

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: P332558

Luminaire Tested: **S124DIP-S575D810U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332558
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D810U835-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

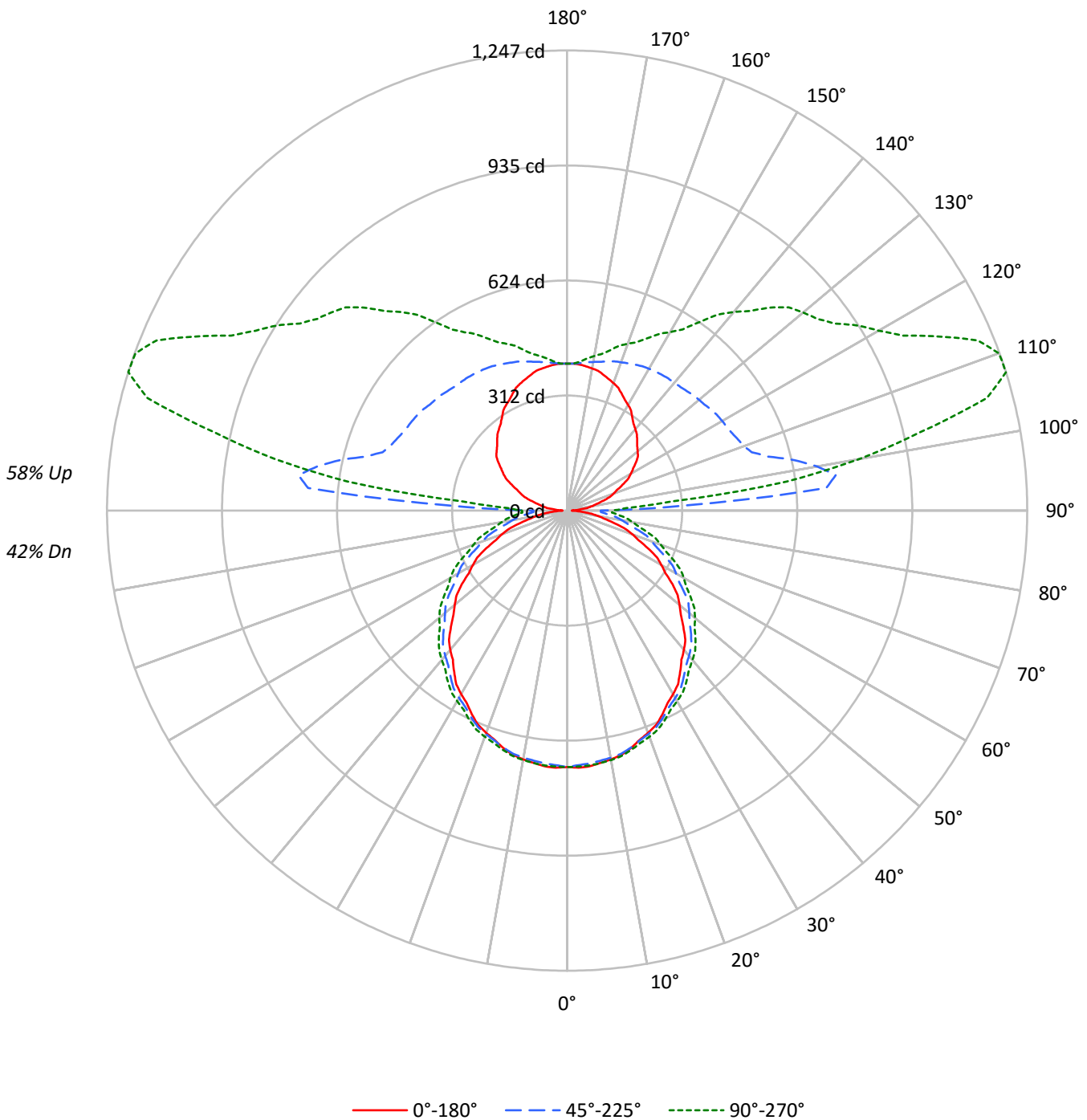
Lumens per Lamp: N/A
Luminaire Lumens: 5265.6 lumens
Efficiency: N/A
Efficacy: 137.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 38.4
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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42				
1	95	90	86	83	86	82	79	76	68	65	63	54	52	51	41	40	39	33				
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	32	27				
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23				
4	72	60	52	46	65	55	48	43	46	40	36	36	33	29	28	25	23	19				
5	66	54	45	39	59	49	42	36	41	35	31	33	29	25	25	22	20	16				
6	60	48	40	34	55	44	37	31	36	31	27	29	25	22	23	20	17	14				
7	56	43	35	30	50	40	33	27	33	27	23	27	22	19	21	18	15	13				
8	52	39	31	26	47	36	29	24	30	24	21	24	20	17	19	16	14	11				
9	48	36	28	23	44	33	26	21	27	22	18	22	18	15	17	14	12	10				
10	45	33	25	21	41	30	24	19	25	20	16	21	17	14	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	1.2
10°-20°	188.5	3.6
20°-30°	285.1	5.4
30°-40°	344.9	6.6
40°-50°	364.7	6.9
50°-60°	343.2	6.5
60°-70°	284.7	5.4
70°-80°	200.0	3.8
80°-90°	115.3	2.2
90°-100°	354.6	6.7
100°-110°	648.0	12.3
110°-120°	569.2	10.8
120°-130°	469.6	8.9
130°-140°	384.0	7.3
140°-150°	288.8	5.5
150°-160°	201.8	3.8
160°-170°	118.7	2.3
170°-180°	38.6	0.7
0°-30°	539.4	10.2
0°-40°	884.4	16.8
0°-60°	1592.2	30.2
0°-90°	2192.2	41.6
90°-120°	1571.8	29.9
90°-150°	2714.2	51.5
90°-180°	3073.0	58.4
0°-180°	5265.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	13	50	91	114	122	10
95°	36	117	705	403	286	37
105°	98	156	564	1175	1177	105
115°	166	215	494	932	1116	165
125°	228	270	477	784	884	203
135°	268	319	458	683	778	208
145°	308	352	449	564	623	193
155°	350	377	436	494	515	161
165°	381	393	418	443	450	107
175°	397	398	401	407	405	38
180°	398	398	398	398	398	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.2	30.6	38.1	45.3	52.5	59.8	68.3	75.9	83.8	91.7	96.5
90°	13.2	21.7	31.0	38.7	46.4	53.6	65.7	73.1	82.1	91.1	95.3
92.5°	20.7	31.0	44.6	60.4	78.0	101.1	148.3	216.4	282.9	321.3	284.8
95°	35.9	44.0	57.5	73.4	97.8	137.1	212.2	347.5	541.5	705.0	727.6
