

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: P331588

Luminaire Tested: **S122DIW-S1005D435U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331588
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: S122DIW-S1005D435U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5537.6 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

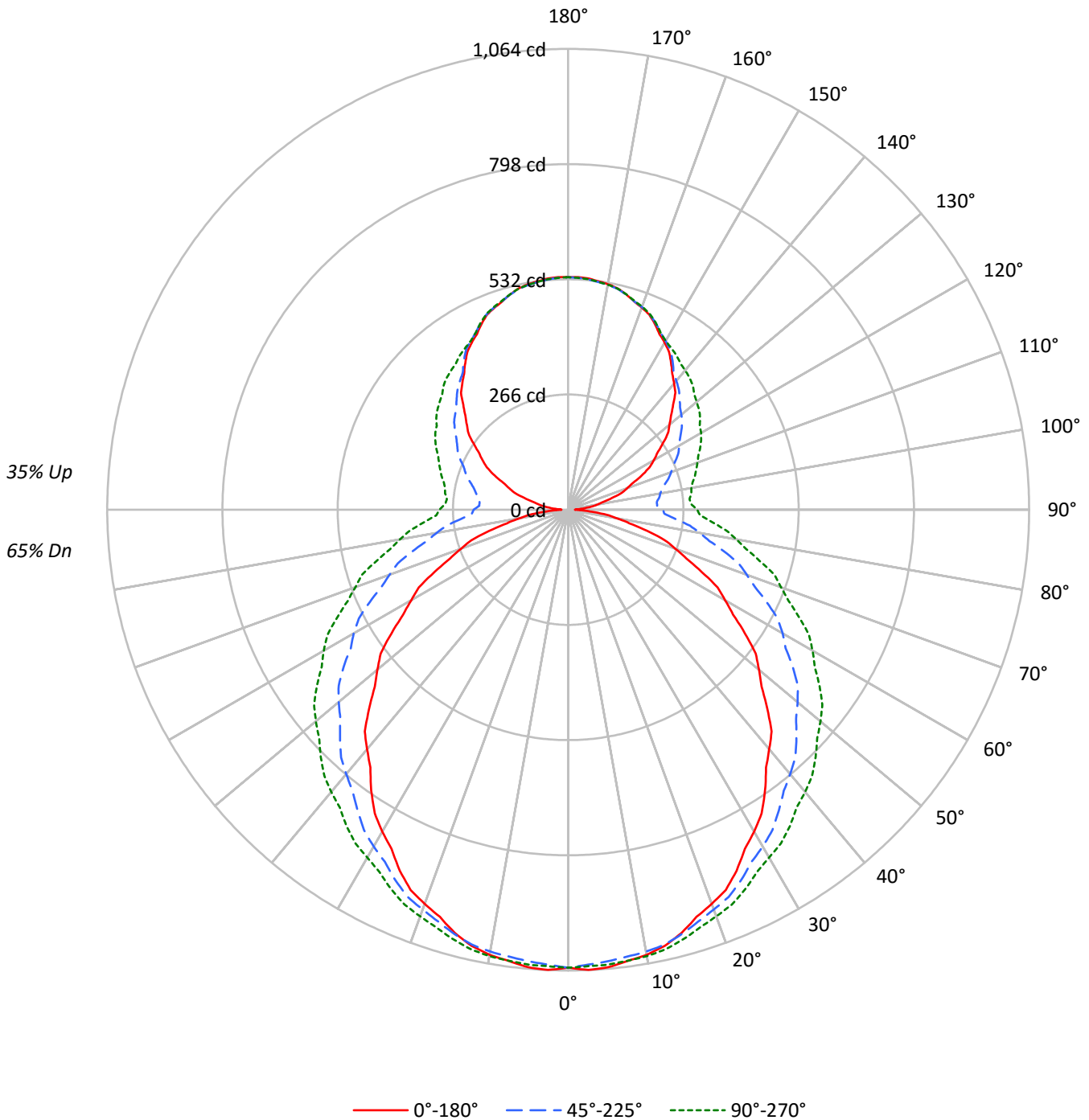
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65
1	99	94	89	85	93	88	84	80	77	74	71	68	65	63	59	57	55	51
2	90	81	74	68	84	76	70	64	67	62	58	58	54	51	50	47	45	41
3	81	71	62	56	76	66	59	53	58	52	48	51	46	42	44	40	37	34
4	74	62	53	47	69	58	50	44	51	45	40	45	40	36	39	35	32	28
5	68	55	46	40	63	52	44	38	46	39	34	40	35	31	35	31	27	24
6	62	49	41	34	58	47	39	33	41	35	30	36	31	27	32	27	24	21
7	58	44	36	30	54	42	34	29	37	31	26	33	28	23	29	24	21	18
8	54	40	32	26	50	38	31	25	34	28	23	30	25	21	26	22	19	16
9	50	37	29	23	47	35	28	23	31	25	21	28	22	19	24	20	17	15
10	47	34	26	21	44	32	25	20	29	23	19	26	20	17	23	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17073	17073	17073
5°	17157	16435	16373
10°	17049	15949	15770
15°	16814	15435	15136
20°	16517	14884	14525
25°	16223	14353	13970
30°	15810	13808	13414
35°	15392	13280	13021
40°	14952	12831	12629
45°	14535	12429	12294
50°	14086	12066	11964
55°	13616	11675	11627
60°	13040	11269	11271
65°	12441	10795	10850
70°	11770	10285	10393
75°	10911	9784	9973
80°	9555	9272	9549
85°	8259	8830	9217



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	1.8
10°-20°	287.3	5.2
20°-30°	435.4	7.9
30°-40°	530.3	9.6
40°-50°	570.5	10.3
50°-60°	554.1	10.0
60°-70°	483.8	8.7
70°-80°	372.4	6.7
80°-90°	252.1	4.6
90°-100°	206.2	3.7
100°-110°	231.4	4.2
110°-120°	263.7	4.8
120°-130°	283.9	5.1
130°-140°	286.0	5.2
140°-150°	264.8	4.8
150°-160°	219.2	4.0
160°-170°	145.4	2.6
170°-180°	50.8	0.9
0°-30°	822.9	14.9
0°-40°	1353.3	24.4
0°-60°	2477.9	44.7
0°-90°	3586.2	64.8
90°-120°	701.3	12.7
90°-150°	1535.9	27.7
90°-180°	1951.0	35.2
0°-180°	5537.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1060	1056	1047	1055	1054	101
15°	1012	1014	1014	1028	1027	285
25°	920	930	944	962	967	423
35°	792	819	848	880	892	495
45°	650	692	745	790	808	501
55°	498	555	633	686	708	445
65°	340	416	506	566	588	338
75°	188	275	372	436	458	199
85°	55	150	248	310	334	59
90°	16	111	218	276	297	11
95°	36	113	205	261	281	37
105°	105	153	232	284	303	112
