

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: P331335-935

Luminaire Tested: **SA2XXDIP-C675D330U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331335-935
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-C675D330U935-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3416.0 lumens
Efficiency: N/A
Efficacy: 97.6 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: Semi-Direct

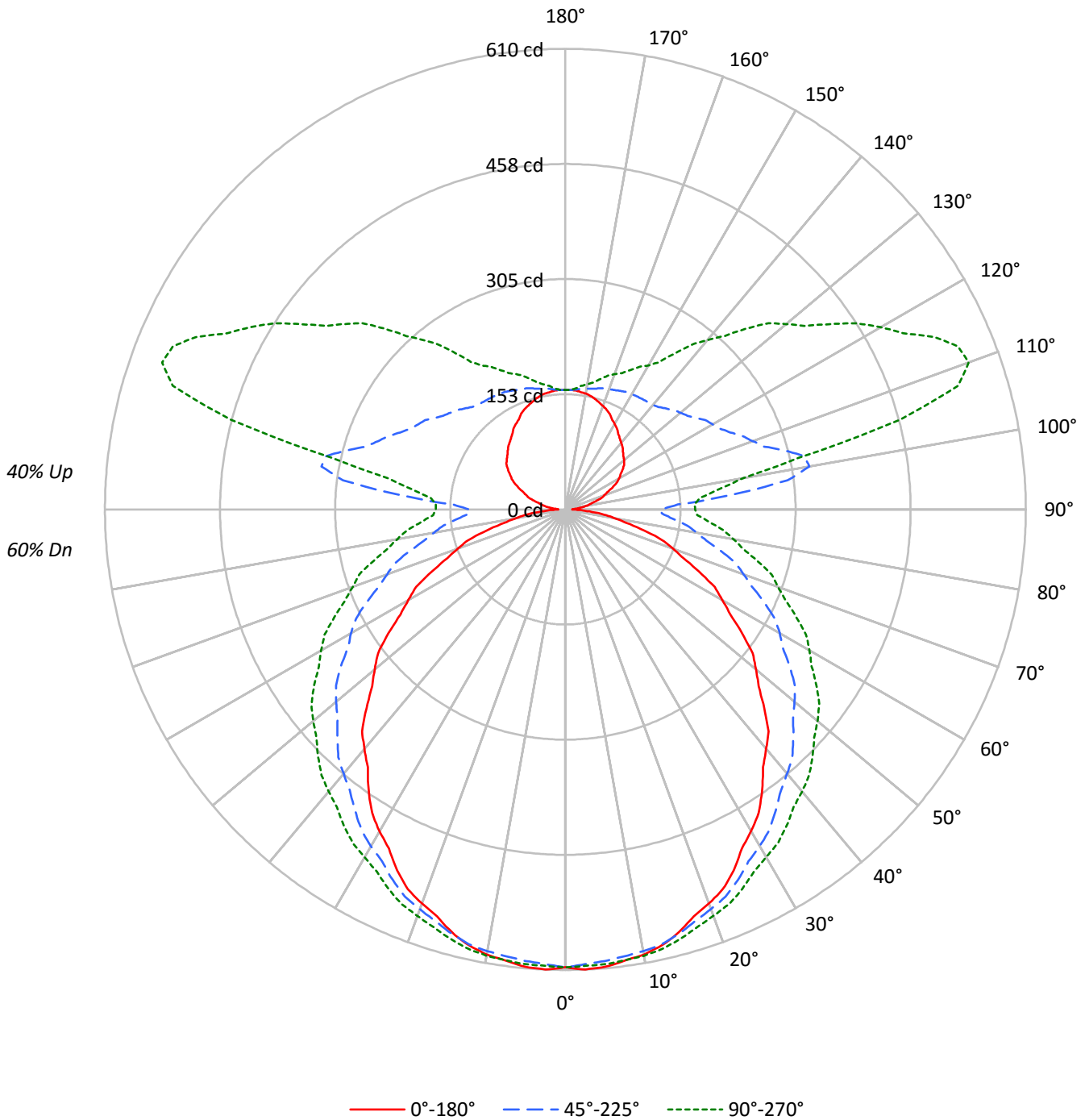
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	98	93	88	84	91	87	83	79	75	72	69	65	62	60	55	53	52	47
2	89	80	73	67	82	75	69	64	65	60	56	56	52	49	47	45	42	38
3	81	70	62	55	75	65	58	52	57	51	46	49	44	41	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	37	33	30	26
5	67	55	46	39	62	51	43	37	45	38	33	39	33	29	33	29	26	23
6	62	49	40	34	57	46	38	32	40	34	29	35	30	26	30	26	22	20
7	57	44	36	30	53	41	34	28	36	30	25	32	26	23	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	18	15
9	49	37	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	14
10	46	33	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9792	9792	9792
5°	9839	9426	9390
10°	9778	9148	9044
15°	9643	8853	8681
20°	9473	8536	8331
25°	9305	8231	8014
30°	9067	7919	7694
35°	8828	7615	7468
40°	8576	7358	7243
45°	8334	7127	7051
50°	8078	6920	6861
55°	7810	6696	6668
60°	7480	6465	6465
65°	7135	6192	6222
70°	6751	5899	5960
75°	6257	5612	5720
80°	5488	5319	5476
85°	4743	5064	5286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.7
10°-20°	164.8	4.8
20°-30°	249.7	7.3
30°-40°	304.2	8.9
40°-50°	327.2	9.6
50°-60°	317.8	9.3
60°-70°	277.5	8.1
70°-80°	213.6	6.3
80°-90°	144.8	4.2
90°-100°	162.0	4.7
100°-110°	286.8	8.4
110°-120°	275.7	8.1
120°-130°	214.3	6.3
130°-140°	161.9	4.7
140°-150°	115.9	3.4
150°-160°	80.1	2.3
160°-170°	47.1	1.4
170°-180°	15.3	0.4
0°-30°	472.0	13.8
0°-40°	776.1	22.7
0°-60°	1421.1	41.6
0°-90°	2057.0	60.2
90°-120°	724.4	21.2
90°-150°	1216.5	35.6
90°-180°	1359.0	39.8
0°-180°	3416.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	608	605	600	605	605	58
15°	580	582	582	589	589	163
25°	527	534	541	552	555	242
35°	454	469	486	505	512	284
45°	373	397	427	453	463	288
55°	286	318	363	394	406	255
65°	195	239	290	325	338	194
75°	108	158	214	250	263	114
85°	32	86	142	178	192	34
90°	9	64	126	160	172	6
95°	18	75	220	178	180	17
105°	42	87	301	508	459	44
115°	69	97	241	467	540	68
