

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: P332754-935

Luminaire Tested: **S124DIW-S575D770U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332754-935
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: S124DIW-S575D770U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4334.4 lumens
Efficiency: N/A
Efficacy: 115.3 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: General Diffuse

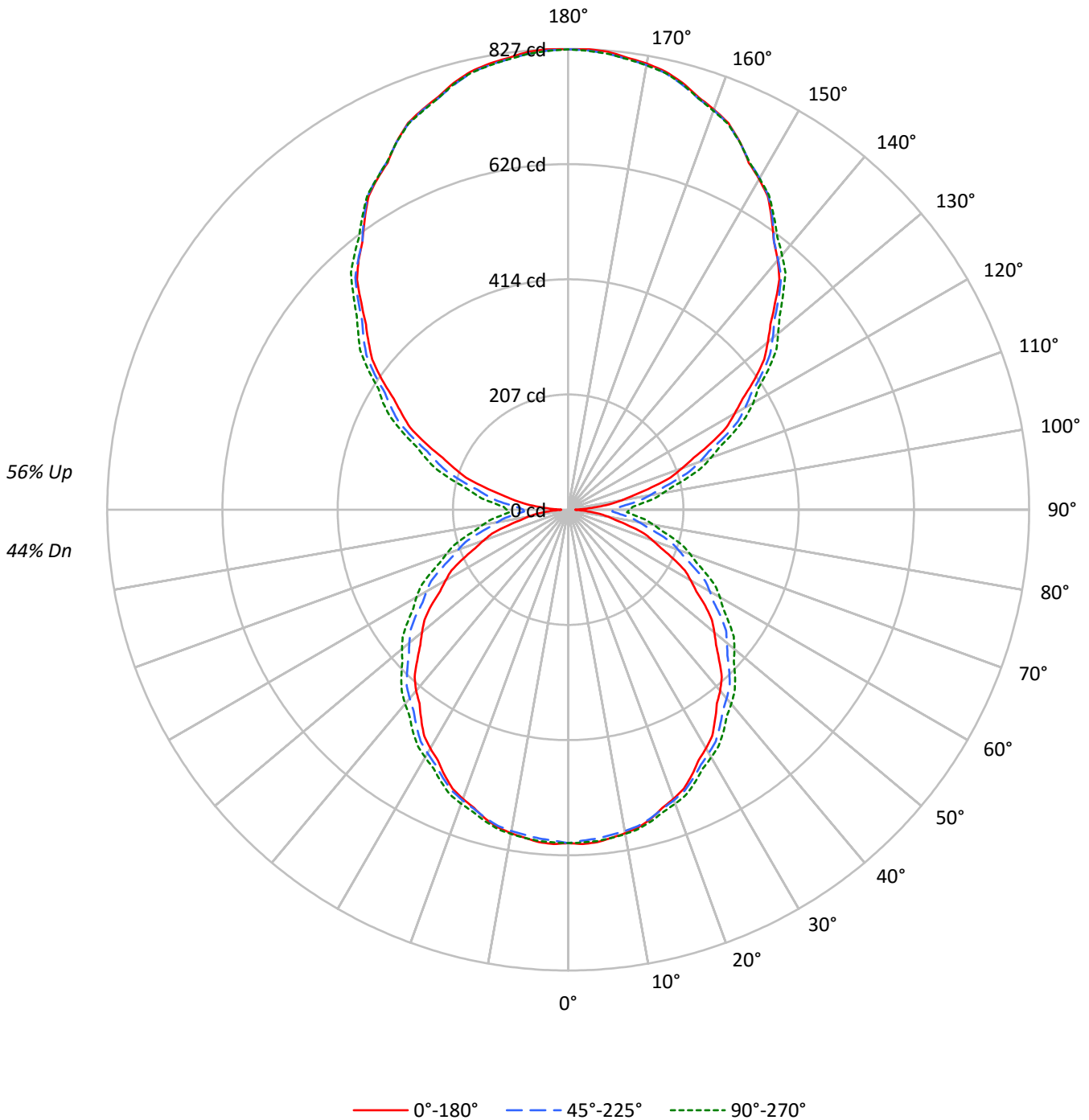
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				
1	95	91	87	83	87	83	79	76	69	66	64	55	53	52	43	42	41	35				
2	87	79	72	67	79	72	66	62	60	55	52	48	45	42	37	35	33	28				
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24				
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20				
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17				
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15				
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13				
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12				
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11				
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.3
10°-20°	162.3	3.7
20°-30°	245.5	5.7
30°-40°	297.0	6.9
40°-50°	314.0	7.2
50°-60°	295.5	6.8
60°-70°	245.2	5.7
70°-80°	172.2	4.0
80°-90°	99.8	2.3
90°-100°	112.3	2.6
100°-110°	204.2	4.7
110°-120°	302.7	7.0
120°-130°	377.5	8.7
130°-140°	412.8	9.5
140°-150°	400.2	9.2
150°-160°	335.4	7.7
160°-170°	223.1	5.1
170°-180°	78.1	1.8
0°-30°	464.5	10.7
0°-40°	761.4	17.6
0°-60°	1370.9	31.6
0°-90°	1888.0	43.6
90°-120°	619.3	14.3
90°-150°	1809.7	41.8
90°-180°	2446.0	56.4
0°-180°	4334.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	13	46	80	103	110	10
95°	47	75	107	126	133	50
105°	155	170	196	214	222	165
115°	283	289	309	322	327	279
125°	408	409	424	435	438	364
135°	525	529	533	542	545	406
145°	636	638	639	642	643	398
155°	728	728	728	730	728	335
165°	793	791	790	793	791	223
175°	825	822	821	825	821	78
180°	826	826	826	826	826	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.2	26.6	33.0	39.3	45.8	52.3	59.1	65.9	72.6	79.3	83.8
90°	12.7	20.1	27.6	35.2	42.7	50.2	57.8	65.3	72.8	80.4	85.6
92.5°	23.8	31.0	38.1	45.3	52.4	59.7	66.8	74.0	81.2	88.4	93.2
95°	47.0	53.2	59.4	65.6	71.8	78.4	85.6	92.6	99.8	106.9	111.3
97.5°	74.9	80.2	85.4	90.7	95.9	102.1	109.3	116.5	123.7	131.0	135.3