115°	187	210	275	319	336	185
125°	267	273	318	357	372	239
135°	343	348	364	394	406	265
145°	414	417	420	429	436	259
155°	473	475	476	478	477	218
165°	515	515	515	518	516	145
175°	536	535	534	537	534	51
180°	537	537	537	537	537	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1063.6	1062.8	1061.9	1061.1	1060.3	1058.9	1057.0	1055.1	1053.2	1051.3	1052.7
5°	1060.5	1059.5	1058.5	1057.4	1056.4	1054.9	1052.9	1050.8	1048.8	1046.7	1048.8
7.5°	1051.0	1050.3	1049.6	1049.0	1048.3	1047.2	1045.6	1044.0	1042.5	1040.9	1043.3
10°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.1	1039.1	1038.0	1037.0	1036.0	1038.7
12.5°	1031.4	1031.5	1031.7	1031.8	1031.9	1031.6	1030.9	1030.1	1029.4	1028.6	1031.4
15°	1011.5	1012.2	1012.8	1013.5	1014.2	1014.5	1014.5	1014.5	1014.5	1014.5	1017.6
17.5°	985.7	987.2	988.6	990.0	991.4	992.7	993.8	994.9	996.0	997.1	1000.3
20°	968.6	970.3	972.0	973.7	975.4	976.9	978.3	979.6	981.0	982.4	986.1
22.5°	950.2	952.1	954.1	956.1	958.1	960.0	961.9	963.8	965.7	967.6	971.4
25°	919.5	921.9	924.3	926.7	929.1	931.8	934.8	937.9	941.0	944.0	948.1
27.5°	882.7	886.6	890.5	894.4	898.3	902.0	905.6	909.2	912.8	916.5	921.6
30°	858.2	862.6	867.1	871.5	875.9	880.4	884.8	889.2	893.6	898.1	903.5
32.5°	831.2	836.2	841.2	846.2	851.1	856.2	861.5	866.7	872.0	877.2	883.5
35°	792.3	798.1	803.9	809.7	815.5	821.6	828.1	834.5	841.0	847.5	855.0
37.5°	750.0	756.7	763.4	770.0	776.7	784.2	792.6	801.0	809.4	817.8	826.1
40°	721.8	729.3	736.8	744.3	751.8	760.1	769.3	778.5	787.7	796.9	805.8
42.5°	694.9	702.3	709.8	717.3	724.8	733.8	744.4	755.0	765.5	776.1	785.7
45°	649.8	659.0	668.2	677.4	686.6	697.1	709.1	721.0	732.9	744.8	755.4
47.5°	605.4	615.4	625.4	635.4	645.4	657.4	671.4	685.3	699.3	713.2	724.3
50°	574.7	585.3	595.8	606.4	616.9	629.9	645.2	660.5	675.8	691.2	702.8
52.5°	545.3	556.4	567.5	578.6	589.7	603.3	619.4	635.6	651.7	667.9	679.7
55°	498.1	510.3	522.6	534.9	547.1	562.1	579.8	597.5	615.2	632.9	645.2
57.5°	451.5	465.3	479.1	493.0	506.8	522.7	540.8	558.8	576.9	594.9	608.1
60°	418.4	433.0	447.7	462.3	477.0	494.0	513.4	532.8	552.2	571.6	584.6
62.5°	389.0	404.1	419.3	434.5	449.7	467.0	486.4	505.8	525.3	544.7	558.4
65°	340.2	356.9	373.6	390.3	407.0	425.4	445.5	465.5	485.6	505.7	519.7
67.5°	295.5	312.9	330.3	347.8	365.2	384.2	404.8	425.4	445.9	466.5	480.6
70°	263.6	281.3	299.0	316.7	334.4	353.8	375.0	396.1	417.2	438.3	452.9
