

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: P331389-935

Luminaire Tested: **SA2XXDIP-C865D530U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331389-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
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-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

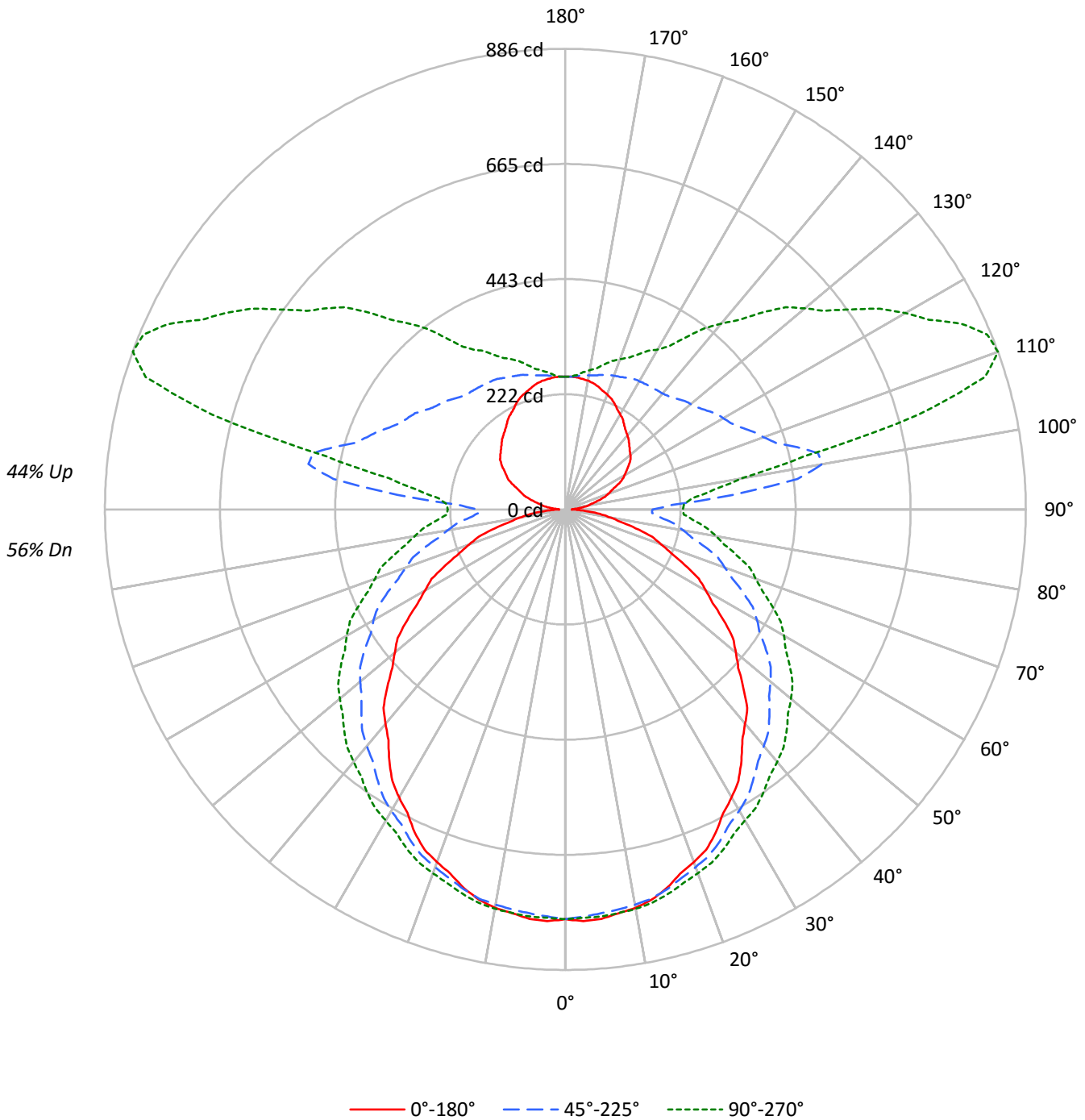
Lumens per Lamp: N/A
Luminaire Lumens: 4786.6 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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	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	56																											
	1	97	92	88	84	90	86	82	78	73	70	68	62	60	58	52	50	49	44																											
	2	88	80	73	67	81	74	68	63	63	59	55	54	50	47	45	42	40	35																											
	3	80	69	61	55	74	65	57	52	55	50	45	47	43	39	39	36	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	62	51	43	37	44	37	33	37	32	28	31	27	24	21																											
	6	61	49	40	34	57	45	38	32	39	33	28	33	28	25	28	24	21	18																											
	7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	22	19	16																											
	8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	23	19	17	14																											
	9	49	36	28	23	45	34	27	22	29	24	20	25	21	17	21	18	15	13																											
	10	46	33	26	21	42	31	24	20	27	21	18	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	1.6
10°-20°	214.2	4.5
20°-30°	324.6	6.8
30°-40°	395.4	8.3
40°-50°	425.3	8.9
50°-60°	413.1	8.6
60°-70°	360.7	7.5
70°-80°	277.7	5.8
80°-90°	188.6	3.9
90°-100°	230.5	4.8
100°-110°	440.2	9.2
110°-120°	430.0	9.0
120°-130°	337.5	7.1
130°-140°	257.8	5.4
140°-150°	186.4	3.9
150°-160°	129.2	2.7
160°-170°	76.1	1.6
170°-180°	24.8	0.5
0°-30°	613.5	12.8
0°-40°	1008.9	21.1
0°-60°	1847.2	38.6
0°-90°	2674.2	55.9
90°-120°	1100.6	23.0
90°-150°	1882.3	39.3
90°-180°	2112.0	44.1
0°-180°	4786.6	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	85	168	211	226	9
95°	26	106	324	246	244	25
105°	66	131	462	787	704	70
115°	110	153	373	730	844	109
125°	150	179	332	578	671	133
135°	174	208	302	463	535	135
145°	197	227	288	364	403	124
155°	224	242	279	316	328	103
165°	244	252	268	284	288	69
175°	255	255	257	260	260	24
180°	255	255	255	255	255	



