

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: P331387-935

Luminaire Tested: **SA2XXDIP-C865D530U935-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331387-935
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-C865D530U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

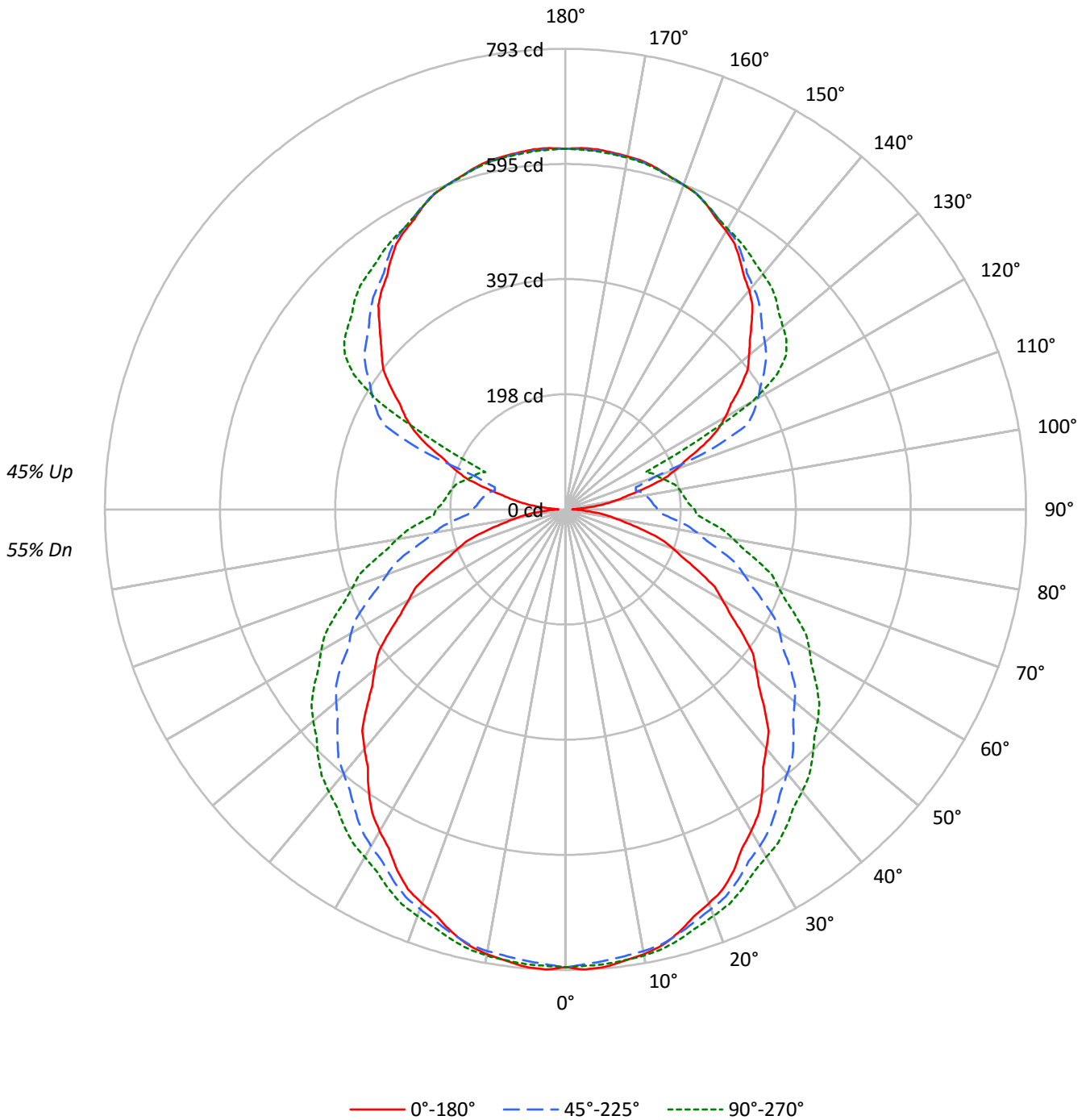
Lumens per Lamp: N/A
Luminaire Lumens: 4828.8 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 48.8
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	50	30	10	0	
RCR																						
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	97	92	88	84	90	86	82	78	73	70	67	62	60	58	51	50	48	43				
2	88	80	73	67	81	74	68	63	63	59	55	53	50	47	44	42	39	35				
3	80	69	61	55	74	65	57	52	55	50	45	47	42	39	39	35	33	29				
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24				
5	67	54	46	39	61	51	43	37	43	37	32	37	32	28	31	27	24	21				
6	61	49	40	34	57	45	38	32	39	33	28	33	28	24	28	24	21	18				
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	18	16				
8	53	40	32	26	49	37	30	25	32	26	22	27	23	19	23	19	16	14				
9	49	36	28	23	45	34	27	22	29	24	19	25	20	17	21	18	15	13				
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	1.5
10°-20°	214.2	4.4
20°-30°	324.6	6.7
30°-40°	395.4	8.2
40°-50°	425.3	8.8
50°-60°	413.1	8.6
60°-70°	360.7	7.5
70°-80°	277.7	5.8
80°-90°	187.9	3.9
90°-100°	149.1	3.1
100°-110°	169.7	3.5
110°-120°	265.0	5.5
120°-130°	369.7	7.7
130°-140°	371.0	7.7
140°-150°	333.8	6.9
150°-160°	266.4	5.5
160°-170°	171.7	3.6
170°-180°	59.1	1.2
0°-30°	613.5	12.7
0°-40°	1008.9	20.9
0°-60°	1847.2	38.3
0°-90°	2673.4	55.4
90°-120°	583.8	12.1
90°-150°	1658.3	34.3
90°-180°	2155.0	44.6
0°-180°	4828.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	12	83	160	206	222	9
95°	38	79	149	193	208	43
105°	142	183	126	169	185	152
115°	263	286	346	181	152	258
125°	368	376	418	451	464	328
135°	453	461	476	503	513	350
145°	524	524	532	541	545	328
155°	577	574	579	581	578	266
165°	608	606	607	610	607	172
175°	622	619	620	623	619	59
180°	621	621	621	621	621	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.5	37.8	53.2	68.5	83.9	99.8	116.1	132.6	149.0	165.4	175.9
90°	11.9	27.7	43.5	59.3	75.2	91.6	108.7	125.7	142.8	159.8	170.5
92.5°	19.5	33.2	46.8	60.4	74.0	88.9	104.9	121.0	137.0	153.0	163.2
95°	38.3	47.0	55.6	64.2	72.9	85.2	101.1	117.0	132.9	149.0	159.0
