

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: P331407-930

Luminaire Tested: **S122DIP-S865D925U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331407-930  
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: S122DIP-S865D925U930-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

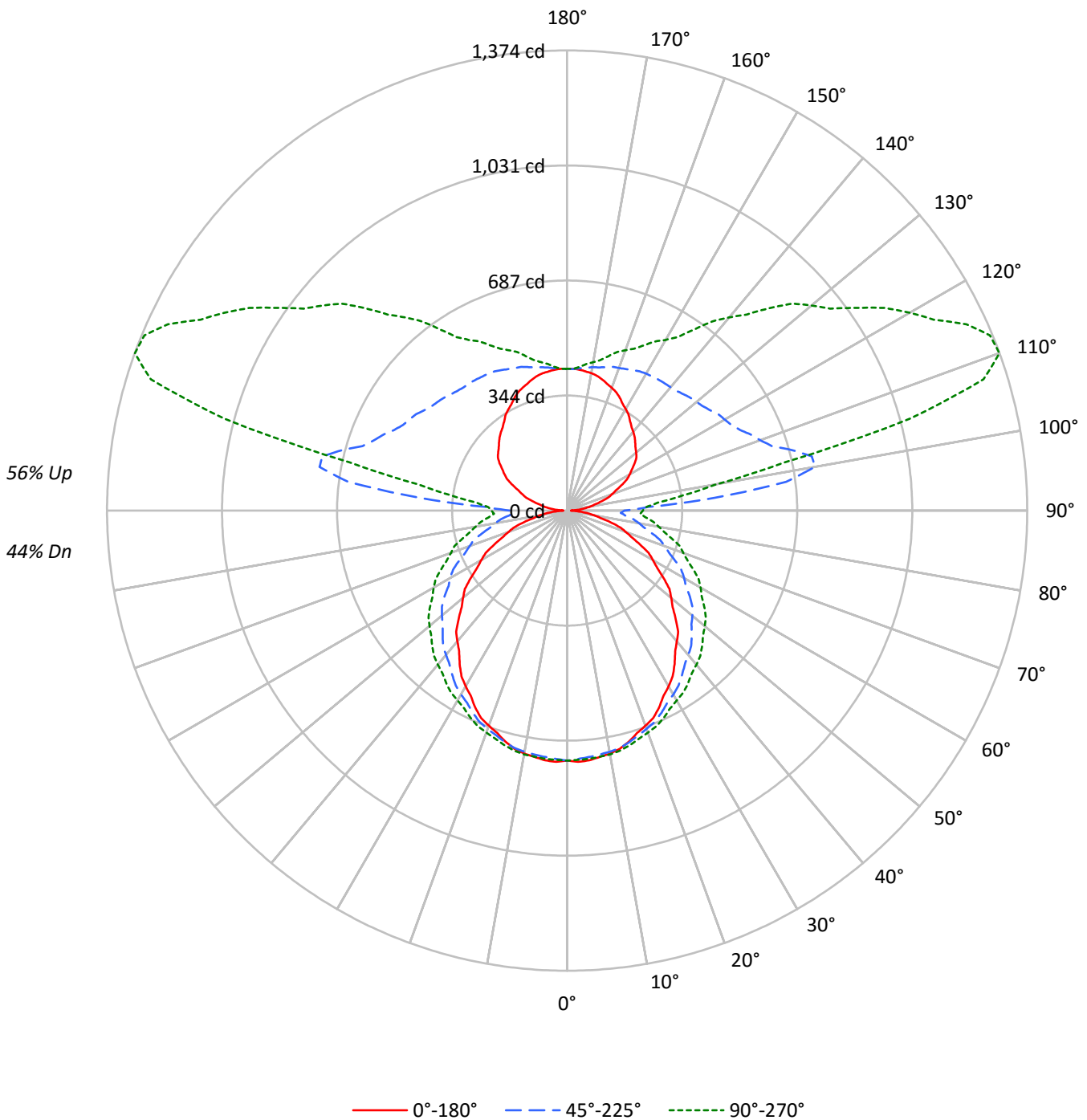
Lumens per Lamp: N/A  
Luminaire Lumens: 5796.1 lumens  
Efficiency: N/A  
Efficacy: 95.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 60.5  
Input Voltage (V): 120  
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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	95	90	86	82	87	82	79	75	68	65	63	55	53	51	42	41	40	34
2	86	78	71	66	78	71	66	61	59	55	51	47	44	42	37	34	33	28
3	78	68	60	54	71	62	56	50	51	46	42	41	38	35	32	29	27	23
4	71	60	52	45	65	55	48	42	45	40	36	37	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	33	28	25	25	22	20	16
6	60	48	39	33	54	44	36	31	36	31	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	27	22	19	21	18	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	14	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	18	14	12	10
10	44	32	25	20	41	30	23	19	25	20	16	21	16	14	16	13	11	9

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

	0°	45°	90°
0°	12053	12053	12053
5°	12111	11602	11558
10°	12036	11258	11133
15°	11869	10896	10685
20°	11659	10507	10254
25°	11452	10132	9863
30°	11160	9747	9469
35°	10866	9375	9193
40°	10556	9059	8916
45°	10260	8774	8678
50°	9944	8519	8446
55°	9611	8242	8208
60°	9207	7957	7957
65°	8784	7620	7658
70°	8310	7260	7336
75°	7704	6907	7041
80°	6744	6545	6739
85°	5835	6234	6508



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.7	1.2
10°-20°	202.8	3.5
20°-30°	307.4	5.3
30°-40°	374.4	6.5
40°-50°	402.8	6.9
50°-60°	391.1	6.7
60°-70°	341.5	5.9
70°-80°	262.9	4.5
80°-90°	180.3	3.1
90°-100°	290.7	5.0
100°-110°	662.9	11.4
110°-120°	668.5	11.5
120°-130°	534.8	9.2
130°-140°	416.9	7.2
140°-150°	307.1	5.3
150°-160°	214.1	3.7
160°-170°	126.0	2.2
170°-180°	41.0	0.7
0°-30°	580.9	10.0
0°-40°	955.3	16.5
0°-60°	1749.2	30.2
0°-90°	2533.9	43.7
90°-120°	1622.2	28.0
90°-150°	2881.0	49.7
90°-180°	3262.0	56.3
0°-180°	5796.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	749	745	739	745	744	71
15°	714	716	716	725	725	201
25°	649	657	666	679	683	298
35°	559	578	598	621	630	349
45°	459	488	526	558	570	354
55°	352	392	447	484	500	314
65°	240	294	357	400	415	239
