

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: P331720-830

Luminaire Tested: **S122RDIP-S865D725U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331720-830  
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: S122RDIP-S865D725U830-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5575.4 lumens  
Efficiency: N/A  
Efficacy: 102.5 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

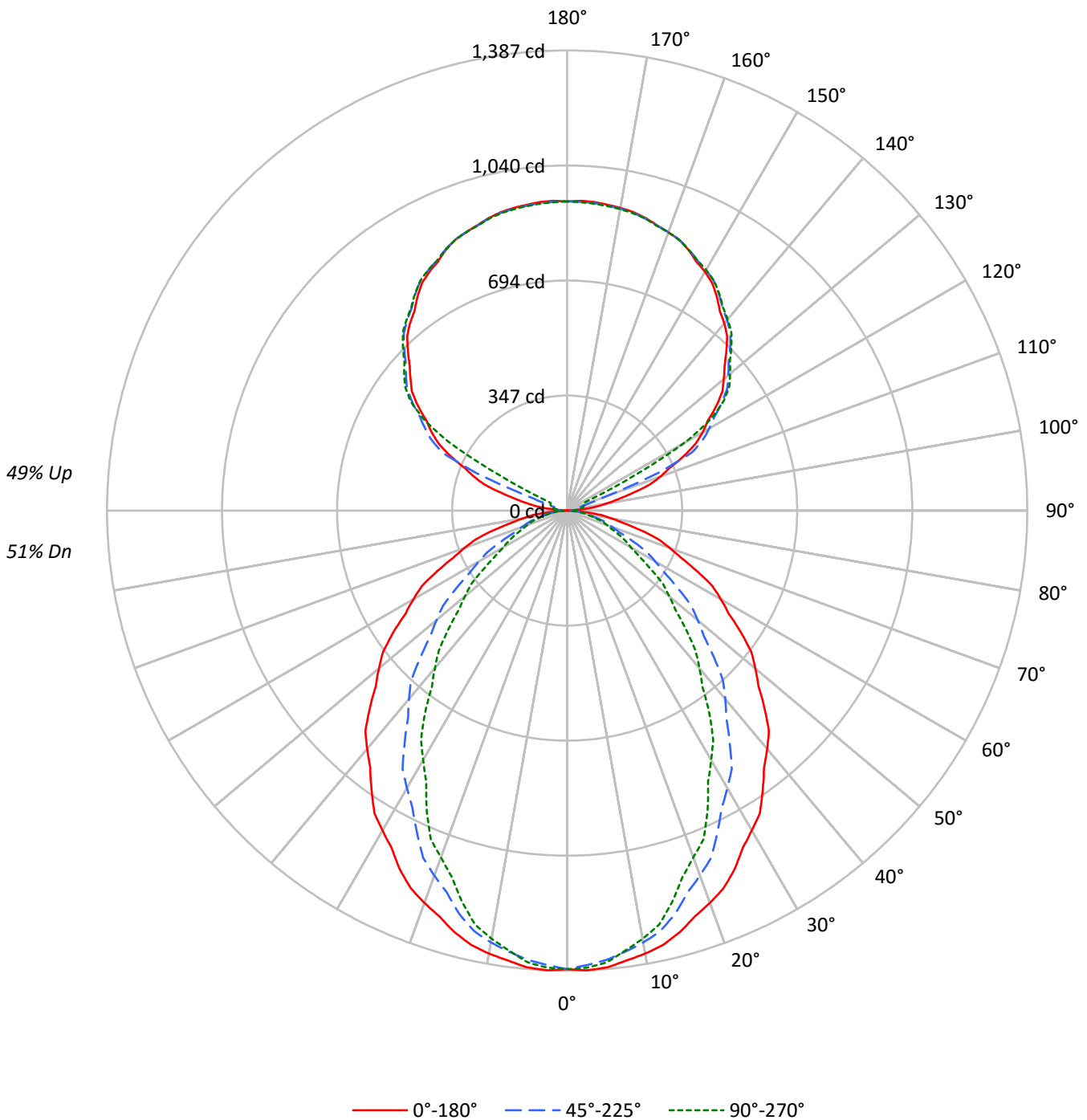
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	84	84	84		70	70	70		57	57	57	51
1	98	94	91	87	91	87	84	81	74	72	70		62	61	59		51	50	49	44
2	90	83	77	72	83	77	72	68	66	62	59		55	53	50		46	44	42	38
3	82	73	66	61	76	68	62	57	58	54	50		49	46	43		41	38	36	32
4	76	65	58	52	70	61	54	49	52	47	43		44	40	37		37	34	32	28
5	70	58	50	45	64	54	47	42	47	42	37		40	36	33		33	30	28	25
6	64	53	45	39	59	49	42	37	42	37	33		36	32	29		31	27	25	22
7	60	48	40	34	55	45	38	33	39	33	29		33	29	26		28	25	22	20
8	55	43	36	31	51	41	34	29	35	30	26		30	26	23		26	23	20	18
9	52	40	32	27	48	37	31	26	33	27	23		28	24	21		24	21	18	16
10	48	37	29	25	45	34	28	24	30	25	21		26	22	19		22	19	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	22315	22315	22315
5°	22400	22034	22156
10°	22228	21674	21489
15°	21972	21031	20425
20°	21618	20113	19105
25°	21257	19073	17826
30°	20752	18000	16183
35°	20262	16837	14741
40°	19770	15633	13076
45°	19192	14280	11565
50°	18600	12913	10083
55°	17990	11443	8659
60°	17286	9894	7188
65°	16485	8313	6548
70°	15526	6850	6019
75°	14361	6245	5614
80°	12673	5579	5114
85°	9967	4409	4409



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.4	2.3
10°-20°	355.2	6.4
20°-30°	498.8	8.9
30°-40°	543.9	9.8
40°-50°	500.1	9.0
50°-60°	392.8	7.0
60°-70°	256.1	4.6
70°-80°	132.0	2.4
80°-90°	36.6	0.7
90°-100°	31.1	0.6
100°-110°	114.0	2.0
110°-120°	304.7	5.5
120°-130°	502.9	9.0
130°-140°	534.9	9.6
140°-150°	497.1	8.9
150°-160°	399.7	7.2
160°-170°	257.6	4.6
170°-180°	88.7	1.6
0°-30°	983.3	17.6
0°-40°	1527.2	27.4
0°-60°	2420.1	43.4
0°-90°	2844.8	51.0
90°-120°	449.7	8.1
90°-150°	1984.7	35.6
90°-180°	2731.0	49.0
0°-180°	5575.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1382	1382	1382	1382	1382	
5°	1382	1375	1360	1370	1367	131
15°	1314	1299	1258	1235	1222	370
25°	1193	1151	1071	1021	1001	548
35°	1028	962	854	778	748	643
45°	840	754	625	540	506	649
55°	639	539	406	334	308	571
65°	432	330	218	177	171	428
