

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: P331272-927

Luminaire Tested: **SA2XXDIP-C290D925U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331272-927
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-C290D925U927-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3811.9 lumens
Efficiency: N/A
Efficacy: 102.2 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-Indirect

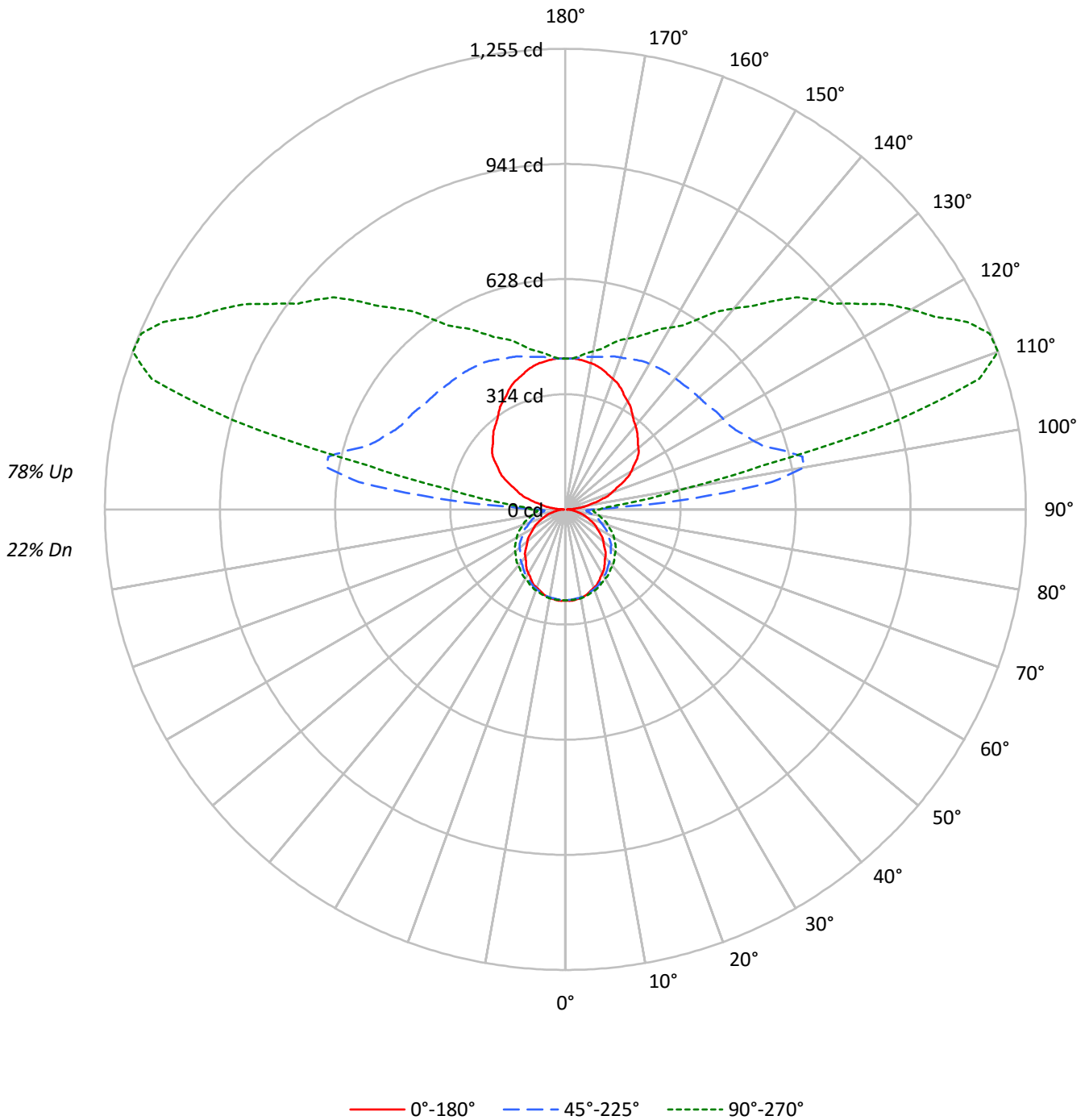
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
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	101	101	101	101	89	89	89	89	68	68	68	48	48	48	31	31	31	22				
1	91	86	82	79	80	77	73	70	58	56	54	41	40	39	26	25	24	17				
2	82	75	69	64	73	67	61	57	51	47	44	36	34	32	22	21	20	14				
3	75	66	58	53	66	58	52	47	44	40	37	32	29	27	20	18	17	11				
4	68	58	50	44	60	51	45	40	39	35	31	28	25	22	17	16	14	10				
5	63	51	43	37	55	46	39	34	35	30	26	25	22	19	16	14	12	8				
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	7				
7	53	41	33	28	47	37	30	25	28	23	20	20	17	15	13	11	9	6				
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	12	10	8	6				
9	45	34	26	21	40	30	24	19	23	19	15	17	14	11	11	9	7	5				
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	7	5				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4009	4009	4009
5°	4030	3859	3845
10°	4004	3746	3703
15°	3948	3624	3554
20°	3878	3495	3410
25°	3809	3371	3279
30°	3712	3242	3150
35°	3615	3118	3059
40°	3511	3013	2965
45°	3413	2919	2886
50°	3309	2833	2810
55°	3196	2741	2731
60°	3061	2646	2648
65°	2922	2534	2548
70°	2764	2415	2440
75°	2564	2299	2342
80°	2245	2177	2240
85°	1945	2073	2163



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	0.6
10°-20°	67.5	1.8
20°-30°	102.2	2.7
30°-40°	124.5	3.3
40°-50°	134.0	3.5
50°-60°	130.1	3.4
60°-70°	113.6	3.0
70°-80°	87.5	2.3
80°-90°	62.4	1.6
90°-100°	204.8	5.4
100°-110°	587.4	15.4
110°-120°	612.1	16.1
120°-130°	498.7	13.1
130°-140°	396.3	10.4
140°-150°	296.8	7.8
150°-160°	208.1	5.5
160°-170°	122.5	3.2
170°-180°	39.9	1.0
0°-30°	193.2	5.1
0°-40°	317.8	8.3
0°-60°	581.9	15.3
0°-90°	845.3	22.2
90°-120°	1404.3	36.8
90°-150°	2596.2	68.1
90°-180°	2967.0	77.8
0°-180°	3811.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	249	248	246	248	248	24
15°	238	238	238	241	241	67
25°	216	218	222	226	227	99
35°	186	192	199	207	210	116
45°	153	162	175	186	190	118
55°	117	130	149	161	166	105