75°	133	194	263	308	324	141
85°	39	106	175	219	236	42
90°	12	85	170	211	226	9
95°	37	130	443	284	271	37
105°	105	188	696	1207	1060	112
115°	179	239	569	1137	1316	177
125°	246	293	522	908	1055	219
135°	288	343	491	743	854	222
145°	327	376	477	598	660	205
155°	372	402	463	524	544	171
165°	405	417	443	470	478	114
175°	422	423	426	432	430	40
180°	423	423	423	423	423	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	750.8	750.2	749.7	749.1	748.5	747.5	746.2	744.9	743.5	742.2	743.1
5°	748.6	748.0	747.2	746.5	745.8	744.7	743.2	741.8	740.4	738.9	740.4
7.5°	741.9	741.4	740.9	740.5	740.0	739.2	738.1	737.0	735.9	734.8	736.5
10°	736.8	736.3	735.8	735.3	734.8	734.3	733.5	732.8	732.1	731.3	733.3
12.5°	728.1	728.2	728.3	728.4	728.5	728.2	727.7	727.2	726.7	726.1	728.1
15°	714.0	714.5	715.0	715.5	715.9	716.2	716.2	716.2	716.2	716.2	718.4
17.5°	695.9	696.8	697.9	698.9	699.9	700.7	701.6	702.3	703.1	703.8	706.1
20°	683.7	684.9	686.2	687.4	688.5	689.7	690.6	691.5	692.5	693.5	696.1
22.5°	670.7	672.1	673.5	674.9	676.3	677.7	679.1	680.4	681.8	683.1	685.7
25°	649.1	650.8	652.5	654.2	655.8	657.8	659.9	662.1	664.2	666.4	669.3
27.5°	623.1	625.9	628.6	631.4	634.1	636.7	639.3	641.9	644.4	646.9	650.6
30°	605.8	608.9	612.1	615.2	618.3	621.5	624.6	627.7	630.9	634.0	637.8
32.5°	586.8	590.3	593.8	597.4	600.9	604.5	608.1	611.9	615.6	619.2	623.7
35°	559.3	563.4	567.5	571.6	575.7	580.0	584.6	589.1	593.7	598.3	603.6
37.5°	529.5	534.2	538.9	543.6	548.3	553.6	559.5	565.5	571.4	577.3	583.2
40°	509.6	514.9	520.2	525.5	530.7	536.6	543.1	549.6	556.1	562.6	568.8
42.5°	490.5	495.8	501.1	506.4	511.7	518.0	525.5	533.0	540.4	547.9	554.6
45°	458.7	465.2	471.7	478.2	484.7	492.1	500.5	509.0	517.4	525.8	533.2
47.5°	427.3	434.4	441.5	448.6	455.6	464.1	473.9	483.8	493.7	503.5	511.3
50°	405.7	413.1	420.6	428.0	435.5	444.7	455.4	466.3	477.1	488.0	496.1
52.5°	384.9	392.7	400.6	408.5	416.3	425.9	437.3	448.7	460.1	471.5	479.8
55°	351.6	360.3	368.9	377.6	386.2	396.8	409.3	421.8	434.3	446.8	455.4
57.5°	318.7	328.5	338.3	348.0	357.8	369.0	381.7	394.5	407.2	420.0	429.3
60°	295.4	305.7	316.0	326.4	336.7	348.7	362.4	376.1	389.8	403.6	412.7
62.5°	274.6	285.3	296.0	306.7	317.5	329.7	343.4	357.1	370.8	384.5	394.2
65°	240.2	251.9	263.7	275.5	287.3	300.3	314.5	328.6	342.8	357.0	366.9
67.5°	208.6	220.9	233.2	245.5	257.8	271.3	285.8	300.3	314.8	329.3	339.2
70°	186.1	198.6	211.1	223.6	236.1	249.8	264.7	279.6	294.5	309.4	319.8