75°	230	145	100	92	90	244
85°	54	29	24	24	24	63
90°	1	8	14	17	18	4
95°	44	23	26	29	29	54
105°	205	214	41	48	51	219
115°	388	399	416	118	55	382
125°	548	557	570	574	576	489
135°	678	689	695	701	700	524
145°	787	787	798	802	799	492
155°	866	861	868	872	867	399
165°	913	909	911	915	911	258
175°	934	929	930	934	928	89
180°	932	932	932	932	932	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1
2.5°	1387.0	1385.9	1384.8	1383.7	1382.6	1380.8	1378.4	1375.9	1373.5	1371.0	1373.3
5°	1382.1	1380.6	1379.2	1377.8	1376.5	1373.9	1370.4	1366.8	1363.1	1359.5	1362.0
7.5°	1367.7	1366.0	1364.3	1362.6	1360.8	1357.9	1353.7	1349.4	1345.2	1341.0	1341.7
10°	1355.8	1353.8	1351.9	1349.9	1347.9	1344.3	1338.7	1333.1	1327.6	1322.0	1321.2
12.5°	1340.8	1338.3	1336.0	1333.6	1331.2	1326.4	1319.3	1312.2	1305.0	1298.0	1296.5
15°	1314.5	1311.5	1308.3	1305.3	1302.2	1296.0	1286.6	1277.1	1267.6	1258.2	1252.9
17.5°	1282.2	1277.5	1272.9	1268.2	1263.6	1255.2	1243.0	1230.9	1218.8	1206.6	1200.4
20°	1258.2	1252.6	1247.1	1241.5	1236.0	1226.2	1212.3	1198.4	1184.6	1170.6	1163.7
22.5°	1232.2	1226.0	1219.7	1213.5	1207.3	1196.4	1180.6	1165.0	1149.3	1133.6	1124.6
25°	1193.2	1184.3	1175.4	1166.5	1157.6	1144.0	1125.6	1107.3	1088.9	1070.6	1059.2
27.5°	1146.1	1136.4	1126.8	1117.1	1107.5	1092.3	1071.6	1050.9	1030.2	1009.6	996.3
30°	1113.1	1102.6	1092.0	1081.5	1070.9	1054.5	1032.3	1010.0	987.8	965.5	951.4
32.5°	1081.1	1068.7	1056.4	1044.1	1031.7	1014.3	991.6	968.8	946.2	923.5	907.4
35°	1028.0	1013.9	999.8	985.5	971.4	952.1	927.6	903.1	878.7	854.2	836.7
37.5°	975.1	959.5	944.0	928.3	912.8	891.9	865.9	839.8	813.8	787.7	768.4
40°	938.0	921.3	904.7	888.0	871.3	849.5	822.6	795.6	768.6	741.7	721.9
42.5°	900.0	882.4	864.9	847.3	829.7	807.0	779.2	751.3	723.5	695.6	675.2
45°	840.5	821.8	803.2	784.6	766.0	742.1	712.9	683.7	654.5	625.4	605.6
47.5°	782.4	762.7	743.0	723.2	703.5	678.5	648.5	618.3	588.1	558.1	538.5
50°	740.5	720.7	701.0	681.2	661.5	636.3	605.8	575.1	544.6	514.1	494.8
52.5°	699.4	678.7	658.2	637.5	616.9	591.6	561.8	531.8	501.9	472.0	453.5
55°	639.1	617.5	595.8	574.1	552.4	526.5	496.5	466.5	436.5	406.5	389.8
57.5°	577.3	555.1	532.8	510.6	488.4	462.9	433.9	405.1	376.3	347.4	332.2
60°	535.3	513.0	490.9	468.6	446.4	420.9	392.3	363.6	335.1	306.4	292.3
62.5°	494.3	472.0	449.8	427.5	405.3	380.6	353.3	326.0	298.7	271.4	257.9
65°	431.5	409.0	386.4	363.9	341.5	317.6	292.7	267.7	242.6	217.6	208.2