97.5°	55.5	60.4	72.0	86.3	107.3	140.8	200.2	313.1	505.9	734.1	890.6
100°	68.0	72.5	82.5	96.3	115.7	146.3	199.2	294.3	460.6	687.8	892.6
102.5°	80.5	85.7	94.5	107.2	125.4	154.4	202.8	287.1	429.4	631.5	842.5
105°	98.5	104.3	111.7	124.5	142.0	169.6	213.6	284.9	400.7	564.3	752.4
107.5°	119.9	124.3	131.1	143.9	160.2	187.0	227.5	292.6	392.2	524.8	679.0
110°	133.7	137.7	144.0	155.8	172.3	197.6	238.1	298.9	390.9	510.4	641.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.8	150.5	157.2	168.1	184.3	209.4	248.3	305.7	391.9	501.6	619.2
115°	165.7	169.6	176.7	186.1	202.5	227.1	263.9	316.4	394.6	494.0	596.3
117.5°	186.2	189.4	195.1	204.7	219.5	244.5	279.3	327.6	398.0	488.5	583.3
120°	199.4	201.5	207.4	216.6	230.4	255.0	289.8	335.4	400.7	485.4	575.7
122.5°	211.9	213.5	219.1	227.2	241.9	265.5	300.0	342.9	403.5	481.7	567.6
125°	227.5	230.5	235.0	243.4	258.1	282.1	314.6	354.8	408.4	476.9	555.2
127.5°	241.9	244.2	249.7	259.4	274.7	298.3	328.8	365.2	411.5	470.5	539.3
130°	249.4	252.4	258.5	270.0	284.7	308.7	338.0	371.3	413.9	466.7	529.3
132.5°	257.6	259.9	267.8	278.8	294.7	317.2	346.0	378.0	416.4	463.6	520.4
135°	268.2	271.3	279.1	292.4	308.9	329.8	356.8	386.2	419.4	458.2	506.3
137.5°	279.6	282.4	290.8	303.3	320.2	339.8	364.5	391.3	420.4	454.4	494.3
140°	287.7	289.9	298.3	311.5	327.7	346.5	370.1	395.3	422.1	451.9	487.8
142.5°	295.9	298.2	306.1	318.8	334.5	352.6	375.3	398.4	423.6	450.7	482.5
145°	308.1	310.2	317.9	328.7	343.4	360.5	380.8	401.9	424.6	448.8	474.9
147.5°	322.0	322.6	329.3	340.4	352.6	368.0	387.1	405.5	425.4	446.0	468.2
150°	330.7	331.4	337.4	346.7	358.2	373.0	390.2	407.4	425.4	444.1	463.7
152.5°	338.3	338.4	344.6	353.3	363.8	377.4	392.7	408.6	424.1	441.0	458.7
155°	349.5	350.3	355.0	362.8	371.4	383.1	396.4	409.7	422.2	436.3	451.2
157.5°	360.6	360.6	365.0	371.1	378.6	387.8	399.1	409.7	420.2	431.5	443.5
160°	367.5	367.5	370.6	376.1	382.4	391.0	400.3	409.7	418.3	427.7	437.9
162.5°	373.8	373.1	375.6	380.5	386.1	392.8	401.6	409.7	416.5	424.0	432.9
165°	380.8	380.8	382.4	386.3	390.2	394.9	401.9	408.2	412.9	418.3	424.6
167.5°	387.8	387.1	387.8	390.8	393.0	396.6	401.8	406.3	409.1	412.7	417.1
170°	391.0	390.2	391.0	393.3	394.9	397.2	401.1	405.0	406.6	408.9	412.1
172.5°	394.1	393.3	393.5	395.2	396.1	397.8	400.5	403.8	404.1	405.2	407.7
175°	397.2	396.4	396.4	397.2	398.0	398.0	399.6	401.9	401.1	401.1	402.7
