

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: P332601-830

Luminaire Tested: **SA4XXDIP-C795D810U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332601-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D810U830-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

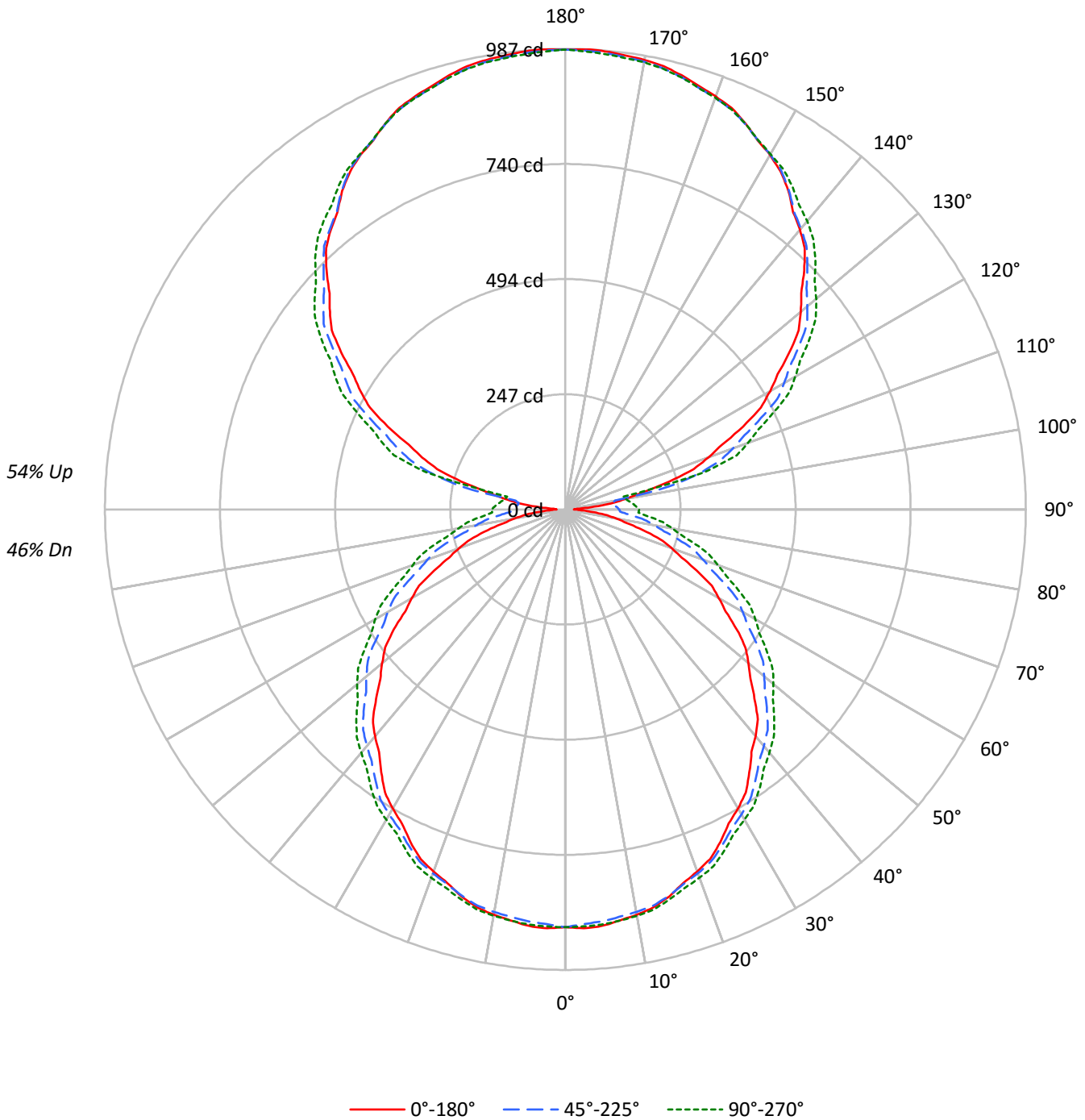
Lumens per Lamp: N/A
Luminaire Lumens: 6102.7 lumens
Efficiency: N/A
Efficacy: 133.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	1.4
10°-20°	242.9	4.0
20°-30°	367.3	6.0
30°-40°	444.4	7.3
40°-50°	469.8	7.7
50°-60°	442.2	7.2
60°-70°	366.8	6.0
70°-80°	257.7	4.2
80°-90°	148.5	2.4
90°-100°	120.2	2.0
100°-110°	278.9	4.6
110°-120°	454.0	7.4
120°-130°	546.0	8.9
130°-140°	568.8	9.3
140°-150°	524.2	8.6
150°-160°	421.0	6.9
160°-170°	271.5	4.4
170°-180°	93.6	1.5
0°-30°	695.0	11.4
0°-40°	1139.4	18.7
0°-60°	2051.4	33.6
0°-90°	2824.4	46.3
90°-120°	853.1	14.0
90°-150°	2492.1	40.8
90°-180°	3278.0	53.7
0°-180°	6102.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	18	66	116	148	158	13
95°	54	64	103	134	145	62
105°	231	256	296	325	309	242
115°	420	433	463	485	493	414
125°	586	589	612	632	640	523
135°	724	724	734	750	758	558
145°	834	835	835	842	847	521
155°	913	914	912	914	912	421
165°	963	960	960	965	959	272
175°	985	981	982	987	979	94
180°	985	985	985	985	985	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	30.2	39.6	49.0	58.4	68.0	77.7	87.7	97.6	107.7	117.7	124.4
90°	18.3	28.9	39.7	50.4	61.1	71.9	82.8	93.7	104.6	115.5	122.9
92.5°	24.5	32.6	40.7	48.9	57.0	66.5	77.4	88.3	99.2	110.1	117.3
95°	53.5	55.3	57.1	58.9	60.7	66.3	75.5	84.8	94.2	103.4	110.5
97.5°	97.9	107.7	117.5	127.3	137.1	137.4	128.2	118.9	109.7	100.5	106.4
100°	131.9	140.6	149.4	158.2	166.8	164.3	150.3	136.5	122.5	108.6	111.9
102.5°	170.8	178.0	185.3	192.6	199.7	206.1	211.7	217.3	222.8	228.4	204.2
105°	230.8	236.3	241.8	247.1	252.6	259.9	268.9	278.0	287.0	296.1	303.1
107.5°	288.3	292.5	296.5	300.7	304.8	311.4	320.3	329.2	338.1	347.0	353.3
110°	326.4	330.0	333.6	337.2	340.8	347.0	355.8	364.6	373.3	382.1	387.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.4	366.9	370.6	374.3	377.9	383.7	391.6	399.4	407.4	415.3	420.2
