

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: P331256-940

Luminaire Tested: **S122DIP-S290D530U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331256-940  
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-S290D530U940-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

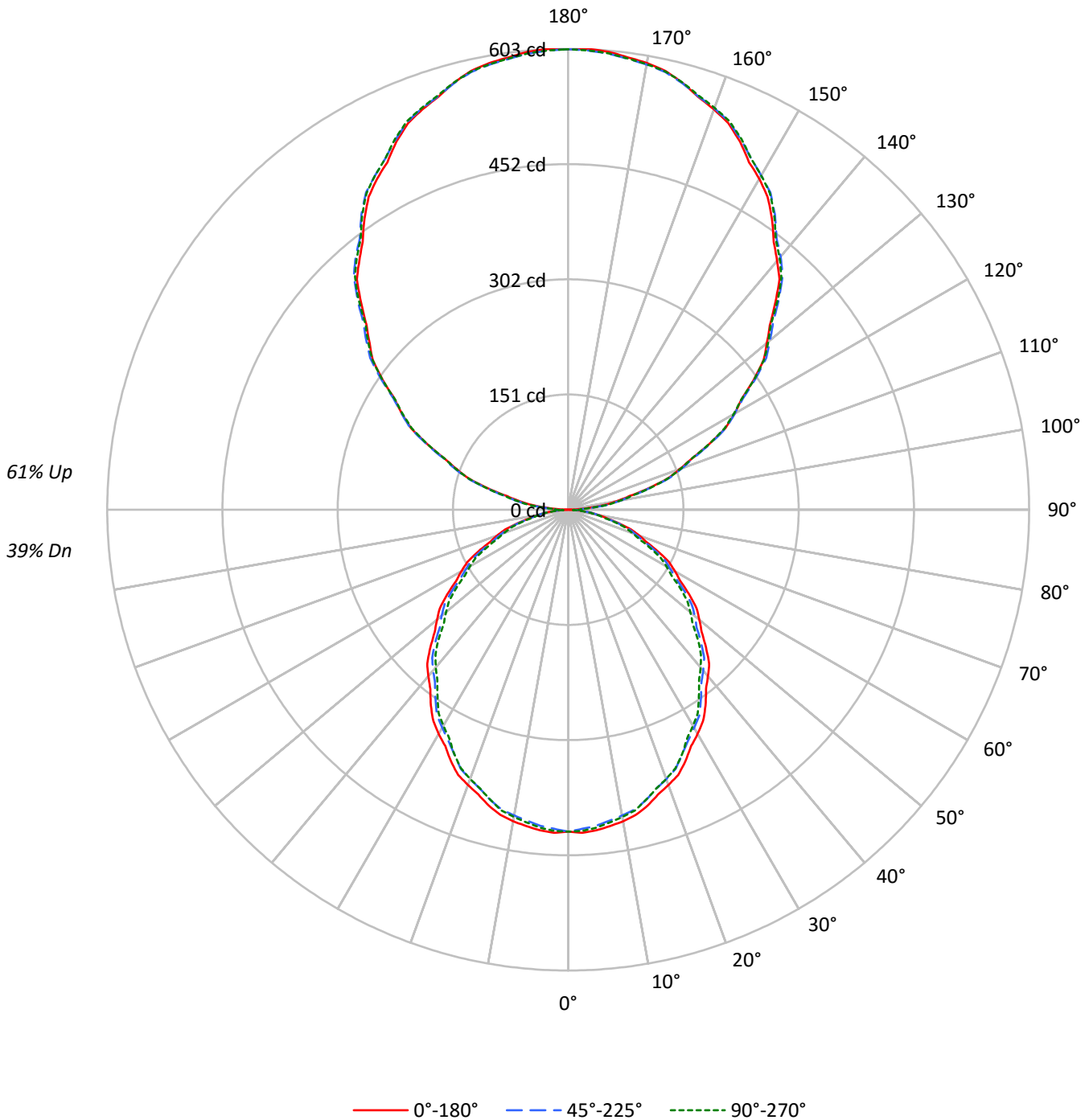
Lumens per Lamp: N/A  
Luminaire Lumens: 2759.1 lumens  
Efficiency: N/A  
Efficacy: 107.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 25.6  
Input Voltage (V): 120  
Input Current (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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	84	86	83	80	77	68	65	63	54	52	51	41	40	39	33
2	87	79	73	68	79	72	67	63	59	55	52	47	44	42	36	34	33	27
3	79	70	63	57	72	64	57	52	52	48	44	42	38	36	32	30	28	23
4	72	62	54	48	65	56	50	44	46	41	37	37	33	31	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	37	31	51	41	34	29	34	28	25	27	23	20	21	18	16	14
8	52	40	33	27	47	37	30	25	31	25	22	25	21	18	19	17	15	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	17	21	17	15	17	14	12	10

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

	0°	45°	90°
0°	6801	6801	6801
5°	6827	6729	6770
10°	6787	6661	6694
15°	6703	6574	6569
20°	6584	6445	6438
25°	6465	6285	6285
30°	6315	6139	6087
35°	6173	5964	5876
40°	5994	5788	5678
45°	5818	5613	5476
50°	5627	5433	5242
55°	5427	5225	5027
60°	5205	4970	4789
65°	4967	4722	4504
70°	4664	4414	4206
75°	4242	4067	3968
80°	3766	3654	3468
85°	3075	2927	2631



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.6	1.4
10°-20°	111.5	4.0
20°-30°	163.8	5.9
30°-40°	190.3	6.9
40°-50°	190.1	6.9
50°-60°	165.8	6.0
60°-70°	122.6	4.4
70°-80°	69.4	2.5
80°-90°	21.1	0.8
90°-100°	38.2	1.4
100°-110°	118.6	4.3
110°-120°	202.7	7.3
120°-130°	266.6	9.7
130°-140°	299.2	10.8
140°-150°	293.4	10.6
150°-160°	246.1	8.9
160°-170°	163.2	5.9
170°-180°	57.0	2.1
0°-30°	314.9	11.4
0°-40°	505.2	18.3
0°-60°	861.1	31.2
0°-90°	1074.2	38.9
90°-120°	359.5	13.0
90°-150°	1218.6	44.2
90°-180°	1685.0	61.1
0°-180°	2759.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	421	421	421	421	421	
5°	421	420	415	418	418	40
15°	401	398	393	395	393	113
25°	363	360	353	354	353	167
35°	313	309	303	300	298	195
45°	255	252	246	242	240	197
55°	193	190	186	181	179	172
65°	130	128	124	120	118	129
75°	68	67	65	63	64	73
85°	17	16	16	15	14	19
90°	0	7	18	17	17	2
95°	26	31	32	32	32	30
105°	109	111	112	113	113	115
115°	203	206	206	205	203	201
125°	296	300	299	298	297	264
