

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: P332177-927

Luminaire Tested: **S123DIW-S775D1535U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332177-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D1535U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6776.6 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

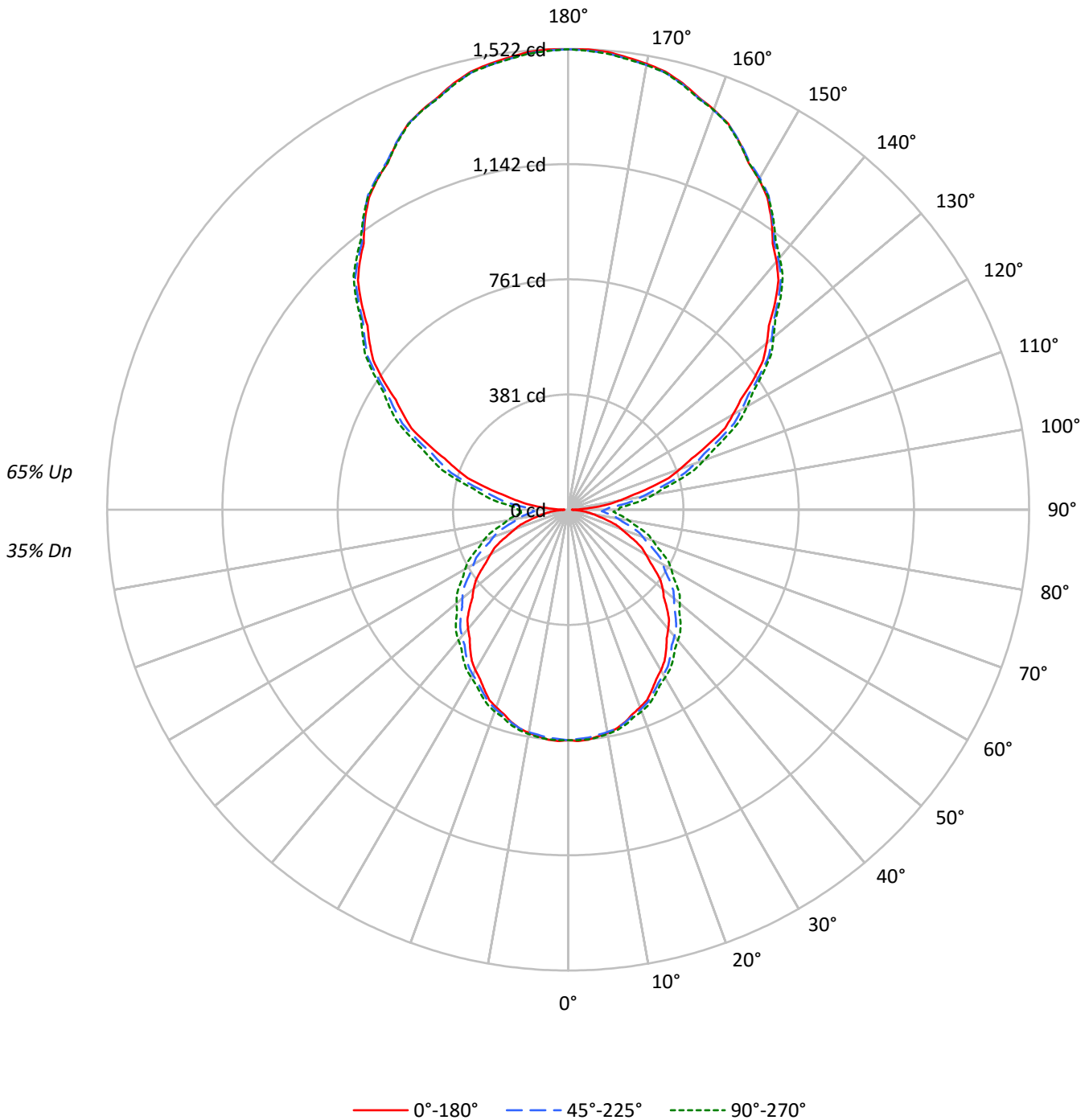
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35
1	94	89	85	81	84	80	77	74	64	62	60	50	48	46	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	40	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	44	41	38	35	32	27	25	24	19
4	70	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	25	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	11
8	51	39	31	26	46	35	28	24	28	23	20	22	19	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8196	8196	8196
5°	8222	7990	7994
10°	8148	7806	7766
15°	8043	7597	7518
20°	7893	7358	7245
25°	7708	7084	6957
30°	7517	6836	6666
35°	7305	6575	6434
40°	7102	6337	6184
45°	6877	6109	5986
50°	6655	5883	5766
55°	6409	5652	5569
60°	6171	5417	5366
65°	5924	5168	5126
70°	5555	4887	4879
75°	5090	4566	4628
80°	4551	4249	4341
85°	4050	4032	4175



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.2	1.1
10°-20°	205.8	3.0
20°-30°	307.8	4.5
30°-40°	367.5	5.4
40°-50°	384.5	5.7
50°-60°	360.9	5.3
60°-70°	301.4	4.4
70°-80°	215.6	3.2
80°-90°	133.1	2.0
90°-100°	179.8	2.7
100°-110°	355.8	5.3
110°-120°	543.9	8.0
120°-130°	686.0	10.1
130°-140°	755.8	11.2
140°-150°	735.1	10.8
150°-160°	617.0	9.1
160°-170°	410.7	6.1
170°-180°	143.8	2.1
0°-30°	585.7	8.6
0°-40°	953.3	14.1
0°-60°	1698.6	25.1
0°-90°	2348.8	34.7
90°-120°	1079.5	15.9
90°-150°	3256.3	48.1
90°-180°	4428.0	65.3
0°-180°	6776.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	762	760	756	762	761	72
15°	726	728	728	735	735	204
25°	655	663	666	676	677	302
35°	564	577	588	600	604	353
45°	461	481	502	517	524	356
55°	352	379	409	430	438	315
65°	243	276	312	336	345	240
75°	132	171	212	239	250	141
85°	41	82	126	153	163	43
90°	12	65	122	154	166	12
95°	80	121	170	200	209	86
105°	275	299	344	367	377	295
115°	512	526	553	573	579	506
125°	746	750	771	783	784	665
135°	966	972	980	990	992	744
145°	1170	1172	1175	1180	1179	731
155°	1339	1339	1340	1344	1337	616
165°	1459	1455	1455	1461	1454	411
175°	1517	1513	1512	1519	1511	144
