

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: P331315

Luminaire Tested: **SA2XXDIP-C485D925U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331315
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D925U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

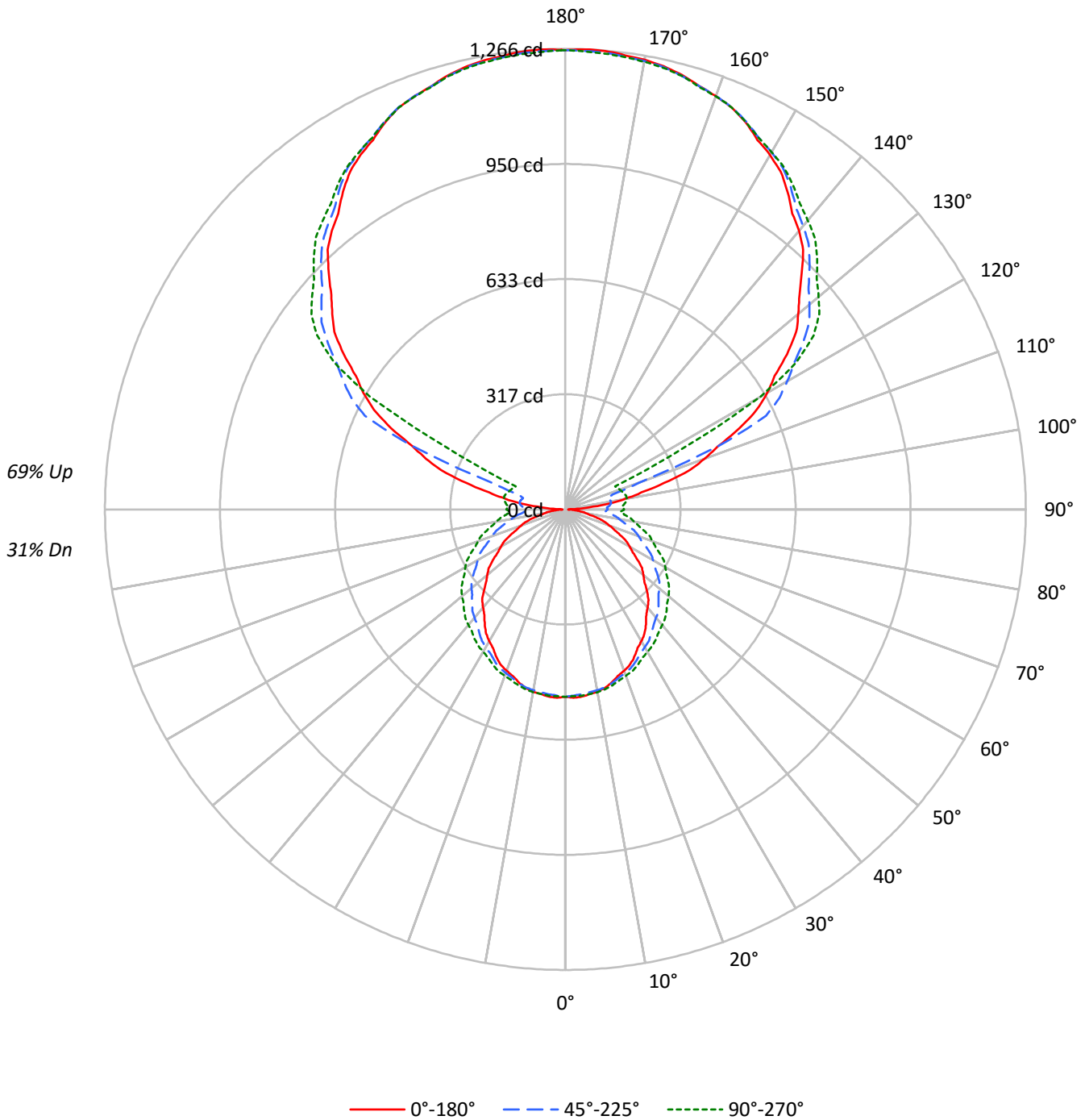
Lumens per Lamp: N/A
Luminaire Lumens: 5667.9 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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	0
RCR																		
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24
2	84	76	70	65	75	68	63	59	54	50	47	41	38	36	28	26	25	19
3	76	67	59	53	68	60	54	48	47	43	39	35	32	30	25	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	22	20	18	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	22	19	17	15	12
6	58	46	38	33	52	42	35	30	33	28	24	25	21	19	18	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	14	15	12	10	8
9	46	34	27	22	41	31	25	20	25	20	16	19	15	13	13	11	9	7
10	43	31	24	19	39	28	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.9
10°-20°	140.0	2.5
20°-30°	212.2	3.7
30°-40°	258.4	4.6
40°-50°	278.0	4.9
50°-60°	270.0	4.8
60°-70°	235.8	4.2
70°-80°	181.5	3.2
80°-90°	124.9	2.2
90°-100°	126.0	2.2
100°-110°	215.7	3.8
110°-120°	453.2	8.0
120°-130°	703.9	12.4
130°-140°	734.0	13.0
140°-150°	675.1	11.9
150°-160°	541.4	9.6
160°-170°	348.9	6.2
170°-180°	120.1	2.1
0°-30°	401.0	7.1
0°-40°	659.5	11.6
0°-60°	1207.5	21.3
0°-90°	1749.7	30.9
90°-120°	794.9	14.0
90°-150°	2907.8	51.3
90°-180°	3918.0	69.1
0°-180°	5667.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	8	62	117	150	162	8
95°	65	73	122	153	162	77
105°	281	316	120	155	168	301
115°	528	554	608	227	150	520
125°	744	758	797	823	833	663
135°	920	934	950	974	979	710
145°	1066	1066	1080	1091	1090	667
155°	1174	1166	1176	1181	1174	541
165°	1237	1232	1234	1240	1234	349
175°	1265	1259	1260	1266	1258	120
180°	1262	1262	1262	1262	1262	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.8	25.2	35.5	45.8	56.2	66.8	77.8	88.7	99.7	110.6	117.6
90°	8.4	20.2	32.1	44.0	55.8	67.9	80.1	92.4	104.6	116.8	124.5
92.5°	25.3	34.1	42.8	51.6	60.4	70.3	81.3	92.3	103.4	114.4	121.4
95°	65.3	66.4	67.5	68.6	69.7	76.0	87.4	98.7	110.1	121.5	128.8
97.5°	123.0	111.1	99.2	87.2	75.3	75.7	88.6	101.4	114.3	127.1	134.1
100°	166.9	145.2	123.6	101.9	80.2	75.8	88.5	101.3	114.0	126.7	134.5
102.5°	214.5	214.2	214.0	213.7	213.4	203.3	183.5	163.7	143.9	124.0	132.1