67.5°	371.0	348.6	326.3	303.9	281.5	259.1	236.7	214.1	191.6	169.1	164.8
70°	328.9	307.3	285.6	263.9	242.2	221.8	202.6	183.4	164.3	145.1	142.3
72.5°	288.9	268.2	247.3	226.6	205.8	187.7	172.3	156.8	141.5	126.1	123.8
75°	230.2	210.7	191.2	171.7	152.3	137.9	128.4	118.9	109.5	100.1	98.1
77.5°	172.4	155.2	138.2	121.1	104.1	93.3	88.7	84.2	79.6	75.0	73.9
80°	136.3	122.2	108.0	93.8	79.6	71.2	68.3	65.6	62.8	60.0	58.9
82.5°	103.3	92.3	81.2	70.1	59.1	52.6	50.7	48.8	46.9	45.1	44.4
85°	53.8	48.0	42.1	36.3	30.4	27.1	26.3	25.4	24.6	23.8	23.8
87.5°	16.1	14.7	13.3	11.8	10.4	9.7	10.0	10.2	10.5	10.7	10.7
90°	0.7	2.4	4.0	5.7	7.3	8.7	9.9	11.1	12.3	13.5	14.2
92.5°	13.6	13.5	13.3	13.2	13.0	13.3	13.9	14.4	15.1	15.6	16.0
95°	43.8	38.9	33.9	29.0	24.0	22.1	23.2	24.2	25.3	26.3	27.1
97.5°	87.0	73.0	59.1	45.1	31.2	25.4	27.9	30.3	32.8	35.2	35.8
100°	119.3	98.8	78.3	57.8	37.2	28.3	30.8	33.4	35.9	38.5	39.6
102.5°	155.0	150.6	146.3	141.9	137.5	124.7	103.4	82.1	60.8	39.5	41.1
105°	205.0	209.4	214.0	218.5	222.9	204.7	163.8	122.9	82.0	41.1	42.8
107.5°	262.0	265.6	269.3	272.9	276.5	253.8	204.7	155.7	106.6	57.6	55.9
110°	298.7	301.8	305.0	308.1	311.2	291.2	247.9	204.6	161.3	118.0	103.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	333.2	336.0	338.7	341.6	344.3	340.4	329.7	319.0	308.3	297.6	243.0
115°	387.7	390.2	392.8	395.3	397.8	401.1	404.7	408.5	412.3	416.0	346.7
117.5°	436.4	439.2	442.1	444.9	447.7	450.4	453.1	455.6	458.2	460.8	444.0
120°	471.9	474.2	476.5	478.7	481.0	483.4	486.2	488.8	491.5	494.2	496.0
122.5°	502.2	504.5	506.9	509.3	511.6	514.3	517.3	520.2	523.1	526.0	527.1
125°	548.2	550.1	552.0	554.0	555.9	558.4	561.2	564.0	566.8	569.8	570.8
127.5°	589.8	592.0	594.2	596.3	598.4	600.6	602.8	604.8	607.0	609.1	610.7
130°	616.2	618.7	621.0	623.4	625.8	627.8	629.5	631.1	632.8	634.4	636.1
132.5°	643.2	645.3	647.3	649.3	651.4	653.2	654.9	656.5	658.2	659.8	661.2
135°	678.3	680.7	683.1	685.5	687.9	689.8	691.1	692.4	693.8	695.1	696.6
137.5°	713.8	715.4	717.1	718.8	720.5	722.1	723.6	725.1	726.6	728.2	729.6
140°	737.0	738.1	739.3	740.6	741.7	743.2	744.8	746.5	748.1	749.8	751.1
142.5°	756.4	757.4	758.6	759.6	760.6	762.1	764.0	765.9	767.8	769.7	770.9
145°	786.8	786.6	786.6	786.4	786.3	787.4	789.9	792.5	795.0	797.6	798.7
147.5°	813.4	812.8	812.3	811.7	811.2	812.1	814.6	817.1	819.6	822.2	822.9
150°	830.7	829.6	828.6	827.6	826.4	827.2	829.5	831.9	834.3	836.7	837.6