65°	80	98	119	133	138	79
75°	44	65	88	102	108	47
85°	13	35	58	73	78	14
90°	4	35	74	87	92	4
95°	31	88	351	172	150	32
105°	98	158	617	1090	938	105
115°	171	221	512	1044	1209	170
125°	238	282	484	841	976	211
135°	279	333	470	700	803	215
145°	318	365	463	577	633	199
155°	361	390	450	509	529	166
165°	394	406	431	457	464	111
175°	410	411	414	420	418	39
180°	411	411	411	411	411	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	249.8	249.5	249.4	249.1	249.0	248.7	248.2	247.8	247.3	246.8	247.2
5°	249.1	248.8	248.6	248.3	248.0	247.7	247.2	246.8	246.3	245.8	246.3
7.5°	246.8	246.6	246.4	246.3	246.1	245.9	245.5	245.2	244.8	244.4	245.0
10°	245.1	244.9	244.8	244.6	244.5	244.2	244.0	243.8	243.5	243.3	243.9
12.5°	242.2	242.2	242.2	242.3	242.3	242.2	242.1	241.9	241.7	241.5	242.2
15°	237.5	237.7	237.8	238.0	238.1	238.2	238.2	238.2	238.2	238.2	238.9
17.5°	231.5	231.8	232.1	232.5	232.8	233.1	233.4	233.6	233.9	234.2	234.9
20°	227.4	227.8	228.2	228.6	229.0	229.4	229.7	230.0	230.4	230.7	231.6
22.5°	223.2	223.6	224.0	224.5	225.0	225.5	225.9	226.3	226.8	227.2	228.1
25°	215.9	216.5	217.1	217.6	218.2	218.8	219.5	220.2	220.9	221.7	222.6
27.5°	207.3	208.2	209.1	210.0	211.0	211.8	212.6	213.5	214.4	215.2	216.4
30°	201.5	202.6	203.6	204.6	205.7	206.8	207.8	208.8	209.8	210.9	212.1
32.5°	195.2	196.4	197.5	198.7	199.9	201.1	202.3	203.5	204.8	206.0	207.5
35°	186.1	187.4	188.8	190.1	191.5	192.9	194.5	196.0	197.5	199.0	200.7
37.5°	176.1	177.7	179.3	180.9	182.4	184.2	186.2	188.1	190.0	192.0	194.0
40°	169.5	171.3	173.0	174.8	176.5	178.5	180.6	182.8	185.0	187.1	189.2
42.5°	163.2	164.9	166.7	168.4	170.2	172.3	174.8	177.3	179.7	182.2	184.5
45°	152.6	154.7	156.9	159.1	161.2	163.7	166.5	169.3	172.1	174.9	177.4
47.5°	142.1	144.5	146.9	149.2	151.5	154.4	157.6	160.9	164.2	167.5	170.1
50°	135.0	137.4	139.9	142.4	144.9	147.9	151.5	155.1	158.7	162.3	165.0
52.5°	128.0	130.6	133.2	135.9	138.5	141.6	145.4	149.2	153.0	156.9	159.6
55°	116.9	119.9	122.7	125.6	128.5	132.0	136.2	140.3	144.5	148.6	151.5
57.5°	106.0	109.2	112.5	115.7	119.0	122.7	127.0	131.2	135.5	139.7	142.8
60°	98.2	101.7	105.1	108.5	112.0	116.0	120.6	125.1	129.7	134.2	137.3
62.5°	91.3	94.9	98.5	102.0	105.6	109.6	114.2	118.7	123.3	127.9	131.1
65°	79.9	83.8	87.7	91.7	95.5	99.9	104.6	109.3	114.1	118.7	122.1
67.5°	69.4	73.5	77.6	81.7	85.8	90.2	95.1	99.9	104.7	109.6	112.9