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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	37.9	53.5	68.8	84.1	100.0	116.8	133.8	150.6	166.9	177.2
90°	11.9	28.2	44.8	60.5	76.2	93.2	111.8	131.6	150.8	167.5	177.2
92.5°	16.5	32.9	50.1	66.0	83.0	102.3	129.1	160.3	189.9	206.4	206.5
95°	26.3	40.2	57.1	73.4	93.2	118.6	156.4	214.4	286.5	323.9	309.4
97.5°	36.0	49.2	65.1	82.4	102.0	127.9	171.0	245.1	354.4	450.1	475.6
100°	45.8	56.7	70.5	87.7	106.9	132.5	172.7	246.8	367.1	502.1	582.3
102.5°	53.9	63.6	76.6	93.0	111.8	136.7	174.6	241.7	353.7	497.7	618.1
105°	65.6	74.9	85.8	100.5	118.6	142.7	178.9	235.8	330.1	462.1	601.6
107.5°	79.6	87.0	96.3	108.9	125.4	148.6	183.7	234.4	314.0	424.8	548.8
110°	88.1	95.1	103.1	114.6	129.9	153.0	187.0	234.8	307.1	406.0	515.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	96.7	102.9	110.6	120.8	134.9	157.6	190.3	235.5	301.8	391.0	490.5
115°	110.1	115.4	121.1	129.8	142.4	162.8	195.4	236.7	295.8	373.0	458.1
117.5°	123.0	126.7	131.5	138.5	149.8	169.7	199.8	238.5	290.8	359.0	433.9
120°	131.6	134.6	138.5	144.0	154.8	174.1	203.5	240.1	288.1	350.8	420.3
122.5°	139.8	141.8	145.2	150.4	160.6	179.7	207.2	241.3	285.9	343.7	407.9
125°	149.6	151.1	154.0	159.9	169.7	187.5	213.4	243.6	282.1	331.5	388.9
127.5°	158.3	160.0	163.8	170.0	179.2	196.5	220.2	246.6	279.7	321.6	371.3
130°	163.3	165.1	169.7	176.3	185.9	202.2	224.7	248.7	278.5	315.3	359.7
132.5°	168.1	170.1	175.2	182.2	192.2	207.8	228.3	250.7	277.4	309.4	349.3
135°	174.0	175.9	181.8	189.2	200.5	215.5	233.8	253.5	275.7	301.8	335.1
137.5°	180.6	183.0	188.8	196.7	207.8	221.0	237.7	254.9	273.8	295.1	323.2
140°	185.8	187.4	193.1	200.7	211.3	224.1	239.4	255.1	272.3	291.0	316.2
142.5°	190.9	192.2	197.4	205.0	215.2	227.1	241.5	256.5	272.1	289.2	310.8
145°	197.4	199.3	204.2	211.6	221.4	232.2	245.5	259.2	273.0	287.7	305.0
147.5°	205.6	207.1	211.8	218.6	226.8	236.3	248.8	261.0	273.4	285.9	299.9
150°	211.1	212.6	216.5	222.9	230.3	239.1	250.4	261.7	273.0	284.8	296.6
152.5°	216.6	217.3	221.3	226.9	233.8	241.9	252.0	262.1	272.2	282.8	293.9
155°	224.4	224.9	227.8	233.2	238.7	246.0	254.3	262.7	271.0	279.4	288.7
157.5°	230.8	231.4	233.8	238.4	242.8	248.9	256.0	262.7	268.8	275.9	283.9
160°	235.2	235.7	237.6	241.6	245.5	250.9	256.8	262.7	267.6	273.5	280.3
162.5°	239.5	239.2	241.2	244.4	247.9	252.1	257.2	262.3	266.4	271.6	277.2
165°	244.5	244.0	245.0	248.0	250.4	253.4	257.8	261.2	264.2	267.6	272.0
167.5°	248.7	248.1	248.9	250.8	252.6	254.4	257.7	260.5	261.9	264.2	266.9
170°	251.4	250.4	250.9	252.4	253.4	254.9	257.3	259.8	260.7	262.2	264.2
172.5°	253.0	252.4	252.1	253.6	254.2	255.2	256.9	258.6	259.2	259.8	261.4
175°	254.9	254.3	253.8	254.9	254.9	255.3	256.3	257.3	256.8	257.3	257.8
177.5°	255.7	254.9	254.5	255.3	255.3	255.3	255.7	256.5	255.7	255.3	255.7
180°	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3



