

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: P331958-930

Luminaire Tested: **S123DIP-S775D365U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331958-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D365U930-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3817.2 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct

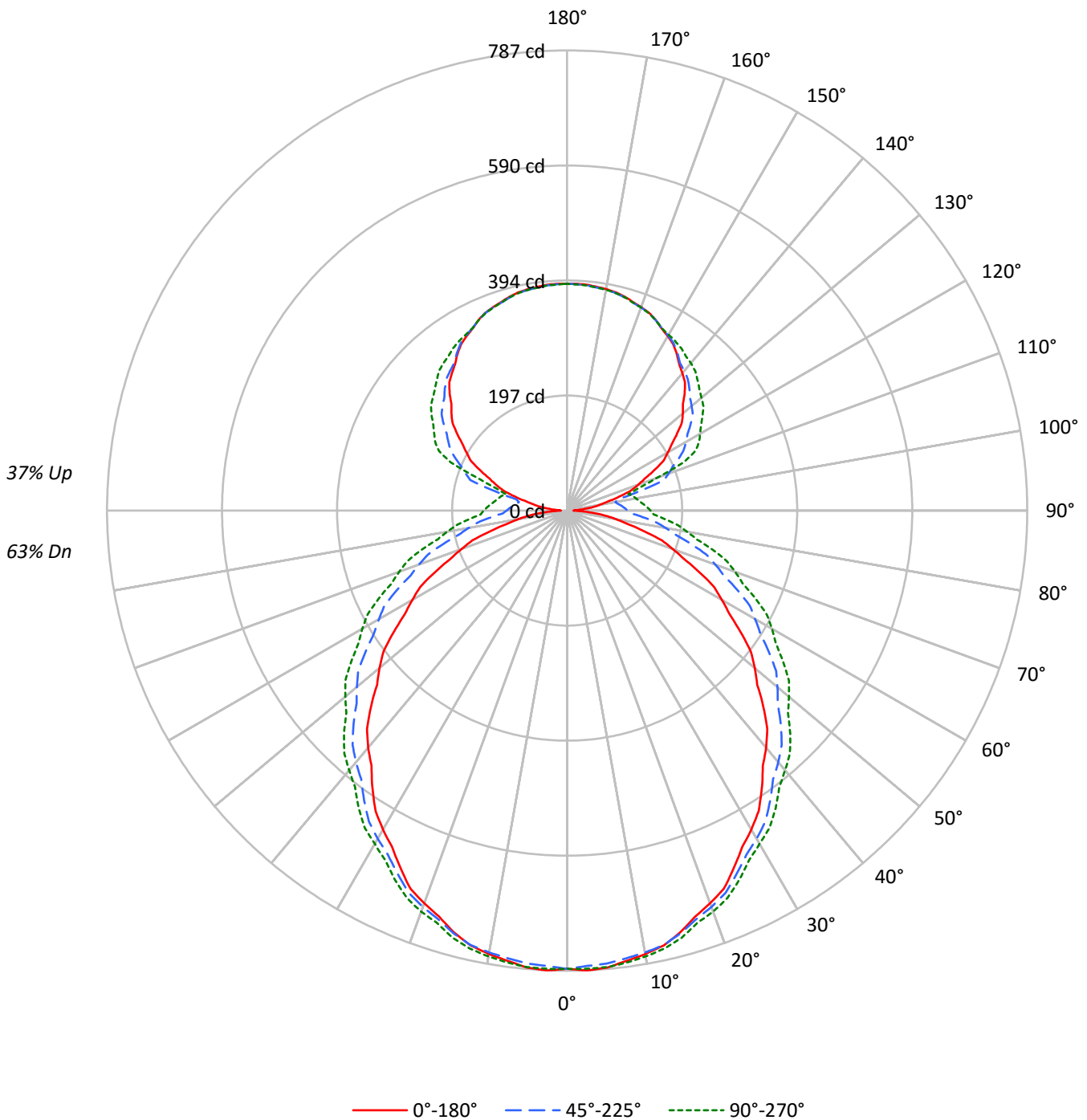
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331958-930

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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	91	91	91	79	79	79	68	68	68	63
1	99	94	90	86	93	89	85	81	78	75	72	68	65	63	58	57	55	50
2	90	82	75	69	84	77	71	65	67	63	58	59	55	52	51	48	45	41
3	82	71	63	57	76	67	60	54	59	53	49	51	47	43	44	41	38	34
4	75	63	54	48	70	59	52	46	52	46	41	46	41	37	39	36	32	29
5	69	56	47	41	64	53	45	39	47	40	35	41	36	32	35	31	28	25
6	63	50	42	35	59	47	40	34	42	35	31	37	32	28	32	28	25	22
7	58	45	37	31	54	43	35	30	38	32	27	33	28	24	29	25	22	19
8	54	41	33	27	51	39	31	26	35	28	24	31	25	22	27	23	19	17
9	50	38	30	24	47	36	28	23	32	26	21	28	23	19	25	21	18	15
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	23	19	16	14