177.5°	398.6	398.0	397.4	398.0	398.0	398.0	398.6	399.9	398.6	398.6	399.2
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	101.7	106.9	112.1	115.3	117.0	118.7	120.0	121.6
90°	101.1	106.9	112.7	115.9	118.1	120.3	120.9	122.2
92.5°	236.6	203.5	184.8	172.3	164.4	161.6	160.3	161.7
95°	656.4	539.9	439.8	367.1	330.3	307.6	295.1	286.5
97.5°	928.0	887.5	815.5	736.9	682.3	636.7	614.7	599.9
100°	1011.5	1031.8	998.1	943.2	876.4	829.9	807.7	802.6
102.5°	1003.7	1085.8	1101.4	1080.3	1039.9	1006.7	983.3	979.7
105°	935.8	1075.4	1157.1	1192.0	1194.9	1190.1	1180.5	1177.2
107.5°	841.8	990.1	1103.3	1175.8	1215.7	1234.8	1243.9	1247.1
110°	785.0	924.2	1041.6	1130.3	1187.2	1221.4	1236.9	1245.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	742.2	865.6	976.6	1065.2	1129.6	1170.7	1191.8	1204.6
115°	697.9	797.9	893.1	970.7	1033.7	1081.8	1108.1	1115.5
117.5°	673.4	756.6	832.1	898.3	952.3	993.1	1019.9	1026.1
120°	661.2	737.4	803.4	861.4	907.3	943.1	964.8	974.8
122.5°	650.6	724.3	784.7	835.7	874.6	905.3	923.7	933.5
125°	633.6	704.1	761.3	806.5	838.8	862.5	878.4	884.2
127.5°	612.9	680.3	737.2	780.2	812.8	834.1	847.8	853.7
130°	597.3	662.2	718.5	762.0	795.1	815.7	829.2	834.9
132.5°	581.4	642.4	697.3	740.7	773.2	796.3	809.2	814.9
135°	558.3	611.9	662.4	703.4	735.7	758.6	772.2	777.9
137.5°	537.8	583.4	626.1	663.1	693.2	715.7	726.9	733.4
140°	526.0	565.0	602.5	636.9	665.1	683.2	695.0	702.1
142.5°	515.5	549.8	582.0	611.8	636.7	653.4	663.8	669.0
145°	500.9	528.6	553.1	575.8	596.1	610.0	618.6	623.2
147.5°	489.0	510.2	529.1	546.7	561.6	573.6	580.1	582.0
150°	482.4	500.4	516.1	530.1	542.7	552.8	557.5	558.3
152.5°	475.6	491.0	505.4	517.0	527.6	535.9	538.7	539.5
155°	465.2	477.8	489.5	498.9	506.7	512.9	515.3	515.3
157.5°	454.1	464.6	474.5	482.0	487.9	492.6	494.0	494.0
160°	447.3	455.9	464.5	470.7	475.4	480.1	480.9	480.9
162.5°	440.4	447.7	454.5	460.1	463.5	468.2	469.0	468.4
165°	430.8	435.5	441.0	444.9	448.0	451.2	450.4	449.6
167.5°	421.6	425.2	429.6	431.9	433.5	435.5	435.4	434.7
170°	416.0	418.3	421.5	423.8	425.4	426.1	425.4	425.4
172.5°	411.0	412.7	414.6	416.3	417.2	418.0	417.2	416.0
175°	404.3	405.0	406.6	406.6	406.6	408.2	406.6	405.0
177.5°	399.9	400.5	400.5	401.1	400.5	401.1	399.9	398.6
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0

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