

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: P333042-940

Luminaire Tested: **S124RDIW-S575D770U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333042-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S575D770U940-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4470.5 lumens  
Efficiency: N/A  
Efficacy: 118.9 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: General Diffuse

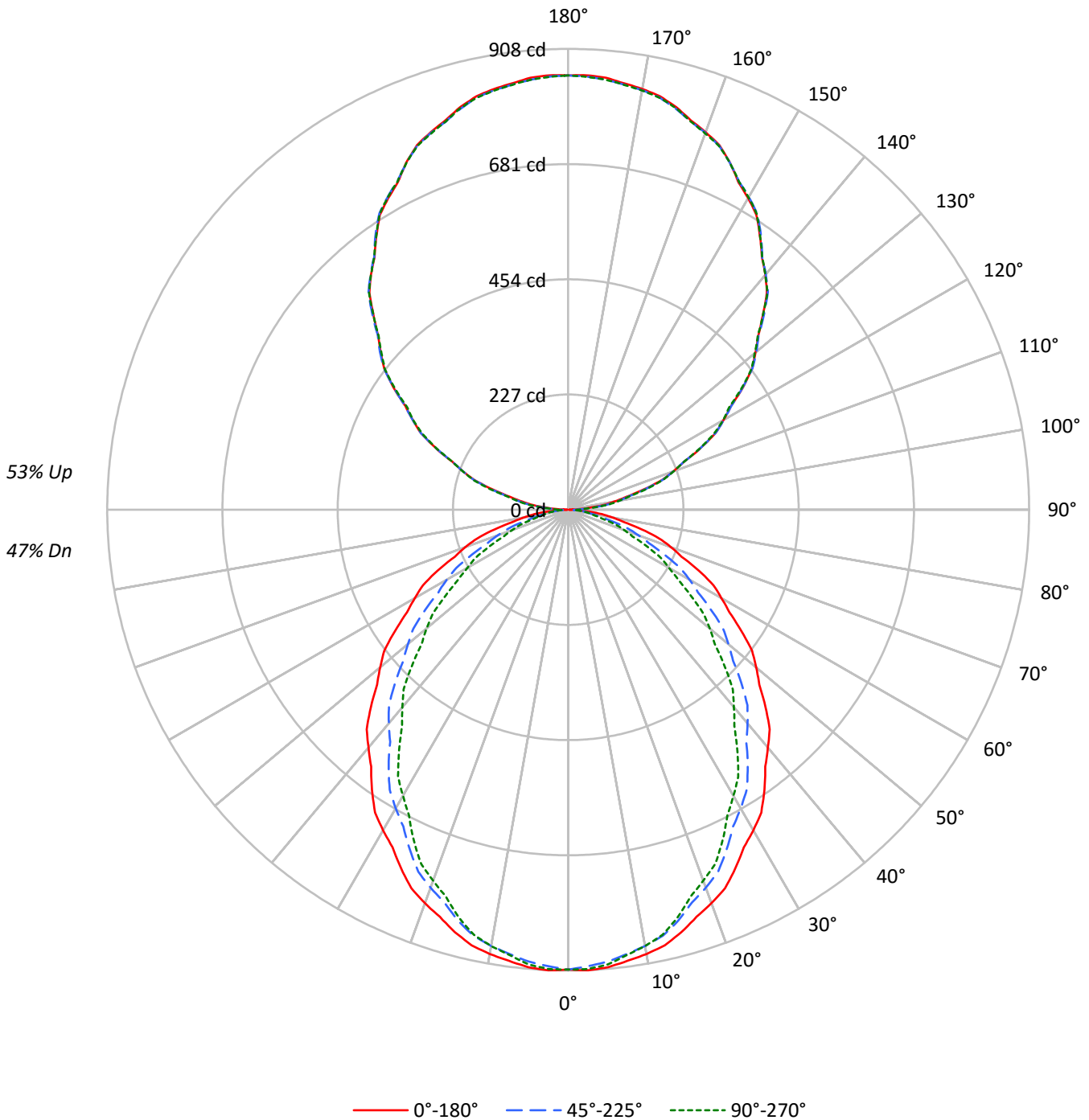
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	97	93	89	86	89	86	83	80	72	70	67	59	58	56	47	46	45	40
2	89	82	76	71	81	75	70	66	63	60	56	52	50	47	42	40	39	34
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33	29
4	74	64	56	50	68	59	52	47	50	45	41	41	38	35	34	31	29	25
5	68	57	49	43	63	53	46	40	45	39	35	37	33	30	30	27	25	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19
7	58	46	38	33	53	43	36	31	37	31	27	31	27	23	25	22	20	17
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	31	26	46	36	29	25	31	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15	13

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

	0°	45°	90°
0°	7316	7316	7316
5°	7332	7243	7288
10°	7287	7156	7156
15°	7203	7005	6954
20°	7088	6808	6682
25°	6942	6576	6409
30°	6797	6332	6068
35°	6640	6080	5724
40°	6450	5792	5352
45°	6275	5505	4975
50°	6075	5176	4575
55°	5859	4835	4141
60°	5624	4459	3697
65°	5408	3989	3261
70°	5094	3472	2769
75°	4697	2879	2249
80°	4096	2194	2064
85°	3473	1991	1871



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.1	1.9
10°-20°	237.4	5.3
20°-30°	342.8	7.7
30°-40°	388.6	8.7
40°-50°	375.2	8.4
50°-60°	312.0	7.0
60°-70°	215.4	4.8
70°-80°	109.2	2.4
80°-90°	30.6	0.7
90°-100°	56.4	1.3
100°-110°	167.2	3.7
110°-120°	283.8	6.3
120°-130°	374.2	8.4
130°-140°	420.2	9.4
140°-150°	413.0	9.2
150°-160°	347.3	7.8
160°-170°	231.1	5.2
170°-180°	80.9	1.8
0°-30°	665.3	14.9
0°-40°	1053.9	23.6
0°-60°	1741.1	38.9
0°-90°	2096.3	46.9
90°-120°	507.4	11.4
90°-150°	1714.8	38.4
90°-180°	2374.0	53.1
0°-180°	4470.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	905	902	894	900	899	86
15°	862	855	838	837	832	243
25°	779	766	738	727	720	359
35°	674	651	617	594	581	421
45°	550	523	482	449	436	424
55°	416	388	344	309	294	372
65°	283	252	209	180	171	279
75°	151	125	92	77	72	159
85°	38	24	22	20	20	42
90°	2	9	14	18	20	4
95°	40	46	50	52	52	44