105°	281.4	292.3	303.2	314.1	325.0	307.0	260.3	213.5	166.7	119.9	128.0
107.5°	358.5	367.3	376.0	384.8	393.5	368.8	310.6	252.5	194.3	136.1	139.4
110°	407.6	415.2	422.7	430.3	437.9	416.4	365.9	315.4	264.9	214.3	199.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	454.3	460.9	467.5	474.0	480.6	480.5	473.7	467.0	460.2	453.5	384.7
115°	528.1	533.4	538.7	544.0	549.2	558.1	570.7	583.2	595.8	608.3	519.3
117.5°	593.3	598.4	603.4	608.5	613.5	621.3	631.6	642.0	652.4	662.8	645.0
120°	641.5	645.3	649.0	652.7	656.4	663.4	673.7	684.0	694.3	704.5	711.6
122.5°	682.5	685.9	689.4	692.9	696.4	703.2	713.4	723.6	733.9	744.1	750.0
125°	744.0	746.6	749.3	751.9	754.6	760.5	769.6	778.8	788.0	797.1	803.0
127.5°	800.4	803.2	806.0	808.7	811.5	816.4	823.6	830.8	837.9	845.1	851.3
130°	836.2	839.3	842.4	845.5	848.6	853.0	858.7	864.4	870.1	875.8	882.1
132.5°	872.8	875.4	878.0	880.6	883.2	886.9	891.8	896.8	901.7	906.6	912.4
135°	919.5	922.8	926.0	929.3	932.5	935.9	939.4	942.8	946.3	949.8	955.3
137.5°	967.6	969.8	972.0	974.3	976.5	979.0	981.8	984.6	987.4	990.2	995.3
140°	999.0	1000.4	1001.9	1003.3	1004.8	1006.8	1009.4	1011.9	1014.5	1017.1	1021.6
142.5°	1025.3	1026.6	1027.9	1029.2	1030.5	1032.4	1035.0	1037.7	1040.3	1042.9	1046.7
145°	1065.8	1065.6	1065.4	1065.2	1065.0	1066.6	1070.1	1073.5	1077.0	1080.4	1082.8
147.5°	1101.8	1101.0	1100.3	1099.5	1098.7	1100.0	1103.4	1106.9	1110.3	1113.7	1114.9
150°	1125.2	1123.8	1122.3	1120.9	1119.5	1120.4	1123.7	1126.9	1130.2	1133.4	1134.6
152.5°	1144.9	1143.3	1141.7	1140.2	1138.6	1139.3	1142.4	1145.5	1148.6	1151.7	1152.9
155°	1173.6	1171.8	1169.9	1168.1	1166.3	1166.6	1169.0	1171.5	1173.9	1176.3	1177.5
157.5°	1196.0	1194.5	1193.0	1191.4	1189.9	1190.0	1191.7	1193.4	1195.1	1196.8	1198.2
160°	1209.2	1208.0	1206.8	1205.5	1204.3	1204.3	1205.5	1206.8	1208.0	1209.2	1210.4
162.5°	1220.9	1219.7	1218.5	1217.2	1216.0	1215.9	1217.0	1218.0	1219.1	1220.2	1221.5
165°	1236.6	1235.4	1234.2	1232.9	1231.7	1231.4	1232.0	1232.6	1233.3	1233.9	1235.3
167.5°	1248.3	1247.1	1245.9	1244.6	1243.4	1243.1	1243.7	1244.2	1244.8	1245.4	1246.8
170°	1254.9	1253.6	1252.4	1251.2	1250.0	1249.6	1250.0	1250.4	1250.8	1251.2	1252.6
172.5°	1259.2	1258.0	1256.8	1255.6	1254.4	1254.0	1254.4	1254.8	1255.2	1255.6	1257.0
175°	1264.9	1263.5	1262.1	1260.6	1259.2	1258.7	1259.1	1259.5	1259.9	1260.3	1261.8