152.5°	845.2	844.0	842.9	841.7	840.6	841.1	843.4	845.6	847.9	850.2	851.1
155°	866.4	865.1	863.7	862.3	861.0	861.2	863.0	864.8	866.6	868.4	869.3
157.5°	883.0	881.8	880.7	879.6	878.4	878.4	879.8	881.0	882.2	883.5	884.6
160°	892.7	891.7	890.9	889.9	889.1	889.1	889.9	890.9	891.7	892.7	893.6
162.5°	901.4	900.4	899.6	898.6	897.7	897.7	898.4	899.2	900.0	900.8	901.8
165°	912.9	912.0	911.2	910.2	909.3	909.1	909.6	910.0	910.4	910.9	911.9
167.5°	921.5	920.7	919.7	918.9	917.9	917.7	918.1	918.5	919.0	919.4	920.4
170°	926.4	925.5	924.6	923.7	922.8	922.5	922.8	923.1	923.4	923.7	924.7
172.5°	929.6	928.7	927.8	926.9	926.0	925.8	926.0	926.3	926.6	926.9	928.0
175°	933.8	932.7	931.7	930.7	929.6	929.3	929.5	929.8	930.1	930.5	931.5
177.5°	934.5	933.7	932.8	932.0	931.1	930.8	930.9	931.0	931.1	931.2	932.1
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1	1382.1
2.5°	1375.5	1377.7	1379.9	1380.8	1380.4	1379.9	1379.5	1379.0
5°	1364.5	1367.0	1369.5	1370.4	1369.5	1368.7	1367.8	1367.0
7.5°	1342.5	1343.1	1343.9	1343.5	1342.1	1340.7	1339.2	1337.8
10°	1320.3	1319.5	1318.6	1317.4	1315.7	1314.1	1312.4	1310.7
12.5°	1295.0	1293.5	1291.9	1289.9	1287.0	1284.3	1281.5	1278.7
15°	1247.6	1242.4	1237.1	1233.0	1230.3	1227.5	1224.7	1221.9
17.5°	1194.1	1187.8	1181.6	1176.0	1171.2	1166.5	1161.7	1156.9
20°	1156.8	1149.8	1142.8	1136.3	1130.2	1124.1	1117.9	1111.9
22.5°	1115.8	1106.8	1097.9	1091.1	1086.6	1081.9	1077.4	1072.9
25°	1047.8	1036.4	1025.0	1017.2	1013.0	1008.9	1004.8	1000.6
27.5°	983.0	969.7	956.4	946.5	939.9	933.2	926.6	920.0
30°	937.2	923.0	908.8	898.0	890.5	883.0	875.5	868.0
32.5°	891.2	875.0	858.8	847.2	840.2	833.1	826.0	819.0
35°	819.2	801.7	784.2	772.4	766.3	760.2	754.0	747.9
37.5°	749.1	729.8	710.6	697.4	690.4	683.3	676.4	669.4
40°	702.2	682.5	662.7	649.2	642.1	634.8	627.5	620.4
42.5°	654.9	634.4	614.1	600.3	593.3	586.4	579.3	572.3
45°	585.9	566.2	546.4	533.2	526.5	519.9	513.2	506.5
47.5°	518.8	499.2	479.6	466.7	460.7	454.6	448.6	442.5
50°	475.7	456.5	437.3	424.8	419.0	413.1	407.3	401.4
52.5°	435.0	416.5	397.9	386.1	380.6	375.2	369.9	364.5
55°	373.2	356.5	339.8	328.8	323.5	318.2	312.9	307.6
57.5°	316.9	301.6	286.3	276.4	272.0	267.5	263.1	258.6
60°	278.1	263.9	249.7	240.4	235.9	231.5	227.1	222.6
62.5°	244.4	230.9	217.4	209.2	206.6	204.0	201.2	198.6
65°	198.7	189.3	179.8	174.7	173.8	173.1	172.2	171.4
67.5°	160.4	156.1	151.7	149.1	148.3	147.3	146.5	145.6