72.5°	165.3	178.2	191.1	204.0	216.9	230.8	246.0	261.1	276.1	291.2	301.4
75°	133.1	146.5	160.0	173.5	186.9	201.4	216.7	232.1	247.5	262.9	273.2
77.5°	101.9	116.0	130.1	144.1	158.2	173.1	188.7	204.4	220.0	235.6	245.9
80°	81.1	95.8	110.5	125.1	139.8	154.9	170.6	186.2	201.8	217.4	227.6
82.5°	63.8	78.3	92.8	107.2	121.7	136.9	152.7	168.5	184.3	200.2	210.3
85°	39.0	53.9	68.7	83.6	98.6	113.7	129.1	144.5	159.9	175.3	185.4
87.5°	21.4	36.2	51.2	65.8	80.5	95.8	112.0	128.6	144.9	160.5	170.1
90°	11.7	28.0	45.2	60.8	76.4	93.4	112.9	134.0	154.3	170.5	179.3
92.5°	19.9	37.3	56.1	72.6	91.2	112.8	145.9	186.6	224.5	240.8	233.7
95°	37.1	51.7	71.1	89.8	114.1	146.4	198.3	283.6	392.3	443.4	412.6
97.5°	54.0	68.4	87.1	108.2	133.2	167.3	228.2	340.6	511.4	659.7	695.2
100°	70.2	81.5	97.8	119.7	144.9	178.8	235.4	348.1	537.4	751.0	877.1
102.5°	84.3	94.2	109.7	130.9	155.9	189.3	242.2	343.5	519.3	748.2	941.1
105°	104.7	114.9	127.6	146.8	171.6	204.2	254.9	339.8	486.6	696.0	920.9
107.5°	127.9	136.1	147.2	164.0	187.3	219.1	268.1	343.2	466.2	640.9	840.2
110°	142.7	150.7	160.4	175.8	197.7	229.6	277.2	347.6	458.6	613.6	789.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	156.9	164.3	173.8	187.8	208.3	240.2	285.8	352.4	453.7	593.2	752.4
115°	179.3	186.0	193.5	205.9	224.9	253.6	299.4	359.8	449.6	569.4	705.2
117.5°	201.3	206.3	212.9	223.2	240.6	269.3	311.6	368.2	447.4	552.9	671.8
120°	215.6	219.8	225.7	234.0	251.2	279.2	320.7	374.1	446.5	543.2	653.2
122.5°	229.3	232.3	237.6	245.9	262.5	290.7	329.5	379.3	446.4	535.3	636.7
125°	246.3	248.7	253.6	263.3	279.6	306.2	343.2	387.6	445.7	521.7	612.0
127.5°	260.6	263.6	270.2	280.7	296.1	322.5	357.2	396.2	446.4	511.2	589.1
130°	269.0	272.1	280.0	291.1	307.1	332.3	365.8	401.9	447.6	504.7	574.0
132.5°	276.9	280.5	289.1	300.8	317.6	342.2	373.2	407.4	448.7	498.9	560.8
135°	287.5	290.7	300.5	312.7	331.4	355.4	383.8	414.7	449.7	491.1	542.6
137.5°	298.6	302.4	312.2	325.1	343.6	365.3	392.1	419.6	450.3	484.7	528.1
140°	307.0	310.1	319.6	332.3	350.0	371.3	396.2	421.9	450.0	480.6	519.4
142.5°	315.5	317.9	326.7	339.5	356.5	376.3	400.1	424.9	450.6	478.9	512.4
145°	327.1	330.4	338.5	350.7	367.0	384.9	406.8	429.7	452.4	476.8	504.3
147.5°	340.8	343.2	351.0	362.2	375.8	391.8	412.4	432.4	453.1	473.9	496.8
150°	349.9	352.3	358.8	369.4	381.6	396.2	415.0	433.7	452.4	472.0	491.5
152.5°	359.0	360.1	366.6	375.9	387.5	400.8	417.6	434.3	451.1	468.7	486.9
