

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: P331668

Luminaire Tested: **SA2XXRDIP-C485D925U835-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331668  
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: SA2XXRDIP-C485D925U835-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

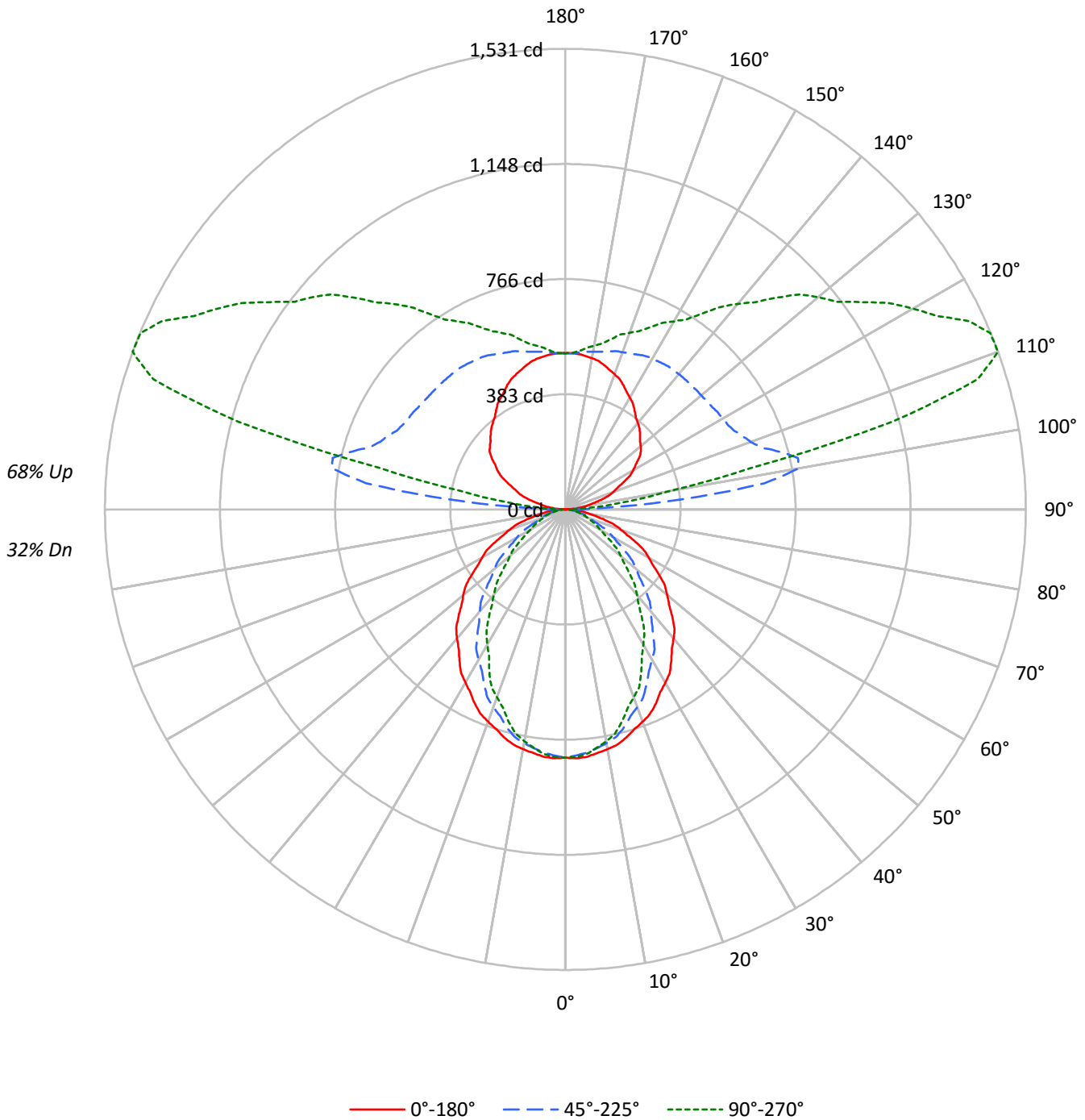
Lumens per Lamp: N/A  
Luminaire Lumens: 5313.4 lumens  
Efficiency: N/A  
Efficacy: 119.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 44.5  
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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32
1	94	90	86	83	85	81	78	75	65	63	61	49	48	47	35	35	34	28
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	32	30	29	24
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	27	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	16
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14
7	56	44	37	32	51	40	34	29	33	28	24	26	22	20	19	17	15	12
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9

