

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: P331424-840

Luminaire Tested: **S122DIP-S1005D330U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331424-840
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: S122DIP-S1005D330U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5258.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

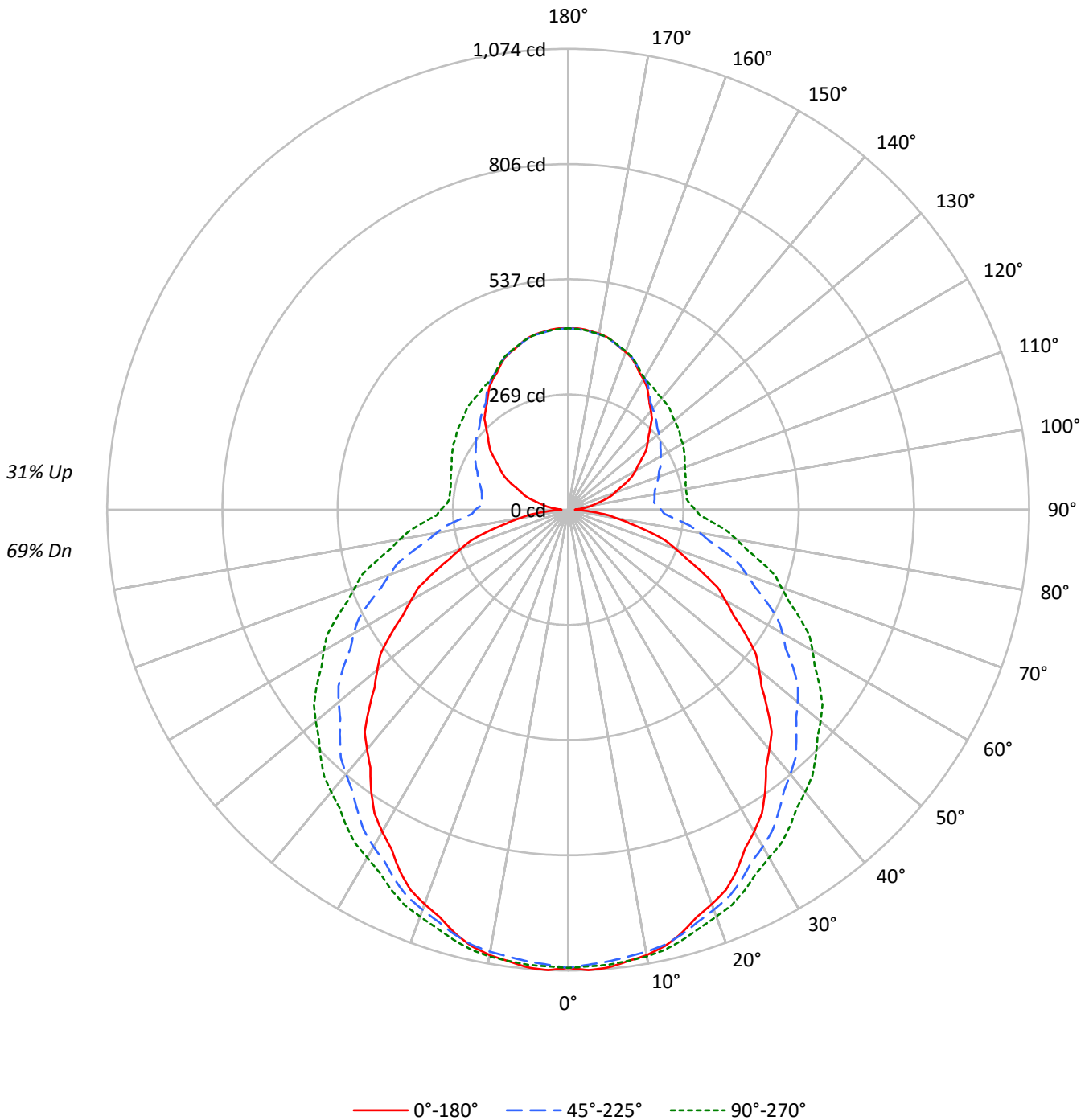
Input Watts (W): 49.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	100	95	90	85	94	89	85	81	79	76	73	70	68	65	62	60	58	54
2	90	81	74	68	85	77	70	65	68	63	59	60	56	53	53	50	47	43
3	82	71	63	56	77	67	59	53	60	54	49	53	48	44	46	43	39	36
4	75	62	54	47	70	59	51	45	53	46	41	47	41	37	41	37	33	30
5	68	55	46	40	64	53	44	38	47	40	35	42	36	32	37	32	29	26
6	63	50	41	34	59	47	39	33	42	35	30	38	32	28	33	29	25	22
7	58	45	36	30	55	43	35	29	38	31	27	34	29	24	30	26	22	20
8	54	41	32	27	51	39	31	26	35	28	24	31	26	22	28	23	20	17
9	50	37	29	24	47	35	28	23	32	26	21	29	23	19	26	21	18	16
10	47	34	26	21	44	33	25	21	29	23	19	27	21	18	24	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	1.9
10°-20°	290.2	5.5
20°-30°	439.7	8.4
30°-40°	535.6	10.2
40°-50°	576.2	11.0
50°-60°	559.5	10.6
60°-70°	488.6	9.3
70°-80°	376.1	7.2
80°-90°	254.1	4.8
90°-100°	200.7	3.8
100°-110°	210.2	4.0
110°-120°	226.1	4.3
120°-130°	233.9	4.4
130°-140°	229.6	4.4
140°-150°	209.3	4.0
150°-160°	172.7	3.3
160°-170°	114.5	2.2
170°-180°	40.0	0.8
0°-30°	831.1	15.8
0°-40°	1366.6	26.0
0°-60°	2502.3	47.6
0°-90°	3621.1	68.9
90°-120°	637.0	12.1
90°-150°	1309.7	24.9
90°-180°	1637.0	31.1
0°-180°	5258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	16	111	217	276	297	11
95°	31	108	201	257	278	31
105°	84	132	212	264	284	90
115°	149	171	237	281	299	147
125°	211	216	262	302	317	189
135°	270	275	290	321	334	209
145°	326	329	331	340	347	204
155°	373	374	375	377	376	172
165°	406	405	405	408	406	114
175°	422	421	420	422	421	40
180°	423	423	423	423	423	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.4	51.1	71.8	92.5	113.2	134.7	157.0	179.4	201.8	224.1	238.1
90°	15.9	36.8	57.7	78.6	99.5	121.8	145.5	169.3	193.0	216.8	230.4
92.5°	20.6	39.9	59.2	78.4	97.7	118.1	139.7	161.3	182.9	204.5	218.0
95°	30.9	47.9	64.8	81.8	98.8	117.6	138.5	159.3	180.1	200.9	213.9
97.5°	44.7	59.8	74.8	90.0	105.0	122.6	142.7	162.8	183.0	203.1	215.8
100°	56.1	69.5	82.9	96.2	109.6	126.0	145.5	165.0	184.5	204.0	216.7
102.5°	66.9	79.1	91.2	103.3	115.4	131.0	150.0	169.1	188.0	207.0	219.5
105°	84.4	94.6	104.8	115.1	125.3	139.5	157.4	175.5	193.6	211.6	223.8
107.5°	103.7	112.0	120.4	128.7	137.0	149.8	166.8	184.0	201.1	218.2	229.8