72.5°	234.2	252.4	270.7	288.9	307.2	327.0	348.4	369.8	391.2	412.6	426.9
75°	188.5	207.6	226.6	245.7	264.8	285.2	307.0	328.8	350.6	372.4	387.0
77.5°	144.4	164.3	184.3	204.2	224.2	245.2	267.4	289.5	311.6	333.8	348.4
80°	114.9	135.7	156.5	177.3	198.0	219.5	241.6	263.8	285.9	308.0	322.3
82.5°	90.4	110.9	131.4	151.9	172.4	193.9	216.3	238.7	261.1	283.5	297.8
85°	55.2	76.3	97.4	118.5	139.6	161.1	182.9	204.7	226.5	248.3	262.6
87.5°	30.1	50.7	71.2	91.7	112.3	133.7	155.9	178.2	200.4	222.6	236.5
90°	15.8	36.7	57.7	78.7	99.6	122.1	146.1	170.1	194.1	218.2	231.6
92.5°	22.2	41.4	60.7	80.0	99.3	119.7	141.2	162.7	184.2	205.7	219.1
95°	35.8	52.8	69.8	86.9	103.9	122.7	143.3	164.0	184.6	205.2	218.2
97.5°	53.8	68.9	84.0	99.1	114.3	131.8	151.8	171.8	191.8	211.8	224.4
100°	68.3	81.7	95.1	108.5	121.9	138.3	157.7	177.0	196.4	215.8	228.4
102.5°	82.3	94.4	106.6	118.7	130.9	146.4	165.3	184.2	203.1	222.1	234.5
105°	105.1	115.2	125.4	135.6	145.8	159.8	177.7	195.6	213.6	231.5	243.6
107.5°	129.6	137.9	146.3	154.6	163.0	175.6	192.6	209.5	226.5	243.5	255.0
110°	144.3	151.7	159.1	166.6	174.0	186.0	202.7	219.4	236.1	252.8	263.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.7	168.0	174.4	180.7	187.0	198.1	213.9	229.6	245.4	261.2	271.9
115°	187.4	191.7	196.1	200.4	204.8	214.5	229.6	244.7	259.9	275.0	285.1
117.5°	211.4	214.6	217.9	221.1	224.4	232.8	246.4	260.0	273.6	287.2	297.1
120°	228.4	230.6	232.7	234.9	237.1	244.6	257.4	270.2	283.0	295.8	305.4
122.5°	244.0	245.5	247.0	248.5	250.0	256.9	269.2	281.4	293.6	305.9	314.9
125°	266.7	267.7	268.6	269.5	270.4	276.1	286.7	297.3	307.9	318.5	327.4
127.5°	290.4	291.2	292.0	292.8	293.6	298.2	306.7	315.1	323.5	331.9	340.0
130°	305.3	306.2	307.2	308.2	309.1	313.1	320.0	327.0	333.9	340.9	348.9
132.5°	321.9	322.7	323.4	324.1	324.8	328.0	333.5	339.1	344.6	350.2	357.7
135°	342.7	343.8	344.9	346.0	347.1	349.5	353.1	356.7	360.3	363.9	371.0
137.5°	366.2	367.0	367.8	368.7	369.5	370.8	372.6	374.3	376.1	377.8	384.0
140°	380.3	380.9	381.4	382.0	382.6	383.4	384.6	385.8	387.0	388.2	393.6
142.5°	394.8	395.4	395.9	396.5	397.0	397.6	398.0	398.5	399.0	399.5	403.9
145°	414.1	414.8	415.5	416.2	416.9	417.6	418.2	418.8	419.4	420.0	422.1
147.5°	432.7	433.5	434.4	435.2	436.1	436.7	437.1	437.5	437.9	438.3	438.8
150°	445.4	446.0	446.6	447.2	447.8	448.3	448.7	449.1	449.5	449.9	450.2
152.5°	456.6	457.2	457.8	458.4	459.0	459.6	460.0	460.5	461.0	461.5	461.9
