

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: P332898-830

Luminaire Tested: **S124RDIP-S575D365U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332898-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-S575D365U830-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3592.0 lumens  
Efficiency: N/A  
Efficacy: 130.6 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-Direct

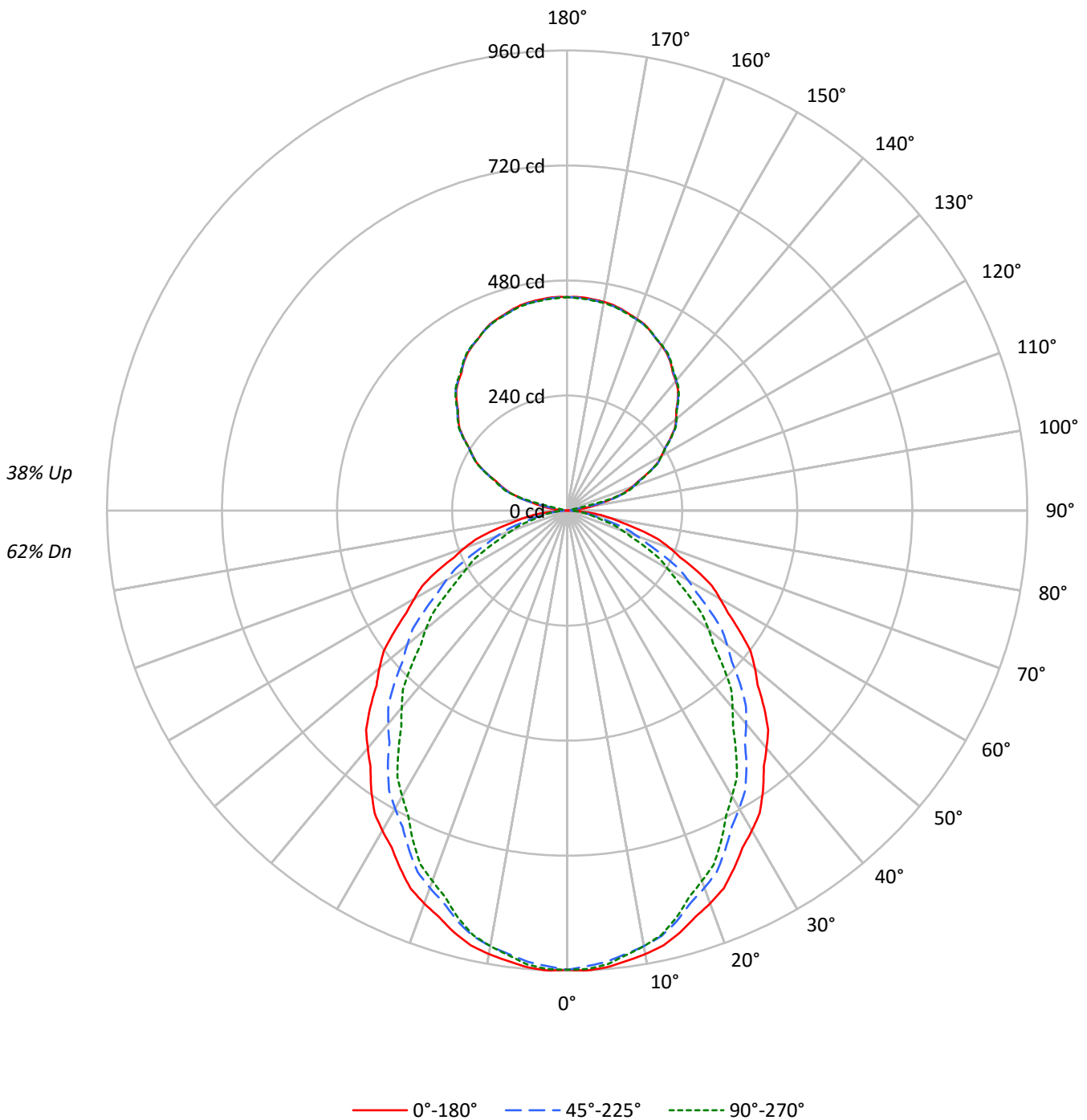
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	101	96	93	89	94	90	87	84	79	77	75	69	67	66	60	58	57	53
2	92	85	79	73	86	80	74	70	70	66	62	61	58	55	53	51	49	45
3	84	75	67	62	79	70	64	59	62	57	53	54	50	47	47	44	42	38
4	77	66	58	52	72	63	55	50	55	50	45	49	44	41	42	39	36	33
5	71	59	51	45	66	56	49	43	50	44	39	44	39	35	38	35	32	29
6	66	53	45	39	61	50	43	38	45	39	34	40	35	31	35	31	28	25
7	61	48	40	35	57	46	38	33	41	35	31	36	31	28	32	28	25	23
8	56	44	36	31	53	42	35	30	37	31	27	33	28	25	29	25	23	20
9	53	40	33	28	49	38	31	27	34	29	25	31	26	22	27	23	20	18
10	49	37	30	25	46	35	29	24	32	26	22	28	24	20	25	21	19	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.0	2.5
10°-20°	250.9	7.0
20°-30°	362.3	10.1
30°-40°	410.7	11.4
40°-50°	396.6	11.0
50°-60°	329.8	9.2
60°-70°	227.7	6.3
70°-80°	115.4	3.2
80°-90°	30.9	0.9
90°-100°	15.2	0.4
100°-110°	97.1	2.7
110°-120°	185.8	5.2
120°-130°	235.8	6.6
130°-140°	252.3	7.0
140°-150°	236.0	6.6
150°-160°	190.3	5.3
160°-170°	122.7	3.4
170°-180°	42.3	1.2
0°-30°	703.2	19.6
0°-40°	1113.9	31.0
0°-60°	1840.3	51.2
0°-90°	2214.4	61.6
90°-120°	298.1	8.3
90°-150°	1022.3	28.5
90°-180°	1378.0	38.4
0°-180°	3592.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	1	5	7	9	10	3
95°	18	8	7	9	10	24
105°	100	102	104	106	95	105
115°	187	188	188	188	188	184
125°	263	264	264	265	265	235
135°	326	326	327	328	329	251
145°	376	377	377	378	378	235
155°	413	413	412	413	412	190
165°	435	434	434	436	433	123
175°	445	444	444	446	443	42
180°	445	445	445	445	445	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	13.7	12.8	12.0	11.0	10.2	9.7	9.7	9.7	9.7	9.7	9.6
90°	1.0	1.8	2.6	3.5	4.2	5.0	5.6	6.1	6.7	7.4	7.7
92.5°	4.2	4.2	4.2	4.3	4.3	4.7	5.3	5.8	6.5	7.1	7.5
95°	18.3	15.8	13.3	10.7	8.3	7.1	7.1	7.2	7.3	7.4	7.7
97.5°	38.9	40.4	42.0	43.6	45.1	41.8	33.6	25.4	17.1	8.8	8.9