177.5°	1265.8	1264.7	1263.6	1262.4	1261.3	1260.8	1261.0	1261.1	1261.3	1261.4	1262.6
180°	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	124.5	131.5	138.5	143.1	145.3	147.5	149.7	151.9
90°	132.2	139.8	147.5	152.5	154.9	157.3	159.7	162.1
92.5°	128.5	135.5	142.5	147.2	149.4	151.6	153.9	156.1
95°	136.1	143.5	150.8	155.3	157.1	158.9	160.7	162.5
97.5°	141.0	148.0	154.9	159.5	161.7	163.9	166.1	168.3
100°	142.3	150.0	157.8	162.8	165.0	167.3	169.5	171.7
102.5°	140.3	148.4	156.5	161.8	164.1	166.5	168.9	171.3
105°	136.0	144.1	152.1	157.4	160.1	162.7	165.4	168.0
107.5°	142.7	146.0	149.3	152.3	154.9	157.6	160.2	162.8
110°	184.4	169.4	154.4	148.2	150.9	153.5	156.1	158.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.0	247.3	178.6	145.4	147.9	150.4	152.9	155.3
115°	430.3	341.3	252.4	201.5	188.7	175.9	163.1	150.3
117.5°	627.2	609.4	591.6	559.5	513.2	466.8	420.5	374.2
120°	718.7	725.8	732.9	723.6	698.1	672.5	646.9	621.3
122.5°	756.0	762.0	768.0	769.1	765.3	761.6	757.8	754.0
125°	808.9	814.8	820.7	824.7	826.8	828.9	831.0	833.1
127.5°	857.5	863.6	869.8	873.7	875.3	876.9	878.5	880.0
130°	888.3	894.5	900.7	904.4	905.5	906.6	907.7	908.9
132.5°	918.1	923.9	929.6	933.1	934.2	935.3	936.4	937.6
135°	960.9	966.4	971.9	975.1	976.0	976.9	977.9	978.8
137.5°	1000.3	1005.4	1010.4	1013.2	1013.6	1014.0	1014.5	1014.9
140°	1026.0	1030.5	1035.0	1037.2	1037.2	1037.2	1037.2	1037.2
142.5°	1050.5	1054.3	1058.1	1059.9	1059.7	1059.6	1059.4	1059.3
145°	1085.3	1087.7	1090.1	1091.2	1091.0	1090.8	1090.7	1090.5
147.5°	1116.0	1117.2	1118.4	1118.8	1118.3	1117.9	1117.4	1117.0
150°	1135.8	1137.1	1138.3	1138.4	1137.4	1136.3	1135.3	1134.3
152.5°	1154.1	1155.3	1156.5	1156.5	1155.1	1153.8	1152.5	1151.1
155°	1178.8	1180.0	1181.2	1181.0	1179.4	1177.7	1176.1	1174.5
157.5°	1199.5	1200.9	1202.3	1202.2	1200.6	1199.0	1197.4	1195.9
160°	1211.6	1212.9	1214.1	1214.0	1212.5	1211.1	1209.7	1208.3
162.5°	1222.9	1224.3	1225.7	1225.5	1223.8	1222.0	1220.3	1218.5
165°	1236.7	1238.1	1239.5	1239.5	1238.1	1236.7	1235.3	1233.9
167.5°	1248.2	1249.6	1251.1	1250.8	1249.0	1247.2	1245.4	1243.5
170°	1254.1	1255.5	1256.9	1256.7	1254.9	1253.0	1251.2	1249.4
172.5°	1258.4	1259.9	1261.3	1261.1	1259.2	1257.4	1255.6	1253.8
175°	1263.2	1264.6	1266.0	1265.7	1263.7	1261.7	1259.6	1257.6
177.5°	1263.7	1264.9	1266.0	1265.8	1264.4	1262.9	1261.4	1260.0
180°	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2

(END OF REPORT)