

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: P331275

Luminaire Tested: **SA2XXDIP-C290D925U835-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331275  
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-C290D925U835-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

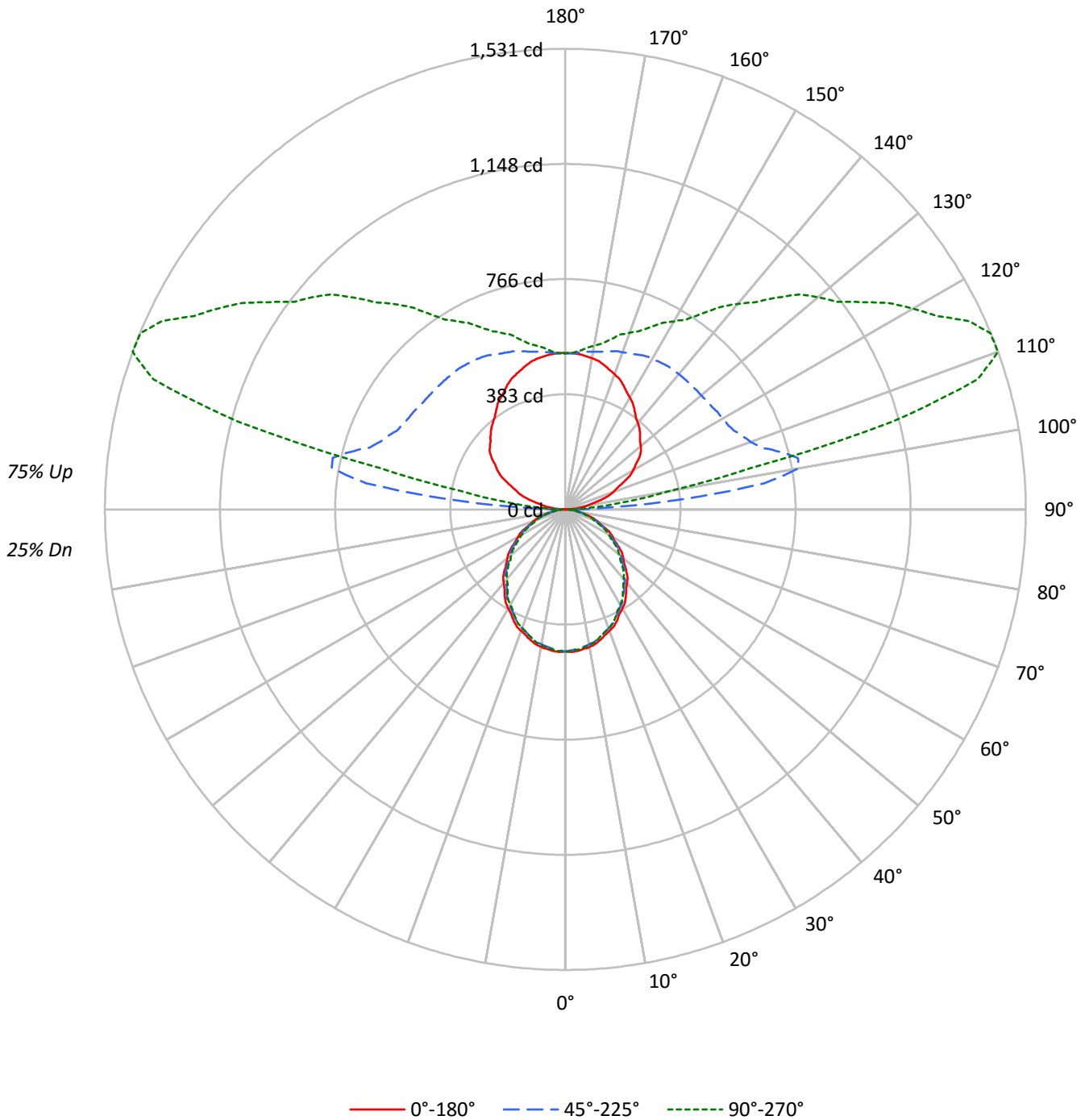
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4818.0 lumens  
Efficiency: N/A  
Efficacy: 129.2 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: 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	90	90	90	90	69	69	69	51	51	51	33	33	33	25				
1	92	88	84	81	82	78	75	73	61	59	57	44	43	42	29	29	28	21				
2	84	77	71	66	74	69	64	59	53	50	47	39	37	35	26	25	23	18				
3	76	67	60	55	68	60	54	50	47	43	39	34	32	29	23	21	20	15				
4	70	60	52	46	62	53	47	42	41	37	33	31	28	25	20	19	17	13				
5	64	53	45	39	57	47	41	36	37	32	29	27	24	22	18	16	15	11				
6	59	47	39	34	52	42	36	31	33	28	25	25	21	19	17	15	13	10				
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	12	9				
8	50	38	31	26	45	35	28	24	27	23	19	20	17	15	14	12	10	8				
9	47	35	28	23	41	31	25	21	25	20	17	19	15	13	13	11	9	7				
10	43	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	8	6				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7627	7627	7627
5°	7656	7546	7592
10°	7612	7470	7507
15°	7517	7373	7366
20°	7383	7228	7220
25°	7251	7049	7049
30°	7081	6885	6825
35°	6922	6688	6589
40°	6721	6492	6367
45°	6524	6295	6140
50°	6310	6094	5878
55°	6086	5858	5638
60°	5838	5574	5370
65°	5570	5295	5051
70°	5231	4952	4716
75°	4760	4560	4448
80°	4221	4100	3887
85°	3446	3279	2946



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.4	0.9
10°-20°	125.0	2.6
20°-30°	183.7	3.8
30°-40°	213.4	4.4
40°-50°	213.2	4.4
50°-60°	185.9	3.9
60°-70°	137.5	2.9
70°-80°	77.9	1.6
80°-90°	25.6	0.5
90°-100°	207.5	4.3
100°-110°	704.2	14.6
110°-120°	748.1	15.5
120°-130°	615.8	12.8
130°-140°	494.5	10.3
140°-150°	373.7	7.8
150°-160°	262.6	5.5
160°-170°	154.6	3.2
170°-180°	50.3	1.0
0°-30°	353.2	7.3
0°-40°	566.6	11.8
0°-60°	965.7	20.0
0°-90°	1206.6	25.0
90°-120°	1659.8	34.4
90°-150°	3143.8	65.3
90°-180°	3611.0	74.9
0°-180°	4818.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	472	470	466	469	468	45
15°	450	447	441	443	441	127
25°	407	403	396	396	396	187
35°	351	346	339	337	334	219
45°	286	282	276	271	269	220
55°	216	213	208	203	200	193