180°	1521	1521	1521	1521	1521	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	764.8	764.3	763.9	763.4	763.0	762.2	761.0	759.9	758.7	757.5	758.7
5°	762.3	761.9	761.5	761.2	760.8	760.1	759.0	757.9	756.8	755.7	757.2
7.5°	754.8	754.9	754.9	755.0	755.1	754.6	753.5	752.5	751.4	750.4	752.2
10°	748.2	748.5	748.9	749.3	749.6	749.4	748.5	747.6	746.6	745.7	747.6
12.5°	740.2	740.8	741.2	741.8	742.3	742.3	741.6	741.0	740.4	739.7	741.4
15°	725.8	726.4	726.9	727.5	728.0	728.2	728.0	727.9	727.6	727.5	729.3
17.5°	707.6	708.7	709.8	710.8	711.9	712.5	712.4	712.3	712.3	712.2	713.8
20°	694.3	695.4	696.5	697.6	698.7	699.4	699.8	700.2	700.5	700.9	702.6
22.5°	680.3	681.4	682.5	683.7	684.8	685.6	686.1	686.6	687.1	687.6	689.8
25°	655.3	657.1	658.9	660.8	662.7	663.8	664.4	665.0	665.5	666.1	668.4
27.5°	630.1	632.2	634.3	636.4	638.5	640.1	641.3	642.5	643.6	644.8	646.9
30°	612.1	614.6	617.0	619.3	621.7	623.7	625.1	626.6	628.1	629.5	631.8
32.5°	592.2	594.9	597.6	600.3	603.0	605.3	607.2	609.2	611.1	613.0	615.4
35°	564.0	567.0	570.0	572.9	575.8	578.5	580.9	583.3	585.7	588.1	590.9
37.5°	534.2	537.5	540.8	544.2	547.5	550.6	553.6	556.5	559.4	562.4	565.5
40°	514.3	517.6	520.9	524.3	527.5	531.1	534.7	538.4	542.1	545.8	548.9
42.5°	492.3	496.5	500.5	504.5	508.6	512.5	516.3	520.2	524.0	527.9	531.3
45°	461.2	465.6	470.0	474.4	478.9	483.4	488.0	492.6	497.3	501.8	505.3
47.5°	428.5	433.6	438.6	443.5	448.5	453.7	459.0	464.2	469.5	474.8	478.7
50°	407.3	412.4	417.6	422.8	427.9	433.3	439.1	444.8	450.5	456.2	460.4
52.5°	384.7	390.1	395.6	401.1	406.5	412.4	418.7	425.0	431.3	437.6	442.0
55°	351.7	357.7	363.8	369.9	376.0	382.4	389.0	395.7	402.3	408.9	413.9
57.5°	319.5	325.8	332.2	338.5	344.9	351.6	358.9	366.2	373.4	380.7	385.7
60°	297.0	303.6	310.2	316.9	323.5	330.6	338.2	345.7	353.2	360.8	366.0
62.5°	275.7	282.5	289.3	296.0	302.9	310.2	318.2	326.2	334.2	342.2	347.4
65°	243.0	250.3	257.4	264.6	271.8	279.4	287.6	295.6	303.8	311.9	317.4
67.5°	209.8	217.5	225.1	232.7	240.3	248.3	256.6	264.8	273.1	281.4	287.4
70°	186.6	194.6	202.5	210.4	218.3	226.7	235.6	244.4	253.3	262.1	268.0
72.5°	165.4	173.3	181.3	189.2	197.1	205.7	214.8	223.9	233.1	242.2	248.3
75°	131.9	140.5	149.2	157.9	166.5	175.5	184.7	193.9	203.1	212.4	218.4
77.5°	102.7	111.5	120.2	128.9	137.6	146.6	156.0	165.2	174.5	183.8	190.2
80°	82.1	91.2	100.2	109.2	118.3	127.5	137.1	146.7	156.3	165.9	172.1
82.5°	64.2	73.4	82.5	91.7	100.9	110.4	120.1	129.8	139.6	149.3	155.6
