

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: P332918-930

Luminaire Tested: **SA4XXRDIP-C575D1035U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332918-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D1035U930-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4929.7 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

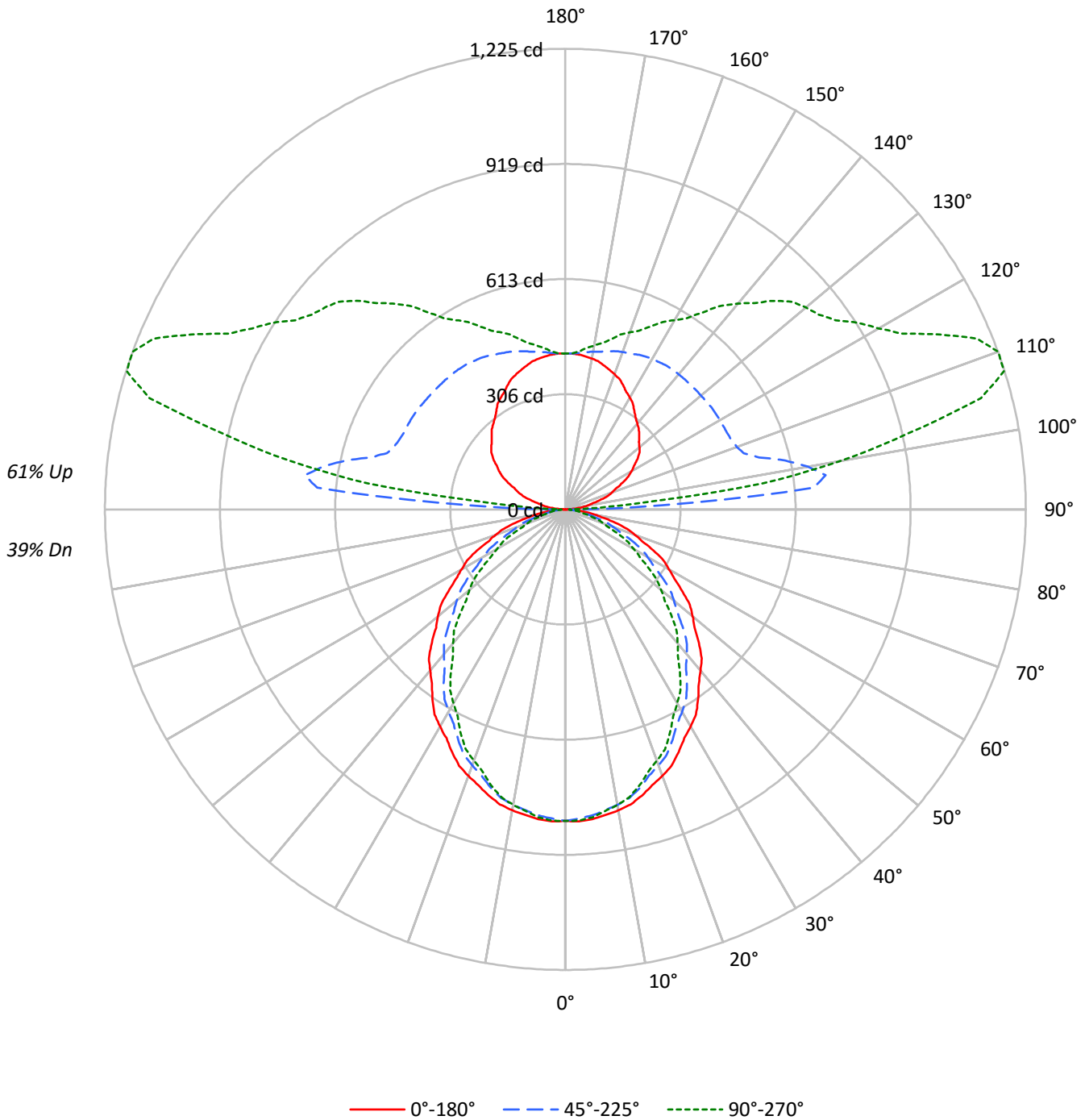
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	91	88	84	87	83	80	77	68	66	64	54	52	51	41	40	39	33
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	35	33	28
3	80	70	63	58	72	64	58	53	53	48	45	42	39	36	32	30	29	24
4	73	62	55	49	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	56	48	42	61	51	44	39	42	37	33	34	30	27	26	24	22	18
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	37	32	52	41	34	30	34	29	25	28	24	21	22	19	17	14
8	53	41	33	28	48	38	31	26	31	26	23	25	22	19	20	17	15	13
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	18	16	14	12
10	46	34	27	22	42	31	25	21	26	22	18	22	18	15	17	14	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6689	6689	6689
5°	6704	6622	6663
10°	6662	6542	6542
15°	6586	6405	6358
20°	6480	6225	6110
25°	6347	6013	5860
30°	6216	5790	5547
35°	6071	5558	5233
40°	5896	5296	4894
45°	5737	5034	4548
50°	5554	4732	4182
55°	5358	4421	3786
60°	5142	4077	3381
65°	4946	3647	2980
70°	4657	3175	2530
75°	4295	2633	2059
80°	3747	2004	1888
85°	3168	1815	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	1.6
10°-20°	217.0	4.4
20°-30°	313.4	6.4
30°-40°	355.3	7.2
40°-50°	343.1	7.0
50°-60°	285.3	5.8
60°-70°	197.0	4.0
70°-80°	99.8	2.0
80°-90°	27.9	0.6
90°-100°	299.2	6.1
100°-110°	622.8	12.6
110°-120°	557.8	11.3
120°-130°	469.2	9.5
130°-140°	391.2	7.9
140°-150°	298.9	6.1
150°-160°	210.1	4.3
160°-170°	123.6	2.5
170°-180°	40.2	0.8
0°-30°	608.3	12.3
0°-40°	963.6	19.5
0°-60°	1591.9	32.3
0°-90°	1916.6	38.9
90°-120°	1479.8	30.0
90°-150°	2639.2	53.5
90°-180°	3013.0	61.1
0°-180°	4929.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	827	824	817	823	822	78
15°	788	782	766	765	761	222
25°	712	700	675	664	658	328
35°	616	595	564	543	531	385
45°	502	478	441	411	398	387
55°	381	354	314	282	269	340
65°	259	231	191	165	156	256
75°	138	114	84	70	66	145
85°	34	22	20	18	18	39
90°	1	6	15	16	17	3
95°	27	85	663	328	199	30
105°	95	138	534	1150	1145	102
115°	168	210	476	915	1100	166