65°	146	143	139	135	132	144
75°	76	75	73	71	71	82
85°	19	18	18	16	16	21
90°	1	14	34	32	33	3
95°	35	86	391	148	114	37
105°	122	184	740	1322	1125	129
115°	215	271	619	1277	1480	213
125°	299	354	595	1034	1201	266
135°	351	419	588	869	995	271
145°	401	461	585	726	794	252
155°	456	492	568	642	668	210
165°	497	512	544	577	586	140
175°	518	518	523	530	528	49
180°	519	519	519	519	519	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4
2.5°	474.6	474.2	473.8	473.4	473.0	472.4	471.5	470.6	469.7	468.8	469.6
5°	472.4	472.0	471.6	471.2	470.8	470.1	469.0	467.9	466.7	465.6	466.4
7.5°	468.3	467.6	467.0	466.4	465.8	464.9	463.8	462.6	461.5	460.4	461.2
10°	464.3	463.6	462.9	462.2	461.4	460.5	459.3	458.1	456.9	455.6	456.4
12.5°	458.8	458.2	457.6	456.9	456.3	455.4	454.2	453.0	451.8	450.6	451.1
15°	449.7	449.1	448.5	447.9	447.3	446.4	445.0	443.7	442.4	441.1	441.5
17.5°	438.1	437.5	436.9	436.3	435.7	434.7	433.4	432.0	430.7	429.4	429.8
20°	429.7	429.1	428.5	427.9	427.3	426.3	424.9	423.5	422.1	420.7	421.0
22.5°	421.4	420.5	419.7	418.8	418.0	416.9	415.6	414.2	412.9	411.6	411.6
25°	407.0	406.2	405.4	404.6	403.8	402.5	400.8	399.1	397.4	395.7	395.9
27.5°	390.7	390.0	389.2	388.5	387.8	386.7	385.4	384.0	382.7	381.3	381.0
30°	379.8	379.0	378.2	377.4	376.5	375.4	373.9	372.4	370.8	369.3	369.0
32.5°	368.1	367.5	366.9	366.2	365.6	364.4	362.8	361.3	359.7	358.1	357.5
35°	351.2	350.1	349.1	348.1	347.1	345.8	344.2	342.6	341.0	339.3	338.7
37.5°	332.0	331.1	330.2	329.3	328.4	327.2	325.6	324.0	322.3	320.7	320.0
40°	318.9	318.1	317.3	316.5	315.7	314.5	312.8	311.2	309.6	308.0	307.1
42.5°	306.2	305.4	304.6	303.8	303.0	301.7	300.1	298.5	296.9	295.3	294.3
45°	285.7	285.0	284.3	283.6	282.9	281.8	280.3	278.8	277.3	275.7	274.6
47.5°	265.4	264.7	264.1	263.4	262.7	261.6	260.0	258.5	256.9	255.3	254.1
50°	251.2	250.7	250.2	249.7	249.2	248.2	246.8	245.4	244.0	242.6	241.2
52.5°	237.4	236.7	236.1	235.4	234.7	233.7	232.4	231.1	229.7	228.4	227.2
55°	216.2	215.6	215.0	214.4	213.8	212.9	211.7	210.5	209.3	208.1	206.8
57.5°	195.0	194.5	194.0	193.5	193.0	192.1	190.8	189.5	188.1	186.8	185.6
60°	180.8	180.4	180.0	179.6	179.2	178.3	176.9	175.5	174.0	172.6	171.5
62.5°	167.0	166.3	165.7	165.1	164.4	163.5	162.4	161.4	160.3	159.2	158.1
65°	145.8	145.2	144.6	144.0	143.4	142.6	141.6	140.6	139.6	138.6	137.6
67.5°	124.3	123.8	123.3	122.8	122.4	121.7	120.7	119.8	118.9	118.0	117.3
