

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: P332918-830

Luminaire Tested: **SA4XXRDIP-C575D1035U830-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

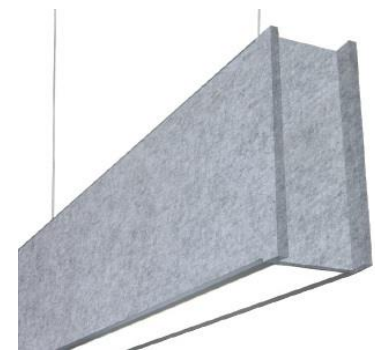
**Test Information**

Test Method: LM-79-08  
Report Number: P332918-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C575D1035U830-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

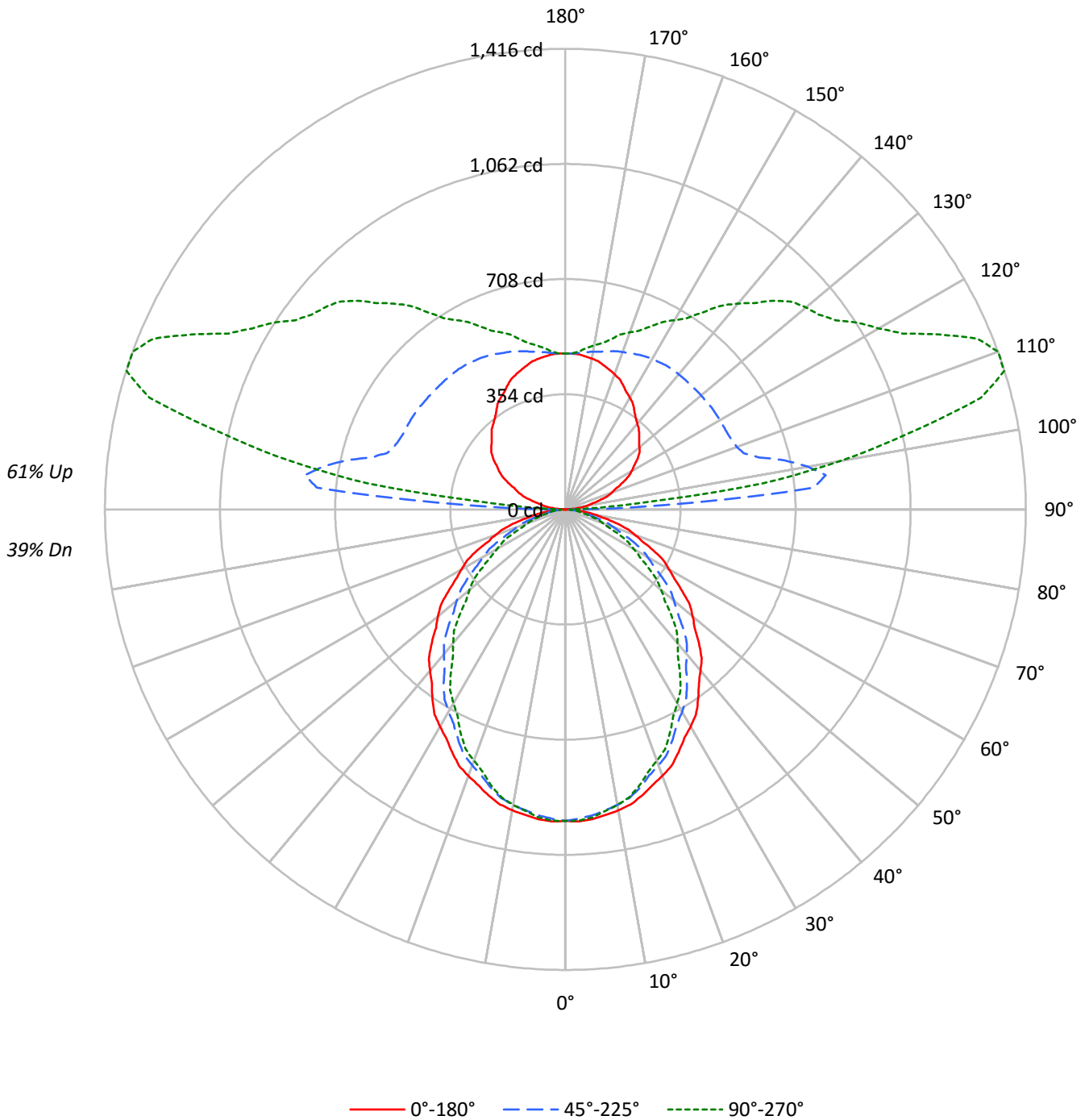
Lumens per Lamp: N/A  
Luminaire Lumens: 5699.0 lumens  
Efficiency: N/A  
Efficacy: 128.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 44.5  
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	50	30	10	0	
RCR																						
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	96	91	88	84	87	83	80	77	68	66	64	54	52	51	41	40	39	33				
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	35	33	28				
3	80	70	63	58	72	64	58	53	53	48	45	42	39	36	32	30	29	24				
4	73	62	55	49	66	57	50	45	47	42	38	38	34	31	29	27	25	21				
5	67	56	48	42	61	51	44	39	42	37	33	34	30	27	26	24	22	18				
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	21	19	16				
7	57	45	37	32	52	41	34	30	34	29	25	28	24	21	22	19	17	14				
8	53	41	33	28	48	38	31	26	31	26	23	25	22	19	20	17	15	13				
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	18	16	14	12				
10	46	34	27	22	42	31	25	21	26	22	18	22	18	15	17	14	13	11				