110°	115.0	122.4	129.8	137.0	144.4	156.5	173.4	190.3	207.1	224.0	234.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	128.8	134.9	141.2	147.4	153.7	164.8	180.8	196.7	212.7	228.7	239.5
115°	149.0	153.2	157.4	161.7	165.9	175.7	191.1	206.3	221.7	237.0	247.2
117.5°	167.4	170.6	173.7	176.8	180.0	188.4	202.3	216.1	230.0	243.9	253.9
120°	180.9	182.9	184.9	186.9	188.9	196.5	209.6	222.8	235.9	249.0	258.6
122.5°	193.2	194.5	195.8	197.1	198.4	205.3	217.8	230.2	242.8	255.3	264.4
125°	210.8	211.5	212.2	212.9	213.6	219.3	230.1	240.9	251.7	262.4	271.5
127.5°	229.3	229.9	230.5	231.1	231.6	236.2	244.8	253.4	262.0	270.5	278.8
130°	241.1	241.8	242.5	243.2	243.8	247.7	254.8	261.9	268.9	276.0	284.1
132.5°	254.2	254.7	255.2	255.7	256.2	259.2	264.9	270.4	276.1	281.7	289.3
135°	270.2	271.0	272.0	272.9	273.7	275.9	279.5	283.2	286.7	290.3	297.5
137.5°	288.7	289.3	289.9	290.6	291.2	292.5	294.2	295.9	297.6	299.3	305.6
140°	299.8	300.2	300.5	300.9	301.3	302.1	303.1	304.2	305.3	306.4	311.8
142.5°	311.2	311.6	311.9	312.4	312.8	313.1	313.5	314.0	314.4	314.8	319.2
145°	326.1	326.7	327.2	327.8	328.3	328.8	329.3	329.8	330.2	330.7	332.9
147.5°	340.7	341.4	342.0	342.7	343.4	343.9	344.2	344.6	344.9	345.2	345.6
150°	350.7	351.2	351.6	352.1	352.6	353.0	353.4	353.7	354.0	354.3	354.6
152.5°	359.6	360.0	360.5	361.0	361.4	361.9	362.2	362.6	363.0	363.5	363.8
155°	372.8	373.0	373.3	373.5	373.8	374.1	374.3	374.5	374.8	375.0	375.4
157.5°	384.2	384.4	384.5	384.7	384.9	385.0	385.2	385.3	385.4	385.6	386.1
160°	391.0	391.2	391.3	391.5	391.6	391.8	391.8	391.9	392.0	392.1	392.5
162.5°	397.3	397.4	397.4	397.4	397.5	397.5	397.6	397.7	397.8	397.8	398.4
165°	405.7	405.6	405.5	405.5	405.4	405.3	405.3	405.3	405.3	405.3	405.9
167.5°	412.6	412.4	412.2	411.9	411.7	411.6	411.5	411.5	411.5	411.5	412.0
170°	416.4	416.2	415.9	415.7	415.5	415.3	415.2	415.1	415.1	415.0	415.5
172.5°	418.9	418.7	418.5	418.2	418.0	417.8	417.8	417.7	417.6	417.5	418.1
175°	422.1	421.8	421.6	421.3	421.1	420.9	420.8	420.6	420.4	420.3	420.8
177.5°	423.3	423.1	422.9	422.8	422.6	422.4	422.3	422.2	422.0	421.9	422.3
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	252.2	266.1	280.1	289.3	293.8	298.2	302.6	307.0
90°	244.0	257.6	271.1	280.0	284.3	288.5	292.7	296.9
92.5°	231.6	245.0	258.5	267.4	271.6	275.7	279.8	284.0
95°	226.9	240.0	253.1	261.7	265.6	269.5	273.5	277.5
97.5°	228.5	241.3	254.0	262.4	266.4	270.4	274.5	278.5
100°	229.4	242.2	254.9	263.1	266.8	270.5	274.2	277.9
102.5°	232.1	244.6	257.1	265.2	268.9	272.6	276.3	280.0
105°	236.0	248.2	260.3	268.3	272.2	275.9	279.7	283.5
107.5°	241.5	253.1	264.7	272.3	275.7	279.0	282.5	285.9
110°	245.9	256.9	267.9	275.2	278.8	282.4	285.9	289.4