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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°	187.4	197.6	208.2	215.1	218.3	221.6	224.8	228.1
90°	186.8	196.0	207.2	214.2	217.3	220.3	223.3	226.4
92.5°	205.3	209.1	215.0	218.4	221.1	222.6	226.0	228.3
95°	279.3	259.0	248.1	243.6	240.2	239.4	241.0	244.5
97.5°	440.6	395.4	351.6	322.4	301.9	292.8	288.6	287.5
100°	581.3	529.9	472.0	418.6	380.6	362.4	350.9	344.9
102.5°	671.6	667.0	627.0	570.1	528.6	495.2	480.3	471.1
105°	712.6	777.0	792.3	781.9	754.2	726.6	708.3	704.2
107.5°	665.6	757.7	817.3	846.7	853.3	854.5	853.1	846.7
110°	627.5	723.5	794.4	840.2	864.1	876.2	883.5	885.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	592.0	684.5	759.8	811.4	843.6	861.9	873.1	878.6
115°	546.8	630.1	702.0	757.8	795.4	820.8	836.4	843.6
117.5°	510.3	584.3	650.1	702.6	740.7	767.2	783.2	789.5
120°	490.7	558.7	617.9	667.4	704.6	730.5	747.5	755.3
122.5°	474.2	536.8	593.1	638.1	671.3	696.4	711.4	717.9
125°	449.3	506.7	556.8	598.2	629.0	649.9	664.4	670.6
127.5°	424.7	476.8	523.8	562.1	589.2	608.9	621.7	627.1
130°	409.1	457.4	502.2	538.7	564.8	583.5	595.4	601.3
132.5°	393.7	438.7	480.2	514.6	540.3	559.0	570.2	575.7
135°	372.4	410.1	447.8	479.0	502.1	520.4	531.2	535.3
137.5°	353.9	385.6	416.0	443.2	464.2	479.8	489.4	494.0
140°	342.3	370.0	396.6	421.0	438.2	452.5	461.4	465.9
142.5°	333.4	356.6	379.4	399.7	415.9	428.9	436.8	438.7
145°	321.8	339.4	356.2	371.9	384.9	394.5	400.7	403.4
147.5°	313.1	326.1	338.1	349.0	359.3	366.6	370.5	372.0
150°	308.3	319.2	329.5	338.3	345.7	351.5	354.5	355.0
152.5°	304.0	314.1	322.8	330.5	336.2	341.4	343.5	343.6
155°	298.1	305.9	313.2	318.7	324.1	327.5	329.5	328.5
157.5°	291.1	297.6	303.8	308.1	311.9	314.8	315.6	315.6
160°	286.7	292.1	297.6	301.0	304.4	306.9	307.4	307.4
162.5°	282.4	287.1	291.7	294.3	297.7	299.5	299.9	299.5
165°	276.0	279.4	282.8	284.8	286.7	288.7	288.7	288.3
167.5°	269.8	272.4	274.7	276.6	277.4	278.5	278.4	277.8
170°	266.7	268.1	270.1	271.0	271.6	273.0	272.5	271.6
172.5°	263.1	264.2	265.7	266.3	266.8	267.5	267.0	266.4
175°	259.2	259.8	260.3	260.7	260.7	261.2	260.7	259.8
177.5°	256.5	256.5	256.9	256.9	256.9	256.9	256.5	255.7
180°	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3

(END OF REPORT)