125°	93	111	211	368	428	83
135°	108	129	189	292	338	84
145°	122	141	178	227	252	77
155°	139	150	173	196	204	64
165°	152	156	166	176	179	43
175°	158	158	159	161	161	15
180°	158	158	158	158	158	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	610.0	609.5	609.1	608.6	608.1	607.3	606.2	605.1	604.1	603.0	603.7
5°	608.2	607.6	607.1	606.5	605.9	605.0	603.8	602.7	601.5	600.3	601.5
7.5°	602.8	602.4	602.0	601.6	601.2	600.5	599.7	598.7	597.9	597.0	598.4
10°	598.6	598.1	597.8	597.4	597.0	596.5	595.9	595.4	594.8	594.2	595.7
12.5°	591.5	591.6	591.7	591.8	591.9	591.7	591.2	590.8	590.4	590.0	591.5
15°	580.1	580.5	580.9	581.3	581.7	581.9	581.9	581.9	581.9	581.9	583.6
17.5°	565.3	566.2	567.0	567.8	568.6	569.4	570.0	570.6	571.2	571.9	573.7
20°	555.5	556.5	557.4	558.4	559.4	560.3	561.0	561.9	562.7	563.4	565.6
22.5°	544.9	546.0	547.3	548.4	549.5	550.6	551.7	552.8	553.9	555.0	557.2
25°	527.4	528.7	530.1	531.5	532.9	534.4	536.1	538.0	539.7	541.4	543.8
27.5°	506.3	508.5	510.7	513.0	515.2	517.4	519.4	521.5	523.6	525.6	528.6
30°	492.2	494.7	497.3	499.8	502.4	504.9	507.5	510.0	512.6	515.1	518.1
32.5°	476.7	479.6	482.4	485.3	488.2	491.1	494.1	497.1	500.1	503.1	506.7
35°	454.4	457.7	461.1	464.3	467.7	471.2	474.9	478.6	482.3	486.0	490.3
37.5°	430.2	434.0	437.8	441.6	445.5	449.8	454.6	459.4	464.2	469.0	473.8
40°	414.0	418.3	422.6	426.9	431.2	435.9	441.3	446.5	451.8	457.0	462.1
42.5°	398.6	402.8	407.1	411.4	415.7	420.9	427.0	433.0	439.0	445.1	450.6
45°	372.6	378.0	383.2	388.5	393.7	399.8	406.7	413.5	420.3	427.1	433.3
47.5°	347.2	352.9	358.7	364.4	370.1	377.0	385.0	393.0	401.1	409.1	415.4
50°	329.6	335.7	341.7	347.8	353.8	361.3	370.1	378.8	387.6	396.4	403.0
52.5°	312.7	319.1	325.5	331.8	338.2	346.0	355.2	364.5	373.8	383.1	389.9
55°	285.7	292.7	299.7	306.8	313.7	322.4	332.5	342.7	352.8	363.0	370.1
57.5°	258.9	266.9	274.8	282.8	290.7	299.8	310.1	320.5	330.9	341.2	348.8
60°	240.0	248.3	256.8	265.2	273.5	283.4	294.5	305.6	316.7	327.9	335.3
62.5°	223.1	231.8	240.5	249.2	258.0	267.9	279.0	290.1	301.3	312.4	320.3
65°	195.1	204.7	214.3	223.9	233.4	243.9	255.5	267.0	278.5	290.1	298.1
67.5°	169.4	179.4	189.5	199.5	209.5	220.3	232.1	243.9	255.7	267.5	275.6
70°	151.2	161.4	171.5	181.7	191.8	202.9	215.1	227.1	239.3	251.4	259.8
72.5°	134.3	144.7	155.2	165.7	176.2	187.5	199.8	212.1	224.4	236.6	244.9
