

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: P331388-935

Luminaire Tested: **S122DIP-S865D530U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331388-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S865D530U935-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4636.7 lumens  
Efficiency: N/A  
Efficacy: 95.0 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

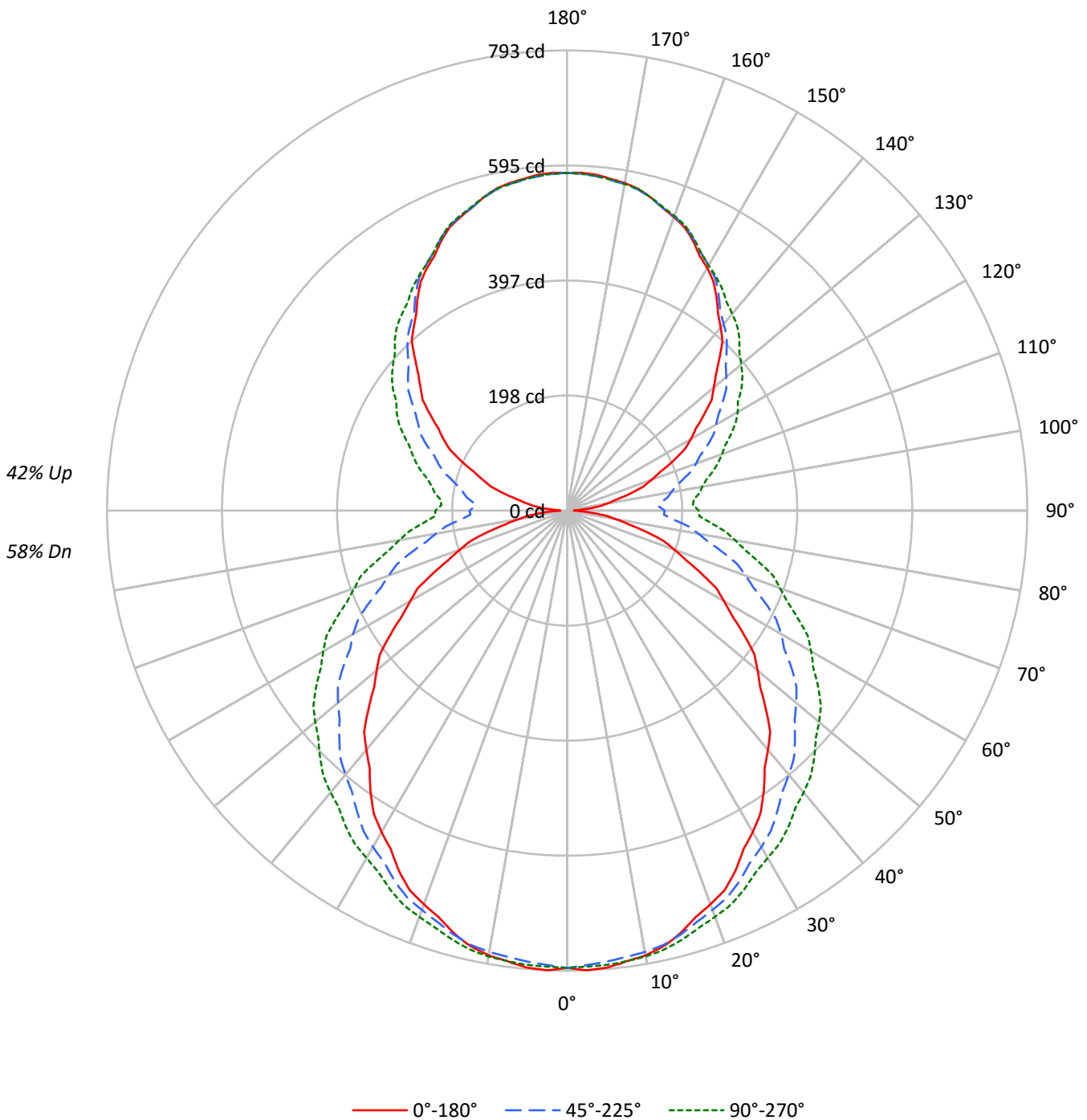
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88		75	75	75		63	63	63	58
1	98	93	88	84	91	86	82	79	74	71	68		63	61	59		53	51	50	45
2	88	80	73	67	82	74	68	63	64	59	55		55	51	48		46	43	41	36
3	80	70	62	55	74	65	58	52	56	50	46		48	43	40		40	37	34	30
4	73	61	53	46	68	57	50	44	49	43	38		42	37	34		35	32	29	25
5	67	54	46	39	62	51	43	37	44	38	33		38	33	29		32	28	25	22
6	62	49	40	34	57	46	38	32	40	33	29		34	29	25		29	25	22	19
7	57	44	35	30	53	41	33	28	36	30	25		31	26	22		26	22	19	16
8	53	40	32	26	49	37	30	25	33	26	22		28	23	20		24	20	17	15
9	49	36	28	23	46	34	27	22	30	24	20		26	21	17		22	18	15	13
10	46	33	26	21	43	31	24	20	27	22	18		24	19	16		20	17	14	12