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

	0°	45°	90°
0°	13324	13324	13324
5°	13374	13157	13230
10°	13273	12942	12832
15°	13120	12558	12197
20°	12909	12010	11407
25°	12693	11389	10644
30°	12392	10750	9663
35°	12100	10054	8803
40°	11805	9335	7807
45°	11460	8526	6907
50°	11105	7709	6021
55°	10742	6832	5171
60°	10320	5909	4292
65°	9845	4963	3908
70°	9272	4088	3597
75°	8571	3724	3356
80°	7569	3329	3059
85°	5947	2631	2631



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.2	1.5
10°-20°	212.1	4.0
20°-30°	297.8	5.6
30°-40°	324.8	6.1
40°-50°	298.6	5.6
50°-60°	234.5	4.4
60°-70°	152.9	2.9
70°-80°	78.8	1.5
80°-90°	25.1	0.5
90°-100°	207.5	3.9
100°-110°	704.2	13.3
110°-120°	748.1	14.1
120°-130°	615.8	11.6
130°-140°	494.5	9.3
140°-150°	373.7	7.0
150°-160°	262.6	4.9
160°-170°	154.6	2.9
170°-180°	50.3	0.9
0°-30°	587.2	11.1
0°-40°	912.0	17.2
0°-60°	1445.1	27.2
0°-90°	1702.0	32.0
90°-120°	1659.8	31.2
90°-150°	3143.8	59.2
90°-180°	3611.0	68.0
0°-180°	5313.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	825	821	812	818	816	78
15°	785	776	751	738	730	221
25°	712	687	639	610	598	327
35°	614	574	510	465	447	384
45°	502	450	373	322	302	387
55°	382	322	243	200	184	341
65°	258	197	130	106	102	255
75°	137	87	60	55	54	145
85°	32	17	14	14	14	38
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°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	828.2	827.6	826.9	826.2	825.6	824.5	823.1	821.6	820.1	818.7	820.0
5°	825.2	824.4	823.6	822.8	821.9	820.4	818.3	816.1	814.0	811.8	813.3
7.5°	816.7	815.7	814.7	813.6	812.6	810.8	808.3	805.8	803.3	800.8	801.2
10°	809.6	808.4	807.2	806.1	804.9	802.7	799.4	796.0	792.7	789.4	788.9
12.5°	800.6	799.2	797.7	796.3	794.9	792.1	787.8	783.6	779.3	775.1	774.2
15°	784.9	783.1	781.3	779.4	777.6	773.9	768.2	762.6	757.0	751.3	748.2
17.5°	765.7	762.9	760.1	757.3	754.5	749.5	742.3	735.0	727.8	720.5	716.8
20°	751.3	748.0	744.7	741.4	738.0	732.2	723.9	715.6	707.3	699.0	694.9
22.5°	735.8	732.1	728.3	724.6	720.9	714.4	705.0	695.6	686.3	676.9	671.6
25°	712.5	707.2	701.9	696.5	691.2	683.1	672.1	661.2	650.2	639.3	632.5
27.5°	684.4	678.6	672.8	667.1	661.3	652.2	639.9	627.5	615.2	602.8	594.9
30°	664.7	658.4	652.1	645.8	639.5	629.7	616.4	603.1	589.8	576.6	568.1
32.5°	645.6	638.2	630.8	623.5	616.1	605.6	592.1	578.5	565.0	551.5	541.8
35°	613.9	605.4	597.0	588.5	580.0	568.5	553.9	539.3	524.7	510.1	499.6
37.5°	582.2	572.9	563.6	554.3	545.1	532.6	517.1	501.5	485.9	470.4	458.8
40°	560.1	550.2	540.2	530.3	520.3	507.3	491.2	475.1	459.0	442.9	431.1
42.5°	537.4	526.9	516.4	506.0	495.5	481.9	465.3	448.6	432.0	415.4	403.2
45°	501.9	490.8	479.6	468.5	457.4	443.1	425.7	408.3	390.8	373.4	361.6
47.5°	467.2	455.4	443.7	431.9	420.1	405.2	387.2	369.2	351.2	333.2	321.5
50°	442.1	430.3	418.6	406.8	395.0	380.0	361.7	343.5	325.2	306.9	295.5
52.5°	417.6	405.3	393.0	380.7	368.4	353.3	335.4	317.6	299.7	281.9	270.8