**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	1.6
10°-20°	250.9	4.4
20°-30°	362.3	6.4
30°-40°	410.7	7.2
40°-50°	396.6	7.0
50°-60°	329.8	5.8
60°-70°	227.7	4.0
70°-80°	115.4	2.0
80°-90°	32.3	0.6
90°-100°	345.9	6.1
100°-110°	720.0	12.6
110°-120°	644.9	11.3
120°-130°	542.4	9.5
130°-140°	452.3	7.9
140°-150°	345.5	6.1
150°-160°	242.9	4.3
160°-170°	142.9	2.5
170°-180°	46.5	0.8
0°-30°	703.2	12.3
0°-40°	1113.9	19.5
0°-60°	1840.3	32.3
0°-90°	2215.7	38.9
90°-120°	1710.8	30.0
90°-150°	3051.1	53.5
90°-180°	3483.0	61.1
0°-180°	5699.0	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°	1	8	17	19	20	4
95°	31	98	767	380	230	35
105°	110	159	617	1329	1324	117
115°	194	243	550	1058	1271	192
125°	270	321	548	900	1014	240
135°	321	382	543	799	907	248
145°	370	423	540	674	741	232
155°	421	454	525	595	620	194
165°	458	472	503	533	541	129
175°	478	479	483	489	487	45
180°	479	479	479	479	479	



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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°	13.7	13.0	12.5	11.7	10.8	10.3	11.2	11.1	11.3	11.6	11.3
90°	0.9	2.8	5.7	6.6	7.5	7.5	13.2	13.2	15.1	17.0	16.0
92.5°	10.7	15.6	24.5	35.9	49.7	69.3	117.1	190.1	261.2	298.5	248.6
95°	31.0	33.8	43.3	55.5	78.1	117.6	199.4	353.8	578.7	766.9	788.5
97.5°	55.7	55.7	63.8	75.1	94.4	127.6	190.7	318.0	541.6	807.7	990.6
100°	71.5	71.5	78.1	89.4	107.3	137.4	192.9	299.3	491.2	756.5	997.4
102.5°	86.5	88.0	93.9	104.4	121.6	150.1	200.4	294.0	457.3	692.6	940.9
105°	110.1	112.9	117.6	128.9	145.8	173.1	218.3	296.4	428.1	617.3	838.4
107.5°	136.1	138.0	142.6	154.7	170.9	197.7	239.2	310.3	422.8	575.1	755.5
110°	153.4	155.2	159.9	171.3	188.2	213.6	255.0	320.8	424.3	560.8	714.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.9	171.8	177.3	187.8	204.7	230.2	270.0	332.2	428.9	554.0	690.9
115°	193.9	196.6	203.2	212.6	230.5	255.9	293.6	350.1	437.5	550.4	669.0
117.5°	218.7	221.3	227.2	237.5	254.2	280.6	316.3	368.3	446.8	549.5	659.2
120°	235.3	237.1	243.7	254.0	270.0	296.4	332.2	381.1	453.6	549.5	653.9
122.5°	250.3	252.1	258.7	268.3	285.9	311.4	347.2	393.1	460.3	548.7	647.9
125°	270.0	273.8	279.5	289.8	307.6	334.0	367.9	411.2	470.5	547.6	638.0
127.5°	287.6	290.6	297.4	309.2	327.8	354.4	387.1	426.8	478.5	545.5	624.6
130°	297.4	301.1	308.6	322.7	340.6	367.9	399.9	436.6	484.6	544.8	616.3
132.5°	307.1	310.1	319.9	333.3	352.7	378.4	410.5	446.4	489.8	544.0	608.8
135°	320.8	324.6	334.0	350.1	369.8	394.3	425.3	459.2	497.8	542.9	597.5
137.5°	334.6	338.2	348.6	363.7	384.3	407.6	436.6	468.3	502.5	542.7	587.7
140°	344.4	347.2	357.6	373.5	393.3	415.9	444.1	474.2	506.2	542.0	582.5
142.5°	355.0	357.8	367.3	382.6	401.6	423.4	450.9	478.7	509.3	542.0	578.0
145°	369.8	372.6	382.0	395.2	413.1	433.8	458.3	483.6	511.0	540.1	570.2
147.5°	386.5	387.5	395.8	409.3	424.1	442.8	465.8	488.0	511.9	536.7	563.3
150°	397.1	398.0	405.6	416.9	430.9	448.8	469.6	490.2	511.9	534.4	558.0
152.5°	406.9	407.1	414.6	425.1	437.7	454.1	472.6	491.7	510.4	530.7	552.0
155°	420.6	421.5	427.2	436.6	447.0	461.1	477.0	493.0	508.1	525.1	542.9
157.5°	433.9	433.9	439.2	446.6	455.6	466.7	480.2	493.0	505.7	519.2	533.7
160°	442.2	442.2	446.0	452.6	460.1	470.5	481.7	493.0	503.4	514.7	527.0
162.5°	449.8	449.0	452.0	457.9	464.7	472.8	483.2	493.0	501.1	510.2	520.9
165°	458.3	458.3	460.1	464.9	469.6	475.1	483.6	491.2	496.8	503.4	511.0
167.5°	466.7	465.8	466.7	470.3	473.0	477.2	483.4	488.9	492.3	496.6	501.9
170°	470.5	469.6	470.5	473.3	475.1	478.0	482.7	487.4	489.3	492.1	495.9
172.5°	474.2	473.3	473.4	475.5	476.6	478.7	481.9	485.9	486.3	487.6	490.6
175°	478.0	477.0	477.0	478.0	478.9	478.9	480.8	483.6	482.7	482.7	484.6
177.5°	479.7	478.9	478.2	478.9	478.9	478.9	479.7	481.2	479.7	479.7	480.4
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9



