

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: P331396-930

Luminaire Tested: **S122DIP-S865D725U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331396-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S865D725U930-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5211.9 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

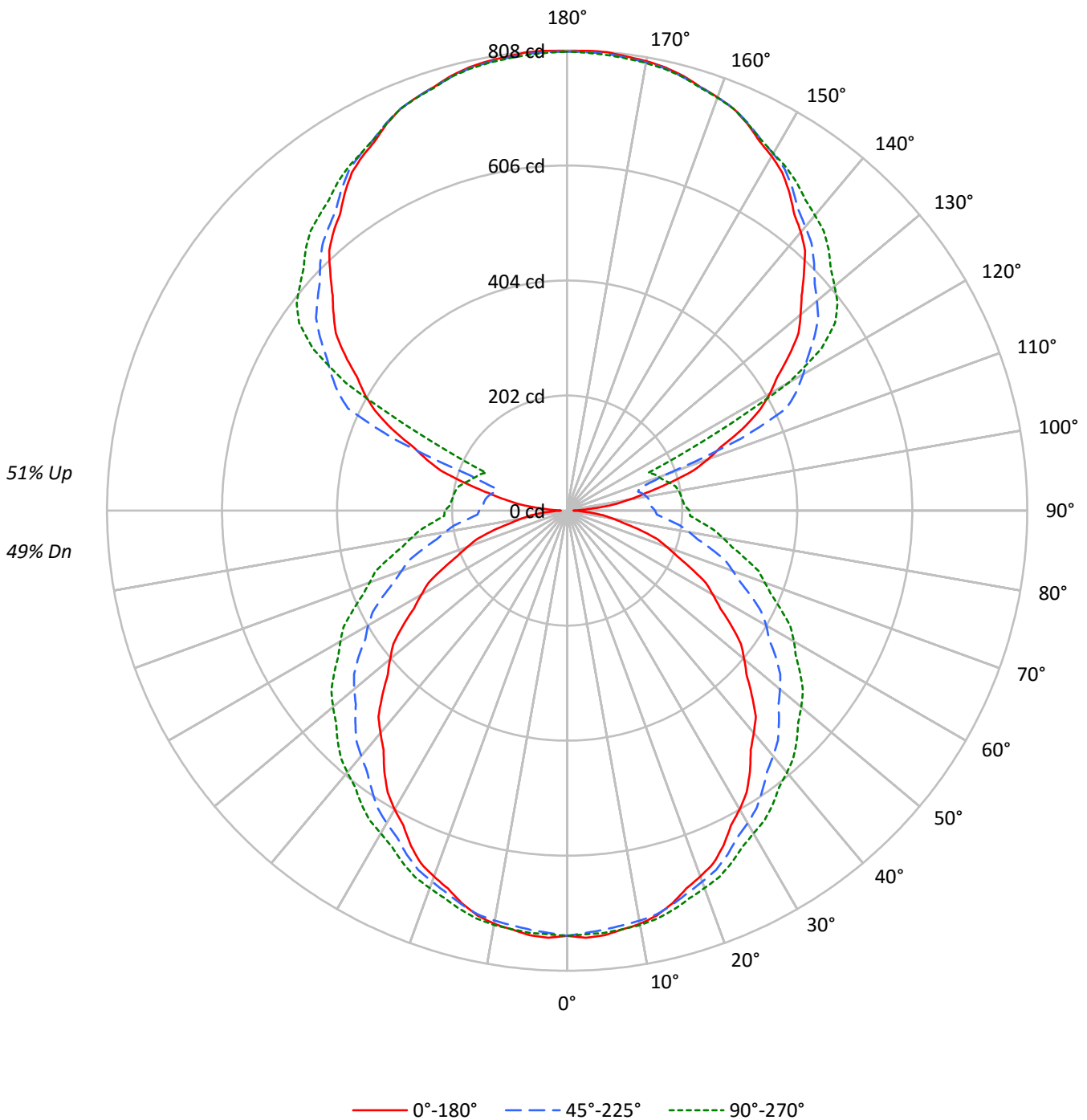
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																				
1	96	91	87	83	88	84	80	76	70	67	65	58	56	54	46	45	43	38																				
2	87	79	72	66	79	72	67	62	61	56	52	50	47	44	40	37	35	31																				
3	79	69	61	55	72	63	56	51	53	48	43	44	40	36	35	32	29	25																				
4	72	60	52	46	66	56	48	43	47	41	37	38	34	31	31	28	25	21																				
5	66	54	45	39	60	49	42	36	42	36	31	34	30	26	28	24	22	18																				
6	61	48	40	33	55	44	37	31	37	31	27	31	26	23	25	21	19	16																				
7	56	43	35	29	51	40	33	27	34	28	24	28	23	20	23	19	17	14																				
8	52	39	31	26	47	36	29	24	31	25	21	26	21	18	21	17	15	12																				
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11																				
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	14	12	10																				

