1	8.9
50°-60°	450.8	7.4
60°-70°	311.3	5.1
70°-80°	157.8	2.6
80°-90°	43.3	0.7
90°-100°	33.7	0.6
100°-110°	214.9	3.5
110°-120°	411.0	6.8
120°-130°	521.8	8.6
130°-140°	558.3	9.2
140°-150°	522.1	8.6
150°-160°	421.0	6.9
160°-170°	271.5	4.5
170°-180°	93.6	1.5
0°-30°	961.2	15.8
0°-40°	1522.6	25.1
0°-60°	2515.6	41.4
0°-90°	3027.9	49.8
90°-120°	659.6	10.9
90°-150°	2261.8	37.2
90°-180°	3048.0	50.2
0°-180°	6075.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1307	1303	1291	1301	1299	124
15°	1245	1235	1211	1209	1202	351
25°	1126	1106	1067	1050	1040	519
35°	974	940	891	858	839	608
45°	794	756	697	649	630	612
55°	602	560	496	446	425	538
65°	409	365	302	260	247	404
75°	218	180	133	111	104	230
85°	54	35	31	29	29	61
90°	2	10	16	20	22	4
95°	40	17	16	20	21	52
105°	222	226	230	235	210	232
115°	414	416	416	417	417	407
125°	582	585	584	586	587	520
135°	722	722	724	726	727	556
145°	833	835	835	836	837	520
155°	913	914	912	914	912	421
165°	963	960	960	965	959	272
175°	985	981	982	987	979	94
180°	985	985	985	985	985	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1312.6	1311.8	1311.1	1310.4	1309.7	1308.3	1306.4	1304.5	1302.5	1300.5	1302.5
5°	1307.3	1306.5	1305.5	1304.7	1303.7	1302.0	1299.3	1296.7	1293.9	1291.3	1293.5
7.5°	1295.5	1294.6	1293.6	1292.7	1291.8	1289.6	1286.1	1282.6	1279.1	1275.6	1277.1
10°	1284.3	1283.2	1282.0	1280.9	1279.8	1277.2	1273.3	1269.2	1265.3	1261.2	1262.1
12.5°	1269.8	1268.6	1267.2	1265.9	1264.7	1261.7	1257.0	1252.2	1247.5	1242.7	1243.3
15°	1245.2	1243.2	1241.1	1239.2	1237.2	1233.4	1227.8	1222.2	1216.6	1211.1	1210.6
17.5°	1215.3	1212.4	1209.5	1206.6	1203.7	1198.9	1192.2	1185.5	1178.8	1172.1	1170.9
20°	1192.0	1189.1	1186.3	1183.4	1180.4	1175.3	1167.6	1160.1	1152.4	1144.9	1143.1
22.5°	1166.4	1163.1	1159.9	1156.6	1153.4	1147.6	1139.5	1131.4	1123.3	1115.2	1112.6
25°	1125.9	1121.8	1117.9	1113.8	1109.8	1103.2	1094.1	1085.0	1075.8	1066.7	1062.9
27.5°	1083.4	1078.4	1073.3	1068.3	1063.2	1055.8	1046.0	1036.3	1026.5	1016.8	1012.1
30°	1053.7	1048.1	1042.5	1037.0	1031.4	1023.4	1013.0	1002.5	991.9	981.5	975.9
32.5°	1022.4	1016.2	1009.8	1003.5	997.3	988.7	977.9	967.0	956.2	945.4	939.0
35°	973.5	966.4	959.2	952.1	945.0	935.9	924.7	913.5	902.4	891.3	883.7
37.5°	921.1	913.8	906.4	899.1	891.7	881.9	869.6	857.2	844.9	832.5	824.1
40°	884.3	876.9	869.6	862.2	854.9	844.8	832.1	819.4	806.7	794.0	784.7
42.5°	848.9	841.2	833.6	825.9	818.1	807.7	794.5	781.2	768.0	754.7	745.2
45°	794.0	785.8	777.5	769.3	761.0	750.3	736.9	723.5	710.1	696.8	685.9
47.5°	737.3	728.8	720.3	711.7	703.2	692.0	678.2	664.2	650.4	636.4	625.1