105°	154	155	158	160	162	164
115°	289	288	287	287	286	284
125°	420	420	420	418	417	374
135°	542	546	546	545	543	419
145°	658	661	662	661	659	412
155°	754	754	754	756	754	347
165°	821	819	818	822	819	231
175°	854	851	850	854	850	81
180°	856	856	856	856	856	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	908.5	907.9	907.5	907.0	906.5	905.5	904.2	902.9	901.4	900.1	901.4
5°	904.8	904.2	903.6	902.9	902.4	901.2	899.3	897.4	895.5	893.8	895.3
7.5°	896.6	896.0	895.4	894.7	894.0	892.5	890.1	887.7	885.3	882.9	883.9
10°	888.9	888.1	887.3	886.5	885.8	884.0	881.3	878.4	875.7	872.9	873.5
12.5°	878.9	878.0	877.1	876.2	875.3	873.3	870.0	866.7	863.4	860.1	860.5
15°	861.8	860.4	859.1	857.6	856.2	853.6	849.8	846.0	842.0	838.2	837.9
17.5°	841.2	839.1	837.1	835.1	833.1	829.8	825.2	820.6	815.9	811.3	810.5
20°	825.0	823.0	821.0	819.0	817.0	813.4	808.2	802.9	797.6	792.5	791.2
22.5°	807.3	805.0	802.8	800.5	798.3	794.3	788.7	783.1	777.5	771.9	770.0
25°	779.3	776.5	773.6	770.9	768.1	763.6	757.2	750.9	744.6	738.3	735.7
27.5°	749.8	746.4	742.9	739.4	735.8	730.8	724.0	717.3	710.5	703.7	700.5
30°	729.2	725.4	721.6	717.7	713.9	708.3	701.1	693.8	686.5	679.3	675.5
32.5°	707.7	703.3	698.9	694.6	690.3	684.3	676.8	669.3	661.8	654.3	649.9
35°	673.8	668.9	663.9	659.0	654.1	647.7	640.0	632.3	624.6	616.9	611.6
37.5°	637.6	632.5	627.4	622.3	617.2	610.4	601.8	593.3	584.8	576.2	570.3
40°	612.0	606.9	601.8	596.7	591.7	584.7	576.0	567.1	558.4	549.6	543.1
42.5°	587.5	582.3	576.9	571.6	566.2	559.0	549.8	540.6	531.5	522.4	515.8
45°	549.6	543.9	538.1	532.4	526.7	519.2	510.0	500.8	491.5	482.2	474.7
47.5°	510.3	504.4	498.5	492.6	486.7	478.9	469.3	459.8	450.1	440.5	432.7
50°	483.7	477.6	471.6	465.6	459.6	451.7	441.8	431.9	422.0	412.1	404.5
52.5°	456.5	450.6	444.7	438.8	432.8	424.9	414.7	404.7	394.5	384.4	376.6
55°	416.3	410.2	404.0	397.8	391.6	383.5	373.5	363.6	353.5	343.5	335.5
57.5°	376.7	370.2	363.8	357.4	351.0	342.9	333.0	323.1	313.3	303.4	295.2
60°	348.3	342.1	336.0	329.8	323.7	315.7	305.8	295.9	286.1	276.2	268.1
62.5°	322.8	316.4	310.0	303.5	297.1	288.9	278.7	268.7	258.5	248.4	241.0
65°	283.1	276.5	269.8	263.2	256.5	248.3	238.4	228.6	218.7	208.8	202.2
67.5°	241.9	235.5	229.2	222.8	216.5	208.7	199.6	190.4	181.3	172.1	166.4
70°	215.8	209.3	202.9	196.4	189.9	182.3	173.4	164.7	155.9	147.1	142.0
