

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: P331425-930

Luminaire Tested: **S122DIP-S1005D330U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331425-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S1005D330U930-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

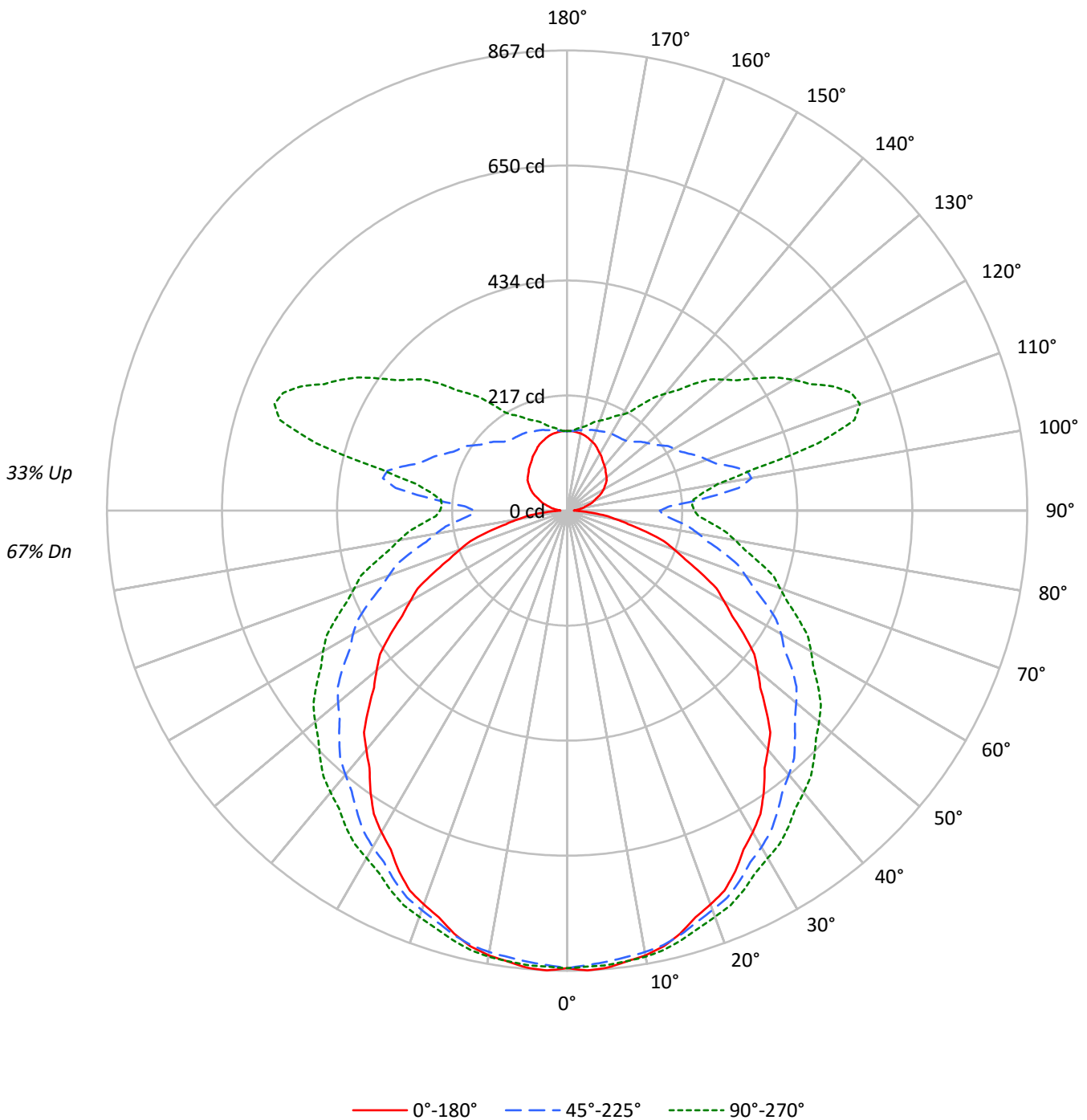
Lumens per Lamp: N/A  
Luminaire Lumens: 4332.8 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 49.8  
Input Voltage (V): 120  
Input 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72
1	100	94	90	85	94	89	85	81	79	75	72	69	67	64	61	59	57
2	90	81	74	68	84	77	70	65	68	63	58	60	56	52	52	49	46
3	82	71	62	56	76	67	59	53	59	53	48	52	47	43	46	42	39
4	74	62	53	47	70	59	51	45	52	46	41	46	41	37	40	36	33
5	68	55	46	40	64	52	44	38	47	40	35	41	36	31	36	32	28
6	63	50	41	34	59	47	39	33	42	35	30	37	32	27	33	28	25
7	58	45	36	30	54	42	34	29	38	31	26	34	28	24	30	25	22
8	54	41	32	27	50	39	31	25	35	28	23	31	25	21	27	23	19
9	50	37	29	24	47	35	28	23	32	25	21	28	23	19	25	21	17
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16

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

	0°	45°	90°
0°	13919	13919	13919
5°	13988	13400	13350
10°	13899	13004	12858
15°	13709	12584	12339
20°	13467	12136	11842
25°	13227	11701	11390
30°	12890	11257	10936
35°	12550	10828	10617
40°	12191	10461	10297
45°	11850	10133	10022
50°	11485	9837	9754
55°	11101	9519	9479
60°	10631	9187	9189
65°	10145	8801	8846
70°	9596	8384	8474
75°	8897	7976	8132
80°	7792	7559	7784
85°	6733	7197	7515



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.7	1.9
10°-20°	234.3	5.4
20°-30°	355.0	8.2
30°-40°	432.4	10.0
40°-50°	465.2	10.7
50°-60°	451.7	10.4
60°-70°	394.4	9.1
70°-80°	303.7	7.0
80°-90°	205.1	4.7
90°-100°	200.3	4.6
100°-110°	305.8	7.1
110°-120°	283.6	6.5
120°-130°	215.5	5.0
130°-140°	158.6	3.7
140°-150°	110.6	2.6
150°-160°	75.8	1.7
160°-170°	44.6	1.0
170°-180°	14.5	0.3
0°-30°	670.9	15.5
0°-40°	1103.3	25.5
0°-60°	2020.2	46.6
0°-90°	2923.4	67.5