100°	96.9	101.3	105.7	110.1	114.6	120.4	127.4	134.5	141.6	148.7	153.0
102.5°	120.4	124.0	127.6	131.2	134.8	140.1	146.9	153.8	160.7	167.5	171.8
105°	154.9	158.1	161.2	164.3	167.4	172.0	178.1	184.2	190.2	196.3	200.4
107.5°	192.5	195.1	197.7	200.4	202.9	206.9	212.2	217.5	222.7	228.1	232.1
110°	217.5	219.9	222.2	224.6	227.0	230.7	235.7	240.8	245.9	251.0	254.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	243.6	245.5	247.4	249.3	251.2	254.5	259.2	263.9	268.6	273.4	276.6
115°	282.7	284.0	285.3	286.6	288.0	290.9	295.4	299.9	304.4	308.8	311.9
117.5°	320.0	321.0	321.9	322.8	323.7	326.3	330.5	334.8	339.1	343.3	345.9
120°	344.6	345.6	346.6	347.7	348.6	351.1	355.0	358.9	362.7	366.7	368.9
122.5°	370.7	371.0	371.3	371.6	372.0	374.0	377.9	381.8	385.6	389.5	392.0
125°	408.5	408.3	408.2	408.0	407.9	409.6	413.2	416.7	420.3	423.9	426.5
127.5°	443.2	443.5	443.8	444.0	444.4	445.7	448.4	451.1	453.7	456.3	458.7
130°	467.2	467.5	467.8	468.0	468.3	469.7	472.0	474.4	476.8	479.1	481.6
132.5°	492.2	492.4	492.6	492.8	492.9	493.9	495.7	497.5	499.3	501.1	503.3
135°	524.7	525.6	526.4	527.3	528.1	529.1	530.1	531.2	532.2	533.2	535.3
137.5°	560.8	561.0	561.2	561.5	561.7	562.2	562.9	563.7	564.4	565.2	567.0
140°	584.8	584.9	585.0	585.1	585.3	585.5	585.6	585.7	585.9	586.1	587.8
142.5°	606.2	606.5	606.7	607.0	607.3	607.3	607.1	606.8	606.7	606.5	608.1
145°	636.5	636.9	637.3	637.7	638.2	638.4	638.6	638.8	638.9	639.0	639.8
147.5°	666.7	667.2	667.7	668.2	668.8	669.0	668.9	668.7	668.7	668.6	668.6
150°	685.1	685.4	685.9	686.3	686.7	687.0	687.0	687.0	687.0	687.0	687.0
152.5°	701.9	702.2	702.5	702.8	703.2	703.4	703.4	703.6	703.7	703.8	704.1
155°	728.5	728.5	728.5	728.5	728.5	728.4	728.2	728.1	728.0	727.9	728.4
157.5°	751.0	750.7	750.4	750.2	749.9	749.8	749.8	749.8	749.8	749.7	750.1
160°	764.3	764.1	764.0	763.9	763.7	763.5	763.4	763.3	763.1	763.0	763.4
162.5°	776.5	776.2	775.8	775.4	775.1	774.8	774.6	774.6	774.4	774.2	775.0
165°	793.1	792.6	792.2	791.8	791.3	791.0	790.7	790.4	790.1	789.8	790.7
167.5°	805.6	805.1	804.5	803.9	803.3	803.0	803.1	803.1	803.1	803.1	804.0
170°	812.9	812.1	811.4	810.7	810.0	809.7	809.9	810.0	810.1	810.3	811.1
172.5°	817.9	817.3	816.7	816.1	815.5	815.3	815.3	815.4	815.4	815.4	816.4
175°	825.0	824.2	823.5	822.9	822.2	821.7	821.6	821.4	821.3	821.1	822.2