70°	61.9	66.1	70.2	74.4	78.5	83.1	88.0	93.0	98.0	102.9	106.4
72.5°	55.0	59.3	63.5	67.8	72.2	76.8	81.8	86.8	91.9	96.9	100.3
75°	44.3	48.7	53.2	57.7	62.2	66.9	72.1	77.2	82.3	87.5	90.9
77.5°	33.9	38.6	43.3	47.9	52.7	57.6	62.8	68.0	73.2	78.3	81.8
80°	27.0	31.8	36.8	41.6	46.5	51.6	56.7	61.9	67.1	72.3	75.7
82.5°	21.2	26.1	30.9	35.6	40.5	45.6	50.8	56.1	61.3	66.5	69.9
85°	13.0	17.9	22.9	27.8	32.8	37.8	42.9	48.1	53.2	58.3	61.6
87.5°	7.2	12.4	17.8	22.9	28.0	33.4	39.4	45.6	51.7	56.9	60.0
90°	4.4	11.4	19.2	25.4	31.6	38.9	47.9	58.6	68.4	74.4	76.8
92.5°	13.0	21.5	31.5	39.4	49.0	61.1	83.9	114.0	141.3	147.7	134.8
95°	30.6	37.5	49.1	60.0	76.4	99.7	140.9	214.4	310.9	351.3	315.6
97.5°	47.6	55.2	66.9	81.0	98.9	124.4	174.7	275.1	432.1	567.4	596.3
100°	63.4	68.8	78.8	94.4	113.2	139.0	185.4	286.4	461.6	660.6	777.4
102.5°	77.6	82.1	91.9	107.3	126.4	152.1	195.2	285.3	447.7	661.7	843.6
105°	98.2	103.8	111.6	125.8	145.4	170.9	212.1	286.7	421.3	616.8	829.9
107.5°	121.0	125.3	132.5	145.4	164.5	189.6	229.7	295.0	406.9	568.9	757.4
110°	135.9	140.6	146.9	158.8	177.1	202.7	241.5	302.3	402.7	545.7	711.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	149.7	154.2	161.0	172.0	189.3	215.4	252.6	310.1	401.5	529.8	679.5
115°	171.4	176.3	181.9	192.3	209.0	232.5	270.1	321.9	402.3	511.7	639.1
117.5°	193.5	197.3	202.6	211.5	227.3	251.4	286.1	334.7	405.3	501.4	612.4
120°	207.4	210.9	215.9	223.4	239.6	263.5	297.5	343.3	407.4	495.3	597.9
122.5°	220.7	223.4	228.2	236.1	252.1	276.4	308.3	350.9	410.4	491.0	585.3
125°	237.9	240.3	245.0	254.5	270.3	293.7	324.8	362.9	414.5	483.5	567.0
127.5°	251.8	254.9	261.5	271.8	286.9	310.7	340.4	374.4	419.1	478.2	550.0
130°	260.1	263.2	270.9	281.9	297.7	320.6	350.0	381.7	422.9	475.2	538.8
132.5°	267.6	271.3	279.8	291.4	307.8	330.6	358.2	389.0	426.6	472.8	529.4
135°	278.7	281.9	291.3	303.2	321.4	343.9	369.9	398.5	430.9	469.6	516.3
137.5°	289.4	293.2	302.7	315.3	333.3	354.0	379.4	405.5	434.6	467.4	506.7
140°	297.6	300.7	310.1	322.7	340.0	360.6	384.4	409.2	436.2	465.6	500.9
142.5°	305.9	308.3	317.1	329.6	346.3	365.6	388.7	412.6	437.6	465.0	495.6
145°	317.8	321.0	328.9	340.8	356.6	374.0	395.3	417.5	439.6	463.3	489.1
147.5°	331.1	333.5	341.0	352.0	365.1	380.6	400.7	420.2	440.2	460.5	482.7
150°	340.0	342.3	348.6	358.9	370.8	385.0	403.2	421.4	439.6	458.6	477.5
152.5°	348.8	349.9	356.2	365.3	376.5	389.4	405.8	422.0	438.3	455.4	473.1
