

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: P331959-840

Luminaire Tested: **S123DIP-S775D365U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331959-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D365U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 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: 4522.0 lumens
Efficiency: N/A
Efficacy: 129.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

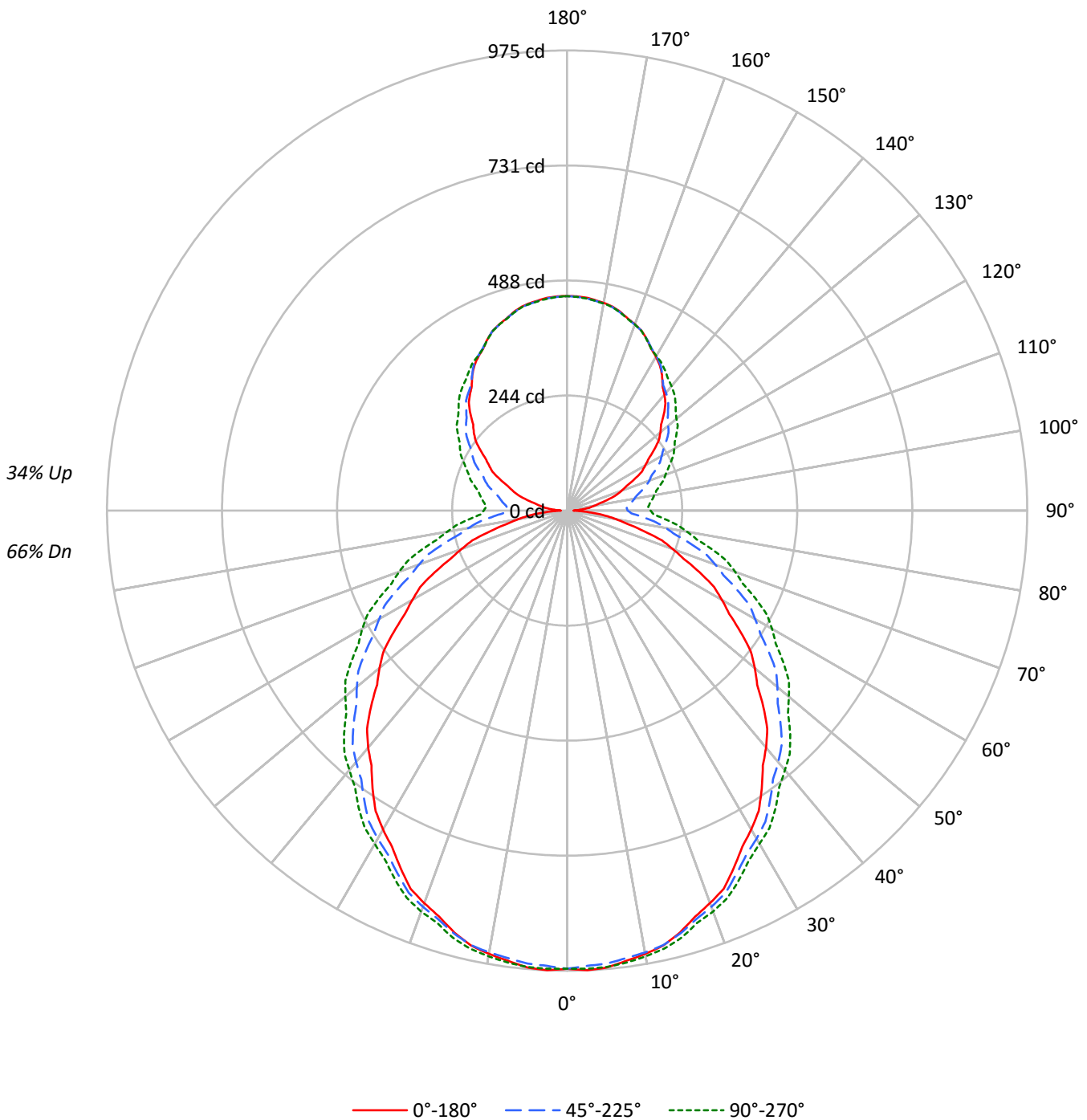
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66								
1	100	95	90	86	94	89	85	82	79	76	73	69	67	65	61	59	57	53								
2	91	82	75	69	85	77	71	66	68	64	59	60	56	53	52	50	47	43								
3	82	72	64	57	77	68	60	55	60	54	49	53	48	44	46	43	39	36								
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	30								
5	69	56	48	41	64	53	45	39	47	41	36	42	37	32	37	33	29	26								
6	63	51	42	36	59	48	40	34	43	36	31	38	32	28	33	29	26	23								
7	59	46	37	31	55	43	35	30	39	32	27	34	29	25	30	26	23	20								
8	55	41	33	28	51	39	32	27	35	29	24	31	26	22	28	23	20	18								
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16								
10	47	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	2.0
10°-20°	262.3	5.8
20°-30°	392.3	8.7
30°-40°	468.5	10.4
40°-50°	490.2	10.8
50°-60°	460.0	10.2
60°-70°	384.2	8.5
70°-80°	274.9	6.1
80°-90°	165.3	3.7
90°-100°	132.4	2.9
100°-110°	164.2	3.6
110°-120°	201.1	4.4
120°-130°	227.0	5.0
130°-140°	235.7	5.2
140°-150°	221.7	4.9
150°-160°	184.3	4.1
160°-170°	122.7	2.7
170°-180°	43.0	1.0
0°-30°	746.7	16.5
0°-40°	1215.2	26.9
0°-60°	2165.4	47.9
0°-90°	2989.8	66.1
90°-120°	497.8	11.0
90°-150°	1182.2	26.1
90°-180°	1532.0	33.9
0°-180°	4522.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	14	70	128	164	177	11
95°	33	77	131	164	176	33
105°	89	116	164	192	203	95
115°	157	172	208	233	242	155
125°	225	228	256	276	283	201
135°	290	292	302	319	325	223
145°	350	350	351	359	362	219
155°	400	400	400	402	399	184
165°	436	435	435	437	434	123
175°	453	452	452	454	451	43
180°	454	454	454	454	454	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.2	40.1	51.9	63.8	75.6	87.7	99.9	112.1	124.2	136.4	144.5
90°	14.1	26.5	38.7	51.0	63.3	76.0	89.0	102.0	115.0	128.1	136.3
92.5°	21.5	32.4	43.4	54.3	65.2	76.9	89.3	101.7	114.0	126.4	134.5
95°	32.7	42.4	52.1	61.8	71.6	82.5	94.6	106.8	119.0	131.1	138.7
