

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: P331388-940

Luminaire Tested: **SA2XXDIP-C865D530U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331388-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D530U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4802.1 lumens
Efficiency: N/A
Efficacy: 98.4 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: General Diffuse

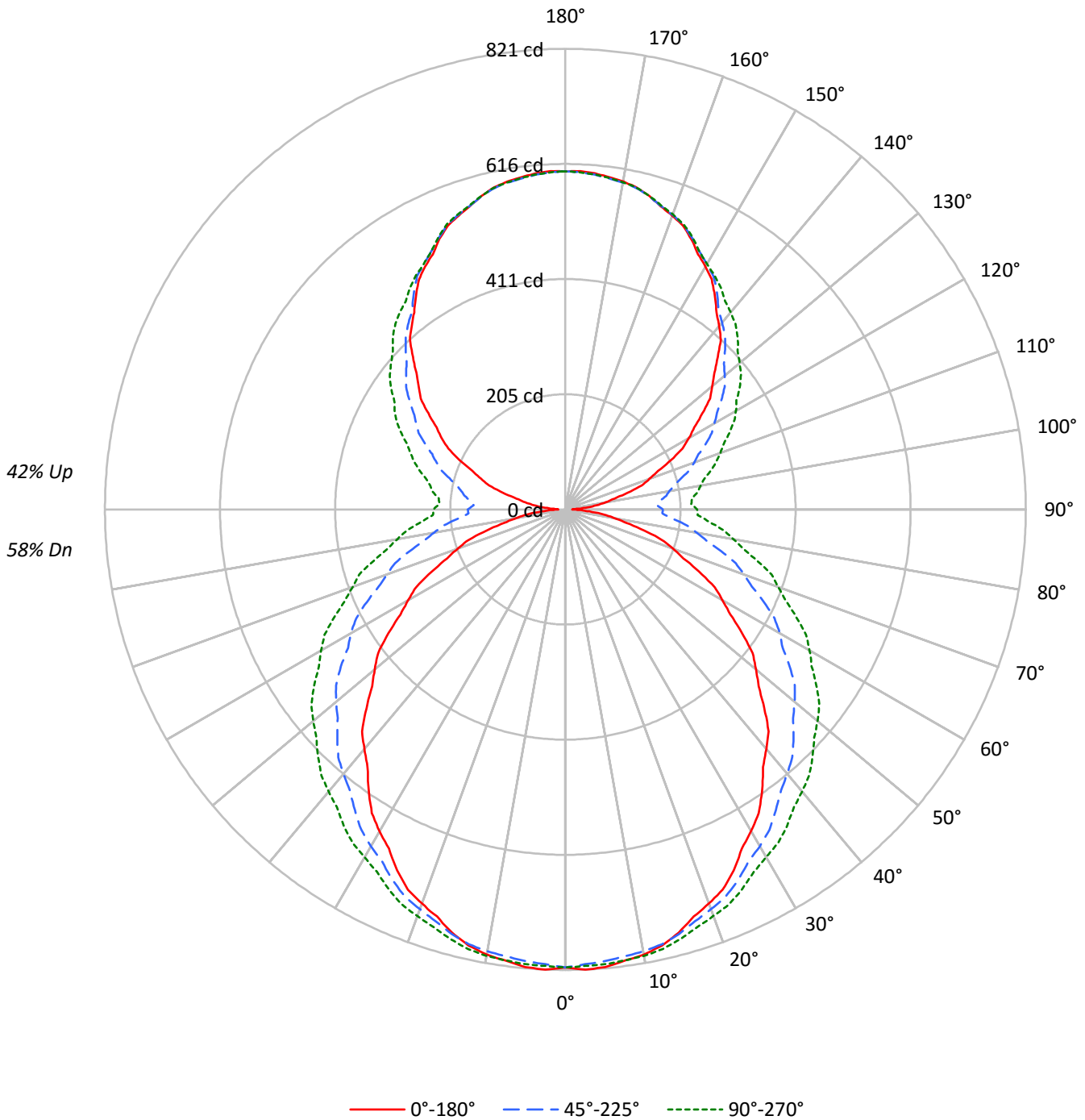
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58																			
1	98	93	88	84	91	86	82	79	74	71	68	63	61	59	53	51	50	45																			
2	88	80	73	67	82	74	68	63	64	59	55	55	51	48	46	43	41	36																			
3	80	70	62	55	74	65	58	52	56	50	46	48	43	40	40	37	34	30																			
4	73	61	53	46	68	57	50	44	49	43	38	42	37	34	35	32	29	25																			
5	67	54	46	39	62	51	43	37	44	38	33	38	33	29	32	28	25	22																			
6	62	49	40	34	57	46	38	32	40	33	29	34	29	25	29	25	22	19																			
7	57	44	35	30	53	41	33	28	36	30	25	31	26	22	26	22	19	16																			
8	53	40	32	26	49	37	30	25	33	26	22	28	23	20	24	20	17	15																			
9	49	36	28	23	46	34	27	22	30	24	20	26	21	17	22	18	15	13																			
10	46	33	26	21	43	31	24	20	27	22	18	24	19	16	20	17	14	12																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.6
10°-20°	221.8	4.6
20°-30°	336.2	7.0
30°-40°	409.5	8.5
40°-50°	440.5	9.2
50°-60°	427.8	8.9
60°-70°	373.5	7.8
70°-80°	287.6	6.0
80°-90°	195.4	4.1
90°-100°	171.1	3.6
100°-110°	215.7	4.5
110°-120°	266.8	5.6
120°-130°	302.4	6.3
130°-140°	314.2	6.5
140°-150°	296.0	6.2
150°-160°	246.1	5.1
160°-170°	163.2	3.4
170°-180°	57.0	1.2
0°-30°	635.4	13.2
0°-40°	1044.8	21.8
0°-60°	1913.1	39.8
0°-90°	2769.6	57.7
90°-120°	653.6	13.6
90°-150°	1566.2	32.6
90°-180°	2032.0	42.3
0°-180°	4802.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	12	88	174	219	235	9
95°	36	97	169	212	227	38
105°	115	153	214	254	269	122
115°	208	226	276	310	323	205
125°	298	305	339	368	380	267
135°	384	390	402	426	435	297
145°	465	468	471	479	483	291
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.3	39.2	55.2	71.2	87.0	103.7	121.0	138.4	155.7	173.0	183.7
90°	12.3	29.0	45.6	62.2	78.7	96.8	116.0	135.4	154.7	174.0	184.3
92.5°	20.0	35.1	50.3	65.5	80.7	96.7	113.5	130.3	147.0	163.8	174.2
95°	35.9	49.4	62.9	76.3	89.9	104.6	120.6	136.6	152.6	168.6	178.6
97.5°	56.6	68.6	80.5	92.6	104.5	118.3	133.8	149.5	165.1	180.6	190.4
100°	72.9	83.5	94.2	104.8	115.4	128.2	143.3	158.4	173.4	188.5	198.2
102.5°	89.0	98.6	108.3	117.8	127.4	139.6	154.4	169.1	183.8	198.6	208.1
105°	115.2	123.2	131.2	139.1	147.1	158.0	171.9	185.8	199.7	213.7	223.0
107.5°	142.9	149.5	156.0	162.6	169.2	179.1	192.2	205.3	218.4	231.5	240.4