70°	110.8	110.4	110.0	109.6	109.2	108.6	107.7	106.8	105.8	104.9	104.2
72.5°	97.0	96.6	96.2	95.8	95.4	94.9	94.3	93.8	93.2	92.6	91.9
75°	76.3	76.1	75.9	75.7	75.5	75.2	74.7	74.1	73.6	73.1	72.5
77.5°	57.8	57.4	57.1	56.8	56.4	56.1	55.9	55.7	55.5	55.3	55.0
80°	45.4	45.3	45.2	45.1	45.0	44.9	44.7	44.5	44.3	44.1	43.8
82.5°	33.8	33.8	33.8	33.7	33.7	33.6	33.5	33.4	33.3	33.2	32.8
85°	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.7	17.4
87.5°	6.7	7.2	7.8	8.1	8.3	8.7	9.6	10.8	11.8	11.9	11.4
90°	1.0	4.0	8.0	10.0	12.0	15.0	20.0	26.9	32.9	33.9	32.9
92.5°	12.2	17.6	24.8	29.1	35.9	45.3	67.9	99.6	127.9	129.7	109.6
95°	34.9	38.9	48.9	57.9	73.9	97.8	143.7	230.5	346.3	391.2	342.3
97.5°	56.9	62.3	72.9	86.4	104.8	131.9	189.6	310.6	503.0	667.9	700.6
100°	76.8	79.8	88.8	104.8	124.8	152.7	205.6	327.4	542.9	788.4	932.2
102.5°	95.2	97.4	106.4	122.4	143.1	171.1	220.0	328.2	527.8	792.4	1018.4
105°	121.8	125.8	132.7	147.7	169.7	197.6	244.5	333.3	498.0	739.5	1005.0
107.5°	150.5	153.7	160.5	174.3	196.0	224.2	269.7	347.1	483.2	682.9	917.4
110°	169.7	173.7	179.6	192.6	213.6	242.5	286.4	358.3	480.1	655.7	862.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.2	191.2	198.0	210.2	230.3	260.1	302.4	370.3	480.8	638.1	824.0
115°	214.6	219.6	225.6	237.5	257.5	284.4	327.4	388.2	485.0	618.8	776.5
117.5°	242.9	246.9	252.9	263.5	282.6	310.6	350.3	407.4	492.2	609.4	746.5
120°	260.5	264.5	270.5	279.4	299.4	327.4	366.3	420.2	497.0	603.8	730.6
122.5°	277.3	280.4	286.4	296.2	316.2	344.9	381.4	431.3	502.6	600.6	717.0
125°	299.4	302.4	308.4	320.4	340.3	368.3	404.2	449.1	511.0	594.8	697.6
127.5°	317.0	321.0	329.3	342.5	361.7	390.4	425.4	465.7	519.6	591.4	679.7
130°	327.4	331.3	341.3	355.3	375.3	403.2	438.1	476.1	526.0	589.8	667.7
132.5°	336.9	341.7	352.5	367.3	388.0	416.0	449.3	486.4	532.3	589.0	658.1
135°	351.3	355.3	367.3	382.2	405.2	433.1	465.1	500.0	539.9	587.8	644.7
137.5°	364.9	369.7	381.6	397.6	420.4	446.3	477.9	510.4	546.7	587.6	635.3
140°	375.3	379.3	391.2	407.2	429.2	455.1	485.0	516.0	549.9	586.8	629.8
142.5°	385.6	388.8	400.0	416.0	437.1	461.5	490.6	520.8	552.3	586.8	624.2
145°	401.2	405.2	415.2	430.2	450.1	472.1	499.0	527.0	554.9	584.8	616.8
147.5°	418.0	421.0	430.5	444.3	460.9	480.5	505.8	530.4	555.7	581.3	609.2
150°	429.2	432.1	440.1	453.1	468.1	486.0	509.0	531.9	554.9	578.9	602.8
152.5°	440.3	441.7	449.7	461.1	475.3	491.6	512.2	532.7	553.3	574.9	597.2