75°	108.1	119.1	130.0	140.9	151.9	163.6	176.1	188.6	201.0	213.6	222.0
77.5°	82.8	94.3	105.7	117.1	128.5	140.7	153.3	166.1	178.7	191.4	199.8
80°	66.0	77.8	89.7	101.7	113.6	125.9	138.6	151.3	163.9	176.7	184.9
82.5°	51.8	63.6	75.3	87.1	98.9	111.2	124.1	136.9	149.7	162.6	170.8
85°	31.7	43.7	55.9	67.9	80.1	92.4	104.9	117.4	129.9	142.4	150.6
87.5°	17.3	29.1	41.0	52.8	64.5	76.8	89.5	102.5	115.4	127.9	135.9
90°	9.1	21.4	33.9	45.8	57.8	70.6	84.6	99.3	113.6	126.4	133.9
92.5°	11.8	24.0	36.8	48.6	61.2	75.3	94.3	116.0	136.6	149.2	150.8
95°	17.7	28.1	40.3	52.2	66.3	84.0	109.7	147.9	194.9	220.3	212.8
97.5°	23.5	33.3	44.7	57.0	70.8	88.8	117.6	165.7	235.6	297.1	314.3
100°	29.6	37.7	47.7	59.8	73.1	90.7	117.8	165.8	242.5	328.2	379.3
102.5°	34.4	41.8	51.1	62.6	75.5	92.6	118.1	161.8	233.2	324.5	400.5
105°	41.5	48.4	56.2	66.4	78.8	95.2	119.7	156.9	217.2	301.0	388.7
107.5°	50.1	55.6	62.2	70.9	82.1	97.8	121.4	154.7	206.0	276.6	354.6
110°	55.2	60.4	66.1	74.0	84.2	99.8	122.8	154.2	201.0	264.1	333.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	60.6	65.1	70.4	77.4	86.9	102.1	124.1	153.9	196.7	253.7	316.7
115°	68.9	72.6	76.5	82.4	90.6	104.3	126.1	153.5	191.8	241.3	295.2
117.5°	76.7	79.3	82.6	87.1	94.5	107.7	127.9	153.4	187.4	231.3	278.9
120°	82.1	84.0	86.6	90.1	97.0	109.9	129.5	153.8	185.0	225.3	269.5
122.5°	87.1	88.4	90.6	93.8	100.2	112.9	131.3	153.9	183.0	220.2	261.0
125°	93.0	93.9	95.7	99.4	105.5	117.1	134.3	154.3	179.4	211.2	247.8
127.5°	98.4	99.4	101.8	105.6	111.2	122.4	138.1	155.4	176.8	203.8	235.6
130°	101.5	102.5	105.4	109.4	115.4	125.8	140.6	156.3	175.6	199.1	227.6
132.5°	104.4	105.7	108.8	113.1	119.2	129.2	142.6	157.0	174.2	194.7	220.2
135°	108.0	109.2	112.8	117.4	124.4	133.9	145.6	158.2	172.3	188.8	210.3
137.5°	112.1	113.5	117.1	122.0	128.9	137.2	147.7	158.4	170.4	183.7	201.8
140°	115.3	116.3	119.8	124.4	130.9	138.9	148.4	158.3	169.0	180.6	196.8
142.5°	118.4	119.2	122.4	127.1	133.4	140.7	149.6	158.9	168.6	179.3	193.1
145°	122.3	123.6	126.6	131.1	137.2	143.9	152.1	160.7	169.1	178.2	189.2
147.5°	127.4	128.3	131.2	135.4	140.5	146.5	154.2	161.7	169.4	177.2	185.9
150°	130.8	131.7	134.1	138.1	142.7	148.2	155.2	162.1	169.1	176.4	183.7
152.5°	134.2	134.7	137.1	140.5	144.9	149.8	156.1	162.4	168.7	175.2	182.0
155°	139.1	139.3	141.1	144.5	147.8	152.4	157.6	162.7	167.9	173.1	178.9