85°	40.6	49.8	59.1	68.3	77.5	87.0	96.8	106.5	116.3	126.1	132.4
87.5°	22.3	32.0	41.7	51.4	61.2	71.1	81.1	91.3	101.3	111.4	117.9
90°	12.0	23.7	35.3	47.1	58.7	71.0	83.8	96.7	109.6	122.4	129.8
92.5°	39.1	49.0	58.9	68.9	78.8	89.4	100.6	111.9	123.1	134.3	141.2
95°	79.6	88.6	97.7	106.7	115.8	125.9	137.0	148.2	159.4	170.5	177.3
97.5°	133.3	141.2	149.1	156.9	164.8	173.8	183.9	194.2	204.3	214.4	221.2
100°	169.9	177.4	184.9	192.4	199.9	208.5	218.3	228.1	238.0	247.8	253.9
102.5°	212.3	218.6	224.8	231.1	237.3	245.5	255.6	265.7	275.8	285.8	291.8
105°	275.4	280.4	285.3	290.3	295.2	302.9	313.1	323.5	333.8	344.1	349.3
107.5°	348.0	352.0	356.2	360.2	364.3	370.6	379.1	387.5	396.0	404.5	410.3
110°	393.2	397.0	400.9	404.7	408.6	414.5	422.4	430.3	438.2	446.1	451.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	441.0	444.0	447.1	450.1	453.2	458.3	465.5	472.7	479.8	487.0	493.0
115°	511.8	514.8	517.8	520.9	523.9	528.5	534.6	540.7	546.8	552.9	557.5
117.5°	583.8	585.7	587.6	589.5	591.4	595.1	600.6	606.2	611.7	617.3	621.6
120°	628.0	630.6	633.1	635.6	638.1	641.7	646.5	651.3	656.0	660.8	664.8
122.5°	674.9	676.5	678.2	679.9	681.5	684.8	690.0	695.1	700.1	705.3	708.7
125°	745.5	746.3	747.1	747.9	748.7	751.5	756.3	761.1	766.0	770.8	773.6
127.5°	811.4	812.9	814.4	816.0	817.5	820.2	824.0	827.8	831.7	835.5	837.7
130°	855.4	857.4	859.3	861.3	863.2	865.6	868.5	871.4	874.3	877.1	879.6
132.5°	898.7	900.8	902.9	905.0	907.0	909.3	911.6	914.0	916.4	918.8	920.8
135°	965.7	967.1	968.5	969.9	971.3	972.9	974.6	976.4	978.2	979.9	982.2
137.5°	1027.6	1028.8	1030.0	1031.2	1032.4	1033.9	1035.7	1037.5	1039.3	1041.2	1043.0
140°	1070.0	1071.3	1072.6	1074.0	1075.3	1076.3	1077.1	1078.0	1078.8	1079.6	1082.1
142.5°	1109.1	1110.3	1111.5	1112.7	1113.9	1114.8	1115.3	1115.9	1116.5	1117.1	1119.3
145°	1170.3	1170.7	1171.0	1171.3	1171.7	1172.3	1173.1	1173.9	1174.6	1175.4	1176.6
147.5°	1223.0	1223.9	1224.9	1225.9	1226.9	1227.6	1228.4	1229.2	1229.9	1230.7	1231.1
150°	1260.3	1260.8	1261.3	1261.9	1262.4	1262.9	1263.5	1264.0	1264.5	1265.0	1265.0
152.5°	1290.9	1291.6	1292.4	1293.1	1293.8	1294.3	1294.7	1295.0	1295.3	1295.6	1296.1
155°	1339.1	1339.1	1339.1	1339.1	1339.1	1339.3	1339.5	1339.7	1340.1	1340.3	1341.4
157.5°	1380.2	1379.9	1379.6	1379.3	1379.0	1378.9	1379.1	1379.3	1379.5	1379.7	1380.9
160°	1406.0	1405.5	1404.9	1404.4	1403.9	1403.6	1403.6	1403.6	1403.6	1403.6	1404.9