155°	361.3	362.1	366.9	375.6	384.2	396.1	409.6	422.9	436.4	449.9	464.9
157.5°	371.8	372.6	376.4	383.9	390.9	400.8	412.3	422.9	432.8	444.2	457.2
160°	378.7	379.5	382.6	389.0	395.3	404.0	413.5	422.9	430.9	440.4	451.5
162.5°	385.6	385.2	388.3	393.4	399.1	405.9	414.2	422.3	429.0	437.2	446.4
165°	393.7	392.9	394.5	399.3	403.2	408.0	415.1	420.6	425.3	430.9	438.0
167.5°	400.4	399.4	400.8	403.9	406.7	409.7	414.9	419.5	421.7	425.3	429.8
170°	404.8	403.2	404.0	406.4	408.0	410.4	414.3	418.3	419.9	422.2	425.3
172.5°	407.3	406.4	405.9	408.3	409.2	411.0	413.7	416.4	417.3	418.4	421.0
175°	410.4	409.6	408.8	410.4	410.4	411.1	412.7	414.3	413.5	414.3	415.1
177.5°	411.8	410.5	409.9	411.1	411.1	411.1	411.8	413.0	411.8	411.1	411.8
180°	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	247.5	247.8	248.1	248.3	248.1	248.0	247.9	247.7
5°	246.8	247.2	247.7	247.9	247.8	247.7	247.6	247.6
7.5°	245.6	246.1	246.8	247.0	246.9	246.8	246.8	246.7
10°	244.5	245.2	245.8	246.1	246.1	246.0	245.9	245.8
12.5°	242.8	243.4	244.1	244.4	244.3	244.2	244.2	244.1
15°	239.6	240.4	241.1	241.5	241.4	241.3	241.2	241.1
17.5°	235.7	236.4	237.1	237.5	237.5	237.5	237.5	237.5
20°	232.4	233.3	234.2	234.6	234.6	234.6	234.6	234.6
22.5°	229.0	229.9	230.8	231.2	231.4	231.5	231.6	231.8
25°	223.6	224.6	225.5	226.1	226.3	226.6	226.8	227.0
27.5°	217.6	218.9	220.1	220.8	220.9	221.1	221.3	221.5
30°	213.4	214.8	216.0	216.7	217.0	217.2	217.5	217.7
32.5°	208.9	210.4	211.9	212.9	213.3	213.7	214.1	214.5
35°	202.6	204.3	206.0	207.2	207.8	208.3	208.9	209.5
37.5°	195.9	197.9	199.9	201.1	201.7	202.3	202.9	203.4
40°	191.3	193.4	195.4	196.9	197.6	198.3	199.0	199.7
42.5°	186.8	189.0	191.3	192.8	193.5	194.2	195.0	195.7
45°	179.8	182.4	184.8	186.5	187.3	188.1	188.9	189.6
47.5°	172.7	175.2	177.8	179.6	180.5	181.3	182.2	183.1
50°	167.7	170.5	173.2	175.0	175.9	176.7	177.6	178.5
52.5°	162.4	165.2	167.9	169.8	170.8	171.7	172.7	173.6
55°	154.4	157.2	160.2	162.1	163.1	164.2	165.2	166.3
57.5°	145.9	149.0	152.1	154.2	155.3	156.3	157.3	158.4
60°	140.3	143.4	146.4	148.5	149.6	150.7	151.9	153.0
62.5°	134.4	137.6	140.9	143.0	144.0	145.0	146.2	147.2
65°	125.3	128.6	131.9	134.0	135.1	136.1	137.1	138.2
67.5°	116.1	119.5	122.8	125.0	126.0	127.1	128.3	129.4
70°	109.8	113.2	116.7	118.9	119.9	120.8	121.8	122.7
72.5°	103.6	107.0	110.4	112.6	113.8	114.9	116.1	117.2
75°	94.3	97.8	101.2	103.5	104.5	105.5	106.5	107.6
