

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: P332923-830

Luminaire Tested: **SA4XXRDIP-C575D1205U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332923-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D1205U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

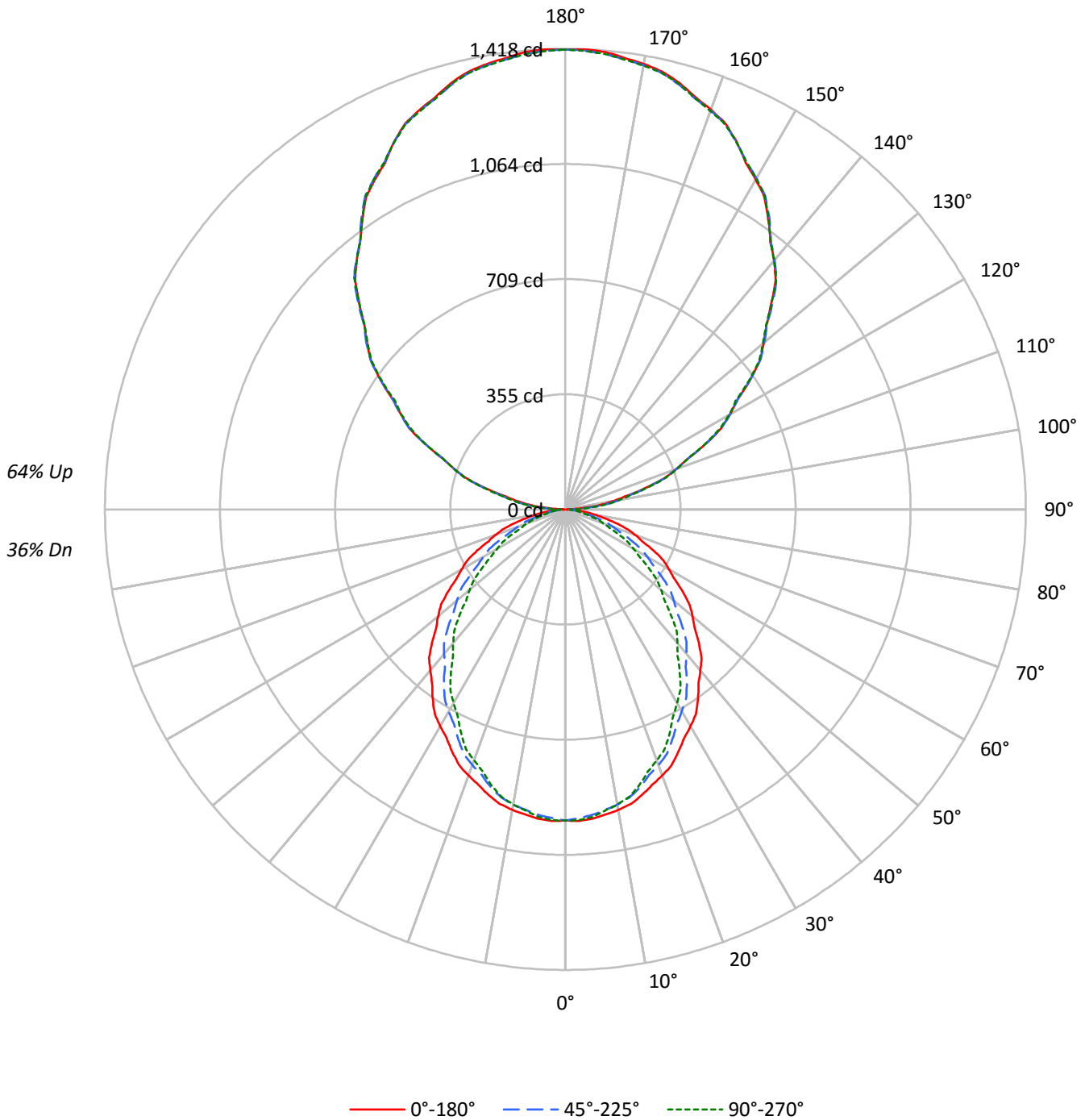
Lumens per Lamp: N/A
Luminaire Lumens: 6145.6 lumens
Efficiency: N/A
Efficacy: 124.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 49.4
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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36				36
1	95	91	87	84	86	82	79	76	66	64	62	52	51	49	39	38	37	31				31
2	86	79	73	69	78	72	67	63	58	55	52	46	43	41	34	33	31	26				26
3	79	70	63	57	71	64	58	53	52	47	44	41	38	35	30	29	27	22				22
4	72	62	54	48	65	56	50	45	46	41	37	36	33	30	27	25	23	19				19
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	22	20	17				17
6	61	49	42	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15				15
7	56	45	37	31	51	41	34	29	34	28	25	27	23	20	20	18	16	13				13
8	52	40	33	28	47	37	30	26	31	26	22	24	21	18	19	16	14	12				12
9	49	37	30	25	44	34	27	23	28	23	20	23	19	16	17	15	13	11				11
10	45	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10				10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	1.5
10°-20°	250.9	4.1
20°-30°	362.3	5.9
30°-40°	410.7	6.7
40°-50°	396.6	6.5
50°-60°	329.8	5.4
60°-70°	227.7	3.7
70°-80°	115.4	1.9
80°-90°	33.8	0.6
90°-100°	93.4	1.5
100°-110°	276.7	4.5
110°-120°	469.6	7.6
120°-130°	619.1	10.1
130°-140°	695.3	11.3
140°-150°	683.3	11.1
150°-160°	574.7	9.4
160°-170°	382.4	6.2
170°-180°	133.9	2.2
0°-30°	703.2	11.4
0°-40°	1113.9	18.1
0°-60°	1840.3	29.9
0°-90°	2217.3	36.1
90°-120°	839.6	13.7
90°-150°	2837.4	46.2
90°-180°	3928.0	63.9
0°-180°	6145.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	3	15	24	30	33	6
95°	66	75	83	86	86	73
105°	255	256	261	264	267	271
115°	477	477	475	474	473	471
125°	695	695	694	692	690	620
135°	897	903	903	901	898	694
145°	1090	1094	1095	1094	1091	682
155°	1248	1248	1247	1251	1247	574
165°	1359	1356	1354	1359	1356	383
175°	1414	1408	1407	1414	1407	134
180°	1416	1416	1416	1416	1416	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	14.1	13.7	13.1	12.6	12.2	12.0	12.3	12.5	12.8	13.0	13.2
90°	3.3	5.9	8.7	11.3	13.9	16.3	18.3	20.2	22.1	24.1	25.5
92.5°	23.5	26.5	29.6	32.6	35.7	37.9	39.3	40.6	42.0	43.4	44.2
95°	65.7	67.9	70.1	72.3	74.5	76.4	78.1	79.8	81.5	83.2	84.0
97.5°	114.8	116.5	118.3	120.0	121.8	123.7	125.6	127.6	129.6	131.6	132.5
100°	153.4	154.3	155.2	156.2	157.2	158.8	161.0	163.2	165.3	167.6	168.1
102.5°	193.6	194.0	194.4	194.7	195.2	196.3	198.3	200.4	202.4	204.3	205.0
105°	255.1	255.4	255.6	255.9	256.1	256.7	257.7	258.6	259.7	260.6	261.4
107.5°	319.7	320.1	320.4	320.7	320.9	321.1	321.3	321.4	321.6	321.7	322.4