**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	1.4
10°-20°	202.8	3.9
20°-30°	307.4	5.9
30°-40°	374.4	7.2
40°-50°	402.8	7.7
50°-60°	391.1	7.5
60°-70°	341.5	6.6
70°-80°	262.9	5.0
80°-90°	178.4	3.4
90°-100°	148.5	2.8
100°-110°	187.4	3.6
110°-120°	322.2	6.2
120°-130°	467.8	9.0
130°-140°	476.4	9.1
140°-150°	432.4	8.3
150°-160°	345.7	6.6
160°-170°	222.8	4.3
170°-180°	76.7	1.5
0°-30°	580.9	11.1
0°-40°	955.3	18.3
0°-60°	1749.2	33.6
0°-90°	2532.1	48.6
90°-120°	658.0	12.6
90°-150°	2034.6	39.0
90°-180°	2680.0	51.4
0°-180°	5211.9	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°	11	81	154	199	215	9
95°	47	80	147	189	204	53
105°	183	223	129	171	187	196
115°	340	364	425	199	157	334
125°	476	486	530	562	574	425
135°	588	598	613	640	649	454
145°	681	681	690	700	703	426
155°	749	745	751	754	750	345
165°	790	786	788	792	788	223
175°	808	804	805	808	803	77
180°	806	806	806	806	806	



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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	36.0	50.5	65.1	79.7	94.9	110.5	126.0	141.7	157.3	167.2
90°	11.4	26.7	42.2	57.5	72.9	88.8	105.2	121.6	138.0	154.5	164.8
92.5°	21.8	34.6	47.5	60.3	73.1	87.2	102.6	117.9	133.2	148.5	158.3
95°	46.6	53.6	60.6	67.7	74.7	85.9	101.2	116.5	131.8	147.2	156.9
97.5°	82.8	80.8	78.8	76.8	74.8	81.8	97.7	113.7	129.6	145.5	155.0
100°	110.8	101.9	93.1	84.2	75.3	78.8	94.4	110.1	125.8	141.5	151.4
102.5°	140.7	145.1	149.4	153.8	158.2	157.7	152.4	147.0	141.6	136.3	146.3
105°	182.7	193.6	204.4	215.3	226.2	220.1	197.2	174.4	151.5	128.7	138.4
107.5°	231.8	240.5	249.2	258.0	266.7	255.8	225.3	194.9	164.4	134.0	140.6
110°	262.7	270.2	277.8	285.3	292.8	283.7	258.0	232.4	206.7	181.1	175.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.5	299.0	305.4	311.9	318.4	322.5	324.5	326.4	328.4	330.4	290.7
115°	339.7	344.5	349.4	354.2	359.1	368.5	382.5	396.6	410.7	424.8	371.9
117.5°	380.7	384.9	389.1	393.3	397.5	405.7	417.9	430.2	442.4	454.6	447.2
120°	411.5	414.4	417.3	420.2	423.1	430.6	442.5	454.4	466.4	478.3	486.7
122.5°	437.7	440.0	442.5	444.9	447.4	454.4	465.9	477.5	489.1	500.7	508.2
125°	476.3	478.0	479.7	481.4	483.1	488.9	499.1	509.3	519.4	529.6	537.0
127.5°	512.3	514.0	515.6	517.2	518.9	523.7	531.7	539.8	547.8	555.9	563.1
130°	535.2	537.0	538.9	540.7	542.6	546.7	553.2	559.6	566.1	572.6	579.8
132.5°	558.6	560.0	561.6	563.1	564.7	568.0	573.4	578.7	584.0	589.3	596.1
135°	587.8	589.9	591.9	594.0	596.1	598.9	602.5	606.0	609.6	613.2	619.5
137.5°	618.5	619.9	621.3	622.6	624.1	626.0	628.4	630.7	633.1	635.5	641.2
140°	638.5	639.4	640.1	640.9	641.7	643.1	645.0	646.9	648.8	650.7	655.7
142.5°	655.3	656.0	656.7	657.4	658.1	659.3	661.0	662.8	664.5	666.3	670.3
145°	680.6	680.4	680.4	680.2	680.1	681.1	683.3	685.5	687.7	689.9	692.3
147.5°	703.6	703.1	702.6	702.1	701.6	702.5	704.7	706.8	709.0	711.2	712.0
150°	718.5	717.6	716.7	715.8	714.9	715.5	717.5	719.6	721.7	723.7	724.6
152.5°	731.1	730.1	729.1	728.1	727.1	727.6	729.5	731.5	733.4	735.4	736.2
155°	749.4	748.3	747.1	745.9	744.8	744.9	746.5	748.0	749.6	751.1	752.0
157.5°	763.8	762.8	761.8	760.8	759.9	759.9	761.0	762.1	763.1	764.3	765.2
160°	772.2	771.4	770.6	769.8	769.1	769.1	769.8	770.6	771.4	772.2	773.0
162.5°	779.7	778.9	778.1	777.3	776.5	776.5	777.1	777.8	778.5	779.2	780.1
165°	789.7	788.9	788.1	787.3	786.5	786.4	786.8	787.2	787.5	787.9	788.8
167.5°	797.1	796.4	795.6	794.8	794.0	793.8	794.2	794.5	794.9	795.2	796.1
170°	801.4	800.5	799.8	799.0	798.3	797.9	798.3	798.5	798.7	799.0	799.9
172.5°	804.1	803.3	802.6	801.8	801.0	800.8	801.0	801.3	801.5	801.8	802.7
175°	807.7	806.8	805.9	805.0	804.1	803.8	804.0	804.3	804.5	804.9	805.8
177.5°	808.4	807.6	806.9	806.2	805.4	805.1	805.2	805.4	805.4	805.5	806.2
180°	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0