155°	456.1	457.1	463.1	474.1	485.0	500.0	517.0	533.9	550.9	567.9	586.8
157.5°	469.3	470.3	475.1	484.6	493.4	506.0	520.4	533.9	546.3	560.7	577.1
160°	478.1	479.1	483.0	491.0	499.0	510.0	522.0	533.9	543.9	555.9	569.9
162.5°	486.8	486.2	490.2	496.6	503.8	512.4	522.8	533.1	541.5	551.9	563.5
165°	497.0	496.0	498.0	504.0	509.0	515.0	524.0	531.0	536.9	543.9	552.9
167.5°	505.4	504.2	506.0	509.8	513.4	517.2	523.8	529.6	532.3	536.9	542.5
170°	511.0	509.0	510.0	513.0	515.0	518.0	523.0	528.0	530.0	532.9	536.9
172.5°	514.2	513.0	512.4	515.4	516.6	518.8	522.2	525.6	526.8	528.2	531.4
175°	518.0	517.0	516.0	518.0	518.0	519.0	521.0	523.0	522.0	523.0	524.0
177.5°	519.8	518.2	517.4	519.0	519.0	519.0	519.8	521.4	519.8	519.0	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4
2.5°	470.4	471.2	472.0	472.4	472.2	472.0	471.9	471.7
5°	467.3	468.1	468.9	469.2	469.0	468.8	468.6	468.4
7.5°	462.0	462.8	463.6	463.9	463.7	463.4	463.2	463.0
10°	457.3	458.1	458.9	459.1	458.8	458.5	458.2	457.9
12.5°	451.7	452.2	452.8	453.0	452.8	452.5	452.3	452.1
15°	441.9	442.3	442.7	442.7	442.2	441.7	441.2	440.7
17.5°	430.3	430.8	431.2	431.2	430.7	430.3	429.8	429.3
20°	421.3	421.6	421.9	421.8	421.4	421.0	420.6	420.2
22.5°	411.7	411.8	411.8	411.7	411.5	411.2	411.0	410.8
25°	396.1	396.3	396.5	396.5	396.3	396.1	395.9	395.7
27.5°	380.7	380.4	380.1	379.7	379.2	378.7	378.3	377.8
30°	368.7	368.4	368.1	367.8	367.4	367.0	366.6	366.1
32.5°	357.0	356.4	355.9	355.4	355.0	354.6	354.2	353.8
35°	338.1	337.5	336.9	336.4	335.9	335.4	334.9	334.3
37.5°	319.2	318.5	317.7	317.1	316.6	316.1	315.7	315.2
40°	306.2	305.3	304.4	303.7	303.3	302.9	302.5	302.1
42.5°	293.3	292.3	291.3	290.5	290.0	289.4	288.9	288.3
45°	273.5	272.4	271.3	270.5	270.1	269.7	269.3	268.9
47.5°	253.0	251.8	250.6	249.7	249.2	248.6	248.0	247.4
50°	239.8	238.3	236.9	236.0	235.5	235.0	234.5	234.0
52.5°	226.1	224.9	223.7	222.8	222.1	221.5	220.8	220.1
55°	205.6	204.4	203.2	202.4	201.9	201.3	200.8	200.3
57.5°	184.4	183.2	182.0	181.2	180.9	180.5	180.1	179.7
60°	170.4	169.3	168.2	167.5	167.2	166.9	166.6	166.3
62.5°	157.1	156.1	155.1	154.4	154.0	153.6	153.2	152.8
65°	136.7	135.8	134.9	134.2	133.7	133.2	132.7	132.2
67.5°	116.6	115.9	115.2	114.6	114.2	113.8	113.4	113.0
70°	103.5	102.8	102.1	101.6	101.2	100.7	100.3	99.9
72.5°	91.2	90.5	89.8	89.2	88.9	88.6	88.3	87.9
75°	71.9	71.3	70.7	70.5	70.7	70.9	71.1	71.3
