

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: P332593-830

Luminaire Tested: **S124DIP-S795D590U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332593-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S795D590U830-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4982.5 lumens
Efficiency: N/A
Efficacy: 123.6 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

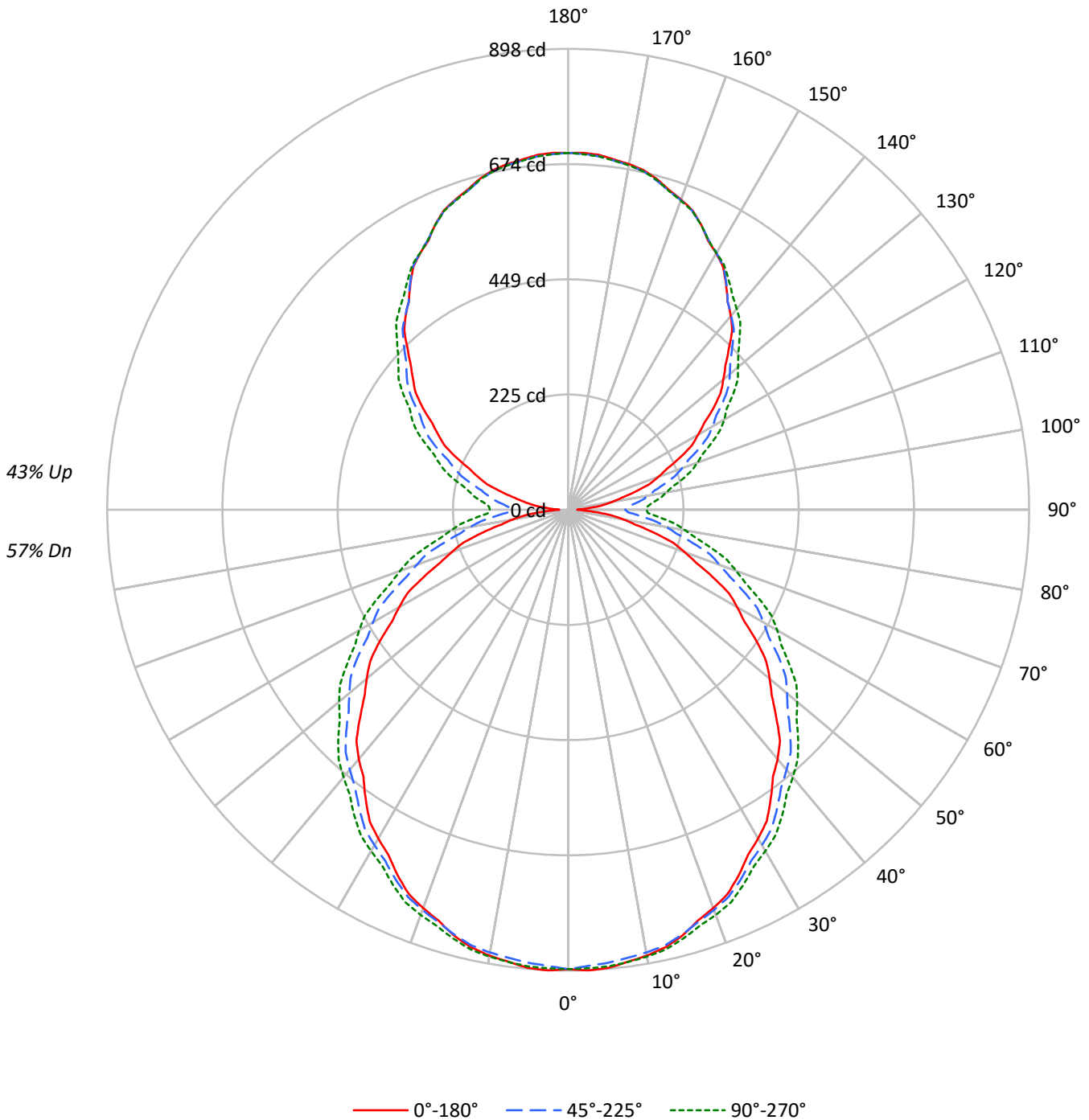
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	98	93	89	85	91	87	83	80	75	72	69	63	61	59	53	52	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	32	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	29	26	22
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	20
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17
8	53	40	32	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