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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°	11.3	11.4	11.5	11.5	11.8	12.1	12.1	12.2
90°	17.0	17.9	18.9	18.9	19.8	20.7	19.8	19.8
92.5°	184.8	139.1	110.7	91.8	80.8	75.7	72.5	72.5
95°	697.2	551.4	425.3	334.0	287.9	258.7	241.9	229.6
97.5°	1030.2	975.9	883.9	785.7	718.1	661.5	633.3	613.7
100°	1134.8	1153.6	1107.5	1037.8	956.0	898.6	870.3	862.9
102.5°	1129.5	1222.9	1236.2	1207.2	1157.0	1115.4	1085.7	1079.7
105°	1053.9	1216.6	1309.8	1348.4	1350.3	1342.7	1329.6	1323.9
107.5°	946.4	1119.7	1250.9	1334.8	1381.3	1402.8	1412.2	1414.7
110°	881.7	1044.4	1180.9	1284.4	1351.2	1390.7	1407.7	1416.2





TEST NUMBER: P332918-830

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	834.2	978.2	1107.1	1210.6	1286.5	1334.3	1358.0	1371.7
115°	786.6	902.4	1012.5	1102.8	1177.1	1233.6	1263.7	1271.2
117.5°	763.3	859.1	945.7	1022.3	1085.7	1133.1	1163.6	1169.4
120°	752.7	840.3	915.6	982.3	1035.9	1077.4	1101.8	1112.2
122.5°	743.8	828.2	896.7	955.3	1000.6	1035.9	1056.7	1067.1
125°	728.3	809.2	874.1	925.9	963.6	990.8	1008.7	1014.4
127.5°	709.5	786.8	851.6	900.7	938.5	962.8	977.8	983.4
130°	694.5	768.7	832.7	882.6	921.1	944.7	959.8	965.4
132.5°	678.6	748.5	810.9	860.8	898.6	925.1	939.4	945.1
135°	656.8	717.9	775.3	822.4	860.1	886.4	901.4	907.1
137.5°	637.1	688.8	737.2	779.7	814.8	840.8	853.3	860.1
140°	625.8	670.0	712.3	751.8	784.8	805.5	818.6	826.1
142.5°	615.2	654.1	690.5	724.7	753.8	773.1	784.8	790.0
145°	600.3	632.4	660.5	686.9	710.4	726.4	735.8	740.6
147.5°	588.1	613.5	636.1	656.8	674.1	687.9	695.0	696.6
150°	580.6	602.2	621.0	638.0	653.0	665.2	670.9	671.8
152.5°	572.3	590.9	608.2	622.2	635.0	644.9	648.3	649.2
155°	559.9	575.0	589.0	600.3	609.7	617.3	620.1	620.1
157.5°	546.5	559.1	571.0	580.0	587.1	592.8	594.5	594.5
160°	538.2	548.6	558.9	566.5	572.1	577.8	578.7	578.7
162.5°	529.9	538.8	546.9	553.6	557.8	563.5	564.4	563.6
165°	518.5	524.1	530.7	535.4	539.1	542.9	542.0	541.0
167.5°	507.4	511.7	517.0	519.8	521.7	524.1	524.0	523.2
170°	500.6	503.4	507.2	510.0	511.9	512.8	511.9	511.9
172.5°	494.6	496.6	498.9	501.0	502.1	503.0	502.1	500.6
175°	486.4	487.4	489.3	489.3	489.3	491.2	489.3	487.4
177.5°	481.2	481.9	481.9	482.7	481.9	482.7	481.2	479.7
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9

(END OF REPORT)