

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: P332549

Luminaire Tested: **SA4XXDIP-C575D590U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332549  
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: SA4XXDIP-C575D590U835-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

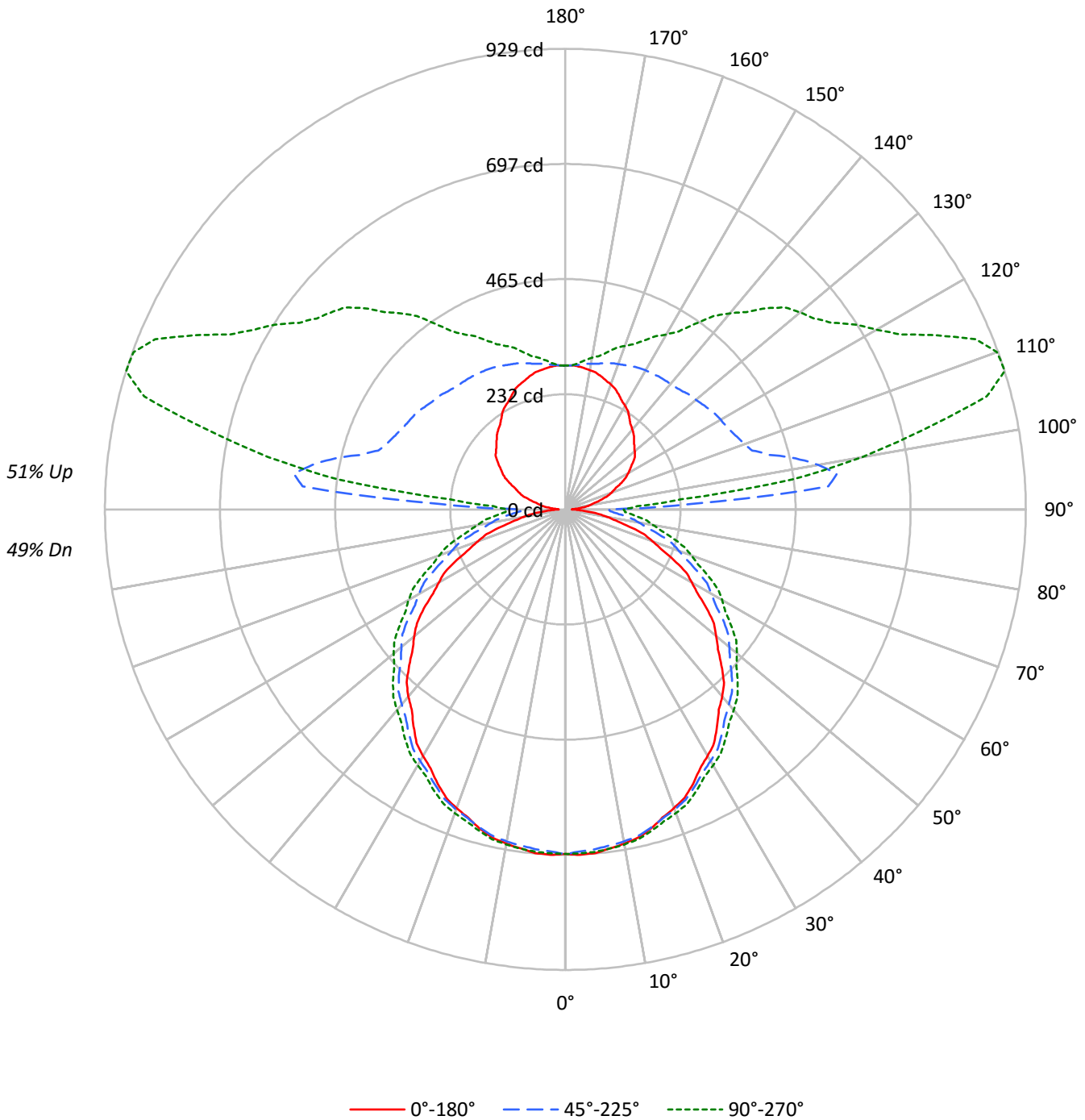
Lumens per Lamp: N/A  
Luminaire Lumens: 4482.1 lumens  
Efficiency: N/A  
Efficacy: 136.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 32.8  
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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	22
5	67	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