90°-120°	789.7	18.2
90°-150°	1274.5	29.4
90°-180°	1409.0	32.5
0°-180°	4332.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	865	861	853	860	860	82
15°	825	827	827	838	837	232
25°	750	759	770	784	788	345
35°	646	667	691	717	727	404
45°	530	564	607	644	658	409
55°	406	452	516	559	577	363
65°	277	339	412	462	480	275
75°	154	224	304	355	374	163
85°	45	123	202	253	272	48
90°	13	89	175	222	239	9
95°	20	94	257	232	239	19
105°	41	97	321	531	490	44
115°	67	99	254	480	553	66
125°	89	107	214	374	434	79
135°	103	123	183	290	337	80
145°	116	133	169	217	243	73
155°	132	142	164	185	193	61
165°	144	148	157	166	169	40
175°	150	150	151	153	152	14
180°	150	150	150	150	150	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	867.2	866.5	865.8	865.1	864.5	863.3	861.8	860.2	858.7	857.1	858.3
5°	864.6	863.8	863.0	862.1	861.3	860.1	858.4	856.7	855.1	853.4	855.1
7.5°	856.9	856.3	855.7	855.2	854.7	853.8	852.5	851.2	849.9	848.6	850.6
10°	850.9	850.4	849.8	849.2	848.6	848.0	847.2	846.3	845.5	844.7	846.9
12.5°	840.9	841.0	841.1	841.2	841.3	841.1	840.5	839.8	839.3	838.6	840.9
15°	824.7	825.2	825.7	826.3	826.9	827.1	827.1	827.1	827.1	827.1	829.6
17.5°	803.6	804.9	806.0	807.1	808.3	809.3	810.2	811.1	812.0	812.9	815.5
20°	789.7	791.1	792.5	793.9	795.2	796.5	797.6	798.7	799.8	801.0	804.0
22.5°	774.7	776.2	777.9	779.5	781.1	782.7	784.2	785.8	787.3	788.9	792.0
25°	749.7	751.6	753.6	755.5	757.5	759.7	762.1	764.7	767.2	769.6	773.0
27.5°	719.7	722.8	726.0	729.2	732.4	735.4	738.3	741.3	744.2	747.2	751.4
30°	699.7	703.3	706.9	710.5	714.1	717.8	721.4	725.0	728.6	732.2	736.6
32.5°	677.7	681.8	685.8	689.9	693.9	698.1	702.4	706.6	710.9	715.2	720.3
35°	646.0	650.7	655.4	660.1	664.9	669.8	675.1	680.4	685.7	691.0	697.1
37.5°	611.5	616.9	622.4	627.8	633.2	639.4	646.2	653.1	659.9	666.8	673.5
40°	588.5	594.6	600.7	606.8	612.9	619.7	627.2	634.7	642.2	649.7	657.0
42.5°	566.6	572.6	578.7	584.8	590.9	598.3	606.9	615.6	624.1	632.8	640.6
45°	529.8	537.3	544.8	552.3	559.8	568.3	578.1	587.8	597.5	607.2	615.9