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	1.7
10°-20°	242.9	4.9
20°-30°	367.3	7.4
30°-40°	444.4	8.9
40°-50°	469.8	9.4
50°-60°	442.2	8.9
60°-70°	366.8	7.4
70°-80°	257.7	5.2
80°-90°	147.8	3.0
90°-100°	132.3	2.7
100°-110°	199.8	4.0
110°-120°	273.5	5.5
120°-130°	328.2	6.6
130°-140°	351.8	7.1
140°-150°	337.6	6.8
150°-160°	282.1	5.7
160°-170°	187.7	3.8
170°-180°	65.7	1.3
0°-30°	695.0	13.9
0°-40°	1139.4	22.9
0°-60°	2051.4	41.2
0°-90°	2823.6	56.7
90°-120°	605.7	12.2
90°-150°	1623.2	32.6
90°-180°	2159.0	43.3
0°-180°	4982.5	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	64	111	142	152	13
95°	45	84	128	156	166	46
105°	134	156	194	220	230	143
115°	240	251	280	301	308	237
125°	345	346	369	386	392	308
135°	442	446	452	467	472	342
145°	536	537	538	543	545	335
155°	613	613	612	614	612	282
165°	667	666	664	667	666	188
175°	694	691	691	694	691	66
180°	695	695	695	695	695	



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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°	30.0	39.3	48.7	58.1	67.4	77.1	87.0	97.0	106.9	116.9	123.5
90°	17.6	27.9	38.1	48.4	58.5	68.9	79.5	90.0	100.6	111.1	118.3
92.5°	26.8	36.3	45.8	55.3	64.8	74.7	85.0	95.2	105.5	115.7	122.4
95°	45.2	53.7	62.1	70.6	79.0	88.2	98.2	108.1	118.1	128.1	134.4
97.5°	68.1	75.3	82.6	89.7	96.9	105.6	115.6	125.5	135.6	145.6	151.8
100°	86.2	92.6	98.9	105.1	111.4	119.4	129.1	138.9	148.6	158.4	164.7
102.5°	106.0	111.3	116.6	121.9	127.1	134.5	144.0	153.5	163.0	172.5	178.7
105°	134.3	138.8	143.5	148.0	152.6	159.2	168.0	176.6	185.4	194.1	200.0
107.5°	165.8	169.6	173.4	177.2	181.0	186.8	194.7	202.6	210.5	218.3	224.1
110°	186.5	189.8	193.2	196.6	199.9	205.5	213.1	220.8	228.5	236.2	241.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.0	210.8	213.7	216.5	219.3	224.3	231.6	238.7	246.0	253.3	258.2
115°	240.4	242.4	244.4	246.4	248.5	252.9	259.8	266.6	273.5	280.4	285.2
117.5°	271.8	273.1	274.4	275.7	277.0	280.9	287.4	293.8	300.3	306.8	311.0
120°	292.1	293.2	294.4	295.5	296.6	300.3	306.4	312.5	318.6	324.7	328.6
122.5°	314.1	314.3	314.6	315.0	315.3	318.5	324.4	330.4	336.3	342.2	346.2
125°	345.3	345.2	345.0	344.7	344.5	347.1	352.5	358.0	363.4	368.9	372.9
127.5°	374.6	374.7	374.8	374.9	375.0	377.2	381.3	385.3	389.5	393.5	397.3
130°	394.4	394.5	394.6	394.7	394.9	396.7	400.3	403.9	407.5	411.0	414.8
132.5°	415.5	415.5	415.5	415.6	415.6	417.0	419.7	422.5	425.3	428.0	431.6
135°	442.2	443.0	443.7	444.4	445.2	446.3	447.8	449.4	451.0	452.5	455.8
137.5°	472.6	472.7	472.8	473.0	473.1	473.5	474.6	475.5	476.5	477.4	480.3
140°	492.9	492.9	492.9	492.9	492.9	493.0	493.2	493.4	493.7	493.9	496.6
142.5°	510.5	510.7	510.9	511.0	511.3	511.2	511.0	510.8	510.6	510.4	512.8
145°	535.9	536.1	536.4	536.7	536.9	537.1	537.2	537.3	537.4	537.5	538.8
147.5°	561.3	561.7	561.9	562.3	562.7	562.8	562.7	562.6	562.5	562.4	562.5
150°	576.7	577.0	577.2	577.5	577.8	577.9	577.9	577.9	577.9	577.9	577.9
152.5°	590.6	590.8	591.1	591.3	591.5	591.7	591.8	591.9	592.0	592.1	592.4
155°	612.8	612.8	612.8	612.8	612.8	612.7	612.7	612.6	612.5	612.3	612.7
157.5°	631.8	631.5	631.3	631.1	630.9	630.7	630.7	630.7	630.7	630.7	631.0
160°	642.9	642.8	642.7	642.6	642.4	642.3	642.2	642.2	642.0	641.9	642.2
162.5°	653.3	653.0	652.6	652.3	652.1	651.8	651.7	651.6	651.5	651.3	652.0
165°	667.1	666.8	666.4	666.1	665.7	665.4	665.2	665.0	664.7	664.5	665.2
167.5°	677.8	677.3	676.7	676.3	675.8	675.5	675.5	675.6	675.6	675.6	676.4
170°	683.8	683.2	682.6	682.0	681.4	681.2	681.3	681.4	681.6	681.6	682.4
172.5°	688.1	687.6	687.1	686.6	686.1	685.9	685.9	685.9	685.9	686.0	686.7
175°	694.0	693.4	692.9	692.2	691.6	691.3	691.2	691.1	690.9	690.8	691.6
177.5°	696.0	695.5	695.0	694.6	694.0	693.8	693.8	693.8	693.8	693.8	694.5
180°	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1