70°	139.5	136.8	133.9	132.1	130.9	129.8	128.7	127.5
72.5°	121.4	119.0	116.7	115.3	114.5	113.9	113.2	112.5
75°	96.1	94.3	92.3	91.1	90.9	90.6	90.3	90.0
77.5°	72.9	71.7	70.6	69.8	69.4	68.9	68.5	68.1
80°	57.8	56.7	55.6	55.0	55.0	55.0	55.0	55.0
82.5°	43.7	43.0	42.3	42.0	42.0	42.0	42.0	42.0
85°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
87.5°	10.6	10.5	10.4	10.4	10.5	10.6	10.6	10.7
90°	15.0	15.7	16.5	17.0	17.3	17.6	17.9	18.2
92.5°	16.4	16.8	17.2	17.5	17.6	17.8	18.0	18.2
95°	27.8	28.6	29.3	29.6	29.4	29.3	29.1	29.0
97.5°	36.4	36.9	37.6	38.0	38.2	38.4	38.5	38.7
100°	40.8	42.0	43.3	44.0	44.3	44.6	44.9	45.1
102.5°	42.6	44.2	45.7	46.8	47.1	47.6	48.0	48.4
105°	44.4	46.1	47.7	48.8	49.5	50.0	50.6	51.3
107.5°	54.2	52.5	50.9	50.3	50.9	51.6	52.1	52.7
110°	88.0	73.0	58.1	50.9	51.5	52.0	52.7	53.3





TEST NUMBER: P331720-830

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	188.3	133.7	79.0	51.8	52.4	52.9	53.3	53.8
115°	277.3	207.9	138.6	98.4	87.7	76.8	66.1	55.3
117.5°	427.3	410.4	393.6	367.5	332.1	296.6	261.2	225.7
120°	497.9	499.6	501.4	492.2	471.9	451.8	431.5	411.3
122.5°	528.2	529.2	530.4	529.0	525.0	521.0	517.2	513.2
125°	571.8	572.9	573.9	574.7	575.1	575.6	576.0	576.5
127.5°	612.2	613.7	615.2	616.0	616.1	616.2	616.3	616.4
130°	637.7	639.4	641.0	641.8	641.7	641.5	641.3	641.2
132.5°	662.6	664.0	665.4	666.1	665.9	665.8	665.6	665.4
135°	698.1	699.6	701.2	701.7	701.4	701.2	700.8	700.5
137.5°	731.1	732.5	734.1	734.5	734.1	733.5	733.0	732.4
140°	752.4	753.8	755.2	755.4	754.7	753.9	753.2	752.4
142.5°	772.1	773.4	774.6	774.9	774.1	773.4	772.6	771.8
145°	799.7	800.8	801.8	801.9	801.3	800.5	799.7	799.0
147.5°	823.7	824.5	825.3	825.4	824.7	824.1	823.5	822.8
150°	838.5	839.4	840.3	840.4	839.6	838.9	838.1	837.4
152.5°	852.0	852.9	853.8	853.8	852.8	851.8	850.8	849.8
155°	870.2	871.1	872.0	871.9	870.6	869.5	868.3	867.0
157.5°	885.5	886.6	887.6	887.5	886.4	885.1	884.0	882.9
160°	894.5	895.4	896.3	896.2	895.1	894.1	893.1	892.0
162.5°	902.8	903.8	904.8	904.7	903.4	902.1	900.9	899.6
165°	912.9	914.1	915.1	915.1	914.1	912.9	911.9	910.9
167.5°	921.5	922.6	923.6	923.4	922.1	920.8	919.4	918.0
170°	925.8	926.8	927.9	927.7	926.4	925.0	923.7	922.4
172.5°	929.1	930.1	931.1	930.9	929.6	928.3	926.9	925.6
175°	932.6	933.6	934.6	934.4	932.9	931.4	929.9	928.4
177.5°	932.9	933.8	934.6	934.5	933.4	932.4	931.2	930.2
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8

(END OF REPORT)