115°	420.2	422.7	425.2	427.7	430.2	434.9	441.9	448.8	455.8	462.8	468.0
117.5°	472.3	474.2	476.0	477.9	479.8	484.2	491.2	498.1	505.2	512.2	516.7
120°	506.9	508.2	509.5	510.9	512.2	515.9	522.3	528.6	534.9	541.2	545.9
122.5°	539.9	540.5	540.9	541.5	542.1	545.4	551.8	558.1	564.4	570.8	575.4
125°	586.2	586.6	587.1	587.5	588.0	590.8	596.1	601.2	606.5	611.7	616.5
127.5°	630.8	630.7	630.7	630.7	630.6	633.1	638.1	643.1	648.2	653.2	657.1
130°	658.9	658.8	658.7	658.7	658.6	660.6	664.7	668.8	672.9	676.9	681.1
132.5°	685.4	685.5	685.6	685.7	685.7	687.5	691.0	694.5	698.0	701.4	705.4
135°	724.2	724.1	723.9	723.8	723.6	724.6	726.8	729.1	731.2	733.5	737.4
137.5°	759.5	759.3	759.1	759.0	758.8	759.5	761.0	762.4	763.9	765.4	769.0
140°	782.4	782.6	782.7	782.8	782.9	783.2	783.7	784.3	784.9	785.4	788.8
142.5°	802.3	802.9	803.3	803.9	804.5	804.7	804.8	804.9	804.9	805.0	807.9
145°	833.8	834.1	834.3	834.6	834.8	835.0	835.0	835.0	835.0	835.0	836.5
147.5°	858.9	859.7	860.4	861.1	861.8	862.0	861.9	861.7	861.5	861.4	861.7
150°	877.2	877.7	878.1	878.5	879.0	879.1	878.9	878.8	878.6	878.4	878.4
152.5°	891.7	892.3	892.8	893.2	893.7	893.8	893.5	893.2	892.9	892.6	892.9
155°	913.1	913.2	913.4	913.6	913.8	913.6	913.1	912.6	912.1	911.6	912.3
157.5°	931.2	931.1	931.0	930.9	930.9	930.5	929.9	929.4	928.9	928.3	929.2
160°	941.9	941.3	940.8	940.4	939.9	939.5	939.4	939.2	939.1	938.9	939.9
162.5°	951.3	950.6	950.0	949.4	948.8	948.4	948.2	948.1	947.9	947.7	948.8
165°	963.2	962.4	961.6	960.7	960.0	959.5	959.5	959.5	959.5	959.5	960.8
167.5°	972.6	971.8	970.9	970.1	969.2	968.7	968.7	968.6	968.5	968.4	969.8
170°	978.0	976.9	976.0	975.0	974.0	973.6	973.7	973.9	974.1	974.3	975.5
172.5°	981.5	980.5	979.5	978.5	977.6	977.1	977.3	977.5	977.6	977.8	979.1
175°	985.3	984.3	983.4	982.4	981.4	981.0	981.2	981.3	981.5	981.7	983.1
177.5°	987.1	986.2	985.2	984.3	983.4	983.1	983.4	983.6	983.9	984.1	985.1
180°	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	131.0	137.7	144.4	148.7	150.7	152.8	154.8	156.8