125°	234	278	474	778	877	208
135°	278	330	470	691	785	214
145°	320	366	467	583	641	201
155°	364	393	454	514	536	168
165°	396	409	436	461	468	112
175°	413	414	418	423	422	39
180°	414	414	414	414	414	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	830.6	830.1	829.7	829.2	828.8	827.9	826.7	825.5	824.2	823.0	824.2
5°	827.3	826.7	826.1	825.6	825.1	823.9	822.2	820.5	818.8	817.2	818.6
7.5°	819.8	819.2	818.6	818.1	817.4	816.0	813.8	811.6	809.4	807.2	808.1
10°	812.7	812.0	811.3	810.6	809.9	808.3	805.8	803.2	800.6	798.1	798.7
12.5°	803.6	802.7	801.9	801.1	800.3	798.4	795.4	792.4	789.5	786.4	786.8
15°	788.0	786.7	785.5	784.2	782.9	780.5	777.0	773.5	769.9	766.4	766.1
17.5°	769.1	767.2	765.4	763.5	761.7	758.7	754.5	750.2	746.0	741.8	741.0
20°	754.3	752.5	750.6	748.9	747.0	743.7	738.9	734.1	729.3	724.6	723.4
22.5°	738.1	736.1	734.0	731.9	729.9	726.3	721.1	716.0	710.9	705.7	704.0
25°	712.5	710.0	707.4	704.8	702.3	698.1	692.4	686.6	680.8	675.1	672.6
27.5°	685.6	682.4	679.2	676.0	672.8	668.1	661.9	655.8	649.6	643.4	640.5
30°	666.8	663.2	659.7	656.2	652.7	647.6	641.0	634.4	627.7	621.1	617.6
32.5°	647.0	643.0	639.0	635.0	631.1	625.7	618.8	612.0	605.1	598.3	594.2
35°	616.0	611.6	607.0	602.5	598.0	592.2	585.1	578.1	571.0	564.0	559.2
37.5°	582.9	578.3	573.6	569.0	564.3	558.1	550.2	542.4	534.7	526.8	521.5
40°	559.5	554.9	550.2	545.6	541.0	534.6	526.6	518.5	510.5	502.5	496.5
42.5°	537.2	532.4	527.5	522.6	517.7	511.1	502.7	494.3	486.0	477.6	471.6
45°	502.5	497.3	492.0	486.8	481.6	474.7	466.3	457.9	449.4	440.9	434.0
47.5°	466.6	461.2	455.8	450.4	445.0	437.9	429.1	420.4	411.6	402.8	395.6
50°	442.2	436.7	431.2	425.7	420.2	412.9	403.9	394.9	385.9	376.8	369.8
52.5°	417.4	412.0	406.6	401.2	395.7	388.5	379.2	370.0	360.7	351.5	344.3
55°	380.7	375.0	369.4	363.7	358.1	350.7	341.5	332.4	323.2	314.1	306.7
57.5°	344.4	338.5	332.6	326.8	320.9	313.5	304.4	295.4	286.4	277.4	269.9
60°	318.5	312.8	307.2	301.6	296.0	288.6	279.6	270.5	261.5	252.5	245.2
62.5°	295.1	289.3	283.4	277.5	271.7	264.2	254.9	245.6	236.4	227.1	220.4
65°	258.9	252.8	246.7	240.7	234.6	227.1	218.0	209.0	200.0	190.9	184.9
67.5°	221.2	215.3	209.5	203.7	198.0	190.9	182.5	174.1	165.8	157.4	152.1
70°	197.3	191.4	185.5	179.5	173.7	166.6	158.6	150.6	142.5	134.5	129.9
72.5°	171.9	166.6	161.2	155.9	150.5	144.1	136.5	128.9	121.2	113.7	109.7
