

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: P331668-840

Luminaire Tested: **S122RDIP-S485D925U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331668-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIP-S485D925U840-4F0-1E-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: 5365.8 lumens  
Efficiency: N/A  
Efficacy: 120.6 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

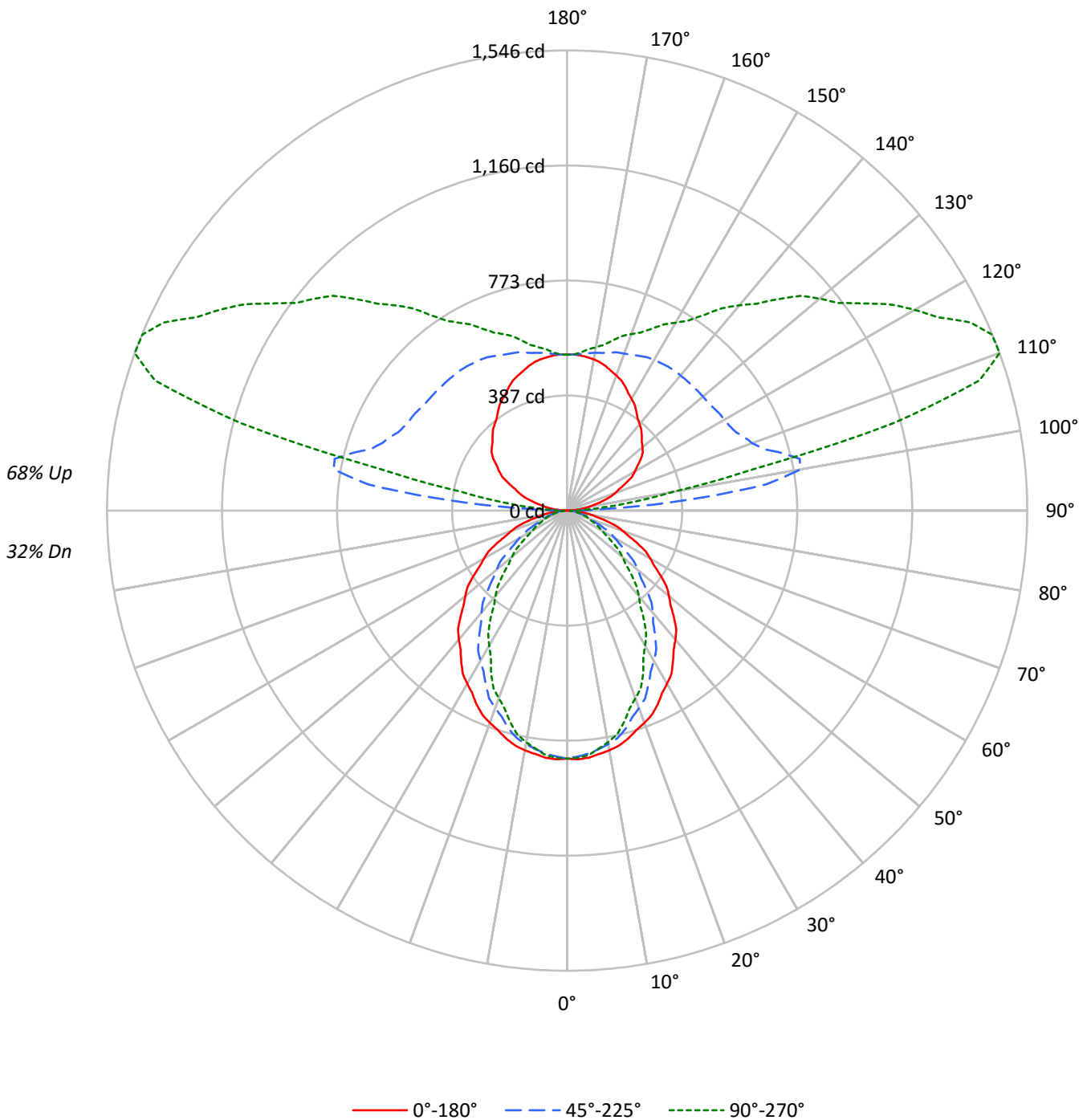
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.0	1.5
10°-20°	214.2	4.0
20°-30°	300.8	5.6
30°-40°	328.0	6.1
40°-50°	301.6	5.6
50°-60°	236.8	4.4
60°-70°	154.4	2.9
70°-80°	79.6	1.5
80°-90°	25.4	0.5
90°-100°	209.6	3.9
100°-110°	711.1	13.3
110°-120°	755.5	14.1
120°-130°	621.9	11.6
130°-140°	499.4	9.3
140°-150°	377.4	7.0
150°-160°	265.2	4.9
160°-170°	156.1	2.9
170°-180°	50.8	0.9
0°-30°	593.0	11.1
0°-40°	921.0	17.2
0°-60°	1459.4	27.2
0°-90°	1718.8	32.0
90°-120°	1676.1	31.2
90°-150°	3174.8	59.2
90°-180°	3647.0	68.0
0°-180°	5365.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	1	14	34	33	33	3
95°	35	87	395	149	115	37
105°	123	185	747	1335	1136	131
115°	217	274	625	1290	1495	215
125°	302	358	601	1045	1212	268
135°	355	423	594	878	1005	274
145°	405	466	591	733	802	254
155°	461	497	574	649	674	212
165°	502	517	549	583	592	141
175°	523	524	528	535	533	50
180°	524	524	524	524	524	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.9	9.4	9.1	8.5	7.8	7.9	8.9	10.3	11.5	11.7	11.3
90°	1.0	4.0	8.1	10.1	12.1	15.1	20.2	27.2	33.2	34.2	33.2
92.5°	12.3	17.8	25.0	29.4	36.3	45.7	68.6	100.6	129.2	131.0	110.7
95°	35.2	39.3	49.4	58.5	74.6	98.8	145.1	232.8	349.7	395.1	345.7
97.5°	57.5	62.9	73.6	87.3	105.8	133.2	191.5	313.7	508.0	674.5	707.5
100°	77.6	80.6	89.7	105.8	126.0	154.2	207.6	330.6	548.3	796.2	941.4
102.5°	96.1	98.4	107.4	123.6	144.5	172.8	222.2	331.4	533.0	800.2	1028.4
105°	123.0	127.0	134.0	149.2	171.4	199.5	246.9	336.6	502.9	746.8	1014.9
107.5°	152.0	155.2	162.1	176.0	197.9	226.4	272.4	350.5	488.0	689.6	926.5
110°	171.4	175.4	181.4	194.5	215.7	244.9	289.2	361.8	484.8	662.2	870.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	189.0	193.1	200.0	212.3	232.6	262.7	305.4	374.0	485.5	644.4	832.1