50°	698.8	690.1	681.4	672.7	664.0	652.5	638.3	624.1	609.7	595.5	584.4
52.5°	659.5	651.0	642.4	634.0	625.5	613.9	599.3	584.7	570.0	555.4	544.1
55°	601.5	592.6	583.7	574.8	565.9	554.2	539.7	525.2	510.8	496.2	484.7
57.5°	544.2	534.9	525.7	516.4	507.1	495.3	481.1	466.8	452.6	438.3	426.6
60°	503.3	494.4	485.5	476.5	467.6	456.1	441.8	427.5	413.3	399.0	387.4
62.5°	466.4	457.1	447.9	438.6	429.3	417.4	402.7	388.1	373.5	358.9	348.2
65°	409.1	399.4	389.8	380.3	370.7	358.8	344.5	330.3	316.0	301.8	292.2
67.5°	349.5	340.4	331.1	322.0	312.7	301.6	288.3	275.1	261.8	248.6	240.3
70°	311.8	302.5	293.0	283.7	274.4	263.3	250.6	237.9	225.3	212.5	205.2
72.5°	271.7	263.3	254.8	246.3	237.8	227.6	215.7	203.6	191.6	179.6	173.3
75°	217.5	209.3	201.0	192.8	184.5	175.2	164.8	154.3	143.8	133.4	128.2
77.5°	162.6	155.6	148.6	141.7	134.6	126.9	118.5	110.0	101.5	93.0	90.0
80°	127.3	120.8	114.4	107.9	101.5	94.9	88.2	81.5	74.8	68.1	67.5
82.5°	96.9	91.0	85.0	79.1	73.1	68.2	64.5	60.6	56.7	53.0	52.4
85°	54.1	49.7	45.2	40.8	36.3	33.7	33.1	32.4	31.8	31.1	30.6
87.5°	18.9	17.8	16.8	15.6	14.6	14.1	14.2	14.3	14.4	14.5	14.5
90°	2.2	4.1	5.8	7.6	9.4	10.9	12.3	13.6	14.9	16.2	17.2
92.5°	9.3	9.4	9.5	9.6	9.7	10.4	11.7	13.0	14.3	15.6	16.6
95°	40.5	35.0	29.4	23.8	18.3	15.6	15.7	15.9	16.0	16.2	17.2
97.5°	86.1	89.5	93.0	96.5	100.0	92.6	74.3	56.0	37.7	19.4	19.5
100°	120.8	123.9	126.8	129.7	132.6	122.8	100.2	77.7	55.0	32.4	29.6
102.5°	159.8	161.9	164.1	166.3	168.4	168.1	165.0	162.1	159.2	156.3	126.2
105°	221.8	222.8	223.8	224.8	225.7	226.7	227.4	228.3	229.1	229.9	231.4
107.5°	279.5	279.9	280.4	281.0	281.4	282.2	283.3	284.5	285.6	286.7	287.4
110°	318.4	318.9	319.3	319.8	320.4	321.0	322.1	323.0	324.0	325.0	325.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.1	356.9	357.9	358.7	359.7	360.3	360.8	361.2	361.7	362.1	362.1
115°	414.2	414.6	415.2	415.7	416.1	416.3	416.1	415.9	415.8	415.7	415.9
117.5°	466.5	467.1	467.8	468.4	469.1	469.7	470.0	470.3	470.7	471.1	471.0
120°	501.9	502.6	503.2	503.9	504.4	504.7	504.5	504.4	504.3	504.1	504.4
122.5°	534.9	535.3	535.6	536.0	536.5	536.8	537.0	537.2	537.4	537.7	537.9
125°	582.2	582.9	583.5	584.2	584.8	584.9	584.7	584.4	584.0	583.7	584.2
127.5°	627.0	627.2	627.4	627.5	627.6	628.1	628.9	629.6	630.4	631.1	631.0
130°	655.9	656.1	656.2	656.4	656.6	656.9	657.3	657.9	658.4	658.8	659.0
132.5°	682.4	682.7	683.1	683.3	683.6	684.1	684.7	685.3	685.9	686.5	686.7
135°	722.3	722.1	721.9	721.7	721.6	721.8	722.5	723.1	723.8	724.4	724.7
137.5°	757.4	757.5	757.6	757.6	757.7	758.1	758.8	759.6	760.3	761.0	761.4
140°	780.4	780.8	781.1	781.5	781.7	782.1	782.4	782.8	783.1	783.3	783.9