155°	473.4	473.7	474.0	474.4	474.7	475.0	475.3	475.6	475.9	476.2	476.7
157.5°	487.9	488.1	488.3	488.5	488.7	488.8	489.0	489.2	489.4	489.6	490.3
160°	496.6	496.8	497.0	497.2	497.4	497.5	497.6	497.7	497.8	497.9	498.5
162.5°	504.5	504.6	504.6	504.6	504.7	504.8	504.9	505.0	505.1	505.2	505.8
165°	515.1	515.0	514.9	514.8	514.7	514.7	514.7	514.7	514.7	514.7	515.4
167.5°	524.0	523.7	523.4	523.1	522.8	522.6	522.6	522.6	522.6	522.6	523.3
170°	528.7	528.4	528.1	527.8	527.5	527.3	527.2	527.1	527.0	526.9	527.6
172.5°	532.0	531.7	531.4	531.1	530.8	530.6	530.5	530.4	530.3	530.2	530.9
175°	536.0	535.7	535.4	535.1	534.8	534.5	534.3	534.1	533.9	533.7	534.4
177.5°	537.6	537.4	537.1	536.9	536.6	536.4	536.3	536.1	535.9	535.8	536.3
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1054.0	1055.4	1056.8	1057.2	1056.6	1056.1	1055.5	1055.0
5°	1050.8	1052.9	1054.9	1055.7	1055.4	1055.1	1054.7	1054.4
7.5°	1045.8	1048.3	1050.7	1051.8	1051.4	1051.1	1050.7	1050.4
10°	1041.4	1044.2	1046.9	1048.1	1047.7	1047.4	1047.1	1046.7
12.5°	1034.1	1036.8	1039.5	1040.7	1040.4	1040.0	1039.7	1039.4
15°	1020.7	1023.7	1026.8	1028.2	1027.8	1027.5	1027.1	1026.8
17.5°	1003.5	1006.7	1009.9	1011.5	1011.5	1011.5	1011.5	1011.5
20°	989.8	993.6	997.3	999.2	999.2	999.2	999.2	999.2
22.5°	975.1	978.9	982.6	984.8	985.3	985.9	986.4	987.0
25°	952.2	956.3	960.4	962.9	964.0	965.0	966.0	967.0
27.5°	926.8	932.0	937.2	940.1	940.9	941.6	942.4	943.1
30°	909.0	914.4	919.9	923.1	924.1	925.1	926.2	927.2
32.5°	889.8	896.0	902.3	906.3	908.2	910.0	911.9	913.7
35°	862.5	870.0	877.5	882.4	884.8	887.2	889.6	891.9
37.5°	834.4	842.7	851.0	856.4	858.9	861.5	864.0	866.5
40°	814.6	823.5	832.3	838.3	841.4	844.4	847.5	850.6
42.5°	795.4	805.1	814.8	821.1	824.2	827.3	830.3	833.4
45°	765.9	776.5	787.0	794.0	797.4	800.8	804.2	807.6
47.5°	735.3	746.3	757.4	764.8	768.5	772.3	776.0	779.8
50°	714.3	725.9	737.5	745.2	748.9	752.6	756.4	760.1
52.5°	691.6	703.4	715.3	723.2	727.2	731.3	735.3	739.3
55°	657.5	669.7	682.0	690.3	694.7	699.2	703.6	708.0
57.5°	621.4	634.6	647.8	656.6	661.1	665.6	670.1	674.6
60°	597.5	610.5	623.4	632.3	637.0	641.8	646.6	651.3
62.5°	572.2	585.9	599.7	608.8	613.3	617.8	622.3	626.8
65°	533.7	547.6	561.6	570.8	575.2	579.6	584.1	588.5
67.5°	494.7	508.8	522.9	532.3	536.9	541.5	546.2	550.8
70°	467.6	482.2	496.9	506.2	510.3	514.4	518.5	522.6
72.5°	441.3	455.7	470.0	479.7	484.6	489.5	494.4	499.3
75°	401.7	416.3	431.0	440.5	444.9	449.4	453.8	458.2