77.5°	54.7	54.4	54.1	53.8	53.5	53.3	53.0	52.7
80°	43.5	43.2	42.9	42.6	42.4	42.2	42.0	41.8
82.5°	32.4	32.0	31.6	31.4	31.4	31.3	31.3	31.3
85°	17.1	16.8	16.5	16.3	16.2	16.1	16.0	15.9
87.5°	11.0	10.3	10.5	10.5	10.5	10.4	10.3	10.2
90°	31.9	29.9	31.9	32.9	32.9	32.9	32.9	32.9
92.5°	87.0	74.7	66.3	60.1	59.3	56.1	56.9	55.3
95°	261.5	200.6	158.7	136.7	123.8	115.8	112.8	113.8
97.5°	610.2	499.2	391.2	319.2	271.5	246.9	232.3	224.0
100°	911.2	787.4	650.7	530.0	447.1	404.2	375.3	357.3
102.5°	1108.4	1080.5	980.5	852.5	762.5	689.2	653.1	628.8
105°	1212.6	1325.4	1338.4	1305.4	1243.5	1181.7	1138.7	1124.8
107.5°	1137.6	1307.4	1411.2	1459.5	1467.3	1463.9	1455.3	1436.8
110°	1072.9	1251.5	1379.3	1461.1	1504.0	1523.0	1532.0	1531.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1013.8	1185.3	1321.8	1415.6	1475.3	1507.0	1524.0	1529.4
115°	941.1	1094.8	1225.6	1328.4	1399.2	1445.1	1471.1	1480.1
117.5°	886.4	1021.4	1139.9	1236.4	1308.6	1357.1	1384.5	1392.0
120°	859.3	983.1	1088.8	1179.7	1249.5	1296.4	1325.4	1335.4
122.5°	837.7	951.1	1051.3	1133.4	1196.0	1242.1	1267.9	1276.3
125°	806.4	909.2	997.0	1071.9	1129.8	1167.7	1192.6	1200.6
127.5°	775.5	868.5	951.3	1020.4	1070.9	1106.4	1128.0	1134.4
130°	755.5	841.3	920.2	986.1	1035.0	1068.9	1088.8	1096.8
132.5°	736.3	815.8	888.2	950.1	998.2	1032.2	1050.5	1057.7
135°	709.6	775.5	841.3	897.2	940.1	973.1	991.0	995.0
137.5°	688.2	743.3	795.6	844.3	883.5	911.8	927.6	933.6
140°	674.7	722.6	768.5	812.4	844.3	870.3	885.3	891.2
142.5°	663.5	704.2	743.7	780.5	810.8	834.4	847.7	848.9
145°	647.7	680.7	711.6	740.5	764.5	781.5	791.4	794.4
147.5°	635.5	661.5	685.6	706.8	726.6	740.1	746.9	748.7
150°	626.8	648.7	669.7	687.6	702.6	714.6	720.6	721.6
152.5°	618.0	638.3	656.1	671.7	683.4	693.8	698.2	698.4
155°	605.8	621.8	636.7	647.7	658.7	665.7	669.7	667.7
157.5°	591.6	605.0	617.6	626.2	633.9	639.7	641.5	641.5
160°	582.8	593.8	604.8	611.8	618.8	623.8	624.8	624.8
162.5°	574.1	583.4	592.8	598.2	605.2	608.6	609.6	608.8
165°	560.9	567.9	574.9	578.9	582.8	586.8	586.8	585.8
167.5°	548.3	553.7	558.5	562.1	563.9	566.1	565.9	564.7
170°	541.9	544.9	548.9	550.9	551.9	554.9	553.9	551.9
172.5°	534.7	536.9	540.1	541.3	542.3	543.7	542.7	541.5
175°	527.0	528.0	529.0	530.0	530.0	531.0	530.0	528.0
177.5°	521.4	521.4	522.2	522.2	522.2	522.2	521.4	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0

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