77.5°	85.2	88.6	92.1	94.3	95.5	96.6	97.7	98.8
80°	79.1	82.4	85.8	88.0	89.1	90.2	91.3	92.4
82.5°	73.3	76.7	80.0	82.2	83.3	84.4	85.4	86.4
85°	65.0	68.4	71.8	74.0	75.1	76.2	77.3	78.4
87.5°	63.1	66.1	69.6	71.9	73.0	74.0	75.0	76.0
90°	79.2	80.8	85.6	88.5	89.4	90.4	91.3	92.3
92.5°	120.1	113.4	110.0	107.1	107.4	105.8	107.4	107.1
95°	254.6	209.5	179.3	163.8	154.6	149.2	147.7	149.5
97.5°	527.6	442.7	360.0	304.9	268.1	249.5	239.0	233.3
100°	763.7	668.7	563.3	469.5	404.8	371.7	349.7	336.3
102.5°	917.8	898.6	822.3	722.8	652.4	595.2	567.4	549.1
105°	997.1	1089.3	1102.4	1078.1	1030.0	981.8	948.7	938.5
107.5°	934.5	1071.7	1156.7	1196.7	1203.8	1202.0	1196.0	1182.3
110°	881.3	1025.4	1129.2	1195.7	1230.6	1246.5	1254.5	1254.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	832.5	970.9	1081.6	1157.6	1205.8	1231.8	1246.1	1251.3
115°	772.0	896.1	1002.0	1085.1	1142.2	1179.4	1200.9	1208.9
117.5°	725.6	834.9	931.1	1009.2	1067.1	1106.4	1128.9	1135.8
120°	702.1	802.4	888.4	961.9	1018.2	1056.2	1080.0	1088.8
122.5°	683.2	775.2	856.7	923.2	973.6	1010.8	1032.0	1039.4
125°	655.4	738.9	810.7	871.4	918.0	948.8	969.2	976.3
127.5°	627.9	703.6	771.2	827.3	868.0	896.8	914.6	920.4
130°	610.2	680.2	744.6	798.0	837.4	864.9	881.4	888.4
132.5°	593.2	658.0	717.2	767.5	806.3	833.8	849.0	855.3
135°	569.4	623.3	677.2	722.6	757.2	783.9	798.8	802.6
137.5°	550.0	595.2	638.0	677.6	709.2	732.1	745.2	750.5
140°	537.7	576.9	614.7	650.3	676.0	697.1	709.4	714.6
142.5°	527.8	561.1	593.4	623.2	647.7	666.8	677.8	679.1
145°	514.0	540.7	565.6	589.0	608.4	622.2	630.5	633.3
147.5°	503.6	524.2	543.4	560.3	576.2	587.1	592.6	594.3
150°	496.5	513.9	530.5	544.7	556.6	566.1	570.8	571.6
152.5°	489.6	505.6	519.8	532.1	541.4	549.6	553.1	553.3
155°	479.9	492.6	504.4	513.1	521.8	527.4	530.5	528.9
157.5°	468.7	479.3	489.3	496.1	502.2	506.8	508.2	508.2
160°	461.7	470.4	479.1	484.7	490.2	494.2	495.0	495.0
162.5°	454.8	462.2	469.6	473.9	479.4	482.1	482.9	482.3
165°	444.3	449.9	455.4	458.6	461.7	464.9	464.9	464.1
167.5°	434.4	438.6	442.4	445.3	446.7	448.5	448.3	447.3
170°	429.3	431.7	434.8	436.4	437.2	439.6	438.8	437.2
172.5°	423.6	425.3	427.9	428.8	429.6	430.7	429.9	429.0
175°	417.5	418.3	419.1	419.9	419.9	420.6	419.9	418.3
177.5°	413.0	413.0	413.7	413.7	413.7	413.7	413.0	411.8
180°	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1

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