110°	363.5	364.0	364.5	365.0	365.5	365.6	365.4	365.1	364.9	364.7	364.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	409.1	409.3	409.3	409.4	409.5	409.3	408.9	408.5	408.0	407.6	407.5
115°	477.4	477.4	477.4	477.4	477.4	477.2	476.7	476.3	475.7	475.2	475.0
117.5°	541.9	542.1	542.2	542.4	542.6	542.5	542.2	541.9	541.5	541.2	540.4
120°	584.8	585.7	586.7	587.7	588.6	588.8	588.1	587.3	586.5	585.9	584.7
122.5°	629.4	629.8	630.2	630.6	631.0	631.0	630.7	630.4	630.0	629.6	628.9
125°	695.3	695.3	695.3	695.3	695.3	695.2	695.0	694.7	694.5	694.3	693.8
127.5°	755.2	755.9	756.6	757.3	758.1	758.3	757.8	757.4	757.1	756.7	756.2
130°	797.2	798.0	798.6	799.4	800.1	800.5	800.5	800.5	800.5	800.5	800.0
132.5°	840.1	840.7	841.2	841.7	842.3	842.4	842.3	842.1	841.9	841.7	841.1
135°	896.8	898.3	899.8	901.3	902.7	903.4	903.4	903.4	903.4	903.4	903.0
137.5°	958.6	959.3	960.0	960.6	961.3	961.9	962.2	962.6	963.0	963.4	962.8
140°	999.8	1000.2	1000.8	1001.3	1001.7	1001.9	1001.9	1001.9	1001.9	1001.9	1001.7
142.5°	1037.5	1037.9	1038.4	1038.9	1039.4	1039.5	1039.3	1039.2	1039.0	1038.8	1038.7
145°	1089.6	1090.5	1091.6	1092.5	1093.4	1094.1	1094.3	1094.6	1094.8	1095.0	1094.8
147.5°	1141.2	1142.5	1143.6	1144.7	1145.9	1146.4	1146.2	1146.0	1145.8	1145.7	1145.5
150°	1172.8	1173.7	1174.8	1175.7	1176.7	1177.1	1177.1	1177.1	1177.1	1177.1	1177.1
152.5°	1202.6	1203.2	1203.7	1204.3	1204.9	1205.3	1205.5	1205.7	1205.9	1206.1	1206.6
155°	1248.3	1248.3	1248.3	1248.3	1248.3	1248.2	1248.0	1247.7	1247.5	1247.3	1248.2
157.5°	1286.9	1286.5	1286.0	1285.6	1285.2	1284.9	1284.9	1284.8	1284.8	1284.7	1285.4
160°	1309.7	1309.5	1309.2	1308.9	1308.7	1308.4	1308.2	1308.0	1307.7	1307.5	1308.2
162.5°	1330.7	1330.0	1329.5	1328.8	1328.1	1327.8	1327.5	1327.3	1327.0	1326.7	1328.0
165°	1359.0	1358.2	1357.4	1356.8	1356.0	1355.4	1354.9	1354.4	1354.0	1353.5	1354.9
167.5°	1380.6	1379.6	1378.6	1377.5	1376.6	1376.0	1376.1	1376.1	1376.2	1376.2	1377.7
170°	1392.9	1391.7	1390.4	1389.2	1388.0	1387.5	1387.8	1388.0	1388.3	1388.6	1390.0
172.5°	1401.7	1400.6	1399.6	1398.5	1397.6	1397.0	1397.1	1397.2	1397.2	1397.3	1398.9
175°	1413.7	1412.5	1411.3	1410.0	1408.8	1408.1	1407.9	1407.6	1407.4	1407.1	1408.8
177.5°	1417.7	1416.6	1415.7	1414.8	1413.7	1413.2	1413.2	1413.2	1413.2	1413.2	1414.7
180°	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	13.4	13.5	13.7	13.9	14.1	14.3	14.5	14.8
90°	27.1	28.5	30.0	30.9	31.4	31.9	32.3	32.9
92.5°	45.1	46.0	46.8	47.4	47.8	48.1	48.4	48.6
95°	84.6	85.4	86.1	86.5	86.5	86.5	86.5	86.5
97.5°	133.4	134.2	135.2	135.5	135.5	135.5	135.5	135.5
100°	168.5	169.0	169.5	169.8	169.8	169.8	169.8	169.8
102.5°	205.7	206.4	207.1	207.5	207.7	207.9	208.1	208.3
105°	262.1	262.8	263.5	264.3	265.0	265.7	266.5	267.2
107.5°	323.1	323.8	324.4	324.8	324.7	324.7	324.6	324.6
110°	363.6	363.2	362.7	362.8	363.5	364.3	365.0	365.7