115°	216.7	221.8	227.8	239.8	260.0	287.2	330.6	392.0	489.8	624.9	784.2
117.5°	245.3	249.3	255.4	266.1	285.4	313.7	353.8	411.4	497.1	615.4	753.9
120°	263.1	267.1	273.2	282.2	302.4	330.6	369.9	424.3	501.9	609.8	737.8
122.5°	280.0	283.2	289.2	299.1	319.3	348.3	385.2	435.6	507.6	606.5	724.1
125°	302.4	305.4	311.4	323.6	343.7	371.9	408.2	453.5	516.0	600.7	704.5
127.5°	320.1	324.2	332.5	345.9	365.3	394.3	429.6	470.3	524.7	597.2	686.4
130°	330.6	334.6	344.7	358.8	379.0	407.2	442.4	480.8	531.2	595.6	674.3
132.5°	340.2	345.1	356.0	370.9	391.8	420.1	453.7	491.2	537.6	594.8	664.6
135°	354.8	358.8	370.9	386.0	409.2	437.4	469.7	504.9	545.2	593.6	651.1
137.5°	368.5	373.3	385.4	401.5	424.5	450.7	482.6	515.4	552.1	593.4	641.6
140°	379.0	383.0	395.1	411.2	433.4	459.6	489.8	521.1	555.3	592.6	636.0
142.5°	389.4	392.6	403.9	420.1	441.4	466.1	495.4	525.9	557.7	592.6	630.4
145°	405.2	409.2	419.3	434.4	454.5	476.8	503.9	532.2	560.4	590.6	622.9
147.5°	422.1	425.2	434.7	448.7	465.4	485.2	510.8	535.6	561.2	587.0	615.2
150°	433.4	436.4	444.4	457.6	472.7	490.8	514.0	537.1	560.4	584.6	608.7
152.5°	444.6	446.1	454.1	465.6	480.0	496.4	517.3	538.0	558.8	580.6	603.1
155°	460.6	461.6	467.7	478.8	489.8	504.9	522.1	539.2	556.3	573.5	592.6
157.5°	473.9	474.9	479.8	489.4	498.3	511.0	525.5	539.2	551.7	566.2	582.8
160°	482.8	483.8	487.8	495.8	503.9	515.0	527.1	539.2	549.3	561.4	575.5
162.5°	491.6	491.0	495.0	501.5	508.8	517.5	528.0	538.4	546.8	557.3	569.1
165°	501.9	500.9	502.9	509.0	514.0	520.1	529.2	536.2	542.2	549.3	558.4
167.5°	510.4	509.2	511.0	514.8	518.5	522.3	529.0	534.8	537.6	542.2	547.9
170°	516.0	514.0	515.0	518.1	520.1	523.1	528.2	533.2	535.2	538.2	542.2
172.5°	519.3	518.1	517.5	520.5	521.7	523.9	527.4	530.8	532.0	533.4	536.6
175°	523.1	522.1	521.1	523.1	523.1	524.1	526.1	528.2	527.1	528.2	529.2
177.5°	524.9	523.3	522.5	524.1	524.1	524.1	524.9	526.5	524.9	524.1	524.9
180°	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	11.0	10.5	10.7	10.9	10.9	10.9	10.9	10.9
90°	32.2	30.2	32.2	33.2	33.2	33.2	33.2	33.2