155°	371.9	372.7	377.6	386.5	395.4	407.6	421.5	435.3	449.1	463.0	478.4
157.5°	382.6	383.4	387.3	395.1	402.3	412.5	424.3	435.3	445.4	457.1	470.5
160°	389.8	390.6	393.8	400.3	406.8	415.8	425.6	435.3	443.4	453.2	464.6
162.5°	396.9	396.4	399.7	404.9	410.7	417.8	426.2	434.6	441.5	450.0	459.4
165°	405.2	404.4	406.0	410.9	415.0	419.9	427.2	432.9	437.7	443.4	450.8
167.5°	412.1	411.1	412.5	415.6	418.6	421.7	427.1	431.8	434.0	437.7	442.3
170°	416.6	415.0	415.8	418.2	419.9	422.3	426.4	430.5	432.1	434.5	437.7
172.5°	419.2	418.2	417.8	420.2	421.2	423.0	425.7	428.5	429.5	430.6	433.3
175°	422.3	421.5	420.7	422.3	422.3	423.1	424.8	426.4	425.6	426.4	427.2
177.5°	423.8	422.5	421.8	423.1	423.1	423.1	423.8	425.1	423.8	423.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	744.0	745.0	746.0	746.3	745.9	745.5	745.1	744.8
5°	741.8	743.2	744.7	745.3	745.0	744.8	744.5	744.3
7.5°	738.3	740.0	741.8	742.5	742.2	742.0	741.8	741.5
10°	735.2	737.1	739.1	739.9	739.6	739.4	739.2	738.9
12.5°	730.0	731.9	733.9	734.7	734.4	734.2	733.9	733.7
15°	720.5	722.7	724.9	725.8	725.5	725.3	725.0	724.9
17.5°	708.4	710.6	712.9	714.0	714.0	714.0	714.0	714.0
20°	698.8	701.4	704.0	705.4	705.4	705.4	705.4	705.4
22.5°	688.4	691.0	693.7	695.2	695.5	695.9	696.3	696.8
25°	672.2	675.1	678.0	679.8	680.4	681.2	681.9	682.7
27.5°	654.3	657.9	661.5	663.7	664.2	664.7	665.3	665.8
30°	641.6	645.5	649.4	651.7	652.3	653.1	653.8	654.5
32.5°	628.1	632.5	636.9	639.8	641.1	642.4	643.7	645.0
35°	608.9	614.2	619.5	622.9	624.6	626.3	627.9	629.7
37.5°	589.0	594.8	600.7	604.5	606.3	608.1	609.9	611.7
40°	575.0	581.3	587.6	591.7	593.9	596.1	598.3	600.5
42.5°	561.5	568.3	575.2	579.7	581.8	584.0	586.1	588.3
45°	540.7	548.1	555.6	560.5	563.0	565.3	567.8	570.1
47.5°	519.1	526.8	534.7	539.9	542.5	545.2	547.8	550.5
50°	504.3	512.4	520.7	526.0	528.6	531.3	533.9	536.6
52.5°	488.2	496.6	504.9	510.5	513.4	516.2	519.0	521.9
55°	464.1	472.8	481.4	487.3	490.4	493.6	496.7	499.8
57.5°	438.6	447.9	457.3	463.6	466.7	469.9	473.0	476.2
60°	421.8	431.0	440.1	446.3	449.7	453.1	456.4	459.8
62.5°	403.9	413.6	423.3	429.8	432.9	436.1	439.3	442.5
65°	376.7	386.6	396.5	402.9	406.0	409.2	412.3	415.4
67.5°	349.2	359.1	369.2	375.8	379.0	382.3	385.6	388.8
70°	330.1	340.4	350.7	357.3	360.3	363.1	366.1	368.9
72.5°	311.5	321.6	331.8	338.6	342.1	345.5	349.0	352.5
75°	283.6	293.9	304.3	311.0	314.1	317.2	320.3	323.5