162.5°	1428.9	1428.2	1427.4	1426.7	1426.0	1425.7	1425.9	1426.2	1426.3	1426.6	1427.9
165°	1458.6	1457.8	1457.0	1456.2	1455.4	1455.0	1455.0	1455.0	1455.0	1455.0	1456.6
167.5°	1482.3	1481.1	1480.1	1479.0	1478.0	1477.6	1477.7	1478.0	1478.2	1478.4	1480.0
170°	1495.6	1494.5	1493.5	1492.4	1491.4	1490.8	1490.8	1490.8	1490.8	1490.8	1492.7
172.5°	1506.1	1505.1	1504.0	1502.9	1501.9	1501.3	1501.3	1501.3	1501.3	1501.3	1503.0
175°	1517.1	1516.1	1515.0	1513.9	1512.8	1512.4	1512.4	1512.4	1512.4	1512.4	1513.9
177.5°	1521.6	1520.8	1520.0	1519.1	1518.2	1517.8	1517.8	1517.8	1517.8	1517.8	1519.1
180°	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	759.9	761.0	762.2	762.7	762.6	762.4	762.2	762.2
5°	758.6	760.1	761.5	762.2	762.0	761.8	761.7	761.4
7.5°	754.0	755.9	757.7	758.5	758.3	758.1	757.9	757.6
10°	749.4	751.2	753.0	753.8	753.4	753.0	752.7	752.3
12.5°	743.1	744.8	746.5	747.2	746.8	746.5	746.1	745.7
15°	731.1	733.0	734.8	735.6	735.5	735.3	735.1	734.9
17.5°	715.5	717.2	718.8	719.5	719.3	719.0	718.7	718.5
20°	704.3	705.9	707.6	708.4	708.7	708.8	709.0	709.2
22.5°	691.8	694.0	696.0	697.0	697.0	696.8	696.7	696.6
25°	670.9	673.3	675.7	676.8	676.8	676.8	676.8	676.8
27.5°	649.0	651.0	653.1	654.2	654.3	654.5	654.7	654.8
30°	634.0	636.2	638.4	639.5	639.5	639.5	639.5	639.5
32.5°	617.7	620.0	622.4	623.8	624.2	624.7	625.1	625.6
35°	593.7	596.4	599.1	600.9	601.7	602.4	603.1	603.9
37.5°	568.6	571.8	574.9	576.8	577.3	578.0	578.5	579.2
40°	552.1	555.2	558.3	560.2	561.0	561.7	562.4	563.2
42.5°	534.7	538.1	541.6	543.8	544.9	545.9	546.9	548.0
45°	508.8	512.3	515.9	518.3	519.8	521.3	522.8	524.3
47.5°	482.7	486.6	490.6	493.1	494.2	495.4	496.5	497.6
50°	464.7	468.9	473.2	475.9	477.2	478.5	479.8	481.1
52.5°	446.4	450.8	455.2	458.2	459.8	461.4	463.0	464.5
55°	418.9	423.9	428.8	432.1	433.6	435.0	436.5	438.0
57.5°	390.8	395.8	400.8	404.2	405.9	407.7	409.3	411.1
60°	371.1	376.3	381.4	385.1	387.1	389.1	391.2	393.2
62.5°	352.6	357.7	362.9	366.4	368.3	370.2	372.1	373.9
65°	323.0	328.4	334.0	337.7	339.5	341.4	343.3	345.1
67.5°	293.4	299.5	305.5	309.3	310.9	312.4	314.0	315.5
70°	273.9	279.8	285.7	289.5	291.4	293.3	295.1	297.0
72.5°	254.3	260.3	266.4	270.4	272.2	274.0	275.8	277.7
75°	224.5	230.6	236.7	240.8	243.0	245.3	247.5	249.7
77.5°	196.6	203.0	209.5	213.5	215.2	216.9	218.6	220.3
80°	178.4	184.7	191.0	195.0	196.9	198.7	200.6	202.4