**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	1.5
10°-20°	188.5	4.2
20°-30°	285.1	6.4
30°-40°	344.9	7.7
40°-50°	364.7	8.1
50°-60°	343.2	7.7
60°-70°	284.7	6.4
70°-80°	200.0	4.5
80°-90°	114.7	2.6
90°-100°	276.9	6.2
100°-110°	486.2	10.8
110°-120°	424.3	9.5
120°-130°	347.7	7.8
130°-140°	282.3	6.3
140°-150°	211.1	4.7
150°-160°	147.3	3.3
160°-170°	86.6	1.9
170°-180°	28.2	0.6
0°-30°	539.4	12.0
0°-40°	884.4	19.7
0°-60°	1592.2	35.5
0°-90°	2191.6	48.9
90°-120°	1187.3	26.5
90°-150°	2028.5	45.3
90°-180°	2291.0	51.1
0°-180°	4482.1	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	48	87	110	118	9
95°	29	95	533	318	235	29
105°	74	120	426	876	880	79
115°	122	160	370	694	830	121
125°	167	198	354	582	656	149
135°	196	233	336	503	574	152
145°	225	257	327	413	457	141
155°	255	275	318	360	376	118
165°	278	286	305	323	328	78
175°	290	290	293	297	296	27
180°	290	290	290	290	290	



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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°	23.1	30.4	37.8	45.0	52.2	59.5	67.7	75.3	83.1	90.9	95.8
90°	13.0	21.1	29.7	37.2	44.7	51.9	62.7	70.2	78.7	87.3	91.8
92.5°	18.3	27.5	39.1	52.3	66.8	85.5	122.0	173.7	224.2	254.2	228.9
95°	28.9	36.4	47.8	60.9	80.3	110.6	167.4	268.0	411.4	532.6	550.4
97.5°	43.0	47.9	57.7	69.4	86.1	112.1	157.4	241.6	384.2	552.5	668.0
100°	51.9	56.4	64.9	76.2	91.6	115.4	155.8	227.1	350.2	517.8	668.5
102.5°	61.0	65.9	73.4	83.7	98.0	120.6	157.7	221.0	326.7	475.9	631.0
105°	73.7	78.9	85.2	95.5	109.3	130.7	164.5	218.3	304.5	425.6	564.0
107.5°	89.3	93.3	99.0	109.1	121.8	142.5	173.7	222.9	297.2	395.5	509.2
110°	99.2	102.8	108.0	117.3	130.0	149.6	180.8	226.8	295.6	384.3	481.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	108.6	111.9	117.4	125.9	138.3	157.7	187.6	231.1	295.5	377.1	463.9
115°	122.2	125.4	131.0	138.3	150.7	169.6	198.0	237.7	296.3	370.3	446.0
117.5°	137.1	139.6	144.1	151.3	162.4	181.4	208.2	244.9	297.6	365.0	435.2
120°	146.5	148.2	152.7	159.5	169.7	188.4	215.1	249.8	298.7	361.9	428.7
122.5°	155.6	156.9	161.0	166.9	177.6	195.5	222.0	254.5	300.0	358.4	421.9
125°	166.8	168.9	172.2	178.3	189.0	207.0	231.9	262.4	302.7	353.8	411.8
127.5°	177.3	178.9	182.9	189.9	201.0	218.7	241.8	269.2	303.9	347.9	398.9
130°	182.6	184.7	189.1	197.5	208.1	226.0	248.1	273.2	305.0	344.3	390.8
132.5°	188.5	190.2	195.9	203.9	215.4	232.1	253.7	277.7	306.3	341.4	383.6
135°	196.1	198.4	204.1	213.8	225.7	241.2	261.2	283.0	307.6	336.2	372.0
137.5°	204.4	206.4	212.5	221.6	233.8	248.2	266.3	286.1	307.5	332.5	362.3
140°	210.3	211.9	218.0	227.5	239.3	253.0	270.3	288.7	308.3	330.1	356.9
142.5°	216.1	217.8	223.6	232.8	244.3	257.4	274.0	290.8	309.1	328.9	352.7
145°	225.0	226.5	232.0	239.8	250.5	263.0	277.8	293.2	309.8	327.4	346.7
147.5°	235.1	235.5	240.4	248.4	257.2	268.5	282.4	295.8	310.3	325.4	341.6
150°	241.5	241.9	246.3	253.0	261.4	272.1	284.7	297.2	310.3	324.0	338.3
152.5°	246.8	246.9	251.4	257.8	265.4	275.3	286.5	298.1	309.4	321.7	334.6
155°	255.0	255.6	259.0	264.7	271.0	279.5	289.2	298.9	308.0	318.3	329.1
157.5°	263.1	263.1	266.3	270.7	276.2	282.9	291.2	298.9	306.6	314.8	323.6
160°	268.1	268.1	270.4	274.4	278.9	285.2	292.1	298.9	305.2	312.0	319.5
162.5°	272.7	272.2	274.0	277.6	281.7	286.6	293.0	298.9	303.8	309.3	315.8
165°	277.8	277.8	278.9	281.8	284.7	288.1	293.2	297.8	301.2	305.2	309.8
167.5°	282.9	282.4	282.9	285.1	286.7	289.3	293.1	296.4	298.5	301.1	304.3
170°	285.2	284.7	285.2	286.9	288.1	289.8	292.6	295.5	296.6	298.3	300.6
172.5°	287.5	286.9	287.0	288.3	289.0	290.2	292.2	294.6	294.8	295.6	297.4
175°	289.8	289.2	289.2	289.8	290.4	290.4	291.5	293.2	292.6	292.6	293.8
177.5°	290.8	290.4	289.9	290.4	290.4	290.4	290.8	291.7	290.8	290.8	291.3
180°	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4