75°	137.7	132.5	127.3	122.1	116.8	110.9	104.3	97.6	91.0	84.4	81.1
77.5°	102.9	98.5	94.1	89.6	85.2	80.3	74.9	69.6	64.2	58.9	57.0
80°	80.6	76.5	72.4	68.3	64.2	60.1	55.8	51.6	47.4	43.1	42.7
82.5°	61.3	57.6	53.8	50.1	46.3	43.2	40.8	38.3	36.0	33.5	33.2
85°	34.2	31.5	28.6	25.8	23.0	21.4	21.0	20.5	20.1	19.6	19.4
87.5°	11.8	11.3	10.8	10.1	9.4	8.9	9.7	9.6	9.8	10.0	9.8
90°	0.8	2.4	4.9	5.7	6.5	6.5	11.4	11.4	13.0	14.7	13.9
92.5°	9.3	13.5	21.2	31.1	43.0	59.9	101.3	164.4	225.9	258.2	215.1
95°	26.8	29.3	37.4	48.0	67.6	101.7	172.5	306.1	500.6	663.3	682.1
97.5°	48.2	48.2	55.2	65.0	81.7	110.4	164.9	275.1	468.5	698.6	856.9
100°	61.9	61.9	67.6	77.3	92.8	118.9	166.9	258.9	424.9	654.4	862.7
102.5°	74.8	76.1	81.2	90.3	105.2	129.9	173.3	254.3	395.6	599.1	813.9
105°	95.2	97.7	101.7	111.5	126.1	149.8	188.8	256.4	370.3	533.9	725.2
107.5°	117.7	119.4	123.4	133.8	147.8	171.0	206.9	268.4	365.7	497.5	653.5
110°	132.6	134.3	138.4	148.1	162.8	184.7	220.5	277.5	367.0	485.1	617.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.0	148.6	153.4	162.5	177.1	199.1	233.6	287.3	371.0	479.2	597.6
115°	167.7	170.1	175.8	183.9	199.4	221.4	254.0	302.8	378.5	476.1	578.7
117.5°	189.1	191.4	196.5	205.5	219.9	242.7	273.6	318.5	386.5	475.3	570.2
120°	203.5	205.1	210.8	219.7	233.6	256.4	287.3	329.6	392.3	475.3	565.7
122.5°	216.5	218.1	223.8	232.1	247.3	269.4	300.4	340.1	398.2	474.7	560.4
125°	233.6	236.8	241.7	250.7	266.1	288.9	318.2	355.7	407.0	473.7	551.9
127.5°	248.7	251.4	257.2	267.4	283.6	306.6	334.8	369.2	413.9	471.9	540.3
130°	257.2	260.5	266.9	279.2	294.6	318.2	345.9	377.6	419.1	471.2	533.1
132.5°	265.6	268.2	276.7	288.3	305.1	327.3	355.1	386.1	423.7	470.6	526.6
135°	277.5	280.8	288.9	302.8	319.8	341.0	367.9	397.2	430.6	469.6	516.8
137.5°	289.4	292.5	301.5	314.6	332.4	352.6	377.6	405.0	434.6	469.4	508.3
140°	297.9	300.4	309.3	323.1	340.2	359.8	384.2	410.2	437.9	468.8	503.9
142.5°	307.0	309.5	317.7	330.9	347.4	366.2	390.0	414.1	440.5	468.8	499.9
145°	319.8	322.3	330.4	341.9	357.3	375.2	396.4	418.3	442.0	467.2	493.3
147.5°	334.4	335.2	342.3	354.1	366.9	383.0	402.9	422.1	442.8	464.2	487.2
150°	343.5	344.3	350.8	360.6	372.8	388.2	406.2	424.0	442.8	462.3	482.7
152.5°	352.0	352.1	358.7	367.7	378.6	392.8	408.8	425.3	441.5	459.0	477.4
155°	363.8	364.6	369.5	377.6	386.6	398.8	412.6	426.5	439.5	454.2	469.6