97.5°	47.8	56.5	65.1	73.8	82.5	92.6	104.0	115.5	126.9	138.4	145.7
100°	58.1	66.0	74.0	82.0	90.1	99.7	110.9	122.1	133.2	144.4	151.5
102.5°	70.1	77.2	84.1	91.2	98.3	107.3	118.6	129.7	140.8	152.0	158.9
105°	88.8	94.5	100.4	106.1	112.0	120.3	131.1	141.9	152.7	163.5	170.1
107.5°	109.5	114.3	119.3	124.1	129.1	136.4	146.3	156.1	166.0	175.9	182.5
110°	122.3	126.7	131.1	135.5	139.9	146.8	156.4	165.9	175.5	185.1	191.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	136.6	140.2	143.7	147.3	150.9	157.2	166.2	175.3	184.4	193.4	199.8
115°	156.9	160.1	163.1	166.1	169.2	174.9	183.2	191.5	199.8	208.0	213.8
117.5°	178.3	180.2	182.1	184.0	185.9	190.7	198.4	206.2	213.9	221.7	227.2
120°	190.9	192.5	194.2	195.8	197.5	202.0	209.3	216.7	224.1	231.5	236.7
122.5°	204.9	205.8	206.8	207.7	208.7	212.8	219.9	227.1	234.3	241.5	246.5
125°	225.2	225.4	225.6	225.9	226.1	229.5	236.2	242.9	249.5	256.2	260.7
127.5°	244.9	245.1	245.4	245.7	245.9	248.8	254.3	259.7	265.2	270.6	274.9
130°	258.0	258.4	258.8	259.1	259.5	262.1	266.5	270.9	275.4	279.8	284.0
132.5°	270.2	270.8	271.5	272.1	272.7	274.7	278.3	281.9	285.5	289.0	293.0
135°	290.1	290.3	290.6	290.8	291.0	292.5	295.0	297.5	299.9	302.5	306.4
137.5°	308.4	308.7	308.9	309.1	309.3	310.2	311.8	313.6	315.2	316.9	320.2
140°	320.4	320.8	321.2	321.6	322.0	322.7	323.5	324.2	325.0	325.8	329.2
142.5°	332.1	332.3	332.5	332.8	333.0	333.3	333.6	333.9	334.1	334.4	337.5
145°	350.4	350.3	350.3	350.2	350.1	350.2	350.4	350.7	350.9	351.1	352.9
147.5°	365.4	365.7	366.0	366.3	366.5	366.8	367.0	367.2	367.4	367.7	368.2
150°	376.5	376.7	376.8	377.0	377.2	377.3	377.5	377.6	377.8	377.9	377.9
152.5°	385.7	385.9	386.1	386.3	386.6	386.7	386.8	386.9	387.0	387.1	387.2
155°	400.1	400.1	400.1	400.1	400.1	400.1	400.2	400.2	400.3	400.4	400.7
157.5°	412.3	412.2	412.1	412.0	411.9	411.9	412.0	412.0	412.1	412.2	412.5
160°	420.0	419.9	419.7	419.6	419.4	419.3	419.3	419.3	419.3	419.3	419.7
162.5°	426.9	426.7	426.5	426.3	426.0	426.0	426.0	426.1	426.2	426.2	426.6
165°	435.8	435.6	435.3	435.0	434.7	434.6	434.6	434.6	434.6	434.6	435.2
167.5°	442.8	442.5	442.2	441.8	441.5	441.4	441.5	441.5	441.6	441.7	442.1
170°	446.8	446.5	446.2	445.9	445.6	445.4	445.4	445.4	445.4	445.4	446.0
172.5°	450.0	449.6	449.3	449.0	448.7	448.5	448.5	448.5	448.5	448.5	449.0
175°	453.2	452.9	452.6	452.3	452.0	451.8	451.8	451.8	451.8	451.8	452.3