100°	54.7	56.0	57.3	58.6	59.9	55.5	45.3	35.1	24.9	14.7	13.4
102.5°	72.2	73.2	74.2	75.1	76.2	76.0	74.6	73.3	71.9	70.6	57.0
105°	100.3	100.7	101.1	101.6	102.1	102.5	102.8	103.2	103.6	104.0	104.6
107.5°	126.3	126.5	126.8	127.0	127.2	127.5	128.1	128.6	129.0	129.6	129.9
110°	143.9	144.1	144.3	144.6	144.8	145.2	145.5	146.0	146.5	146.9	147.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.0	161.4	161.7	162.1	162.6	162.9	163.1	163.2	163.4	163.7	163.6
115°	187.2	187.5	187.7	187.8	188.1	188.1	188.1	188.0	187.9	187.8	188.0
117.5°	210.8	211.1	211.4	211.8	212.1	212.3	212.4	212.6	212.7	212.9	212.9
120°	226.9	227.2	227.4	227.7	228.0	228.1	228.1	228.0	227.9	227.8	228.0
122.5°	241.8	242.0	242.1	242.3	242.5	242.6	242.7	242.8	242.9	243.1	243.1
125°	263.2	263.4	263.7	264.0	264.4	264.4	264.3	264.1	264.0	263.8	264.0
127.5°	283.4	283.5	283.5	283.6	283.7	283.9	284.3	284.6	284.9	285.3	285.2
130°	296.4	296.5	296.6	296.7	296.8	296.9	297.1	297.4	297.6	297.8	297.8
132.5°	308.5	308.6	308.7	308.9	309.0	309.2	309.4	309.7	310.0	310.3	310.4
135°	326.4	326.4	326.3	326.2	326.1	326.2	326.6	326.9	327.2	327.4	327.6
137.5°	342.3	342.4	342.4	342.4	342.5	342.7	343.0	343.3	343.7	343.9	344.1
140°	352.8	352.9	353.1	353.2	353.4	353.5	353.6	353.8	353.9	354.1	354.3
142.5°	362.1	362.3	362.6	362.9	363.2	363.4	363.4	363.5	363.6	363.7	363.8
145°	376.5	376.6	376.8	377.1	377.3	377.4	377.4	377.4	377.4	377.4	377.5
147.5°	387.8	388.2	388.6	389.1	389.5	389.6	389.6	389.5	389.4	389.4	389.4
150°	396.1	396.3	396.6	397.0	397.3	397.4	397.3	397.2	397.1	397.1	397.1
152.5°	403.0	403.2	403.5	403.7	404.0	404.0	403.9	403.7	403.6	403.5	403.6
155°	412.7	412.8	412.8	412.9	413.0	412.9	412.7	412.5	412.3	412.1	412.4
157.5°	420.9	420.8	420.8	420.8	420.8	420.6	420.4	420.1	419.8	419.6	420.0
160°	425.7	425.5	425.3	425.1	424.8	424.7	424.6	424.5	424.4	424.3	424.8
162.5°	430.0	429.7	429.4	429.1	428.9	428.7	428.6	428.5	428.5	428.4	428.9
165°	435.4	435.0	434.6	434.2	433.9	433.7	433.7	433.7	433.7	433.7	434.3
167.5°	439.6	439.2	438.8	438.5	438.1	437.9	437.8	437.8	437.7	437.7	438.4
170°	442.1	441.6	441.1	440.7	440.3	440.1	440.2	440.3	440.3	440.4	440.9
172.5°	443.7	443.2	442.7	442.3	441.9	441.7	441.8	441.9	441.9	442.0	442.5