47.5°	493.6	501.7	509.9	518.0	526.2	536.0	547.4	558.7	570.1	581.5	590.5
50°	468.6	477.2	485.8	494.4	503.0	513.6	526.0	538.5	551.0	563.5	573.0
52.5°	444.6	453.6	462.7	471.7	480.8	491.9	505.0	518.2	531.3	544.5	554.2
55°	406.1	416.0	426.1	436.1	446.1	458.3	472.7	487.1	501.6	516.0	526.0
57.5°	368.1	379.4	390.6	401.9	413.2	426.2	440.9	455.6	470.3	485.0	495.8
60°	341.1	353.0	365.0	376.9	388.9	402.8	418.6	434.4	450.2	466.0	476.6
62.5°	317.2	329.5	341.9	354.2	366.6	380.7	396.6	412.4	428.3	444.1	455.3
65°	277.4	291.0	304.6	318.2	331.8	346.8	363.2	379.5	395.9	412.3	423.7
67.5°	240.9	255.1	269.3	283.6	297.7	313.2	330.0	346.8	363.5	380.3	391.8
70°	214.9	229.3	243.8	258.2	272.6	288.5	305.7	322.9	340.1	357.3	369.2
72.5°	190.9	205.8	220.7	235.5	250.5	266.6	284.1	301.5	318.9	336.4	348.1
75°	153.7	169.3	184.7	200.3	215.9	232.5	250.3	268.1	285.8	303.6	315.5
77.5°	117.7	134.0	150.3	166.5	182.8	199.9	218.0	236.0	254.0	272.1	284.1
80°	93.7	110.6	127.6	144.6	161.4	179.0	197.0	215.1	233.1	251.1	262.8
82.5°	73.7	90.4	107.1	123.8	140.6	158.1	176.3	194.6	212.9	231.1	242.8
85°	45.0	62.2	79.4	96.6	113.8	131.3	149.1	166.9	184.7	202.4	214.1
87.5°	24.5	41.3	58.0	74.7	91.4	108.7	126.8	145.0	163.1	180.9	192.2
90°	12.8	29.8	47.0	63.7	80.4	98.2	117.4	137.1	156.7	174.7	185.6
92.5°	15.0	31.6	48.6	64.9	81.9	100.6	124.3	150.5	175.8	193.4	198.4
95°	20.1	34.2	50.2	65.9	83.5	105.3	135.2	176.9	227.0	256.6	253.1
97.5°	25.2	38.3	53.0	68.5	85.4	107.0	139.7	190.6	262.1	325.7	345.4
100°	30.9	42.1	55.0	69.8	85.9	106.8	137.6	188.3	266.1	352.5	404.3
102.5°	35.2	45.2	57.2	71.3	86.6	106.9	136.2	182.5	255.2	346.7	421.9
105°	41.4	50.6	60.7	73.1	87.4	106.7	134.7	174.8	236.8	320.9	407.2
107.5°	49.4	56.8	65.2	75.7	88.4	106.6	133.5	169.7	222.9	294.3	371.4
110°	54.0	60.7	68.0	77.3	88.9	106.8	133.1	167.4	216.1	280.5	348.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	59.0	64.8	71.5	79.7	90.2	107.5	132.6	165.2	210.1	268.4	330.9