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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°	100.9	106.1	111.2	114.5	116.1	117.7	119.2	120.7
90°	97.3	102.9	108.5	111.7	113.7	115.6	116.4	117.8
92.5°	195.1	172.2	159.9	151.6	146.3	144.6	144.0	145.4
95°	499.7	416.0	344.2	292.0	265.6	249.5	240.8	234.9
97.5°	696.5	668.1	616.9	560.3	520.9	488.0	472.4	462.0
100°	756.4	772.5	749.2	710.0	661.5	628.0	612.1	608.7
102.5°	749.9	811.0	823.6	809.0	779.9	756.0	739.3	737.0
105°	698.9	801.9	862.7	889.0	891.5	888.3	881.7	879.7
107.5°	629.1	738.4	822.2	875.8	905.3	919.5	926.5	929.2
110°	586.8	689.5	776.2	841.6	883.5	908.8	920.5	927.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	554.7	645.8	727.8	793.1	840.5	870.9	886.6	896.3
115°	521.1	595.0	665.6	722.9	769.1	804.6	824.0	829.8
117.5°	501.8	563.5	619.6	668.5	708.3	738.5	758.3	763.3
120°	492.1	548.6	597.7	640.6	674.5	701.0	717.2	724.9
122.5°	483.5	538.2	583.2	621.0	649.7	672.4	686.2	693.7
125°	469.9	522.2	564.9	598.4	622.3	639.9	651.7	656.2
127.5°	453.5	503.5	545.8	577.7	601.9	617.7	628.1	632.7
130°	441.2	489.4	531.3	563.6	588.0	603.3	613.5	618.0
132.5°	428.9	474.2	515.0	547.3	571.2	588.4	598.1	602.5
135°	410.7	450.6	488.1	518.5	542.4	559.4	569.6	574.0
137.5°	394.7	428.6	460.4	487.9	510.1	526.7	535.1	540.1
140°	385.4	414.5	442.4	467.9	488.7	502.1	511.0	516.4
142.5°	377.2	402.8	426.8	448.9	467.3	479.7	487.5	491.4
145°	366.0	386.5	404.6	421.4	436.4	446.8	453.2	456.7
147.5°	356.8	372.3	386.2	399.1	410.1	419.0	423.9	425.5
150°	352.0	365.1	376.5	386.8	395.9	403.3	406.7	407.3
152.5°	346.9	358.2	368.7	377.2	384.9	391.0	393.0	393.6
155°	339.4	348.5	357.1	363.9	369.7	374.2	375.9	375.9
157.5°	331.3	339.0	346.1	351.6	356.0	359.4	360.4	360.4
160°	326.3	332.6	338.8	343.4	346.8	350.3	350.8	350.8
162.5°	321.3	326.6	331.5	335.7	338.2	341.6	342.2	341.7
165°	314.3	317.7	321.7	324.6	326.9	329.1	328.6	328.0
167.5°	307.6	310.2	313.4	315.1	316.3	317.7	317.6	317.2
170°	303.5	305.2	307.5	309.2	310.3	310.9	310.3	310.3
172.5°	299.8	301.1	302.5	303.7	304.4	305.0	304.4	303.5
175°	294.9	295.5	296.6	296.6	296.6	297.8	296.6	295.5
177.5°	291.7	292.2	292.2	292.6	292.2	292.6	291.7	290.8
180°	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4

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