

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: P332539-940

Luminaire Tested: **S124DIP-S575D365U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332539-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D365U940-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

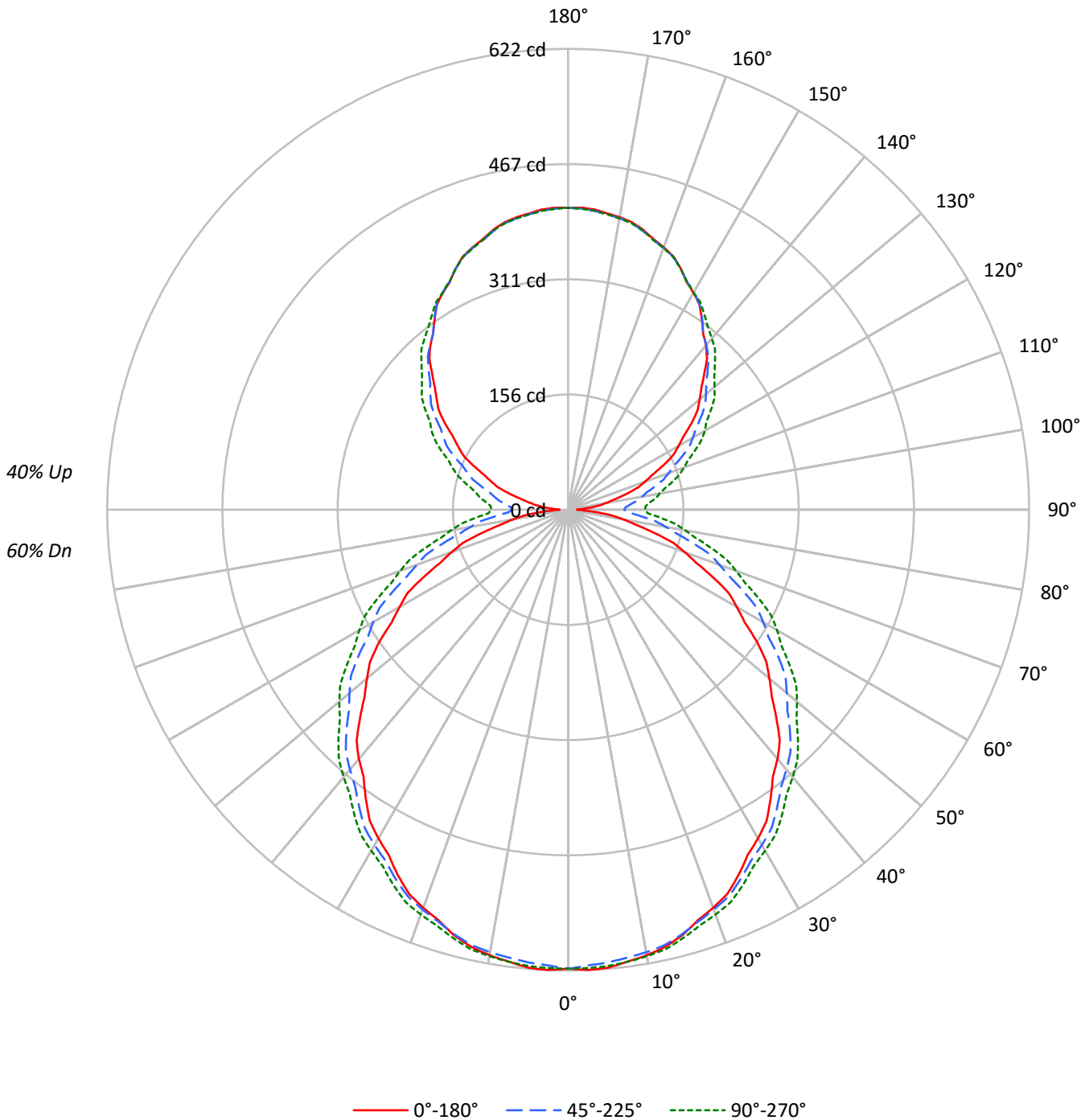
Lumens per Lamp: N/A  
Luminaire Lumens: 3243.9 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 27.5  
Input Voltage (V): 120  
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66
1	99	94	90	86	92	88	84	80	76	73	71	66	64	62	56	54	53
2	90	81	75	69	83	76	70	65	66	62	58	57	53	50	49	46	44
3	81	71	63	57	76	67	59	54	58	52	48	50	46	42	43	39	37
4	74	63	54	48	69	59	51	45	51	45	40	44	40	36	38	34	31
5	68	56	47	41	63	52	44	39	46	39	35	40	35	31	34	30	27
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	24
7	58	45	37	31	54	42	35	29	37	31	26	32	27	24	28	24	21
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	22	19
9	50	37	29	24	47	35	28	23	31	25	21	27	22	19	24	20	17
10	47	34	27	22	44	32	25	21	29	23	19	25	20	17	22	18	15