82.5°	161.8	168.1	174.4	178.4	180.3	182.1	183.9	185.8
85°	138.6	144.9	151.1	155.2	157.0	158.9	160.7	162.6
87.5°	124.4	130.9	137.4	141.6	143.5	145.4	147.4	149.3
90°	137.0	144.4	151.7	156.5	158.9	161.3	163.7	166.0
92.5°	148.2	155.2	162.2	166.4	167.7	169.1	170.5	171.8
95°	184.1	190.8	197.6	201.9	203.7	205.7	207.5	209.3
97.5°	227.9	234.6	241.3	245.6	247.3	249.1	250.8	252.5
100°	260.1	266.2	272.4	276.6	278.9	281.3	283.7	286.1
102.5°	297.9	303.8	309.8	313.7	315.4	317.2	318.9	320.6
105°	354.4	359.7	364.8	368.4	370.7	372.8	375.0	377.2
107.5°	416.1	421.8	427.7	431.2	432.5	433.8	435.1	436.4
110°	457.8	463.7	469.5	472.9	473.9	474.8	475.8	476.7



TEST NUMBER: P332177-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	498.8	504.8	510.7	514.4	515.9	517.5	519.0	520.5
115°	562.2	566.9	571.6	574.6	575.8	576.9	578.2	579.4
117.5°	626.0	630.3	634.6	637.2	637.9	638.5	639.2	639.9
120°	668.8	672.7	676.7	679.1	679.9	680.6	681.4	682.1
122.5°	712.1	715.5	718.8	720.8	721.4	721.9	722.5	723.0
125°	776.3	779.2	782.0	783.5	783.7	783.9	784.2	784.4
127.5°	839.9	842.0	844.2	845.3	845.3	845.3	845.4	845.4
130°	882.0	884.5	886.9	887.7	887.0	886.2	885.5	884.7
132.5°	922.9	925.0	927.1	928.0	927.8	927.6	927.5	927.3
135°	984.4	986.7	989.0	990.3	990.7	991.1	991.5	991.9
137.5°	1044.8	1046.6	1048.4	1049.2	1049.2	1049.1	1049.0	1048.8
140°	1084.7	1087.1	1089.6	1090.4	1089.5	1088.5	1087.6	1086.6
142.5°	1121.5	1123.7	1125.9	1126.8	1126.2	1125.8	1125.2	1124.7
145°	1177.9	1179.1	1180.3	1180.7	1180.4	1180.1	1179.8	1179.4
147.5°	1231.5	1232.0	1232.4	1232.2	1231.2	1230.3	1229.4	1228.4
150°	1265.0	1265.0	1265.0	1264.4	1263.2	1262.0	1260.8	1259.6
152.5°	1296.5	1296.9	1297.4	1296.9	1295.6	1294.3	1293.0	1291.7
155°	1342.4	1343.5	1344.6	1344.2	1342.3	1340.5	1338.6	1336.7
157.5°	1382.0	1383.1	1384.2	1384.0	1382.5	1381.0	1379.5	1378.1
160°	1406.3	1407.6	1408.9	1409.1	1408.0	1406.9	1405.9	1404.8
162.5°	1429.2	1430.5	1431.9	1431.7	1430.0	1428.3	1426.6	1424.9
165°	1458.2	1459.8	1461.3	1461.3	1459.4	1457.5	1455.6	1453.8
167.5°	1481.7	1483.4	1484.9	1484.9	1483.4	1481.7	1480.0	1478.4
170°	1494.5	1496.4	1498.3	1498.3	1496.4	1494.5	1492.7	1490.8
172.5°	1504.6	1506.3	1507.9	1507.8	1505.9	1504.1	1502.2	1500.4
175°	1515.5	1517.1	1518.7	1518.5	1516.7	1514.8	1513.0	1511.2
177.5°	1520.4	1521.6	1522.9	1522.8	1521.3	1519.8	1518.4	1516.9
180°	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7

(END OF REPORT)