TEST NUMBER: P331424-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	250.3	261.2	272.0	279.1	282.8	286.4	290.0	293.6
115°	257.5	267.7	277.9	284.9	288.4	292.0	295.5	299.0
117.5°	263.9	273.9	283.8	290.4	293.8	297.0	300.2	303.6
120°	268.2	277.9	287.5	294.1	297.6	301.1	304.8	308.3
122.5°	273.6	282.8	292.0	298.0	301.0	304.2	307.2	310.2
125°	280.5	289.5	298.6	304.7	307.6	310.6	313.7	316.7
127.5°	287.0	295.3	303.5	309.0	311.7	314.6	317.3	320.1
130°	292.2	300.2	308.3	313.6	316.0	318.5	320.9	323.4
132.5°	296.9	304.6	312.1	317.2	319.7	322.2	324.8	327.2
135°	304.6	311.7	318.9	323.8	326.2	328.7	331.2	333.8
137.5°	311.8	318.1	324.4	328.5	330.5	332.5	334.6	336.6
140°	317.4	322.9	328.4	332.0	333.8	335.5	337.2	339.0
142.5°	323.7	328.1	332.5	335.6	337.0	338.5	340.0	341.4
145°	335.1	337.2	339.3	341.1	342.4	343.9	345.3	346.7
147.5°	346.1	346.5	347.0	347.4	348.0	348.5	349.0	349.5
150°	354.8	355.0	355.3	355.3	355.0	354.8	354.6	354.3
152.5°	364.1	364.4	364.7	364.7	364.4	364.1	363.8	363.5
155°	375.8	376.2	376.6	376.7	376.4	376.2	376.0	375.7
157.5°	386.6	387.2	387.7	387.8	387.4	387.0	386.7	386.3
160°	393.0	393.5	394.0	394.0	393.7	393.4	393.1	392.8
162.5°	398.9	399.4	400.0	400.0	399.7	399.3	398.9	398.5
165°	406.4	407.0	407.5	407.6	407.2	406.8	406.4	406.1
167.5°	412.6	413.1	413.7	413.8	413.4	412.9	412.5	412.1
170°	416.1	416.6	417.2	417.2	416.8	416.3	415.8	415.3
172.5°	418.6	419.2	419.7	419.8	419.3	418.8	418.4	417.9
175°	421.4	421.9	422.5	422.5	422.1	421.6	421.1	420.6
177.5°	422.7	423.0	423.4	423.4	423.0	422.7	422.3	421.9
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

(END OF REPORT)