77.5°	362.9	377.5	392.1	401.8	406.5	411.3	416.1	420.8
80°	336.6	351.0	365.3	374.8	379.6	384.3	389.1	393.9
82.5°	312.1	326.4	340.7	350.1	354.6	359.1	363.6	368.1
85°	276.9	291.2	305.5	315.0	319.8	324.6	329.3	334.1
87.5°	250.3	264.2	278.0	287.2	291.5	295.9	300.3	304.7
90°	245.0	258.4	271.8	280.6	284.8	289.0	293.2	297.4
92.5°	232.4	245.8	259.2	268.0	272.1	276.2	280.3	284.4
95°	231.1	244.1	257.0	265.4	269.3	273.2	277.1	281.0
97.5°	237.0	249.6	262.2	270.5	274.5	278.5	282.5	286.5
100°	241.0	253.6	266.2	274.3	277.9	281.6	285.2	288.9
102.5°	246.9	259.3	271.7	279.7	283.4	287.0	290.7	294.3
105°	255.7	267.8	280.0	287.9	291.6	295.4	299.1	302.9
107.5°	266.5	278.0	289.6	297.0	300.2	303.5	306.8	310.1
110°	274.6	285.5	296.4	303.5	307.0	310.4	313.9	317.3



TEST NUMBER: P331588

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	282.5	293.2	303.9	310.9	314.5	318.0	321.5	325.0
115°	295.2	305.3	315.5	322.2	325.7	329.1	332.6	336.0
117.5°	306.9	316.8	326.6	333.1	336.3	339.5	342.6	345.8
120°	314.9	324.4	334.0	340.5	343.9	347.4	350.8	354.2
122.5°	323.9	332.9	342.0	348.0	350.9	353.9	356.9	359.9
125°	336.3	345.2	354.1	360.0	363.0	365.9	368.9	371.9
127.5°	348.1	356.2	364.3	369.6	372.3	375.0	377.7	380.3
130°	356.8	364.8	372.8	377.9	380.2	382.6	384.9	387.2
132.5°	365.1	372.6	380.0	385.0	387.4	389.8	392.2	394.6
135°	378.0	385.1	392.1	396.8	399.3	401.7	404.1	406.5
137.5°	390.2	396.4	402.6	406.6	408.6	410.5	412.4	414.3
140°	399.1	404.5	410.0	413.5	415.1	416.8	418.4	420.1
142.5°	408.4	412.8	417.2	420.1	421.5	422.9	424.3	425.6
145°	424.3	426.4	428.6	430.3	431.6	432.9	434.2	435.5
147.5°	439.3	439.8	440.3	440.7	441.2	441.6	442.0	442.5
150°	450.5	450.8	451.1	451.1	450.8	450.5	450.2	449.9
152.5°	462.2	462.6	463.0	463.0	462.6	462.2	461.9	461.5
155°	477.2	477.7	478.2	478.3	478.0	477.7	477.4	477.1
157.5°	490.9	491.6	492.3	492.4	491.9	491.4	491.0	490.5
160°	499.1	499.7	500.3	500.4	500.0	499.6	499.2	498.8
162.5°	506.5	507.2	507.9	508.0	507.5	507.0	506.5	506.1
165°	516.1	516.8	517.5	517.6	517.1	516.6	516.1	515.6
167.5°	524.0	524.7	525.4	525.5	524.9	524.4	523.9	523.4
170°	528.3	529.0	529.7	529.8	529.2	528.6	528.0	527.4
172.5°	531.6	532.3	533.0	533.0	532.4	531.8	531.2	530.6
175°	535.1	535.8	536.5	536.6	536.0	535.4	534.8	534.2
177.5°	536.8	537.2	537.7	537.7	537.2	536.8	536.3	535.8
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9

(END OF REPORT)