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

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.3	1.9
10°-20°	211.8	5.5
20°-30°	316.7	8.3
30°-40°	378.3	9.9
40°-50°	395.8	10.4
50°-60°	371.4	9.7
60°-70°	310.2	8.1
70°-80°	221.9	5.8
80°-90°	133.4	3.5
90°-100°	97.1	2.5
100°-110°	128.2	3.4
110°-120°	202.2	5.3
120°-130°	228.8	6.0
130°-140°	230.1	6.0
140°-150°	207.6	5.4
150°-160°	165.7	4.3
160°-170°	106.9	2.8
170°-180°	36.8	1.0
0°-30°	602.8	15.8
0°-40°	981.1	25.7
0°-60°	1748.2	45.8
0°-90°	2413.8	63.2
90°-120°	427.5	11.2
90°-150°	1094.0	28.7
90°-180°	1403.0	36.8
0°-180°	3817.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	11	56	103	132	143	8
95°	27	50	93	121	130	29
105°	93	116	127	102	108	98
115°	165	178	211	233	242	163
125°	230	233	258	276	283	205
135°	284	286	296	311	315	219
145°	327	328	329	336	340	204
155°	359	359	359	360	359	165
165°	379	378	378	380	378	107
175°	388	386	387	388	386	37
180°	388	388	388	388	388	