157.5°	143.0	143.4	144.8	147.7	150.4	154.2	158.6	162.7	166.5	170.9	175.9
160°	145.7	146.0	147.2	149.6	152.1	155.5	159.1	162.7	165.8	169.4	173.7
162.5°	148.4	148.2	149.5	151.4	153.6	156.2	159.4	162.5	165.1	168.2	171.8
165°	151.5	151.2	151.8	153.6	155.2	157.0	159.7	161.9	163.7	165.8	168.5
167.5°	154.0	153.7	154.2	155.4	156.5	157.6	159.6	161.4	162.3	163.7	165.4
170°	155.8	155.2	155.5	156.4	157.0	157.9	159.4	160.9	161.5	162.5	163.7
172.5°	156.7	156.4	156.2	157.1	157.5	158.2	159.2	160.2	160.6	161.0	162.0
175°	157.9	157.6	157.3	157.9	157.9	158.2	158.8	159.4	159.1	159.4	159.7
177.5°	158.4	157.9	157.7	158.2	158.2	158.2	158.4	158.9	158.4	158.2	158.4
180°	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	604.5	605.3	606.1	606.3	606.0	605.7	605.4	605.1
5°	602.7	603.8	605.0	605.5	605.3	605.1	604.9	604.7
7.5°	599.8	601.2	602.6	603.2	603.0	602.8	602.6	602.4
10°	597.3	598.8	600.5	601.1	600.9	600.7	600.5	600.3
12.5°	593.1	594.6	596.2	596.8	596.7	596.5	596.3	596.1
15°	585.4	587.1	588.9	589.7	589.5	589.3	589.1	588.9
17.5°	575.5	577.4	579.2	580.1	580.1	580.1	580.1	580.1
20°	567.7	569.9	572.0	573.1	573.1	573.1	573.1	573.1
22.5°	559.3	561.5	563.5	564.8	565.1	565.4	565.8	566.0
25°	546.1	548.5	550.8	552.2	552.8	553.5	554.1	554.7
27.5°	531.6	534.5	537.5	539.2	539.6	540.0	540.4	540.9
30°	521.3	524.4	527.5	529.4	530.0	530.6	531.2	531.8
32.5°	510.3	513.9	517.5	519.8	520.9	521.9	523.0	524.0
35°	494.6	498.9	503.3	506.1	507.5	508.9	510.1	511.5
37.5°	478.5	483.3	488.1	491.2	492.7	494.0	495.5	497.0
40°	467.2	472.3	477.3	480.8	482.5	484.3	486.0	487.8
42.5°	456.2	461.8	467.3	471.0	472.7	474.5	476.2	477.9
45°	439.3	445.3	451.4	455.4	457.4	459.3	461.2	463.2
47.5°	421.7	428.1	434.4	438.6	440.7	442.9	445.1	447.2
50°	409.7	416.3	423.0	427.4	429.6	431.7	433.8	435.9
52.5°	396.7	403.5	410.3	414.8	417.1	419.4	421.7	424.0
55°	377.0	384.1	391.2	395.9	398.5	401.0	403.6	406.0
57.5°	356.4	363.9	371.5	376.6	379.2	381.8	384.4	386.9
60°	342.7	350.1	357.6	362.7	365.3	368.1	370.8	373.6
62.5°	328.1	336.0	344.0	349.2	351.7	354.3	356.9	359.5
65°	306.1	314.1	322.1	327.4	329.9	332.4	335.0	337.5
67.5°	283.7	291.8	299.9	305.3	307.9	310.6	313.2	315.9
70°	268.2	276.6	285.0	290.3	292.7	295.1	297.4	299.7
72.5°	253.1	261.3	269.6	275.1	277.9	280.8	283.5	286.4
75°	230.4	238.8	247.2	252.6	255.2	257.7	260.3	262.8
77.5°	208.2	216.5	224.9	230.4	233.2	235.9	238.6	241.3
