

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: P331302-940

Luminaire Tested: **SA2XXDIP-C485D530U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331302-940
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-C485D530U940-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3604.6 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

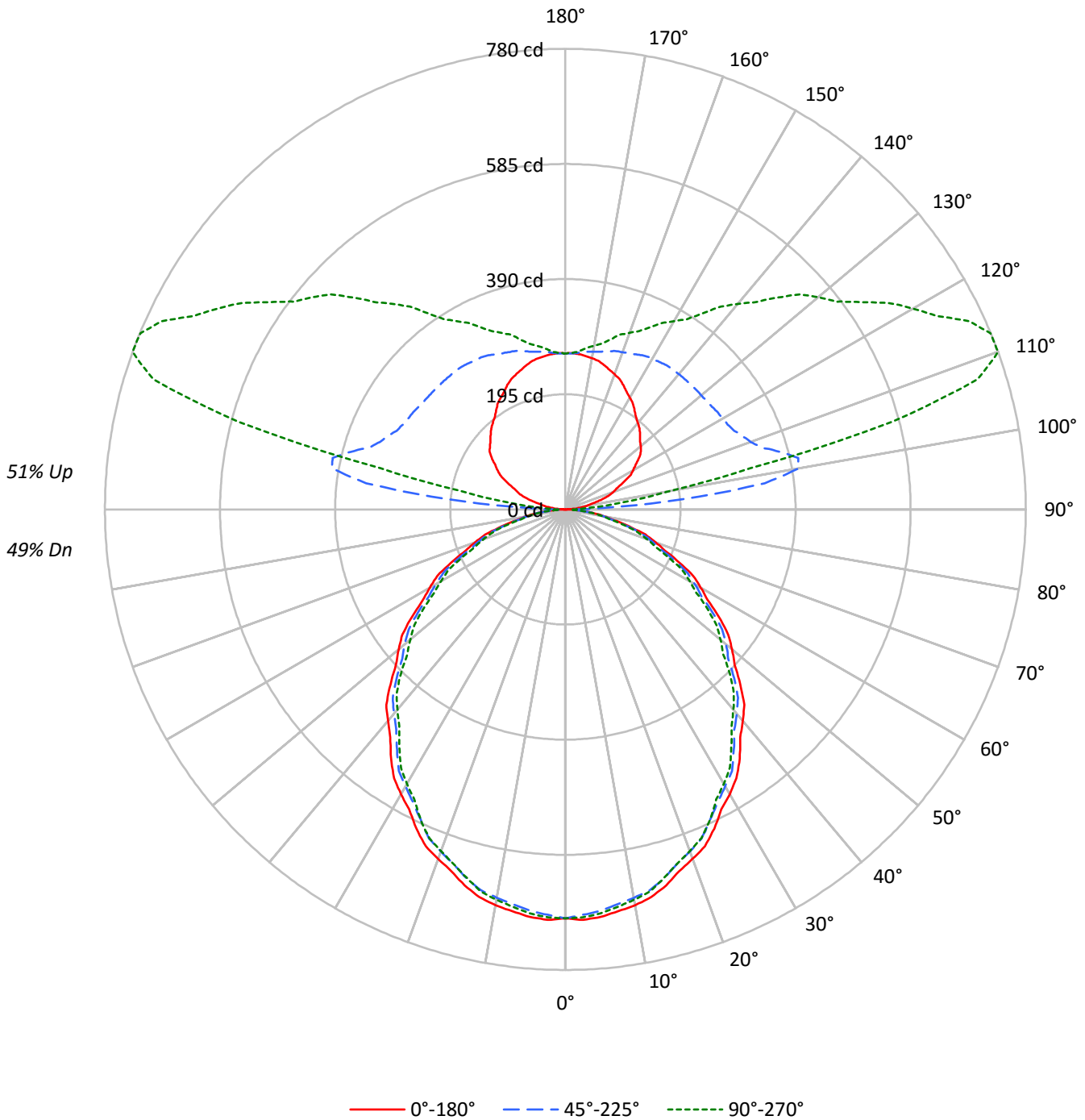
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49				
1	98	93	89	86	90	86	83	80	73	70	68	60	58	57	49	48	47	41				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35				
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	33	29				
4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29	25				
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25	22				
6	63	51	42	37	58	47	40	35	40	35	30	34	29	26	28	25	22	19				
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17				
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15				
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	14				
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	1.8
10°-20°	183.3	5.1
20°-30°	269.4	7.5
30°-40°	312.9	8.7
40°-50°	312.5	8.7
50°-60°	272.6	7.6
60°-70°	201.5	5.6
70°-80°	114.1	3.2
80°-90°	33.1	0.9
90°-100°	105.7	2.9
100°-110°	358.8	10.0
110°-120°	381.2	10.6
120°-130°	313.8	8.7
130°-140°	252.0	7.0
140°-150°	190.4	5.3
150°-160°	133.8	3.7
160°-170°	78.8	2.2
170°-180°	25.6	0.7
0°-30°	517.7	14.4
0°-40°	830.6	23.0
0°-60°	1415.7	39.3
0°-90°	1764.4	49.0
90°-120°	845.7	23.5
90°-150°	1601.9	44.4
90°-180°	1840.0	51.0
0°-180°	3604.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	0	7	17	16	17	2
95°	18	44	199	75	58	19
105°	62	94	377	674	573	66
115°	109	138	315	651	754	108
125°	153	180	303	527	612	135
135°	179	214	300	443	507	138
145°	204	235	298	370	405	128
155°	232	251	289	327	340	107
165°	253	261	277	294	298	71
175°	264	264	266	270	269	25
180°	264	264	264	264	264	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.7	9.7	9.9	9.9	9.9	9.9	10.2	10.7	11.1	10.9	10.4
90°	0.5	2.1	4.1	5.1	6.1	7.7	10.2	13.7	16.8	17.3	16.8
92.5°	6.2	8.9	12.6	14.9	18.3	23.1	34.6	50.7	65.2	66.1	55.8
95°	17.8	19.8	24.9	29.5	37.6	49.8	73.2	117.4	176.5	199.4	174.4
97.5°	29.0	31.7	37.1	44.1	53.4	67.2	96.7	158.3	256.3	340.3	357.0