135°	383	388	390	389	387	296
145°	465	468	471	472	470	290
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2
2.5°	423.2	422.8	422.5	422.1	421.8	421.2	420.4	419.6	418.8	418.0	418.7
5°	421.2	420.9	420.5	420.2	419.8	419.2	418.2	417.2	416.2	415.2	415.9
7.5°	417.6	417.0	416.4	415.9	415.4	414.6	413.6	412.5	411.5	410.5	411.3
10°	414.0	413.4	412.8	412.1	411.4	410.6	409.6	408.5	407.4	406.3	407.0
12.5°	409.1	408.6	408.0	407.4	406.9	406.1	405.0	403.9	402.9	401.8	402.3
15°	401.0	400.5	399.9	399.4	398.9	398.1	396.8	395.7	394.5	393.3	393.7
17.5°	390.7	390.1	389.6	389.1	388.5	387.6	386.5	385.2	384.1	382.9	383.3
20°	383.2	382.6	382.1	381.6	381.0	380.1	378.9	377.6	376.4	375.1	375.4
22.5°	375.8	375.0	374.3	373.4	372.7	371.8	370.6	369.3	368.2	367.0	367.0
25°	362.9	362.2	361.5	360.8	360.1	358.9	357.4	355.9	354.4	352.8	353.0
27.5°	348.4	347.8	347.1	346.4	345.8	344.8	343.7	342.4	341.3	340.0	339.7
30°	338.7	338.0	337.2	336.5	335.7	334.7	333.4	332.1	330.6	329.3	329.0
32.5°	328.2	327.7	327.2	326.5	326.0	324.9	323.5	322.2	320.7	319.3	318.8
35°	313.2	312.2	311.3	310.4	309.5	308.4	306.9	305.5	304.1	302.6	302.0
37.5°	296.0	295.2	294.4	293.6	292.8	291.8	290.3	288.9	287.4	286.0	285.3
40°	284.4	283.7	282.9	282.2	281.5	280.4	278.9	277.5	276.1	274.6	273.8
42.5°	273.0	272.3	271.6	270.9	270.2	269.0	267.6	266.2	264.7	263.3	262.4
45°	254.8	254.1	253.5	252.9	252.3	251.3	249.9	248.6	247.3	245.8	244.9
47.5°	236.7	236.0	235.5	234.9	234.3	233.3	231.8	230.5	229.1	227.7	226.6
50°	224.0	223.6	223.1	222.7	222.2	221.3	220.1	218.8	217.6	216.3	215.1
52.5°	211.7	211.1	210.5	209.9	209.3	208.4	207.2	206.1	204.8	203.7	202.6
55°	192.8	192.3	191.7	191.2	190.6	189.8	188.8	187.7	186.6	185.6	184.4
57.5°	173.9	173.4	173.0	172.5	172.1	171.3	170.1	169.0	167.7	166.6	165.5
60°	161.2	160.9	160.5	160.2	159.8	159.0	157.7	156.5	155.2	153.9	152.9
62.5°	148.9	148.3	147.8	147.2	146.6	145.8	144.8	143.9	142.9	142.0	141.0
65°	130.0	129.5	128.9	128.4	127.9	127.2	126.3	125.4	124.5	123.6	122.7
67.5°	110.8	110.4	109.9	109.5	109.1	108.5	107.6	106.8	106.0	105.2	104.6
70°	98.8	98.4	98.1	97.7	97.4	96.8	96.0	95.2	94.3	93.5	92.9
72.5°	86.5	86.1	85.8	85.4	85.1	84.6	84.1	83.6	83.1	82.6	81.9
75°	68.0	67.9	67.7	67.5	67.3	67.1	66.6	66.1	65.6	65.2	64.6
77.5°	51.5	51.2	50.9	50.6	50.3	50.0	49.8	49.7	49.5	49.3	49.0
80°	40.5	40.4	40.3	40.2	40.1	40.0	39.9	39.7	39.5	39.3	39.1
82.5°	30.1	30.1	30.1	30.1	30.1	30.0	29.9	29.8	29.7	29.6	29.2
85°	16.6	16.5	16.4	16.3	16.2	16.1	16.1	16.0	15.9	15.8	15.5