177.5°	827.2	826.7	826.1	825.6	825.0	824.8	824.8	824.8	824.8	824.8	825.5
180°	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	88.3	92.8	97.3	100.2	101.6	103.0	104.3	105.6
90°	90.7	95.9	101.1	104.4	105.9	107.4	108.8	110.3
92.5°	97.8	102.5	107.3	110.3	111.7	113.0	114.3	115.7
95°	115.7	120.2	124.7	127.5	128.9	130.2	131.6	132.9
97.5°	139.7	144.2	148.6	151.4	152.7	154.0	155.3	156.5
100°	157.3	161.6	165.9	168.6	169.6	170.7	171.7	172.7
102.5°	176.1	180.4	184.7	187.4	188.7	190.0	191.3	192.5
105°	204.6	208.8	212.9	215.8	217.4	219.0	220.7	222.2
107.5°	236.2	240.2	244.4	246.8	247.9	249.0	250.0	251.1
110°	257.3	260.4	263.6	266.0	267.5	269.1	270.8	272.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.8	283.1	286.4	288.6	289.9	291.2	292.5	293.7
115°	315.1	318.2	321.3	323.4	324.3	325.2	326.1	327.0
117.5°	348.5	351.1	353.7	355.5	356.4	357.3	358.2	359.1
120°	371.2	373.5	375.7	377.6	379.1	380.6	382.0	383.5
122.5°	394.5	397.0	399.5	401.1	401.7	402.2	402.8	403.3
125°	429.0	431.5	434.1	435.7	436.3	436.9	437.5	438.1
127.5°	461.1	463.5	465.9	467.4	468.3	469.1	469.8	470.6
130°	484.0	486.4	488.8	490.2	490.4	490.8	491.1	491.5
132.5°	505.7	507.9	510.1	511.6	512.3	513.0	513.7	514.3
135°	537.4	539.5	541.7	542.9	543.4	543.8	544.3	544.8
137.5°	568.8	570.6	572.4	573.7	574.5	575.3	576.2	577.0
140°	589.6	591.4	593.2	594.4	595.0	595.6	596.2	596.8
142.5°	609.8	611.5	613.1	614.2	614.8	615.4	616.0	616.6
145°	640.5	641.3	642.0	642.5	642.7	642.8	643.0	643.2
147.5°	668.6	668.6	668.6	668.7	669.1	669.4	669.8	670.1
150°	687.0	687.0	687.0	686.9	686.7	686.6	686.5	686.3
152.5°	704.5	704.8	705.2	705.2	704.8	704.5	704.0	703.7
155°	729.0	729.5	730.1	730.1	729.5	729.0	728.4	727.9
157.5°	750.5	751.0	751.4	751.4	750.9	750.4	749.9	749.4
160°	763.9	764.3	764.7	764.6	763.9	763.1	762.4	761.7
162.5°	775.8	776.5	777.3	777.3	776.6	775.9	775.2	774.5
165°	791.5	792.4	793.2	793.4	792.8	792.2	791.7	791.1
167.5°	804.9	805.6	806.5	806.5	805.6	804.8	803.9	803.0
170°	812.0	812.9	813.7	813.6	812.6	811.7	810.6	809.7
172.5°	817.3	818.3	819.2	819.2	818.2	817.3	816.2	815.3
175°	823.1	824.1	825.1	825.1	824.1	823.1	822.2	821.1
177.5°	826.3	827.1	827.9	827.9	826.9	826.0	825.1	824.2
180°	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2

(END OF REPORT)