97.5°	66.0	67.3	68.6	69.9	71.3	80.1	96.3	112.5	128.8	145.0	154.8
100°	87.6	83.3	79.0	74.6	70.3	76.2	92.1	108.1	124.0	139.8	150.1
102.5°	110.4	116.1	121.7	127.4	133.1	135.7	135.3	134.9	134.6	134.1	144.4
105°	142.3	152.7	163.0	173.4	183.7	181.9	167.8	153.8	139.7	125.7	135.6
107.5°	180.1	188.4	196.7	205.0	213.4	207.4	187.4	167.4	147.3	127.3	134.7
110°	203.6	210.8	218.0	225.2	232.3	227.7	211.3	194.8	178.5	162.0	160.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.6	232.7	238.8	245.0	251.2	256.5	261.2	266.0	270.6	275.3	247.0
115°	262.9	267.4	271.9	276.4	280.9	290.1	304.0	318.0	331.8	345.8	307.2
117.5°	294.2	298.0	301.7	305.4	309.1	317.1	329.4	341.7	354.0	366.3	362.6
120°	318.0	320.5	323.0	325.5	328.0	335.3	347.2	359.1	371.1	383.1	391.3
122.5°	338.1	340.1	342.1	344.1	346.0	352.8	364.3	375.7	387.3	398.8	406.4
125°	367.6	368.9	370.1	371.5	372.8	378.4	388.5	398.5	408.5	418.5	426.1
127.5°	395.4	396.6	397.7	398.9	400.1	404.7	412.7	420.6	428.6	436.5	443.8
130°	412.9	414.3	415.7	417.0	418.4	422.2	428.7	435.1	441.5	448.0	455.1
132.5°	430.9	432.0	433.2	434.3	435.3	438.5	443.8	448.9	454.2	459.3	466.2
135°	453.1	454.8	456.3	458.0	459.5	462.1	465.5	469.0	472.4	475.8	482.2
137.5°	476.8	477.9	479.0	480.0	481.0	482.7	484.8	487.0	489.0	491.2	496.9
140°	492.2	492.8	493.4	493.9	494.5	495.5	497.1	498.7	500.3	502.0	506.9
142.5°	505.2	505.7	506.1	506.6	507.0	508.0	509.4	510.7	512.0	513.4	517.5
145°	524.3	524.3	524.2	524.1	524.0	524.8	526.5	528.1	529.9	531.6	533.8
147.5°	542.1	541.7	541.3	541.0	540.5	541.2	542.9	544.6	546.2	547.9	548.6
150°	553.5	552.8	552.2	551.5	550.8	551.2	552.8	554.4	556.0	557.6	558.2
152.5°	563.3	562.5	561.7	560.9	560.2	560.5	562.1	563.6	565.1	566.6	567.2
155°	577.4	576.5	575.6	574.7	573.8	573.9	575.1	576.4	577.6	578.8	579.4
157.5°	588.4	587.7	586.9	586.2	585.4	585.5	586.3	587.1	588.0	588.8	589.4
160°	595.0	594.3	593.7	593.1	592.5	592.5	593.1	593.7	594.3	595.0	595.6
162.5°	600.6	600.0	599.4	598.8	598.3	598.2	598.7	599.3	599.8	600.3	601.0
165°	608.4	607.8	607.2	606.6	606.0	605.9	606.1	606.4	606.7	607.0	607.8
167.5°	614.2	613.5	612.9	612.3	611.7	611.6	611.8	612.2	612.4	612.7	613.4
170°	617.3	616.8	616.2	615.6	615.0	614.8	615.0	615.2	615.4	615.6	616.3
172.5°	619.6	619.0	618.4	617.8	617.2	616.9	617.2	617.3	617.5	617.8	618.5