87.5°	6.0	6.1	6.2	6.3	6.4	6.7	7.0	7.4	7.8	8.1	7.8
90°	0.5	1.9	3.2	4.5	6.0	7.8	10.3	12.8	15.3	17.8	17.6
92.5°	9.1	10.1	11.1	12.0	13.0	13.8	14.4	15.0	15.6	16.1	16.2
95°	26.5	27.6	28.7	29.9	30.9	31.7	31.8	32.1	32.3	32.5	32.5
97.5°	48.3	49.3	50.3	51.3	52.3	53.0	53.4	53.9	54.3	54.8	54.8
100°	64.6	65.5	66.3	67.3	68.2	68.8	69.2	69.5	69.8	70.2	70.2
102.5°	81.7	82.4	83.1	83.8	84.5	85.2	85.6	86.0	86.4	86.9	86.9
105°	109.3	109.7	110.0	110.3	110.7	110.9	111.2	111.4	111.6	111.9	112.1
107.5°	137.2	137.7	138.2	138.7	139.2	139.5	139.5	139.5	139.5	139.5	139.6
110°	155.1	155.8	156.4	157.1	157.8	158.1	158.1	158.1	158.1	158.1	158.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.6	175.3	175.9	176.6	177.4	177.6	177.5	177.5	177.4	177.3	177.0
115°	203.4	204.1	204.7	205.5	206.1	206.3	206.1	205.9	205.6	205.5	205.4
117.5°	232.1	233.0	233.9	234.8	235.7	235.9	235.2	234.5	233.9	233.3	233.0
120°	251.2	252.1	253.0	253.9	254.9	254.9	253.9	253.0	252.1	251.2	251.2
122.5°	268.7	269.7	270.9	272.0	273.0	273.2	272.6	272.0	271.3	270.7	270.5
125°	296.0	296.9	298.0	299.0	300.0	300.3	300.0	299.7	299.3	299.0	298.6
127.5°	322.4	323.8	325.0	326.4	327.6	328.1	327.7	327.3	326.9	326.5	326.0
130°	339.2	340.6	342.1	343.6	345.0	345.6	345.4	345.2	345.0	344.7	344.6
132.5°	357.8	359.1	360.3	361.5	362.7	363.3	363.4	363.4	363.5	363.5	363.0
135°	382.9	384.1	385.4	386.6	387.9	388.6	388.8	389.1	389.3	389.5	389.4
137.5°	409.2	410.3	411.3	412.3	413.3	413.9	414.3	414.6	414.8	415.1	415.0
140°	425.1	426.1	427.1	428.1	429.2	430.0	430.5	431.1	431.7	432.2	432.2
142.5°	441.4	442.4	443.4	444.4	445.4	446.1	446.6	446.9	447.3	447.6	447.7
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	471.4
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.1
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2
2.5°	419.5	420.2	420.9	421.2	421.1	420.9	420.8	420.6
5°	416.7	417.4	418.1	418.4	418.2	418.0	417.9	417.7
7.5°	412.0	412.7	413.4	413.7	413.5	413.2	413.0	412.9
10°	407.8	408.5	409.2	409.4	409.1	408.8	408.6	408.3
12.5°	402.8	403.2	403.8	403.9	403.8	403.5	403.3	403.1
15°	394.0	394.4	394.8	394.8	394.3	393.9	393.4	393.0
17.5°	383.7	384.1	384.5	384.5	384.1	383.7	383.3	382.8
20°	375.7	375.9	376.2	376.1	375.8	375.4	375.1	374.7
22.5°	367.1	367.2	367.2	367.1	366.9	366.7	366.5	366.3
25°	353.2	353.4	353.6	353.6	353.4	353.2	353.0	352.8
27.5°	339.5	339.2	338.9	338.6	338.1	337.7	337.3	336.9
30°	328.8	328.5	328.2	328.0	327.6	327.3	326.9	326.5
32.5°	318.3	317.8	317.4	316.9	316.6	316.2	315.8	315.5