72.5°	188.1	182.2	176.3	170.5	164.6	157.6	149.3	141.0	132.6	124.3	120.0
75°	150.6	144.9	139.2	133.5	127.8	121.3	114.0	106.7	99.5	92.3	88.7
77.5°	112.5	107.7	102.9	98.0	93.2	87.8	81.9	76.2	70.3	64.4	62.3
80°	88.1	83.6	79.2	74.7	70.3	65.7	61.1	56.4	51.8	47.2	46.7
82.5°	67.1	63.0	58.9	54.8	50.6	47.3	44.6	41.9	39.3	36.6	36.3
85°	37.5	34.4	31.3	28.2	25.1	23.4	22.9	22.5	21.9	21.5	21.2
87.5°	13.2	12.5	11.9	11.1	10.5	10.3	10.3	10.4	10.6	10.7	10.7
90°	2.0	3.6	5.3	6.9	8.5	9.9	11.1	12.2	13.4	14.5	15.4
92.5°	14.2	16.1	17.8	19.7	21.6	22.9	23.7	24.5	25.4	26.2	26.8
95°	39.7	41.0	42.4	43.7	45.0	46.2	47.2	48.2	49.3	50.3	50.7
97.5°	69.4	70.4	71.5	72.5	73.6	74.7	76.0	77.1	78.4	79.5	80.1
100°	92.6	93.3	93.8	94.4	95.0	95.9	97.3	98.6	100.0	101.3	101.6
102.5°	117.0	117.3	117.4	117.7	118.0	118.7	119.8	121.1	122.3	123.5	123.9
105°	154.2	154.4	154.5	154.6	154.8	155.2	155.8	156.3	156.9	157.5	157.9
107.5°	193.2	193.4	193.6	193.8	193.9	194.1	194.2	194.3	194.4	194.5	194.8
110°	219.7	220.0	220.3	220.6	220.9	221.0	220.8	220.7	220.5	220.3	220.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	247.3	247.3	247.4	247.4	247.4	247.4	247.1	246.8	246.6	246.3	246.3
115°	288.6	288.6	288.6	288.6	288.6	288.4	288.1	287.8	287.5	287.2	287.0
117.5°	327.4	327.6	327.7	327.8	328.0	327.9	327.7	327.5	327.3	327.1	326.5
120°	353.4	354.0	354.5	355.2	355.8	355.8	355.4	355.0	354.5	354.1	353.3
122.5°	380.4	380.7	380.8	381.1	381.4	381.4	381.2	380.9	380.8	380.6	380.0
125°	420.3	420.3	420.3	420.3	420.3	420.2	420.0	419.9	419.7	419.5	419.3
127.5°	456.4	456.8	457.3	457.7	458.2	458.3	458.0	457.8	457.5	457.4	457.0
130°	481.8	482.2	482.7	483.1	483.6	483.8	483.8	483.8	483.8	483.8	483.5
132.5°	507.7	508.1	508.4	508.7	509.1	509.2	509.0	508.9	508.8	508.6	508.4
135°	542.1	542.9	543.8	544.7	545.5	546.0	546.0	546.0	546.0	546.0	545.7
137.5°	579.3	579.8	580.1	580.6	581.0	581.3	581.6	581.8	582.0	582.3	581.8
140°	604.2	604.5	604.8	605.1	605.4	605.6	605.6	605.6	605.6	605.6	605.4
142.5°	627.0	627.3	627.6	627.9	628.2	628.3	628.1	628.0	627.9	627.8	627.8
145°	658.5	659.1	659.7	660.3	660.8	661.2	661.4	661.6	661.6	661.8	661.6
147.5°	689.7	690.5	691.2	691.9	692.6	692.9	692.8	692.6	692.5	692.4	692.2
150°	708.8	709.4	710.0	710.6	711.1	711.5	711.5	711.5	711.5	711.5	711.5
152.5°	726.8	727.2	727.5	727.9	728.3	728.4	728.5	728.7	728.8	728.9	729.2