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

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	1.8
10°-20°	168.1	5.2
20°-30°	254.2	7.8
30°-40°	307.6	9.5
40°-50°	325.2	10.0
50°-60°	306.0	9.4
60°-70°	253.9	7.8
70°-80°	178.3	5.5
80°-90°	102.0	3.1
90°-100°	86.7	2.7
100°-110°	123.9	3.8
110°-120°	164.9	5.1
120°-130°	194.9	6.0
130°-140°	207.3	6.4
140°-150°	198.1	6.1
150°-160°	165.4	5.1
160°-170°	110.0	3.4
170°-180°	38.5	1.2
0°-30°	481.0	14.8
0°-40°	788.6	24.3
0°-60°	1419.8	43.8
0°-90°	1954.1	60.2
90°-120°	375.5	11.6
90°-150°	975.9	30.1
90°-180°	1290.0	39.8
0°-180°	3243.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	12	43	76	97	104	8
95°	28	54	84	103	110	28
105°	80	95	121	138	146	85
115°	142	149	169	184	189	140
125°	203	203	219	231	235	181
135°	260	262	266	276	280	201
145°	314	315	315	319	321	197
155°	359	359	359	360	359	165
165°	391	390	390	391	390	110
175°	407	405	405	407	405	39
180°	407	407	407	407	407	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	20.7	27.2	33.6	40.0	46.5	53.1	60.0	66.9	73.7	80.6	85.2
90°	12.0	19.0	25.9	32.9	39.8	46.9	54.0	61.3	68.4	75.6	80.5
92.5°	17.3	23.7	30.1	36.6	43.0	49.8	56.8	63.8	70.8	77.8	82.5
95°	27.9	33.6	39.3	45.1	50.8	57.1	63.8	70.7	77.5	84.4	88.7
97.5°	41.2	46.1	51.0	55.8	60.7	66.6	73.5	80.3	87.1	93.9	98.3
100°	51.7	56.0	60.4	64.6	68.9	74.4	81.1	87.7	94.3	100.9	105.2
102.5°	63.3	67.0	70.6	74.2	77.8	82.9	89.3	95.9	102.3	108.8	113.0
105°	79.6	82.8	86.0	89.1	92.3	96.8	102.8	108.8	114.8	120.8	124.8
107.5°	98.1	100.8	103.3	105.9	108.6	112.6	118.1	123.5	128.9	134.4	138.3
110°	110.1	112.4	114.8	117.1	119.4	123.1	128.5	133.8	139.2	144.5	147.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	122.7	124.7	126.6	128.5	130.5	133.9	139.0	144.0	149.0	154.1	157.5
115°	141.5	142.9	144.3	145.7	147.1	150.2	155.0	159.8	164.6	169.3	172.7
117.5°	160.0	160.9	161.8	162.6	163.5	166.2	170.7	175.2	179.7	184.1	187.2
120°	171.7	172.5	173.3	174.0	174.7	177.2	181.5	185.7	190.0	194.2	197.0
122.5°	184.6	184.8	185.0	185.2	185.4	187.6	191.7	195.8	199.9	204.1	207.0
125°	202.9	202.7	202.6	202.4	202.2	204.0	207.9	211.6	215.4	219.2	222.0
127.5°	219.9	220.0	220.1	220.1	220.2	221.6	224.4	227.3	230.2	233.0	235.7
130°	231.5	231.5	231.6	231.7	231.7	233.0	235.4	237.9	240.4	242.8	245.5
132.5°	243.8	243.8	243.8	243.8	243.8	244.8	246.7	248.6	250.6	252.4	254.9
135°	259.5	259.8	260.3	260.7	261.1	261.9	263.0	264.0	265.1	266.2	268.5
137.5°	277.2	277.2	277.3	277.3	277.4	277.8	278.4	279.0	279.6	280.3	282.3
140°	289.1	289.1	289.0	289.0	289.0	289.1	289.3	289.4	289.5	289.7	291.7
142.5°	299.3	299.4	299.6	299.7	299.8	299.8	299.6	299.4	299.3	299.2	301.0
145°	314.2	314.3	314.5	314.6	314.7	314.9	314.9	315.0	315.0	315.1	315.9
147.5°	329.1	329.3	329.5	329.7	329.8	329.8	329.8	329.8	329.8	329.7	329.8
150°	338.1	338.3	338.4	338.6	338.7	338.8	338.8	338.8	338.8	338.8	338.8
152.5°	346.2	346.3	346.4	346.6	346.7	346.8	346.9	347.0	347.0	347.1	347.2