175°	622.3	621.6	621.0	620.3	619.5	619.3	619.5	619.7	619.8	620.1	620.8
177.5°	622.8	622.2	621.6	621.1	620.5	620.3	620.4	620.4	620.5	620.6	621.2
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	186.3	196.7	207.2	214.1	217.4	220.7	223.9	227.3
90°	181.1	191.7	202.4	209.4	212.6	215.9	219.1	222.3
92.5°	173.4	183.7	193.9	200.5	203.7	206.9	210.1	213.2
95°	169.2	179.3	189.5	196.0	199.0	201.9	204.9	207.8
97.5°	164.6	174.4	184.2	190.6	193.7	196.9	200.0	203.1
100°	160.2	170.5	180.6	187.3	190.2	193.2	196.2	199.2
102.5°	154.6	164.9	175.1	181.8	184.9	187.9	191.0	194.1
105°	145.6	155.6	165.6	172.2	175.4	178.6	181.8	184.9
107.5°	142.1	149.5	156.9	162.2	165.4	168.6	171.8	175.0
110°	158.3	156.4	154.6	155.2	158.4	161.6	164.8	168.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	218.7	190.5	162.1	149.6	152.7	155.8	158.9	162.0
115°	268.5	230.0	191.3	169.8	165.4	161.0	156.6	152.2
117.5°	359.0	355.2	351.5	339.2	318.2	297.1	276.1	255.1
120°	399.7	407.9	416.3	415.1	404.4	393.7	383.1	372.4
122.5°	414.1	421.6	429.3	433.0	432.7	432.5	432.3	432.0
125°	433.6	441.2	448.8	453.8	456.4	459.0	461.6	464.2
127.5°	451.2	458.5	465.8	470.6	472.9	475.2	477.5	479.7
130°	462.4	469.5	476.7	481.3	483.2	485.2	487.1	489.0
132.5°	473.0	479.8	486.6	491.0	493.0	494.9	496.9	498.8
135°	488.4	494.8	501.2	505.2	507.0	508.9	510.7	512.6
137.5°	502.5	508.2	513.8	517.4	518.8	520.1	521.5	522.9
140°	511.9	516.9	521.8	524.8	525.8	526.8	527.9	528.9
142.5°	521.5	525.6	529.7	532.1	533.0	533.7	534.6	535.5
145°	536.0	538.2	540.4	541.9	542.7	543.5	544.2	545.0
147.5°	549.3	550.1	550.8	551.3	551.5	551.6	551.8	552.0
150°	558.8	559.4	560.0	560.1	559.6	559.0	558.5	558.1
152.5°	567.8	568.4	569.0	568.9	568.3	567.7	567.0	566.4
155°	580.0	580.6	581.2	581.0	580.2	579.5	578.7	577.8
157.5°	590.1	590.8	591.5	591.5	590.6	589.9	589.1	588.3
160°	596.1	596.7	597.3	597.3	596.6	595.9	595.1	594.4
162.5°	601.7	602.4	603.0	603.0	602.1	601.2	600.4	599.5
165°	608.5	609.2	609.8	609.8	609.2	608.5	607.8	607.0
167.5°	614.1	614.8	615.5	615.4	614.5	613.6	612.7	611.8
170°	617.0	617.7	618.4	618.3	617.3	616.5	615.6	614.7
172.5°	619.1	619.8	620.5	620.4	619.6	618.6	617.8	616.8
175°	621.5	622.2	622.8	622.8	621.7	620.7	619.7	618.7
177.5°	621.7	622.3	622.8	622.8	622.1	621.3	620.6	619.9
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0

(END OF REPORT)