TEST NUMBER: P332923-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	407.4	407.3	407.2	407.2	407.4	407.5	407.6	407.8
115°	474.8	474.5	474.3	474.0	473.8	473.5	473.3	473.1
117.5°	539.5	538.7	537.8	537.2	536.7	536.2	535.7	535.3
120°	583.4	582.2	581.0	580.6	581.1	581.5	582.1	582.6
122.5°	628.0	627.2	626.3	625.5	624.6	623.8	622.8	622.0
125°	693.2	692.8	692.3	691.8	691.4	690.9	690.3	689.8
127.5°	755.7	755.3	754.7	754.3	753.9	753.5	753.1	752.7
130°	799.5	799.0	798.5	797.8	796.8	795.9	794.8	793.9
132.5°	840.7	840.2	839.7	839.2	838.9	838.5	838.1	837.7
135°	902.5	901.9	901.4	900.9	900.1	899.4	898.6	898.0
137.5°	962.1	961.5	960.9	960.6	960.8	960.9	961.1	961.2
140°	1001.5	1001.3	1001.0	1000.8	1000.5	1000.2	1000.0	999.8
142.5°	1038.7	1038.6	1038.6	1038.5	1038.5	1038.4	1038.4	1038.3
145°	1094.6	1094.3	1094.1	1093.5	1092.9	1092.1	1091.4	1090.7
147.5°	1145.3	1145.1	1144.8	1144.6	1144.4	1144.2	1143.9	1143.7
150°	1177.1	1177.1	1177.1	1177.0	1176.8	1176.6	1176.3	1176.1
152.5°	1207.2	1207.9	1208.4	1208.4	1207.8	1207.1	1206.5	1205.9
155°	1249.2	1250.2	1251.1	1251.1	1250.2	1249.2	1248.2	1247.3
157.5°	1286.2	1286.9	1287.6	1287.6	1286.8	1285.9	1285.1	1284.3
160°	1308.9	1309.7	1310.4	1310.1	1308.9	1307.7	1306.6	1305.3
162.5°	1329.4	1330.7	1332.0	1332.1	1330.9	1329.6	1328.4	1327.2
165°	1356.4	1357.8	1359.3	1359.5	1358.6	1357.6	1356.6	1355.7
167.5°	1379.1	1380.6	1382.1	1382.1	1380.5	1379.0	1377.5	1376.0
170°	1391.5	1392.9	1394.4	1394.2	1392.5	1390.8	1389.1	1387.4
172.5°	1400.6	1402.2	1403.9	1403.9	1402.1	1400.4	1398.7	1397.0
175°	1410.5	1412.2	1413.9	1413.9	1412.2	1410.5	1408.8	1407.1
177.5°	1416.0	1417.4	1418.7	1418.6	1417.0	1415.5	1413.9	1412.4
180°	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9

(END OF REPORT)