92.5°	87.9	75.4	67.0	60.7	59.9	56.7	57.5	55.8
95°	264.1	202.6	160.3	138.0	125.0	116.9	113.9	114.9
97.5°	616.2	504.1	395.1	322.3	274.2	249.3	234.6	226.2
100°	920.2	795.2	657.1	535.2	451.5	408.2	379.0	360.8
102.5°	1119.3	1091.2	990.2	860.9	770.0	696.0	659.5	635.0
105°	1224.6	1338.5	1351.6	1318.3	1255.8	1193.4	1149.9	1135.9
107.5°	1148.8	1320.3	1425.1	1473.9	1481.8	1478.3	1469.7	1451.0
110°	1083.5	1263.8	1392.9	1475.5	1518.8	1538.0	1547.1	1546.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1023.8	1197.0	1334.8	1429.6	1489.9	1521.9	1539.0	1544.5
115°	950.4	1105.6	1237.7	1341.5	1413.0	1459.4	1485.6	1494.7
117.5°	895.1	1031.5	1151.1	1248.6	1321.5	1370.5	1398.2	1405.7
120°	867.8	992.8	1099.5	1191.3	1261.8	1309.2	1338.5	1348.6
122.5°	846.0	960.5	1061.7	1144.6	1207.8	1254.4	1280.4	1288.9
125°	814.4	918.2	1006.8	1082.5	1140.9	1179.2	1204.4	1212.4
127.5°	783.2	877.1	960.7	1030.5	1081.5	1117.3	1139.1	1145.6
130°	763.0	849.6	929.3	995.8	1045.2	1079.4	1099.5	1107.6
132.5°	743.6	823.8	897.0	959.5	1008.0	1042.4	1060.9	1068.1
135°	716.6	783.2	849.6	906.1	949.4	982.7	1000.8	1004.8
137.5°	695.0	750.6	803.4	852.6	892.2	920.8	936.8	942.8
140°	681.4	729.7	776.1	820.4	852.6	878.9	894.0	900.0
142.5°	670.0	711.1	751.0	788.2	818.8	842.6	856.1	857.3
145°	654.1	687.4	718.6	747.8	772.0	789.2	799.2	802.2
147.5°	641.8	668.0	692.4	713.8	733.8	747.4	754.3	756.1
150°	633.0	655.1	676.3	694.4	709.5	721.6	727.7	728.7
152.5°	624.1	644.6	662.6	678.3	690.1	700.6	705.1	705.3
155°	611.8	627.9	643.0	654.1	665.2	672.3	676.3	674.3
157.5°	597.4	611.0	623.7	632.4	640.2	646.0	647.8	647.8
160°	588.5	599.7	610.8	617.8	624.9	630.0	631.0	631.0
162.5°	579.8	589.2	598.6	604.1	611.2	614.6	615.6	614.8
165°	566.4	573.5	580.6	584.6	588.5	592.6	592.6	591.6
167.5°	553.7	559.2	564.0	567.6	569.5	571.7	571.5	570.3
170°	547.2	550.3	554.3	556.3	557.3	560.4	559.4	557.3
172.5°	540.0	542.2	545.4	546.6	547.6	549.1	548.1	546.8
175°	532.2	533.2	534.2	535.2	535.2	536.2	535.2	533.2
177.5°	526.5	526.5	527.4	527.4	527.4	527.4	526.5	524.9
180°	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1

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