100°	39.1	40.7	45.3	53.4	63.6	77.8	104.8	166.8	276.6	401.7	474.9
102.5°	48.5	49.7	54.2	62.3	72.9	87.1	112.1	167.2	268.9	403.8	518.9
105°	62.1	64.1	67.6	75.3	86.4	100.7	124.6	169.9	253.8	376.8	512.1
107.5°	76.7	78.3	81.8	88.8	99.9	114.2	137.4	176.8	246.2	347.9	467.4
110°	86.4	88.5	91.6	98.2	108.8	123.6	146.0	182.5	244.6	334.1	439.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	95.4	97.5	100.9	107.1	117.3	132.5	154.1	188.7	245.0	325.1	419.8
115°	109.3	111.9	114.9	121.0	131.2	144.9	166.8	197.8	247.2	315.3	395.7
117.5°	123.8	125.8	128.9	134.3	144.0	158.3	178.5	207.6	250.8	310.5	380.4
120°	132.7	134.7	137.8	142.4	152.6	166.8	186.6	214.1	253.2	307.6	372.3
122.5°	141.2	142.9	146.0	151.0	161.1	175.8	194.4	219.8	256.1	306.0	365.3
125°	152.6	154.1	157.1	163.3	173.4	187.6	206.0	228.8	260.4	303.1	355.4
127.5°	161.5	163.5	167.8	174.5	184.3	198.9	216.8	237.3	264.7	301.4	346.3
130°	166.8	168.8	173.9	181.0	191.2	205.5	223.3	242.5	268.0	300.5	340.2
132.5°	171.7	174.2	179.6	187.2	197.7	212.0	228.9	247.9	271.3	300.1	335.3
135°	179.0	181.0	187.2	194.7	206.4	220.7	237.0	254.8	275.1	299.5	328.5
137.5°	185.9	188.3	194.5	202.6	214.2	227.4	243.5	260.0	278.6	299.4	323.7
140°	191.2	193.2	199.4	207.5	218.6	231.9	247.2	262.9	280.2	299.0	320.9
142.5°	196.5	198.1	203.8	212.0	222.7	235.1	250.0	265.4	281.4	299.0	318.1
145°	204.5	206.4	211.5	219.2	229.3	240.5	254.2	268.5	282.8	298.0	314.2
147.5°	212.9	214.5	219.4	226.4	234.9	244.8	257.7	270.3	283.1	296.1	310.4
150°	218.6	220.2	224.3	230.9	238.5	247.6	259.3	271.1	282.8	295.0	307.2
152.5°	224.4	225.1	229.2	235.0	242.2	250.5	261.0	271.4	282.0	292.9	304.3
155°	232.4	232.9	235.9	241.6	247.2	254.8	263.4	272.1	280.7	289.4	299.0
157.5°	239.1	239.6	242.1	246.9	251.5	257.8	265.1	272.1	278.4	285.7	294.0
160°	243.6	244.1	246.1	250.2	254.2	259.8	266.0	272.1	277.1	283.3	290.3
162.5°	248.1	247.7	249.8	253.1	256.7	261.1	266.4	271.6	275.9	281.2	287.1
165°	253.2	252.7	253.8	256.8	259.3	262.4	267.0	270.5	273.6	277.1	281.7
167.5°	257.5	256.9	257.8	259.8	261.6	263.5	266.9	269.8	271.3	273.6	276.4
170°	260.4	259.3	259.8	261.4	262.4	263.9	266.4	269.0	270.0	271.5	273.6
172.5°	262.0	261.4	261.1	262.6	263.2	264.3	266.1	267.8	268.4	269.1	270.7
175°	263.9	263.4	262.9	263.9	263.9	264.4	265.5	266.4	266.0	266.4	267.0