177.5°	454.5	454.3	454.0	453.8	453.5	453.4	453.4	453.4	453.4	453.4	453.8
180°	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	152.5	160.6	168.6	173.9	176.2	178.6	181.0	183.4
90°	144.7	153.0	161.3	166.7	169.2	171.7	174.2	176.7
92.5°	142.5	150.6	158.6	163.7	165.8	167.8	169.9	172.0
95°	146.3	153.9	161.5	166.4	168.8	171.2	173.5	175.9
97.5°	153.1	160.5	167.8	172.7	175.0	177.3	179.7	182.0
100°	158.5	165.6	172.7	177.4	180.0	182.5	185.0	187.4
102.5°	165.7	172.5	179.4	184.0	186.3	188.6	191.0	193.3
105°	176.7	183.3	189.9	194.3	196.5	198.8	201.1	203.4
107.5°	189.0	195.5	202.1	206.3	208.3	210.4	212.3	214.3
110°	197.9	204.4	210.8	214.9	216.6	218.3	220.0	221.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	206.0	212.4	218.6	222.8	224.8	226.9	228.9	231.0
115°	219.5	225.2	231.0	234.7	236.5	238.3	240.1	241.9
117.5°	232.8	238.4	244.0	247.5	249.1	250.7	252.4	254.0
120°	242.1	247.4	252.7	256.1	257.6	259.1	260.5	262.1
122.5°	251.5	256.5	261.5	264.7	266.1	267.6	269.0	270.4
125°	265.4	270.0	274.7	277.6	278.9	280.2	281.6	283.0
127.5°	279.1	283.3	287.5	290.2	291.4	292.7	294.0	295.2
130°	288.1	292.3	296.5	298.9	299.8	300.6	301.5	302.4
132.5°	296.8	300.7	304.7	307.2	308.3	309.5	310.6	311.8
135°	310.3	314.2	318.1	320.6	321.6	322.7	323.7	324.7
137.5°	323.7	327.0	330.4	332.5	333.4	334.3	335.2	336.0
140°	332.6	336.1	339.5	341.6	342.2	342.8	343.5	344.1
142.5°	340.5	343.6	346.7	348.6	349.3	350.0	350.8	351.5
145°	354.8	356.6	358.4	359.6	360.2	360.8	361.4	362.0
147.5°	368.8	369.3	369.9	370.4	370.7	371.1	371.5	371.8
150°	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9
152.5°	387.3	387.5	387.6	387.5	387.2	386.9	386.5	386.2
155°	401.0	401.3	401.7	401.5	401.0	400.4	399.9	399.3
157.5°	412.8	413.2	413.5	413.4	413.0	412.6	412.1	411.7
160°	420.1	420.5	420.9	420.9	420.6	420.3	420.0	419.7
162.5°	427.0	427.4	427.8	427.7	427.2	426.7	426.2	425.7
165°	435.7	436.1	436.6	436.6	436.0	435.5	434.8	434.3
167.5°	442.6	443.1	443.6	443.6	443.1	442.6	442.1	441.7
170°	446.5	447.1	447.6	447.6	447.1	446.5	446.0	445.4
172.5°	449.5	450.0	450.5	450.5	449.9	449.4	448.8	448.3
175°	452.7	453.2	453.7	453.6	453.1	452.5	452.0	451.4
177.5°	454.2	454.5	454.9	454.9	454.5	454.0	453.6	453.1
180°	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3

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