90°	130.4	137.8	145.2	150.1	152.1	154.2	156.4	158.4
92.5°	124.6	131.9	139.1	143.6	145.5	147.4	149.2	151.1
95°	117.4	124.4	131.4	136.0	138.2	140.3	142.5	144.7
97.5°	112.4	118.3	124.2	128.2	130.3	132.3	134.4	136.6
100°	115.1	118.3	121.6	124.0	125.7	127.4	129.2	130.9
102.5°	180.0	155.8	131.7	120.5	122.2	123.9	125.7	127.5
105°	310.2	317.3	324.2	325.7	321.6	317.5	313.4	309.2
107.5°	359.4	365.6	371.8	376.1	378.2	380.5	382.8	384.9
110°	393.0	398.5	404.0	407.8	410.1	412.4	414.6	416.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	425.1	429.9	434.8	438.5	440.8	443.3	445.6	448.1
115°	473.3	478.4	483.7	487.1	488.6	490.2	491.7	493.3
117.5°	521.3	525.8	530.5	533.6	535.3	537.1	538.8	540.5
120°	550.7	555.5	560.3	563.5	564.9	566.4	567.8	569.3
122.5°	580.0	584.8	589.4	592.4	593.6	594.9	596.2	597.5
125°	621.2	625.9	630.7	633.8	635.3	636.8	638.3	639.8
127.5°	661.0	665.0	668.8	671.5	672.9	674.3	675.6	677.0
130°	685.2	689.4	693.6	696.4	697.7	699.0	700.3	701.7
132.5°	709.4	713.4	717.4	720.0	721.1	722.4	723.6	724.8
135°	741.2	745.2	749.0	751.8	753.5	755.2	756.8	758.5
137.5°	772.6	776.3	779.9	782.1	783.2	784.2	785.2	786.3
140°	792.2	795.6	799.0	801.3	802.6	803.8	805.1	806.4
142.5°	810.8	813.7	816.6	818.6	819.5	820.5	821.4	822.5
145°	838.0	839.5	841.0	842.4	843.6	844.8	846.0	847.3
147.5°	862.0	862.3	862.6	863.2	864.0	865.0	865.8	866.7
150°	878.4	878.4	878.4	878.5	878.7	878.8	879.0	879.2
152.5°	893.2	893.4	893.6	893.7	893.6	893.5	893.4	893.3
155°	912.9	913.6	914.3	914.4	913.8	913.3	912.9	912.4
157.5°	930.0	930.9	931.7	931.7	930.9	930.0	929.2	928.3
160°	940.8	941.9	942.8	942.8	941.9	940.8	939.9	938.9
162.5°	949.7	950.6	951.7	951.6	950.5	949.3	948.3	947.2
165°	962.1	963.5	964.8	964.7	963.2	961.8	960.3	958.8
167.5°	971.3	972.7	974.1	974.0	972.4	970.7	969.1	967.5
170°	976.9	978.2	979.5	979.3	977.7	976.1	974.4	972.8
172.5°	980.4	981.8	983.1	982.8	981.1	979.3	977.5	975.7
175°	984.6	986.1	987.5	987.3	985.3	983.4	981.4	979.4
177.5°	986.3	987.3	988.4	988.1	986.5	985.0	983.4	981.8
180°	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3

(END OF REPORT)