155°	359.2	359.2	359.2	359.2	359.2	359.2	359.1	359.0	359.0	358.9	359.2
157.5°	370.3	370.1	370.1	370.0	369.8	369.7	369.7	369.7	369.7	369.7	369.9
160°	376.8	376.7	376.7	376.7	376.6	376.5	376.5	376.4	376.3	376.2	376.5
162.5°	382.9	382.7	382.5	382.4	382.2	382.1	382.0	381.9	381.8	381.7	382.2
165°	391.0	390.8	390.7	390.4	390.2	390.0	389.9	389.8	389.6	389.5	389.9
167.5°	397.3	397.0	396.7	396.4	396.1	395.9	396.0	396.0	396.0	396.0	396.5
170°	400.8	400.5	400.1	399.8	399.4	399.3	399.3	399.4	399.5	399.6	399.9
172.5°	403.3	403.1	402.7	402.4	402.2	402.0	402.0	402.1	402.1	402.1	402.5
175°	406.8	406.4	406.1	405.7	405.4	405.2	405.1	405.0	405.0	404.9	405.4
177.5°	408.0	407.7	407.3	407.1	406.8	406.7	406.7	406.7	406.7	406.7	407.1
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	89.7	94.3	98.9	101.8	103.2	104.6	105.9	107.4
90°	85.4	90.3	95.2	98.4	99.7	101.0	102.5	103.8
92.5°	87.0	91.7	96.2	99.2	100.5	101.8	103.2	104.5
95°	93.1	97.5	101.8	104.7	106.1	107.5	108.9	110.2
97.5°	102.5	106.8	111.1	114.0	115.2	116.5	117.9	119.2
100°	109.6	113.9	118.2	120.8	121.9	123.0	124.1	125.2
102.5°	117.3	121.5	125.7	128.4	129.7	131.0	132.2	133.5
105°	128.9	133.0	137.1	139.8	141.2	142.7	144.1	145.6
107.5°	142.3	146.3	150.3	152.8	153.9	155.1	156.1	157.2
110°	151.3	154.7	158.1	160.5	161.9	163.5	164.9	166.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	160.9	164.3	167.6	170.0	171.2	172.5	173.8	175.0
115°	176.0	179.3	182.6	184.9	185.8	186.8	187.9	188.9
117.5°	190.1	193.1	196.1	198.0	199.2	200.3	201.3	202.4
120°	199.7	202.4	205.2	207.2	208.6	210.0	211.3	212.8
122.5°	209.7	212.6	215.4	217.3	218.2	219.0	219.9	220.8
125°	224.8	227.6	230.3	232.1	232.9	233.7	234.5	235.3
127.5°	238.3	240.9	243.5	245.3	246.3	247.2	248.2	249.1
130°	248.1	250.7	253.3	255.0	255.7	256.3	256.9	257.6
132.5°	257.4	260.0	262.5	264.1	265.0	265.8	266.6	267.4
135°	270.8	273.2	275.5	277.1	277.8	278.5	279.2	279.9
137.5°	284.5	286.5	288.6	290.0	290.8	291.6	292.4	293.3
140°	293.6	295.5	297.5	298.7	299.4	300.1	300.9	301.6
142.5°	302.6	304.4	306.1	307.4	308.0	308.6	309.2	309.9
145°	316.8	317.6	318.5	319.1	319.6	319.9	320.4	320.7
147.5°	329.8	329.8	329.9	330.2	330.6	331.0	331.4	331.9
150°	338.8	338.8	338.8	338.7	338.7	338.6	338.5	338.4
152.5°	347.4	347.6	347.8	347.7	347.5	347.3	347.1	347.0
155°	359.4	359.7	360.0	360.0	359.7	359.4	359.2	358.9
157.5°	370.1	370.3	370.5	370.5	370.2	370.1	369.8	369.5
160°	376.7	376.8	377.1	377.0	376.7	376.3	375.9	375.6
162.5°	382.5	382.9	383.3	383.3	383.0	382.6	382.3	381.9
165°	390.3	390.7	391.1	391.2	390.9	390.7	390.4	390.1
167.5°	396.9	397.3	397.7	397.7	397.3	396.8	396.4	395.9
170°	400.4	400.8	401.3	401.2	400.7	400.2	399.8	399.2
172.5°	403.1	403.5	403.9	403.9	403.5	403.0	402.5	402.0
175°	405.9	406.4	406.9	406.9	406.4	405.9	405.4	404.9
177.5°	407.4	407.9	408.2	408.2	407.8	407.3	406.9	406.4
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4

(END OF REPORT)