142.5°	801.1	801.6	802.3	802.9	803.4	803.8	804.0	804.3	804.5	804.6	805.0
145°	832.7	833.3	833.8	834.2	834.7	835.0	835.0	835.0	835.0	835.0	835.2
147.5°	858.0	858.9	859.8	860.7	861.7	862.0	861.9	861.7	861.5	861.4	861.5
150°	876.3	876.9	877.6	878.3	878.8	879.1	878.9	878.8	878.6	878.4	878.4
152.5°	891.6	892.1	892.6	893.2	893.7	893.8	893.5	893.2	892.9	892.6	892.9
155°	913.1	913.2	913.4	913.6	913.8	913.6	913.1	912.6	912.1	911.6	912.3
157.5°	931.2	931.1	931.0	930.9	930.9	930.5	929.9	929.4	928.9	928.3	929.2
160°	941.9	941.3	940.8	940.4	939.9	939.5	939.4	939.2	939.1	938.9	939.9
162.5°	951.3	950.6	950.0	949.4	948.8	948.4	948.2	948.1	947.9	947.7	948.8
165°	963.2	962.4	961.6	960.7	960.0	959.5	959.5	959.5	959.5	959.5	960.8
167.5°	972.6	971.8	970.9	970.1	969.2	968.7	968.7	968.6	968.5	968.4	969.8
170°	978.0	976.9	976.0	975.0	974.0	973.6	973.7	973.9	974.1	974.3	975.5
172.5°	981.5	980.5	979.5	978.5	977.6	977.1	977.3	977.5	977.6	977.8	979.1
175°	985.3	984.3	983.4	982.4	981.4	981.0	981.2	981.3	981.5	981.7	983.1
177.5°	987.1	986.2	985.2	984.3	983.4	983.1	983.4	983.6	983.9	984.1	985.1
180°	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1304.5	1306.4	1308.3	1309.3	1309.1	1308.9	1308.7	1308.5
5°	1295.7	1298.0	1300.2	1301.1	1300.6	1300.2	1299.8	1299.3
7.5°	1278.5	1280.0	1281.4	1281.7	1281.0	1280.3	1279.6	1278.8
10°	1263.0	1263.9	1264.8	1264.8	1263.9	1263.0	1262.1	1261.2
12.5°	1243.9	1244.3	1244.9	1244.5	1243.3	1242.1	1240.8	1239.5
15°	1210.2	1209.8	1209.3	1208.3	1206.7	1205.1	1203.6	1202.0
17.5°	1169.7	1168.5	1167.2	1165.4	1163.0	1160.6	1158.3	1155.9
20°	1141.3	1139.5	1137.7	1135.5	1132.6	1129.6	1126.7	1123.9
22.5°	1109.9	1107.2	1104.6	1102.0	1099.7	1097.3	1095.0	1092.6
25°	1059.1	1055.4	1051.6	1048.6	1046.3	1044.1	1041.9	1039.6
27.5°	1007.4	1002.8	998.1	994.1	990.9	987.7	984.5	981.3
30°	970.3	964.8	959.2	954.6	951.1	947.5	944.0	940.4
32.5°	932.5	926.0	919.5	914.6	911.3	907.9	904.5	901.1
35°	876.1	868.6	861.0	855.2	851.2	847.2	843.1	839.1
37.5°	815.6	807.1	798.6	792.4	788.4	784.4	780.4	776.4
40°	775.3	765.9	756.6	749.9	745.9	741.9	737.9	733.9
42.5°	735.7	726.1	716.6	709.7	705.5	701.3	697.2	693.0
45°	675.0	664.0	653.1	645.6	641.6	637.6	633.6	629.6
47.5°	613.8	602.5	591.2	583.2	578.9	574.5	570.0	565.6
50°	573.3	562.1	550.9	543.3	539.0	534.8	530.6	526.3
52.5°	532.8	521.5	510.1	502.3	497.9	493.4	489.1	484.7
55°	473.1	461.5	450.0	442.1	437.8	433.6	429.3	425.1
57.5°	414.8	403.0	391.2	383.8	380.6	377.4	374.2	371.0
60°	375.9	364.3	352.7	345.1	341.6	338.0	334.4	330.8
62.5°	337.5	326.9	316.1	309.3	306.5	303.7	300.8	297.9