157.5°	375.4	375.4	379.9	386.3	394.1	403.7	415.4	426.5	437.4	449.1	461.6
160°	382.5	382.5	385.8	391.5	398.0	407.0	416.7	426.5	435.5	445.2	455.8
162.5°	389.1	388.4	391.0	396.1	401.9	409.0	418.0	426.5	433.5	441.3	450.6
165°	396.4	396.4	398.0	402.1	406.2	411.0	418.3	424.9	429.7	435.5	442.0
167.5°	403.7	402.9	403.7	406.8	409.1	412.8	418.2	422.9	425.8	429.6	434.1
170°	407.0	406.2	407.0	409.4	411.0	413.4	417.5	421.6	423.2	425.7	428.9
172.5°	410.2	409.4	409.5	411.3	412.3	414.1	416.9	420.3	420.6	421.8	424.4
175°	413.4	412.6	412.6	413.4	414.3	414.3	415.9	418.3	417.5	417.5	419.1
177.5°	414.9	414.3	413.6	414.3	414.3	414.3	414.9	416.2	414.9	414.9	415.6
180°	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	825.5	826.7	827.9	828.5	828.4	828.3	828.2	828.1
5°	819.9	821.4	822.8	823.4	823.0	822.8	822.5	822.2
7.5°	809.0	809.9	810.9	811.1	810.7	810.2	809.8	809.3
10°	799.2	799.8	800.4	800.4	799.8	799.2	798.7	798.1
12.5°	787.1	787.4	787.8	787.6	786.8	786.0	785.2	784.4
15°	765.8	765.6	765.2	764.7	763.6	762.6	761.7	760.7
17.5°	740.2	739.4	738.6	737.4	736.0	734.5	733.0	731.5
20°	722.3	721.1	720.0	718.5	716.7	714.9	713.1	711.2
22.5°	702.4	700.7	699.0	697.4	695.9	694.4	692.9	691.4
25°	670.3	667.8	665.4	663.6	662.1	660.7	659.3	657.9
27.5°	637.5	634.5	631.6	629.1	627.0	625.0	623.1	621.0
30°	614.1	610.5	607.0	604.1	601.9	599.6	597.4	595.1
32.5°	590.1	586.0	581.9	578.8	576.7	574.5	572.3	570.2
35°	554.4	549.6	544.9	541.2	538.7	536.1	533.5	531.0
37.5°	516.1	510.8	505.4	501.5	498.9	496.4	493.8	491.3
40°	490.6	484.7	478.7	474.6	472.0	469.4	466.9	464.4
42.5°	465.5	459.5	453.5	449.1	446.5	443.8	441.2	438.5
45°	427.1	420.2	413.3	408.5	406.0	403.5	401.0	398.4
47.5°	388.4	381.2	374.1	369.1	366.3	363.5	360.8	357.9
50°	362.7	355.7	348.6	343.8	341.1	338.4	335.7	333.0
52.5°	337.1	330.0	322.9	317.9	315.0	312.3	309.5	306.7
55°	299.4	292.0	284.7	279.7	277.0	274.3	271.7	269.0
57.5°	262.4	255.0	247.6	242.9	240.8	238.8	236.8	234.7
60°	237.8	230.5	223.1	218.4	216.1	213.9	211.7	209.4
62.5°	213.6	206.8	200.1	195.8	194.0	192.2	190.4	188.6
65°	178.9	172.8	166.7	162.8	161.2	159.5	157.8	156.0
67.5°	146.9	141.7	136.5	133.0	131.1	129.2	127.3	125.5
70°	125.2	120.6	115.9	112.8	111.5	110.1	108.6	107.2
72.5°	105.7	101.7	97.8	95.1	93.8	92.5	91.2	89.9
75°	77.9	74.7	71.4	69.4	68.5	67.7	66.9	66.0
77.5°	55.1	53.2	51.3	50.2	50.0	49.7	49.5	49.2