177.5°	264.8	264.0	263.6	264.4	264.4	264.4	264.8	265.6	264.8	264.4	264.8
180°	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	10.0	9.5	9.3	9.2	9.0	8.9	8.8	8.6
90°	16.2	15.2	16.2	16.8	16.8	16.8	16.8	16.8
92.5°	44.3	38.1	33.8	30.6	30.2	28.6	29.0	28.2
95°	133.2	102.2	80.9	69.6	63.0	59.0	57.4	58.0
97.5°	310.9	254.4	199.4	162.6	138.3	125.8	118.4	114.1
100°	464.3	401.3	331.5	270.0	227.8	206.0	191.2	182.1
102.5°	564.8	550.5	499.6	434.4	388.5	351.2	332.8	320.4
105°	617.9	675.3	682.0	665.1	633.6	602.1	580.2	573.1
107.5°	579.6	666.2	719.1	743.7	747.6	745.9	741.5	732.1
110°	546.7	637.7	702.8	744.5	766.3	776.1	780.6	780.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	516.6	604.0	673.5	721.3	751.7	767.9	776.5	779.3
115°	479.6	557.9	624.5	676.9	712.9	736.4	749.6	754.1
117.5°	451.7	520.4	580.9	630.0	666.8	691.5	705.4	709.3
120°	437.8	500.9	554.8	601.1	636.7	660.6	675.3	680.4
122.5°	426.9	484.6	535.7	577.5	609.4	632.9	646.0	650.3
125°	410.9	463.2	508.0	546.2	575.7	594.9	607.7	611.8
127.5°	395.1	442.6	484.7	520.0	545.6	563.7	574.7	578.0
130°	385.0	428.7	468.9	502.4	527.4	544.7	554.8	558.8
132.5°	375.2	415.7	452.6	484.1	508.6	525.9	535.3	539.0
135°	361.6	395.1	428.7	457.2	479.0	495.8	505.0	507.0
137.5°	350.7	378.8	405.4	430.3	450.1	464.6	472.6	475.6
140°	343.8	368.2	391.6	413.9	430.3	443.4	451.0	454.1
142.5°	338.0	358.8	379.0	397.7	413.1	425.2	431.9	432.6
145°	330.0	346.8	362.6	377.4	389.5	398.1	403.2	404.7
147.5°	323.9	337.1	349.4	360.2	370.2	377.1	380.6	381.5
150°	319.3	330.6	341.3	350.4	358.0	364.1	367.1	367.7
152.5°	314.9	325.3	334.3	342.2	348.2	353.6	355.8	355.9
155°	308.7	316.8	324.4	330.0	335.6	339.2	341.3	340.2
157.5°	301.5	308.3	314.7	319.1	323.0	326.0	326.9	326.9
160°	296.9	302.6	308.2	311.7	315.3	317.8	318.3	318.3
162.5°	292.5	297.3	302.1	304.8	308.4	310.1	310.6	310.2
165°	285.8	289.4	292.9	295.0	296.9	299.0	299.0	298.5
167.5°	279.4	282.1	284.5	286.4	287.3	288.5	288.4	287.8
170°	276.2	277.7	279.7	280.7	281.2	282.8	282.2	281.2
172.5°	272.5	273.6	275.2	275.8	276.3	277.1	276.5	275.9
175°	268.5	269.0	269.6	270.0	270.0	270.5	270.0	269.0
177.5°	265.6	265.6	266.1	266.1	266.1	266.1	265.6	264.8
180°	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4

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