80°	193.0	201.3	209.5	215.0	217.7	220.4	223.2	225.9
82.5°	179.0	187.2	195.4	200.8	203.4	206.0	208.5	211.1
85°	158.8	167.0	175.2	180.6	183.4	186.1	188.9	191.6
87.5°	143.8	151.6	159.7	165.0	167.5	170.0	172.5	175.0
90°	141.4	148.6	157.0	162.4	164.7	167.1	169.4	171.8
92.5°	151.5	155.4	160.5	163.7	165.7	167.1	169.7	171.5
95°	195.6	184.5	179.2	177.4	175.7	175.6	177.0	179.7
97.5°	293.9	267.3	241.7	224.5	212.2	207.1	204.9	204.7
100°	380.1	349.6	315.1	283.0	259.9	249.0	242.3	239.0
102.5°	435.0	433.5	410.1	375.7	350.4	330.3	321.4	316.1
105°	458.9	500.1	510.9	505.3	488.6	471.9	461.0	458.9
107.5°	428.3	486.6	524.8	543.9	548.4	549.5	549.1	545.5
110°	403.7	464.4	509.6	538.7	554.0	561.9	566.8	568.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	380.7	439.3	487.2	520.0	540.3	552.1	559.4	563.2
115°	351.4	404.1	449.8	485.1	508.9	525.0	535.0	539.9
117.5°	327.3	374.2	416.1	449.4	473.5	490.2	500.5	504.8
120°	314.2	357.4	395.1	426.5	450.0	466.5	477.4	482.6
122.5°	303.1	342.9	378.8	407.4	428.3	444.2	453.9	458.3
125°	286.2	322.9	354.9	381.3	400.6	414.0	423.3	427.5
127.5°	269.6	302.8	332.9	357.2	374.4	386.9	395.2	398.9
130°	259.0	289.8	318.6	341.8	358.3	370.1	377.8	381.8
132.5°	248.7	277.4	304.0	325.9	342.2	354.0	361.2	365.0
135°	234.2	258.4	282.5	302.4	317.0	328.6	335.7	338.5
137.5°	221.5	241.9	261.5	278.8	292.1	302.0	308.2	311.3
140°	213.7	231.4	248.5	264.1	274.9	284.0	289.7	292.7
142.5°	207.6	222.5	237.0	250.0	260.3	268.5	273.5	274.9
145°	199.8	211.0	221.6	231.5	239.8	245.9	249.9	251.8
147.5°	194.1	202.1	209.7	216.4	222.9	227.5	230.1	231.0
150°	191.1	197.8	204.1	209.6	214.1	217.8	219.6	220.0
152.5°	188.4	194.6	200.0	204.7	208.4	211.5	212.8	212.9
155°	184.7	189.5	194.1	197.4	200.8	202.9	204.1	203.5
157.5°	180.4	184.4	188.2	190.9	193.2	195.0	195.5	195.5
160°	177.6	181.0	184.3	186.5	188.6	190.1	190.5	190.5
162.5°	175.0	177.9	180.7	182.4	184.5	185.5	185.8	185.5
165°	171.0	173.1	175.2	176.4	177.6	178.9	178.9	178.6
167.5°	167.1	168.8	170.2	171.3	171.9	172.5	172.5	172.1
170°	165.2	166.1	167.3	167.9	168.2	169.1	168.8	168.2
172.5°	163.0	163.7	164.6	165.0	165.3	165.7	165.4	165.1
175°	160.7	160.9	161.3	161.5	161.5	161.9	161.5	160.9
177.5°	158.9	158.9	159.2	159.2	159.2	159.2	158.9	158.4
180°	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2

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