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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°	177.2	187.0	197.0	203.6	206.7	209.8	213.0	216.1
90°	175.0	185.2	195.5	202.2	205.4	208.6	211.7	214.8
92.5°	168.0	177.8	187.6	194.0	197.1	200.1	203.1	206.2
95°	166.7	176.5	186.3	192.6	195.3	198.0	200.8	203.6
97.5°	164.4	173.8	183.2	189.4	192.4	195.4	198.4	201.4
100°	161.3	171.2	181.2	187.6	190.5	193.4	196.3	199.2
102.5°	156.4	166.5	176.5	183.0	186.1	189.1	192.1	195.1
105°	148.3	158.2	168.0	174.5	177.7	180.8	183.9	187.1
107.5°	147.2	153.8	160.5	165.3	168.5	171.7	174.9	178.1
110°	170.5	165.3	160.0	158.9	162.1	165.3	168.4	171.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	251.2	211.6	172.0	153.8	156.8	159.9	162.9	166.0
115°	319.2	266.4	213.6	183.8	177.2	170.5	163.8	157.1
117.5°	439.8	432.4	425.0	407.2	379.0	350.7	322.5	294.3
120°	494.9	503.2	511.5	508.2	493.3	478.5	463.7	448.8
122.5°	515.6	523.1	530.6	533.7	532.6	531.5	530.4	529.2
125°	544.4	551.8	559.2	564.2	566.7	569.2	571.9	574.4
127.5°	570.5	577.7	585.0	589.7	591.9	594.1	596.3	598.5
130°	587.0	594.2	601.4	605.8	607.6	609.4	611.2	613.0
132.5°	602.9	609.8	616.5	620.9	622.6	624.4	626.2	628.0
135°	625.9	632.3	638.5	642.5	644.2	645.9	647.6	649.2
137.5°	646.9	652.6	658.3	661.7	662.9	664.1	665.3	666.5
140°	660.7	665.8	670.7	673.7	674.4	675.2	676.0	676.9
142.5°	674.5	678.7	682.8	685.2	685.7	686.4	687.0	687.5
145°	694.6	697.0	699.4	700.7	701.3	701.9	702.5	703.0
147.5°	712.9	713.8	714.6	715.1	715.1	715.2	715.2	715.2
150°	725.3	726.1	726.8	726.9	726.3	725.6	725.0	724.3
152.5°	736.9	737.8	738.6	738.5	737.7	736.8	736.0	735.1
155°	752.8	753.5	754.3	754.2	753.1	752.1	751.1	750.0
157.5°	766.0	766.9	767.8	767.7	766.7	765.6	764.7	763.7
160°	773.7	774.5	775.3	775.2	774.3	773.4	772.5	771.6
162.5°	780.9	781.8	782.7	782.6	781.5	780.3	779.3	778.1
165°	789.7	790.7	791.6	791.6	790.7	789.7	788.8	787.9
167.5°	797.1	798.0	798.9	798.7	797.6	796.5	795.2	794.1
170°	800.8	801.7	802.7	802.5	801.4	800.1	799.0	797.9
172.5°	803.6	804.5	805.4	805.3	804.1	803.0	801.8	800.6
175°	806.7	807.6	808.5	808.3	807.0	805.7	804.4	803.1
177.5°	807.0	807.7	808.5	808.4	807.4	806.5	805.5	804.6
180°	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0

(END OF REPORT)