

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: P331346-935

Luminaire Tested: **SA2XXDIP-C675D530U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331346-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C675D530U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

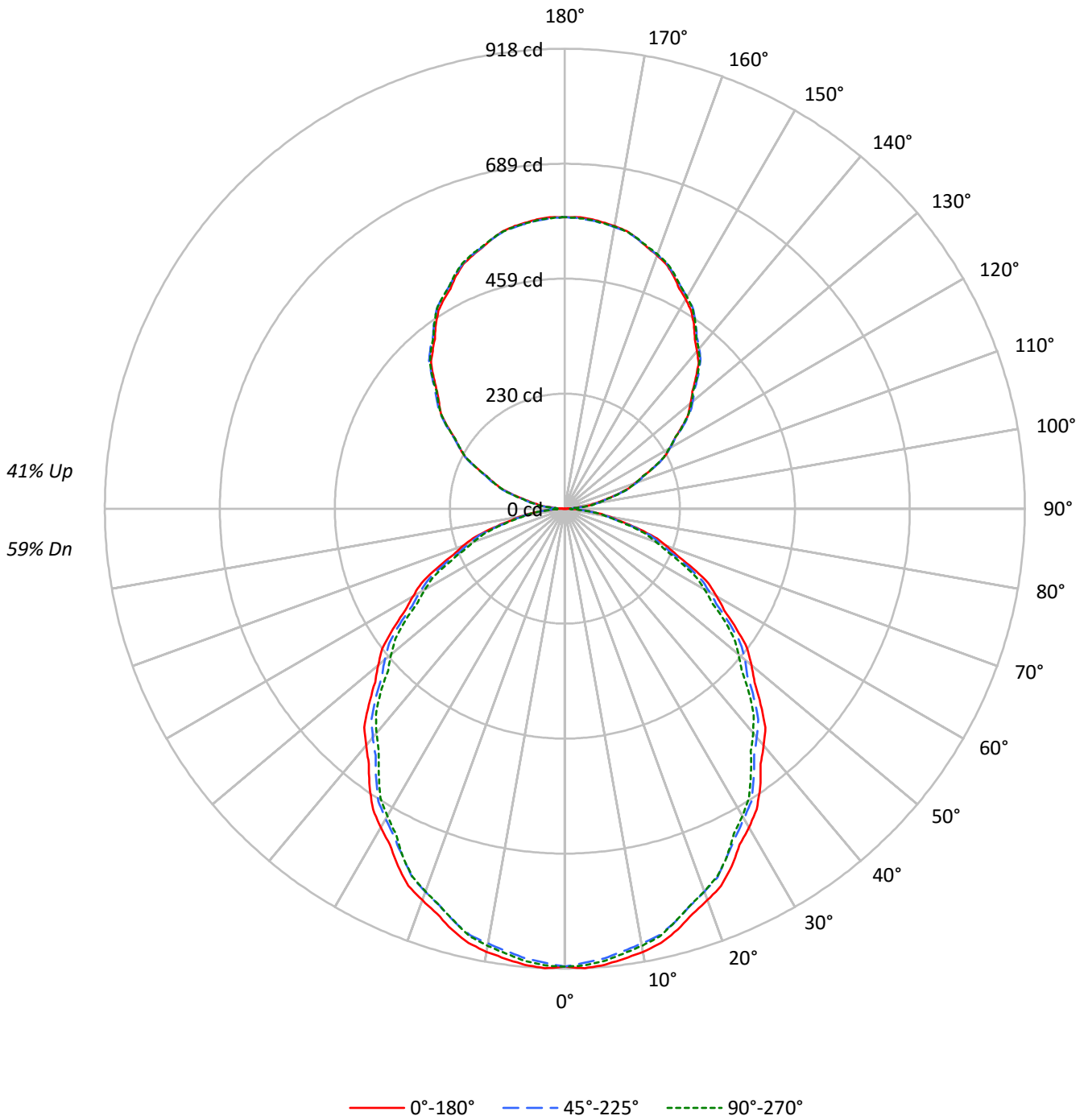
Lumens per Lamp: N/A  
Luminaire Lumens: 3954.8 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 40.3  
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	76	76	76	64	64	64	59
1	100	95	91	88	93	89	86	83	77	75	73	67	65	63	57	55	54	50
2	91	83	77	72	84	78	72	68	68	64	60	59	55	53	50	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	44	41	39	35
4	76	65	57	51	70	61	54	48	53	48	43	46	42	38	40	36	34	30
5	70	58	50	44	65	54	47	41	48	42	37	41	37	33	36	32	29	26
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	32	29	26	23
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	23	21	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15