65°	282.6	273.1	263.4	257.3	254.7	251.9	249.3	246.7
67.5°	232.1	223.9	215.7	210.1	207.2	204.2	201.2	198.3
70°	197.8	190.5	183.1	178.3	176.2	173.9	171.6	169.5
72.5°	167.1	160.8	154.5	150.3	148.4	146.3	144.2	142.1
75°	123.1	118.0	112.8	109.6	108.3	107.0	105.6	104.2
77.5°	87.1	84.1	81.1	79.4	79.0	78.6	78.2	77.8
80°	66.8	66.2	65.5	65.0	64.8	64.6	64.4	64.2
82.5°	51.9	51.5	51.0	50.6	50.4	50.1	50.0	49.8
85°	30.2	29.8	29.3	29.0	29.0	29.0	29.0	29.0
87.5°	14.5	14.5	14.5	14.7	14.9	15.2	15.4	15.6
90°	18.2	19.1	20.2	20.8	21.1	21.5	21.8	22.1
92.5°	17.6	18.6	19.5	20.1	20.2	20.2	20.3	20.4
95°	18.2	19.1	20.2	20.7	20.9	21.0	21.2	21.4
97.5°	19.7	19.8	19.9	20.0	20.2	20.3	20.5	20.6
100°	26.9	24.0	21.3	20.0	20.2	20.3	20.5	20.6
102.5°	96.1	66.2	36.1	21.1	21.1	21.1	21.2	21.2
105°	232.9	234.3	235.8	233.7	227.7	221.8	215.9	210.0
107.5°	288.1	288.8	289.5	290.2	290.9	291.4	292.1	292.8
110°	325.6	326.0	326.3	326.7	327.3	327.7	328.2	328.7



TEST NUMBER: P332940-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	362.0	361.9	361.8	362.1	362.8	363.4	364.0	364.7
115°	416.3	416.6	417.0	417.2	417.2	417.2	417.2	417.2
117.5°	470.9	470.9	470.8	470.7	470.7	470.6	470.5	470.5
120°	504.7	505.1	505.4	505.4	505.1	504.7	504.4	504.1
122.5°	538.1	538.3	538.5	538.4	538.1	537.7	537.4	537.1
125°	584.7	585.1	585.6	586.0	586.2	586.3	586.4	586.6
127.5°	630.9	630.8	630.7	630.7	630.5	630.4	630.3	630.1
130°	659.2	659.3	659.5	659.6	659.6	659.6	659.6	659.6
132.5°	686.9	687.0	687.2	687.2	687.1	686.9	686.8	686.7
135°	725.1	725.4	725.8	726.0	726.4	726.7	727.1	727.4
137.5°	761.7	762.0	762.4	762.5	762.4	762.3	762.2	762.1
140°	784.4	784.9	785.3	785.7	785.9	786.0	786.2	786.4
142.5°	805.3	805.7	806.1	806.3	806.3	806.3	806.3	806.3
145°	835.3	835.5	835.7	835.8	836.2	836.5	836.9	837.2
147.5°	861.7	861.8	861.9	862.0	862.2	862.3	862.5	862.7
150°	878.4	878.4	878.4	878.5	878.7	878.8	879.0	879.2
152.5°	893.2	893.4	893.6	893.7	893.6	893.5	893.4	893.3
155°	912.9	913.6	914.3	914.4	913.8	913.3	912.9	912.4
157.5°	930.0	930.9	931.7	931.7	930.9	930.0	929.2	928.3
160°	940.8	941.9	942.8	942.8	941.9	940.8	939.9	938.9
162.5°	949.7	950.6	951.7	951.6	950.5	949.3	948.3	947.2
165°	962.1	963.5	964.8	964.7	963.2	961.8	960.3	958.8
167.5°	971.3	972.7	974.1	974.0	972.4	970.7	969.1	967.5
170°	976.9	978.2	979.5	979.3	977.7	976.1	974.4	972.8
172.5°	980.4	981.8	983.1	982.8	981.1	979.3	977.5	975.7
175°	984.6	986.1	987.5	987.3	985.3	983.4	981.4	979.4
177.5°	986.3	987.3	988.4	988.1	986.5	985.0	983.4	981.8
180°	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3

(END OF REPORT)