35°	301.5	301.0	300.4	300.0	299.5	299.1	298.6	298.1
37.5°	284.6	284.0	283.3	282.8	282.3	281.9	281.5	281.1
40°	273.0	272.2	271.4	270.8	270.5	270.1	269.7	269.4
42.5°	261.5	260.6	259.8	259.0	258.6	258.1	257.6	257.1
45°	243.9	242.9	241.9	241.2	240.9	240.5	240.1	239.8
47.5°	225.6	224.5	223.5	222.7	222.2	221.7	221.1	220.6
50°	213.8	212.5	211.2	210.4	210.0	209.6	209.1	208.7
52.5°	201.6	200.5	199.5	198.7	198.0	197.5	196.9	196.3
55°	183.3	182.3	181.2	180.5	180.0	179.5	179.1	178.6
57.5°	164.4	163.4	162.3	161.6	161.3	161.0	160.6	160.2
60°	151.9	151.0	150.0	149.4	149.1	148.8	148.6	148.3
62.5°	140.1	139.2	138.3	137.7	137.3	137.0	136.6	136.3
65°	121.9	121.1	120.3	119.7	119.2	118.8	118.3	117.9
67.5°	104.0	103.3	102.7	102.2	101.8	101.5	101.1	100.8
70°	92.3	91.7	91.0	90.6	90.2	89.8	89.4	89.1
72.5°	81.3	80.7	80.1	79.5	79.3	79.0	78.7	78.4
75°	64.1	63.6	63.0	62.9	63.0	63.2	63.4	63.6
77.5°	48.8	48.5	48.2	48.0	47.7	47.5	47.3	47.0
80°	38.8	38.5	38.3	38.0	37.8	37.6	37.5	37.3
82.5°	28.9	28.5	28.2	28.0	28.0	27.9	27.9	27.9
85°	15.2	15.0	14.7	14.5	14.4	14.4	14.3	14.2
87.5°	7.6	7.3	7.0	6.9	6.9	6.8	6.8	6.7
90°	17.4	17.1	16.9	16.9	16.9	17.0	17.2	17.3
92.5°	16.2	16.3	16.3	16.4	16.4	16.4	16.5	16.5
95°	32.5	32.5	32.5	32.5	32.2	32.0	31.7	31.6
97.5°	54.8	54.8	54.8	54.7	54.7	54.7	54.7	54.6
100°	70.2	70.2	70.2	70.1	70.0	69.9	69.8	69.6
102.5°	87.0	87.1	87.2	87.2	87.1	86.9	86.9	86.8
105°	112.4	112.5	112.8	112.9	112.9	112.9	112.9	112.9
107.5°	139.6	139.7	139.8	139.6	139.0	138.6	138.0	137.5
110°	158.1	158.1	158.1	158.0	157.7	157.3	156.9	156.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	176.7	176.5	176.2	175.9	175.7	175.4	175.1	175.0
115°	205.2	205.1	205.0	204.7	204.4	204.1	203.8	203.4
117.5°	232.7	232.5	232.2	231.9	231.6	231.2	230.9	230.5
120°	251.2	251.2	251.2	251.0	250.7	250.4	250.0	249.7
122.5°	270.2	269.9	269.7	269.4	269.1	268.9	268.7	268.4
125°	298.3	298.0	297.7	297.4	297.3	297.2	297.0	296.9
127.5°	325.7	325.2	324.9	324.4	324.0	323.7	323.3	323.0
130°	344.3	344.1	343.8	343.5	343.0	342.6	342.1	341.7
132.5°	362.5	361.9	361.5	361.1	360.7	360.3	360.0	359.6
135°	389.3	389.1	389.1	388.8	388.5	388.2	387.8	387.4
137.5°	414.9	414.8	414.7	414.5	414.0	413.6	413.1	412.7
140°	432.2	432.2	432.2	432.0	431.5	431.1	430.6	430.2
142.5°	447.8	447.9	448.0	447.8	447.4	446.9	446.5	446.0
145°	471.6	471.7	471.8	471.6	471.2	470.7	470.3	469.8
147.5°	492.4	492.7	492.9	492.8	492.4	492.0	491.5	491.1
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)