TEST NUMBER: P331958-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	22.7	32.4	41.9	51.5	61.1	70.8	80.6	90.5	100.3	110.1	116.7
90°	11.4	21.4	31.2	41.2	51.1	61.3	71.8	82.3	92.9	103.4	110.1
92.5°	15.7	24.0	32.2	40.4	48.6	57.8	67.9	78.1	88.2	98.4	105.1
95°	27.0	31.7	36.5	41.3	46.1	53.5	63.4	73.5	83.5	93.4	99.8
97.5°	43.7	49.2	54.7	60.2	65.7	70.6	74.8	79.1	83.4	87.6	93.8
100°	56.3	63.8	71.1	78.4	85.8	88.8	87.6	86.3	85.0	83.8	89.8
102.5°	70.9	77.3	83.6	90.1	96.4	98.5	96.1	93.8	91.5	89.1	92.9
105°	92.7	97.9	103.2	108.4	113.7	117.6	119.9	122.3	124.7	127.1	121.1
107.5°	114.8	119.3	123.7	128.1	132.6	139.1	147.7	156.4	165.0	173.7	170.5
110°	129.6	133.5	137.5	141.4	145.3	151.4	159.7	168.0	176.3	184.6	187.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	144.3	147.6	150.8	154.2	157.4	163.1	171.0	179.0	187.0	195.0	199.8
115°	165.3	168.0	170.6	173.3	175.9	181.0	188.4	195.8	203.2	210.6	215.8
117.5°	186.3	188.2	190.0	191.9	193.8	198.1	204.8	211.5	218.3	224.9	229.9
120°	198.8	200.2	201.8	203.3	204.9	208.8	215.3	221.8	228.2	234.6	239.5
122.5°	212.1	213.1	214.0	215.0	216.0	219.6	225.8	232.0	238.1	244.3	248.9
125°	229.6	230.1	230.6	231.1	231.6	234.8	240.5	246.3	252.0	257.8	261.9
127.5°	247.4	247.7	248.0	248.3	248.6	251.2	256.1	260.9	265.8	270.7	274.6
130°	258.4	258.7	259.0	259.3	259.7	261.9	266.0	269.9	274.0	278.1	281.9
132.5°	268.3	268.8	269.3	269.7	270.2	272.1	275.3	278.6	281.8	285.0	288.8
135°	284.3	284.5	284.7	284.9	285.1	286.4	288.7	291.1	293.4	295.8	299.4
137.5°	298.0	298.3	298.6	299.0	299.3	300.2	301.5	302.8	304.1	305.4	308.8
140°	306.6	306.9	307.3	307.7	308.1	308.7	309.4	310.1	311.0	311.7	314.8
142.5°	315.0	315.3	315.5	315.8	316.0	316.3	316.6	316.9	317.2	317.5	320.2
145°	327.0	327.3	327.5	327.8	328.0	328.2	328.3	328.5	328.6	328.7	330.4
147.5°	337.4	337.7	337.9	338.3	338.5	338.8	338.9	339.0	339.2	339.2	339.8
150°	344.3	344.5	344.6	344.9	345.0	345.2	345.4	345.4	345.6	345.7	345.8
152.5°	350.5	350.6	350.7	350.7	350.8	351.0	351.0	351.1	351.1	351.2	351.5
155°	359.3	359.1	359.0	358.9	358.7	358.7	358.8	358.8	358.9	359.0	359.3
157.5°	366.1	366.1	366.1	366.0	366.0	366.0	365.9	365.8	365.7	365.7	366.1
160°	370.2	370.1	370.1	370.0	370.0	369.9	369.8	369.7	369.7	369.7	370.0
162.5°	374.1	374.0	373.8	373.7	373.5	373.3	373.2	373.2	373.2	373.1	373.5
165°	378.9	378.6	378.5	378.3	378.1	378.0	377.9	377.8	377.7	377.7	378.2
167.5°	382.5	382.3	382.0	381.8	381.5	381.4	381.4	381.4	381.4	381.4	381.9
170°	384.6	384.3	384.1	383.8	383.6	383.4	383.4	383.4	383.4	383.4	384.0
172.5°	386.0	385.7	385.4	385.1	384.7	384.7	384.7	384.7	384.8	384.8	385.4
175°	387.8	387.4	387.1	386.9	386.5	386.4	386.5	386.5	386.5	386.6	387.1
177.5°	388.2	388.0	387.8	387.5	387.2	387.1	387.2	387.2	387.3	387.3	387.8
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	123.1	129.6	136.2	140.4	142.3	144.2	146.1	148.1
90°	116.8	123.5	130.2	134.6	136.6	138.6	140.6	142.7
92.5°	111.8	118.5	125.2	129.5	131.3	133.1	134.9	136.7
95°	106.1	112.4	118.8	122.9	124.7	126.7	128.6	130.4
97.5°	100.0	106.2	112.3	116.3	118.3	120.3	122.2	124.3
100°	95.8	101.8	107.9	111.9	113.8	115.8	117.7	119.7
102.5°	96.7	100.4	104.2	107.0	109.1	111.1	113.1	115.1
105°	115.1	109.1	103.1	100.9	102.8	104.6	106.5	108.3
107.5°	167.2	164.0	160.8	155.7	148.9	142.0	135.1	128.2
110°	190.2	193.1	195.8	193.5	185.8	178.1	170.6	162.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	204.6	209.5	214.3	216.5	216.3	216.1	215.7	215.5
115°	221.0	226.2	231.4	234.9	236.7	238.4	240.2	242.0
117.5°	235.0	240.0	245.0	248.3	249.8	251.4	252.9	254.5
120°	244.4	249.2	254.1	257.2	258.6	259.9	261.2	262.5
122.5°	253.5	258.0	262.6	265.6	267.0	268.4	269.8	271.2
125°	266.0	270.1	274.3	277.0	278.5	280.0	281.4	282.8
127.5°	278.6	282.5	286.5	289.0	290.2	291.4	292.5	293.7
130°	285.8	289.7	293.5	296.0	296.9	298.0	299.0	300.0
132.5°	292.4	296.1	299.9	302.3	303.4	304.5	305.6	306.7
135°	303.0	306.6	310.1	312.3	313.2	313.9	314.6	315.4
137.5°	312.0	315.4	318.6	320.7	321.6	322.4	323.2	324.0
140°	317.9	321.0	324.1	326.0	326.9	327.7	328.5	329.3
142.5°	322.9	325.7	328.5	330.2	331.0	331.7	332.6	333.3
145°	332.0	333.7	335.3	336.5	337.3	338.0	338.8	339.6
147.5°	340.5	341.0	341.6	342.1	342.5	342.8	343.2	343.6
150°	346.0	346.1	346.3	346.4	346.6	346.7	347.0	347.2
152.5°	351.7	352.0	352.2	352.2	352.0	351.7	351.6	351.3
155°	359.6	360.0	360.3	360.2	359.9	359.5	359.1	358.7
157.5°	366.5	366.9	367.3	367.2	366.7	366.2	365.7	365.2
160°	370.4	370.8	371.2	371.1	370.7	370.2	369.8	369.3
162.5°	374.0	374.4	374.8	374.9	374.5	374.1	373.7	373.2
165°	378.7	379.3	379.8	379.8	379.4	378.9	378.5	378.0
167.5°	382.4	382.9	383.4	383.4	382.9	382.4	381.9	381.4
170°	384.5	385.0	385.5	385.5	385.0	384.5	384.0	383.4
172.5°	385.9	386.4	386.9	386.9	386.3	385.7	385.1	384.6
175°	387.5	388.0	388.4	388.4	387.9	387.3	386.9	386.4
177.5°	388.2	388.6	389.0	388.9	388.4	387.9	387.3	386.9
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8

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