155°	754.5	754.5	754.5	754.5	754.5	754.4	754.2	754.1	753.9	753.9	754.4
157.5°	777.8	777.5	777.2	776.9	776.7	776.6	776.5	776.5	776.5	776.4	776.9
160°	791.6	791.4	791.2	791.1	790.9	790.8	790.7	790.5	790.3	790.2	790.7
162.5°	804.2	803.9	803.4	803.1	802.7	802.5	802.3	802.2	802.0	801.8	802.6
165°	821.4	820.9	820.5	820.0	819.6	819.2	818.9	818.6	818.3	818.0	818.9
167.5°	834.4	833.8	833.2	832.6	832.0	831.6	831.7	831.7	831.7	831.8	832.7
170°	841.9	841.1	840.3	839.6	838.9	838.6	838.7	838.9	839.0	839.2	840.1
172.5°	847.1	846.5	845.9	845.3	844.6	844.4	844.4	844.5	844.5	844.5	845.5
175°	854.4	853.6	852.9	852.2	851.5	851.0	850.9	850.7	850.6	850.4	851.5
177.5°	856.8	856.2	855.6	855.1	854.4	854.2	854.2	854.2	854.2	854.2	855.0
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	902.9	904.2	905.5	906.2	906.1	905.9	905.8	905.7
5°	896.8	898.4	899.9	900.5	900.2	899.9	899.6	899.3
7.5°	884.8	885.8	886.9	887.1	886.6	886.1	885.6	885.1
10°	874.1	874.8	875.4	875.4	874.8	874.1	873.5	872.9
12.5°	860.9	861.2	861.7	861.4	860.5	859.7	858.8	857.9
15°	837.6	837.3	837.0	836.3	835.2	834.1	833.0	832.0
17.5°	809.6	808.7	807.8	806.6	804.9	803.3	801.6	800.0
20°	790.0	788.7	787.5	785.9	783.9	781.9	779.9	777.8
22.5°	768.2	766.3	764.5	762.8	761.1	759.5	757.9	756.2
25°	733.1	730.4	727.8	725.8	724.2	722.6	721.1	719.5
27.5°	697.2	694.0	690.8	688.0	685.8	683.6	681.4	679.2
30°	671.6	667.7	663.9	660.8	658.3	655.8	653.4	650.9
32.5°	645.4	641.0	636.4	633.0	630.7	628.4	626.0	623.7
35°	606.4	601.1	595.9	591.9	589.2	586.3	583.5	580.8
37.5°	564.5	558.7	552.8	548.5	545.6	542.9	540.1	537.3
40°	536.6	530.1	523.6	519.1	516.2	513.4	510.7	507.9
42.5°	509.2	502.6	496.0	491.2	488.3	485.4	482.5	479.7
45°	467.2	459.6	452.0	446.8	444.1	441.3	438.5	435.8
47.5°	424.8	417.0	409.1	403.7	400.6	397.6	394.6	391.5
50°	396.7	389.1	381.3	376.0	373.1	370.1	367.2	364.3
52.5°	368.7	360.9	353.1	347.7	344.6	341.5	338.5	335.5
55°	327.4	319.4	311.4	305.9	303.0	300.1	297.1	294.2
57.5°	287.0	278.9	270.8	265.6	263.4	261.2	259.0	256.7
60°	260.1	252.1	244.1	238.9	236.4	233.9	231.5	229.0
62.5°	233.6	226.2	218.8	214.1	212.1	210.2	208.2	206.3
65°	195.6	189.0	182.4	178.1	176.3	174.4	172.5	170.7
67.5°	160.7	155.0	149.3	145.4	143.4	141.3	139.3	137.2
70°	137.0	131.9	126.7	123.4	121.9	120.4	118.8	117.3
72.5°	115.7	111.3	106.9	104.1	102.6	101.2	99.8	98.4
75°	85.2	81.7	78.1	75.9	74.9	74.0	73.1	72.1