80°	42.3	41.9	41.4	41.2	41.0	40.8	40.8	40.6
82.5°	32.9	32.5	32.3	32.0	31.9	31.7	31.6	31.5
85°	19.1	18.8	18.5	18.4	18.4	18.4	18.4	18.4
87.5°	9.8	9.9	9.9	9.9	10.2	10.4	10.4	10.5
90°	14.7	15.5	16.3	16.3	17.1	17.9	17.1	17.1
92.5°	159.9	120.3	95.7	79.4	69.9	65.5	62.7	62.7
95°	603.1	477.0	367.9	288.9	249.1	223.8	209.2	198.6
97.5°	891.1	844.2	764.6	679.6	621.2	572.2	547.8	530.8
100°	981.6	997.8	958.0	897.7	827.0	777.3	752.8	746.4
102.5°	977.1	1057.8	1069.3	1044.2	1000.8	964.8	939.1	933.9
105°	911.6	1052.4	1132.9	1166.4	1168.0	1161.5	1150.1	1145.2
107.5°	818.6	968.6	1082.1	1154.6	1194.8	1213.4	1221.6	1223.7
110°	762.6	903.4	1021.5	1111.0	1168.8	1203.0	1217.6	1225.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	721.6	846.1	957.7	1047.2	1112.8	1154.1	1174.7	1186.5
115°	680.4	780.6	875.8	953.9	1018.2	1067.1	1093.1	1099.6
117.5°	660.2	743.1	818.0	884.3	939.1	980.2	1006.5	1011.5
120°	651.1	726.8	792.0	849.7	896.1	932.0	953.1	962.1
122.5°	643.4	716.4	775.7	826.3	865.5	896.1	914.0	923.0
125°	630.0	699.9	756.1	800.9	833.5	857.0	872.5	877.4
127.5°	613.7	680.6	736.6	779.1	811.8	832.8	845.8	850.7
130°	600.7	665.0	720.3	763.4	796.8	817.2	830.2	835.1
132.5°	587.0	647.4	701.4	744.6	777.3	800.2	812.6	817.5
135°	568.1	621.0	670.7	711.3	744.0	766.7	779.8	784.6
137.5°	551.1	595.8	637.6	674.4	704.8	727.3	738.1	744.0
140°	541.3	579.5	616.1	650.3	678.8	696.8	708.1	714.6
142.5°	532.1	565.8	597.3	626.9	652.1	668.7	678.8	683.4
145°	519.3	547.0	571.4	594.2	614.5	628.4	636.5	640.6
147.5°	508.7	530.7	550.2	568.1	583.1	595.0	601.2	602.6
150°	502.2	520.9	537.2	551.9	564.8	575.4	580.3	581.1
152.5°	495.0	511.1	526.1	538.2	549.3	557.8	560.8	561.6
155°	484.3	497.3	509.5	519.3	527.4	533.9	536.4	536.4
157.5°	472.7	483.6	493.9	501.7	507.8	512.7	514.2	514.2
160°	465.5	474.5	483.5	490.0	494.9	499.8	500.6	500.6
162.5°	458.4	466.0	473.0	478.9	482.5	487.4	488.2	487.5
165°	448.5	453.4	459.0	463.1	466.4	469.6	468.8	468.0
167.5°	438.9	442.6	447.2	449.6	451.3	453.4	453.2	452.6
170°	433.0	435.5	438.7	441.2	442.8	443.6	442.8	442.8
172.5°	427.8	429.6	431.5	433.3	434.3	435.1	434.3	433.0
175°	420.8	421.6	423.2	423.2	423.2	424.9	423.2	421.6
177.5°	416.2	416.9	416.9	417.5	416.9	417.5	416.2	414.9
180°	414.3	414.3	414.3	414.3	414.3	414.3	414.3	414.3

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