175°	445.4	444.9	444.5	444.0	443.6	443.4	443.5	443.6	443.7	443.7	444.4
177.5°	446.2	445.7	445.4	444.9	444.5	444.3	444.5	444.6	444.7	444.8	445.4
180°	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	9.6	9.5	9.5	9.6	9.7	9.9	10.1	10.2
90°	8.2	8.7	9.1	9.4	9.5	9.7	9.8	10.0
92.5°	7.9	8.4	8.9	9.0	9.1	9.1	9.1	9.2
95°	8.2	8.7	9.1	9.3	9.4	9.5	9.6	9.6
97.5°	8.9	9.0	9.0	9.0	9.1	9.1	9.2	9.3
100°	12.2	10.8	9.6	9.0	9.1	9.1	9.2	9.3
102.5°	43.5	29.9	16.3	9.5	9.5	9.5	9.6	9.6
105°	105.3	105.9	106.6	105.6	102.9	100.3	97.6	94.9
107.5°	130.3	130.5	130.9	131.2	131.5	131.8	132.1	132.3
110°	147.2	147.3	147.5	147.7	147.9	148.2	148.4	148.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	163.6	163.6	163.5	163.7	164.0	164.3	164.6	164.9
115°	188.1	188.3	188.5	188.5	188.5	188.5	188.5	188.5
117.5°	212.8	212.8	212.8	212.7	212.7	212.7	212.7	212.6
120°	228.1	228.3	228.5	228.5	228.3	228.1	228.0	227.8
122.5°	243.2	243.3	243.4	243.4	243.2	243.1	242.9	242.8
125°	264.3	264.5	264.7	264.9	264.9	265.0	265.0	265.1
127.5°	285.2	285.1	285.1	285.0	285.0	284.9	284.8	284.8
130°	297.9	298.0	298.1	298.1	298.1	298.1	298.1	298.1
132.5°	310.5	310.6	310.7	310.7	310.6	310.5	310.5	310.4
135°	327.7	327.9	328.0	328.2	328.3	328.5	328.7	328.8
137.5°	344.3	344.5	344.6	344.7	344.6	344.6	344.5	344.5
140°	354.5	354.8	355.0	355.2	355.2	355.2	355.3	355.4
142.5°	364.0	364.2	364.3	364.4	364.5	364.5	364.5	364.5
145°	377.6	377.7	377.7	377.8	378.0	378.1	378.2	378.4
147.5°	389.5	389.6	389.6	389.6	389.7	389.7	389.8	389.9
150°	397.1	397.1	397.1	397.1	397.2	397.3	397.3	397.4
152.5°	403.7	403.8	404.0	404.0	403.9	403.9	403.9	403.8
155°	412.6	412.9	413.2	413.3	413.0	412.8	412.6	412.4
157.5°	420.4	420.8	421.1	421.1	420.8	420.4	420.0	419.6
160°	425.3	425.7	426.1	426.1	425.7	425.3	424.8	424.3
162.5°	429.2	429.7	430.2	430.1	429.6	429.1	428.6	428.1
165°	434.9	435.5	436.1	436.0	435.4	434.7	434.0	433.4
167.5°	439.0	439.7	440.3	440.3	439.5	438.8	438.0	437.3
170°	441.6	442.1	442.7	442.6	442.0	441.2	440.5	439.7
172.5°	443.2	443.7	444.3	444.2	443.5	442.6	441.9	441.0
175°	445.1	445.7	446.4	446.3	445.4	444.5	443.6	442.7
177.5°	445.8	446.3	446.8	446.6	445.9	445.2	444.5	443.7
180°	445.4	445.4	445.4	445.4	445.4	445.4	445.4	445.4

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