77.5°	60.3	58.2	56.1	54.9	54.7	54.4	54.1	53.9
80°	46.3	45.8	45.3	45.0	44.9	44.7	44.6	44.4
82.5°	35.9	35.6	35.3	35.0	34.9	34.7	34.6	34.4
85°	20.9	20.6	20.2	20.2	20.2	20.2	20.2	20.2
87.5°	10.8	10.9	10.9	11.1	11.2	11.4	11.6	11.8
90°	16.3	17.2	18.1	18.6	19.0	19.3	19.5	19.9
92.5°	27.3	27.8	28.4	28.7	28.9	29.1	29.2	29.4
95°	51.2	51.6	52.1	52.3	52.3	52.3	52.3	52.3
97.5°	80.6	81.1	81.7	81.9	81.9	81.9	81.9	81.9
100°	101.8	102.1	102.5	102.5	102.5	102.5	102.5	102.5
102.5°	124.3	124.8	125.1	125.4	125.6	125.6	125.7	125.9
105°	158.4	158.8	159.3	159.7	160.2	160.6	161.0	161.5
107.5°	195.3	195.6	196.1	196.3	196.3	196.3	196.2	196.2
110°	219.8	219.5	219.2	219.3	219.7	220.2	220.6	221.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.2	246.1	246.1	246.1	246.2	246.3	246.4	246.5
115°	287.0	286.8	286.6	286.5	286.3	286.2	286.1	285.9
117.5°	326.1	325.6	325.0	324.7	324.4	324.0	323.8	323.5
120°	352.6	351.9	351.2	350.9	351.2	351.5	351.8	352.0
122.5°	379.5	379.1	378.5	378.0	377.5	376.9	376.5	375.9
125°	419.0	418.7	418.4	418.1	417.9	417.5	417.2	417.0
127.5°	456.7	456.5	456.1	455.8	455.7	455.4	455.1	455.0
130°	483.2	482.9	482.6	482.1	481.6	481.0	480.4	479.8
132.5°	508.1	507.8	507.5	507.2	507.0	506.8	506.5	506.3
135°	545.4	545.1	544.8	544.5	544.0	543.6	543.1	542.7
137.5°	581.5	581.1	580.8	580.6	580.7	580.8	580.9	580.9
140°	605.3	605.1	604.9	604.8	604.7	604.5	604.4	604.2
142.5°	627.8	627.7	627.7	627.7	627.6	627.6	627.6	627.5
145°	661.6	661.4	661.2	660.9	660.5	660.0	659.6	659.2
147.5°	692.1	692.1	691.9	691.8	691.6	691.5	691.3	691.2
150°	711.5	711.5	711.5	711.4	711.2	711.1	711.0	710.8
152.5°	729.6	730.0	730.3	730.3	730.0	729.6	729.2	728.8
155°	755.0	755.5	756.2	756.2	755.5	755.0	754.4	753.9
157.5°	777.3	777.8	778.2	778.2	777.7	777.2	776.7	776.1
160°	791.1	791.6	792.0	791.8	791.1	790.3	789.6	788.9
162.5°	803.4	804.2	805.0	805.0	804.3	803.6	802.9	802.1
165°	819.7	820.6	821.5	821.7	821.1	820.5	819.9	819.3
167.5°	833.6	834.4	835.3	835.3	834.4	833.5	832.6	831.6
170°	841.0	841.9	842.8	842.7	841.6	840.6	839.5	838.6
172.5°	846.5	847.5	848.5	848.5	847.4	846.4	845.3	844.4
175°	852.5	853.5	854.5	854.5	853.5	852.5	851.5	850.4
177.5°	855.8	856.6	857.5	857.4	856.4	855.5	854.5	853.6
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7

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