55°	381.6	368.7	355.7	342.8	329.9	314.4	296.5	278.6	260.6	242.7	232.8
57.5°	344.7	331.5	318.2	304.9	291.6	276.4	259.2	241.9	224.7	207.5	198.3
60°	319.6	306.4	293.1	279.8	266.5	251.4	234.3	217.2	200.1	183.0	174.5
62.5°	295.1	281.9	268.6	255.3	242.0	227.3	211.0	194.7	178.4	162.1	154.0
65°	257.7	244.2	230.8	217.3	203.9	189.7	174.8	159.8	144.9	129.9	124.3
67.5°	221.5	208.2	194.8	181.5	168.1	154.7	141.3	127.9	114.4	101.0	98.4
70°	196.4	183.5	170.5	157.6	144.6	132.4	121.0	109.5	98.1	86.6	85.0
72.5°	172.5	160.1	147.7	135.3	122.9	112.1	102.9	93.7	84.5	75.3	73.9
75°	137.4	125.8	114.2	102.6	90.9	82.3	76.7	71.0	65.4	59.7	58.6
77.5°	102.9	92.7	82.5	72.3	62.2	55.7	53.0	50.3	47.5	44.8	44.1
80°	81.4	72.9	64.5	56.0	47.5	42.5	40.8	39.2	37.5	35.8	35.2
82.5°	61.7	55.1	48.5	41.9	35.3	31.4	30.3	29.1	28.0	26.9	26.5
85°	32.1	28.6	25.1	21.7	18.2	16.2	15.7	15.2	14.7	14.2	14.2
87.5°	9.8	9.3	9.0	8.4	7.7	7.8	8.8	10.2	11.4	11.6	11.2
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°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	821.3	822.7	824.0	824.5	824.3	824.0	823.7	823.5
5°	814.8	816.3	817.8	818.3	817.8	817.3	816.8	816.3
7.5°	801.6	802.0	802.5	802.3	801.4	800.5	799.7	798.8
10°	788.4	787.9	787.4	786.7	785.7	784.7	783.7	782.7
12.5°	773.3	772.4	771.5	770.2	768.5	766.9	765.2	763.6
15°	745.0	741.9	738.7	736.3	734.6	733.0	731.3	729.7
17.5°	713.0	709.3	705.5	702.2	699.4	696.5	693.7	690.8
20°	690.7	686.6	682.4	678.5	674.9	671.2	667.6	663.9
22.5°	666.2	660.9	655.6	651.5	648.8	646.1	643.4	640.6
25°	625.7	618.9	612.1	607.4	604.9	602.4	600.0	597.5
27.5°	587.0	579.0	571.1	565.2	561.2	557.3	553.3	549.4
30°	559.6	551.2	542.7	536.2	531.7	527.3	522.8	518.3
32.5°	532.1	522.5	512.8	505.9	501.7	497.5	493.2	489.0
35°	489.2	478.7	468.3	461.2	457.6	453.9	450.3	446.6
37.5°	447.3	435.8	424.3	416.4	412.3	408.1	403.9	399.7
40°	419.3	407.5	395.7	387.7	383.4	379.1	374.7	370.4
42.5°	391.0	378.8	366.7	358.5	354.3	350.1	345.9	341.7
45°	349.8	338.1	326.3	318.4	314.4	310.4	306.4	302.5
47.5°	309.8	298.1	286.4	278.7	275.1	271.5	267.8	264.2
50°	284.0	272.6	261.1	253.7	250.2	246.7	243.2	239.7
52.5°	259.7	248.7	237.6	230.5	227.3	224.1	220.8	217.6
55°	222.8	212.8	202.9	196.3	193.2	190.0	186.9	183.7
57.5°	189.2	180.1	171.0	165.1	162.4	159.8	157.1	154.4
60°	166.0	157.6	149.1	143.6	140.9	138.2	135.6	132.9
62.5°	145.9	137.9	129.8	125.0	123.4	121.8	120.2	118.6
65°	118.7	113.0	107.4	104.3	103.8	103.3	102.8	102.3
67.5°	95.8	93.2	90.6	89.1	88.5	88.0	87.5	86.9
70°	83.3	81.7	80.0	78.8	78.2	77.5	76.8	76.2
72.5°	72.5	71.1	69.7	68.8	68.4	68.0	67.6	67.2
75°	57.4	56.3	55.1	54.4	54.3	54.1	53.9	53.8
77.5°	43.5	42.8	42.2	41.7	41.4	41.2	40.9	40.6
80°	34.5	33.9	33.2	32.9	32.9	32.9	32.9	32.9
82.5°	26.1	25.7	25.3	25.1	25.1	25.1	25.1	25.1
85°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
87.5°	10.9	10.4	10.6	10.8	10.8	10.8	10.8	10.8
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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