77.5°	256.2	266.5	276.8	283.6	287.0	290.3	293.8	297.1
80°	237.7	247.8	257.9	264.6	267.9	271.3	274.7	278.0
82.5°	220.4	230.4	240.5	247.2	250.4	253.5	256.7	259.8
85°	195.4	205.5	215.6	222.4	225.8	229.1	232.4	235.9
87.5°	179.8	189.2	199.3	205.9	209.0	212.1	215.2	218.3
90°	188.1	196.1	207.3	214.3	217.3	220.1	223.1	225.9
92.5°	224.8	224.1	226.7	227.9	230.1	230.4	233.9	235.5
95°	355.9	315.4	290.3	278.4	270.8	267.1	267.6	271.3
97.5°	630.4	548.8	469.7	416.8	380.7	363.5	354.5	350.5
100°	868.9	776.9	674.3	581.6	516.7	484.4	463.4	451.4
102.5°	1023.2	1009.2	936.3	837.6	767.0	709.8	683.1	665.9
105°	1098.5	1198.9	1217.9	1196.5	1148.8	1100.9	1068.6	1059.8
107.5°	1027.8	1174.4	1267.1	1311.8	1320.8	1320.6	1316.3	1303.8
110°	969.1	1122.4	1234.3	1306.2	1343.8	1361.9	1371.9	1373.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	914.8	1062.3	1181.4	1263.0	1314.3	1342.8	1359.3	1366.4
115°	846.6	979.2	1093.0	1181.7	1242.1	1282.2	1306.0	1316.0
117.5°	793.0	910.1	1013.9	1097.3	1158.6	1200.7	1225.4	1234.0
120°	764.9	872.5	965.5	1044.2	1103.8	1144.8	1171.0	1181.8
122.5°	741.8	840.7	929.0	1000.2	1053.6	1093.5	1116.7	1125.8
125°	707.2	797.5	875.6	941.0	990.3	1023.4	1045.9	1054.6
127.5°	673.2	755.0	828.4	888.8	932.1	963.2	982.8	990.2
130°	651.3	727.1	797.1	854.7	896.4	926.0	944.2	952.7
132.5°	630.1	700.4	765.1	819.3	860.5	890.1	906.9	914.7
135°	600.5	659.3	718.0	767.1	804.0	832.7	849.4	854.5
137.5°	575.6	624.9	672.0	714.8	748.3	773.0	787.5	794.0
140°	559.9	602.8	644.1	682.6	710.0	732.6	746.2	752.6
142.5°	547.6	583.8	619.1	651.2	677.2	697.7	709.8	712.0
145°	531.0	559.3	586.0	610.8	631.6	646.6	656.0	659.6
147.5°	518.5	539.9	559.8	577.4	594.1	605.8	611.9	613.9
150°	511.0	528.9	546.0	560.6	572.8	582.6	587.5	588.3
152.5°	503.9	520.4	534.9	547.6	557.2	565.7	569.2	569.4
155°	493.9	507.0	519.1	528.1	537.0	542.7	546.0	544.4
157.5°	482.3	493.3	503.5	510.5	516.8	521.5	523.0	523.0
160°	475.2	484.1	493.1	498.8	504.5	508.6	509.4	509.4
162.5°	468.1	475.6	483.3	487.7	493.4	496.2	497.0	496.4
165°	457.3	463.0	468.7	472.0	475.2	478.4	478.4	477.6
167.5°	447.0	451.4	455.3	458.3	459.7	461.5	461.4	460.4
170°	441.8	444.3	447.5	449.1	450.0	452.4	451.6	450.0
172.5°	435.9	437.7	440.3	441.3	442.1	443.3	442.5	441.5
175°	429.7	430.5	431.3	432.1	432.1	432.9	432.1	430.5
177.5°	425.1	425.1	425.7	425.7	425.7	425.7	425.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1

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