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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°	130.1	136.7	143.3	147.6	149.6	151.6	153.6	155.6
90°	125.5	132.6	139.8	144.4	146.4	148.5	150.4	152.5
92.5°	129.1	135.8	142.6	146.9	148.8	150.7	152.7	154.6
95°	140.8	147.2	153.5	157.8	159.8	161.7	163.8	165.8
97.5°	158.2	164.4	170.7	174.7	176.7	178.6	180.5	182.5
100°	171.0	177.2	183.4	187.4	188.9	190.5	192.1	193.6
102.5°	184.8	191.1	197.2	201.1	203.0	204.8	206.7	208.5
105°	205.9	211.9	217.8	221.9	224.0	226.1	228.3	230.5
107.5°	229.9	235.7	241.6	245.2	246.9	248.5	250.0	251.6
110°	245.9	250.8	255.7	259.2	261.4	263.5	265.6	267.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	263.1	267.9	272.8	276.2	278.1	279.9	281.7	283.6
115°	290.0	294.7	299.5	302.7	304.1	305.6	307.0	308.4
117.5°	315.2	319.4	323.7	326.6	328.1	329.7	331.2	332.7
120°	332.4	336.3	340.2	343.1	345.1	347.1	349.1	351.2
122.5°	350.2	354.3	358.4	361.0	362.2	363.4	364.5	365.7
125°	376.9	380.9	384.8	387.4	388.5	389.6	390.7	391.8
127.5°	401.1	404.8	408.6	411.1	412.5	413.8	415.1	416.4
130°	418.6	422.4	426.1	428.4	429.2	430.2	431.0	431.9
132.5°	435.2	438.8	442.4	444.8	445.9	447.0	448.2	449.3
135°	459.2	462.5	465.8	468.0	468.9	470.0	470.9	471.9
137.5°	483.2	486.2	489.2	491.2	492.4	493.6	494.7	496.0
140°	499.5	502.2	505.0	506.9	507.8	508.9	509.8	510.9
142.5°	515.4	517.9	520.4	522.2	523.0	524.0	524.9	525.8
145°	540.0	541.2	542.4	543.3	543.8	544.4	544.9	545.4
147.5°	562.6	562.7	562.8	563.1	563.6	564.3	564.9	565.4
150°	577.9	577.9	577.9	577.9	577.7	577.6	577.5	577.4
152.5°	592.7	593.0	593.2	593.2	593.0	592.6	592.3	592.0
155°	613.2	613.7	614.3	614.3	613.7	613.2	612.7	612.3
157.5°	631.4	631.8	632.2	632.1	631.7	631.3	630.8	630.5
160°	642.6	642.9	643.3	643.2	642.6	642.0	641.4	640.8
162.5°	652.6	653.3	653.9	653.9	653.4	652.7	652.1	651.6
165°	665.9	666.6	667.3	667.4	666.9	666.5	666.0	665.5
167.5°	677.0	677.8	678.5	678.4	677.8	677.0	676.3	675.5
170°	683.1	683.8	684.5	684.5	683.6	682.8	681.9	681.1
172.5°	687.6	688.4	689.2	689.2	688.3	687.5	686.6	685.9
175°	692.5	693.3	694.1	694.1	693.3	692.5	691.6	690.8
177.5°	695.1	695.8	696.4	696.4	695.7	694.9	694.1	693.3
180°	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1

(END OF REPORT)