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

	0°	45°	90°
0°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.7	1.6
10°-20°	214.2	4.6
20°-30°	324.6	7.0
30°-40°	395.4	8.5
40°-50°	425.3	9.2
50°-60°	413.1	8.9
60°-70°	360.7	7.8
70°-80°	277.7	6.0
80°-90°	188.7	4.1
90°-100°	165.2	3.6
100°-110°	208.2	4.5
110°-120°	257.6	5.6
120°-130°	292.0	6.3
130°-140°	303.4	6.5
140°-150°	285.8	6.2
150°-160°	237.6	5.1
160°-170°	157.6	3.4
170°-180°	55.1	1.2
0°-30°	613.5	13.2
0°-40°	1008.9	21.8
0°-60°	1847.2	39.8
0°-90°	2674.2	57.7
90°-120°	631.1	13.6
90°-150°	1512.2	32.6
90°-180°	1962.0	42.3
0°-180°	4636.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	12	85	168	211	227	9
95°	35	94	163	205	219	37
105°	111	147	206	246	260	118
115°	201	218	267	300	312	198
125°	288	294	328	356	367	258
135°	371	377	389	411	420	287
145°	449	452	455	462	466	281
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.5	37.9	53.3	68.7	84.0	100.1	116.8	133.6	150.3	167.0	177.4
90°	11.9	28.0	44.0	60.0	76.0	93.4	112.0	130.7	149.4	168.0	178.0
92.5°	19.3	33.9	48.6	63.3	77.9	93.3	109.6	125.8	142.0	158.2	168.2
95°	34.7	47.7	60.7	73.7	86.8	101.0	116.5	131.9	147.3	162.8	172.5
97.5°	54.7	66.2	77.7	89.4	100.9	114.3	129.2	144.3	159.4	174.4	183.8
100°	70.3	80.6	90.9	101.2	111.4	123.8	138.4	152.9	167.5	182.0	191.4
102.5°	85.9	95.2	104.5	113.7	123.0	134.8	149.0	163.2	177.5	191.7	201.0
105°	111.2	119.0	126.7	134.3	142.1	152.6	166.0	179.4	192.9	206.3	215.3
107.5°	137.9	144.3	150.7	157.0	163.4	173.0	185.5	198.2	210.9	223.5	232.1
110°	154.3	160.1	165.7	171.5	177.3	186.3	198.8	211.2	223.7	236.1	244.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.1	178.1	183.0	188.0	192.9	201.2	212.9	224.6	236.4	248.1	256.1
115°	201.0	204.4	207.8	211.3	214.7	222.1	233.2	244.5	255.7	266.9	274.4
117.5°	227.5	230.2	232.9	235.7	238.3	244.6	254.6	264.5	274.5	284.5	291.7
120°	246.0	247.9	249.8	251.7	253.6	259.1	268.4	277.7	287.0	296.3	303.3
122.5°	262.9	264.3	265.8	267.3	268.7	273.9	282.8	291.7	300.7	309.6	316.2
125°	288.0	289.0	290.0	291.0	292.0	296.4	304.2	311.9	319.8	327.5	334.1
127.5°	313.7	314.7	315.6	316.7	317.6	321.2	327.4	333.6	339.7	345.9	351.7
130°	329.8	331.0	332.1	333.3	334.4	337.6	342.7	347.8	352.9	358.0	363.9
132.5°	347.8	348.7	349.7	350.5	351.5	354.0	358.2	362.3	366.4	370.6	376.0
135°	370.8	372.0	373.2	374.4	375.7	377.6	380.4	383.1	385.9	388.7	393.9
137.5°	396.3	397.2	398.1	399.1	400.0	401.1	402.6	404.0	405.4	406.7	411.4
140°	411.6	412.3	413.0	413.8	414.5	415.4	416.5	417.5	418.5	419.7	423.7
142.5°	427.3	428.0	428.8	429.5	430.2	430.8	431.3	431.8	432.2	432.7	436.0
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	456.8
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.4
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	187.7	198.0	208.3	215.1	218.3	221.6	224.9	228.2
90°	187.9	197.8	207.8	214.3	217.5	220.6	223.8	226.9
92.5°	178.2	188.2	198.2	204.7	207.8	210.9	214.0	217.0
95°	182.1	191.7	201.4	207.7	210.4	213.3	216.1	219.0
97.5°	193.2	202.6	212.0	218.2	221.1	224.1	227.0	230.1
100°	200.8	210.2	219.6	225.6	228.3	231.0	233.7	236.3
102.5°	210.3	219.6	228.9	234.8	237.5	240.1	242.9	245.6
105°	224.5	233.6	242.7	248.7	251.4	254.3	257.0	259.8
107.5°	240.7	249.3	258.0	263.5	265.7	268.0	270.4	272.6
110°	252.4	260.5	268.6	273.9	276.4	278.8	281.3	283.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	263.9	271.7	279.7	284.8	287.4	289.9	292.5	295.1
115°	281.9	289.5	297.0	302.0	304.4	306.9	309.4	311.8
117.5°	298.9	306.2	313.5	318.2	320.5	322.7	325.0	327.3
120°	310.5	317.5	324.7	329.5	331.9	334.4	336.8	339.3
122.5°	322.9	329.5	336.2	340.6	342.8	344.9	347.0	349.1
125°	340.6	347.2	353.6	358.0	360.2	362.4	364.5	366.7
127.5°	357.7	363.5	369.5	373.3	375.2	377.1	379.0	380.9
130°	369.8	375.7	381.5	385.3	386.8	388.5	390.0	391.7
132.5°	381.4	386.8	392.3	395.8	397.4	399.2	400.8	402.5
135°	399.1	404.3	409.6	413.0	414.7	416.4	418.1	419.8
137.5°	415.9	420.5	425.1	428.1	429.4	430.7	432.0	433.2
140°	427.7	431.8	435.8	438.4	439.5	440.6	441.7	442.8
142.5°	439.4	442.7	446.1	448.2	449.1	450.0	450.8	451.7
145°	458.4	460.0	461.7	462.9	463.7	464.6	465.4	466.2
147.5°	475.9	476.3	476.7	477.1	477.3	477.4	477.7	477.9
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)