110°	159.8	165.8	171.7	177.6	183.6	193.0	205.9	218.7	231.7	244.5	252.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.3	184.4	189.6	194.7	199.7	208.4	220.5	232.6	244.9	257.0	265.2
115°	208.1	211.7	215.3	218.8	222.4	230.0	241.6	253.2	264.8	276.4	284.2
117.5°	235.6	238.4	241.2	244.1	246.8	253.3	263.7	273.9	284.3	294.6	302.1
120°	254.8	256.7	258.7	260.6	262.6	268.3	277.9	287.6	297.2	306.8	314.1
122.5°	272.2	273.8	275.3	276.8	278.3	283.7	292.9	302.1	311.4	320.7	327.5
125°	298.3	299.3	300.3	301.4	302.4	306.9	315.0	323.1	331.2	339.2	346.0
127.5°	324.9	325.9	326.9	328.0	329.0	332.7	339.0	345.4	351.8	358.2	364.3
130°	341.5	342.8	343.9	345.2	346.3	349.6	354.9	360.2	365.5	370.8	376.8
132.5°	360.3	361.1	362.1	363.0	364.0	366.6	371.0	375.2	379.5	383.8	389.4
135°	384.1	385.3	386.6	387.8	389.1	391.1	394.0	396.8	399.7	402.5	408.0
137.5°	410.5	411.3	412.3	413.3	414.3	415.4	417.0	418.4	419.8	421.2	426.1
140°	426.3	427.0	427.8	428.6	429.3	430.3	431.3	432.4	433.5	434.6	438.8
142.5°	442.6	443.3	444.1	444.8	445.6	446.2	446.7	447.2	447.6	448.2	451.6
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	473.1
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.4
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	194.4	205.1	215.7	222.7	226.1	229.5	232.9	236.3
90°	194.6	204.8	215.2	221.9	225.2	228.5	231.8	235.0
92.5°	184.6	194.9	205.3	212.0	215.2	218.4	221.6	224.7
95°	188.6	198.6	208.6	215.1	217.9	220.9	223.8	226.8
97.5°	200.1	209.8	219.5	226.0	229.0	232.1	235.1	238.3
100°	207.9	217.7	227.4	233.6	236.5	239.2	242.0	244.8
102.5°	217.8	227.4	237.0	243.2	245.9	248.7	251.6	254.3
105°	232.5	241.9	251.4	257.5	260.4	263.3	266.2	269.1
107.5°	249.3	258.2	267.2	272.9	275.2	277.6	280.0	282.3
110°	261.4	269.7	278.2	283.7	286.2	288.7	291.3	293.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.3	281.4	289.6	295.0	297.7	300.2	302.9	305.6
115°	291.9	299.8	307.6	312.7	315.2	317.8	320.4	322.9
117.5°	309.6	317.1	324.7	329.6	331.9	334.2	336.6	338.9
120°	321.6	328.9	336.3	341.3	343.8	346.3	348.8	351.4
122.5°	334.4	341.3	348.2	352.8	355.0	357.2	359.4	361.6
125°	352.8	359.5	366.2	370.8	373.0	375.3	377.6	379.8
127.5°	370.4	376.5	382.6	386.6	388.6	390.6	392.5	394.5
130°	383.0	389.1	395.1	399.0	400.6	402.3	403.9	405.6
132.5°	395.0	400.6	406.3	409.9	411.6	413.4	415.1	416.9
135°	413.3	418.7	424.2	427.8	429.5	431.2	433.0	434.8
137.5°	430.8	435.5	440.2	443.4	444.7	446.0	447.4	448.6
140°	443.0	447.2	451.4	454.1	455.2	456.3	457.4	458.6
142.5°	455.0	458.5	462.0	464.1	465.1	466.0	466.9	467.8
145°	474.7	476.4	478.1	479.4	480.3	481.2	482.0	482.9
147.5°	492.8	493.3	493.7	494.1	494.3	494.5	494.7	494.9
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)