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

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.0	2.2
10°-20°	241.9	6.1
20°-30°	355.5	9.0
30°-40°	412.9	10.4
40°-50°	412.5	10.4
50°-60°	359.7	9.1
60°-70°	266.0	6.7
70°-80°	150.6	3.8
80°-90°	42.8	1.1
90°-100°	36.9	0.9
100°-110°	114.5	2.9
110°-120°	195.7	4.9
120°-130°	257.4	6.5
130°-140°	288.9	7.3
140°-150°	283.3	7.2
150°-160°	237.6	6.0
160°-170°	157.6	4.0
170°-180°	55.1	1.4
0°-30°	683.3	17.3
0°-40°	1096.3	27.7
0°-60°	1868.5	47.2
0°-90°	2327.9	58.9
90°-120°	347.1	8.8
90°-150°	1176.6	29.8
90°-180°	1627.0	41.1
0°-180°	3954.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	0	7	17	16	17	3
95°	26	30	31	31	30	29
105°	106	107	108	109	109	112
115°	196	199	198	198	196	194
125°	286	290	289	287	287	255
135°	370	375	376	376	374	285
145°	449	452	455	456	454	280
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°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.7	12.7	12.7	12.6	12.6	12.6	12.7	12.9	13.1	13.3	12.7
90°	0.5	1.8	3.1	4.4	5.8	7.6	10.0	12.4	14.8	17.2	17.0
92.5°	8.8	9.7	10.7	11.6	12.6	13.3	13.9	14.5	15.1	15.6	15.7
95°	25.6	26.6	27.7	28.8	29.9	30.6	30.7	31.0	31.2	31.4	31.4
97.5°	46.7	47.6	48.6	49.5	50.5	51.1	51.6	52.0	52.4	52.9	52.9
100°	62.3	63.2	64.1	65.0	65.9	66.5	66.8	67.1	67.4	67.8	67.8
102.5°	78.9	79.6	80.2	80.9	81.6	82.2	82.7	83.0	83.4	83.9	83.9
105°	105.6	105.9	106.2	106.5	106.9	107.1	107.4	107.5	107.8	108.1	108.2
107.5°	132.5	132.9	133.5	133.9	134.4	134.7	134.7	134.7	134.7	134.7	134.7
110°	149.7	150.4	151.0	151.7	152.4	152.7	152.7	152.7	152.7	152.7	152.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	169.3	169.9	170.6	171.3	171.5	171.4	171.3	171.3	171.2	170.9
115°	196.4	197.1	197.7	198.4	199.0	199.2	199.0	198.8	198.5	198.4	198.3
117.5°	224.1	225.0	225.8	226.7	227.6	227.7	227.1	226.4	225.8	225.2	225.0
120°	242.5	243.4	244.3	245.1	246.1	246.1	245.1	244.3	243.4	242.5	242.5
122.5°	259.4	260.5	261.6	262.6	263.6	263.8	263.2	262.6	262.0	261.4	261.1
125°	285.8	286.7	287.7	288.7	289.6	290.0	289.6	289.4	289.0	288.7	288.3
127.5°	311.3	312.6	313.8	315.1	316.3	316.8	316.4	316.0	315.6	315.2	314.8
130°	327.5	328.9	330.3	331.7	333.1	333.7	333.6	333.3	333.1	332.9	332.7
132.5°	345.5	346.7	347.8	349.0	350.2	350.8	350.9	350.9	350.9	350.9	350.5
135°	369.7	370.9	372.1	373.3	374.5	375.2	375.4	375.7	375.9	376.1	376.0
137.5°	395.1	396.1	397.1	398.1	399.1	399.7	400.0	400.3	400.5	400.8	400.7
140°	410.4	411.5	412.4	413.4	414.4	415.2	415.7	416.2	416.8	417.3	417.3
142.5°	426.2	427.1	428.2	429.1	430.1	430.8	431.2	431.5	431.9	432.2	432.3
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	455.2
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.2
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°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	12.2	11.7	11.2	10.9	10.8	10.7	10.5	10.3
90°	16.8	16.5	16.3	16.3	16.4	16.4	16.6	16.7
92.5°	15.7	15.8	15.8	15.8	15.8	15.8	15.9	15.9
95°	31.4	31.4	31.4	31.3	31.1	30.9	30.7	30.5
97.5°	52.9	52.9	52.9	52.8	52.8	52.8	52.8	52.7
100°	67.8	67.8	67.8	67.7	67.6	67.5	67.4	67.2
102.5°	84.0	84.1	84.2	84.2	84.1	83.9	83.9	83.8
105°	108.5	108.7	108.9	109.0	109.0	109.0	109.0	109.0
107.5°	134.8	134.9	135.0	134.7	134.2	133.8	133.3	132.8
110°	152.7	152.7	152.7	152.6	152.2	151.9	151.5	151.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	170.7	170.4	170.1	169.9	169.6	169.4	169.1	168.9
115°	198.1	198.0	197.9	197.7	197.3	197.1	196.7	196.4
117.5°	224.7	224.5	224.2	223.9	223.6	223.3	222.9	222.6
120°	242.5	242.5	242.5	242.4	242.0	241.8	241.4	241.1
122.5°	260.9	260.6	260.4	260.1	259.8	259.6	259.4	259.2
125°	288.0	287.7	287.4	287.1	287.1	287.0	286.8	286.7
127.5°	314.4	314.0	313.7	313.2	312.9	312.5	312.2	311.9
130°	332.4	332.3	332.0	331.7	331.2	330.8	330.4	329.9
132.5°	350.0	349.5	349.0	348.6	348.3	347.9	347.6	347.2
135°	375.9	375.7	375.7	375.4	375.1	374.8	374.4	374.1
137.5°	400.6	400.5	400.5	400.2	399.8	399.3	398.9	398.5
140°	417.3	417.3	417.3	417.2	416.6	416.2	415.8	415.3
142.5°	432.4	432.5	432.6	432.4	432.0	431.5	431.1	430.7
145°	455.4	455.5	455.6	455.4	455.0	454.5	454.1	453.7
147.5°	475.4	475.7	476.0	475.9	475.4	475.0	474.6	474.2
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)