115°	66.9	71.4	76.2	82.8	91.6	107.0	132.0	162.0	202.4	253.6	307.4
117.5°	73.9	77.0	80.7	85.8	93.4	108.2	131.2	159.2	195.3	240.6	288.5
120°	78.9	81.2	84.1	87.7	94.6	108.8	131.1	157.8	191.1	233.0	277.4
122.5°	83.8	85.1	87.3	90.6	96.8	110.6	131.5	156.4	187.4	226.1	267.3
125°	88.9	89.8	91.5	95.0	100.7	113.2	132.5	154.3	181.1	214.2	251.4
127.5°	94.0	94.9	97.0	100.5	105.7	117.5	134.8	153.6	176.3	204.2	236.5
130°	97.0	97.8	100.4	104.2	109.7	120.6	136.5	153.2	173.5	197.7	226.9
132.5°	99.7	100.9	103.7	107.7	113.4	123.6	137.7	152.9	170.6	191.5	217.8
135°	102.6	103.8	107.3	111.6	118.2	127.7	139.7	152.5	166.8	183.4	205.7
137.5°	106.6	107.9	111.3	115.9	122.4	130.4	140.7	151.4	163.1	176.1	195.0
140°	109.6	110.5	113.7	118.0	124.0	131.7	140.8	150.3	160.7	171.9	188.7
142.5°	112.6	113.2	116.2	120.5	126.3	133.2	141.8	150.6	159.8	169.9	184.2
145°	115.8	117.0	119.8	124.2	130.0	136.2	144.1	152.1	160.1	168.8	179.7
147.5°	120.7	121.5	124.3	128.2	133.1	138.7	146.0	153.1	160.4	167.8	176.0
150°	123.8	124.7	127.0	130.8	135.1	140.3	146.9	153.5	160.1	167.1	174.0
152.5°	127.1	127.5	129.8	133.1	137.2	141.9	147.8	153.8	159.7	165.9	172.4
155°	131.7	131.9	133.6	136.8	140.0	144.3	149.2	154.1	159.0	163.9	169.4
157.5°	135.4	135.7	137.1	139.9	142.4	146.0	150.2	154.1	157.7	161.8	166.6
160°	137.9	138.3	139.4	141.7	144.1	147.2	150.7	154.1	157.0	160.5	164.4
162.5°	140.6	140.3	141.5	143.3	145.4	147.9	150.9	153.8	156.3	159.3	162.7
165°	143.5	143.2	143.7	145.4	146.9	148.6	151.2	153.3	155.0	157.0	159.6
167.5°	145.9	145.5	146.0	147.2	148.2	149.3	151.2	152.9	153.7	155.0	156.6
170°	147.5	146.9	147.2	148.1	148.6	149.5	150.9	152.4	153.0	153.8	155.0
172.5°	148.4	148.1	147.9	148.8	149.1	149.8	150.7	151.7	152.1	152.5	153.4
175°	149.5	149.2	149.0	149.5	149.5	149.8	150.3	150.9	150.7	150.9	151.2
177.5°	150.0	149.5	149.4	149.8	149.8	149.8	150.0	150.5	150.0	149.8	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	859.3	860.5	861.6	861.9	861.4	861.0	860.5	860.1
5°	856.7	858.4	860.1	860.7	860.5	860.2	859.9	859.7
7.5°	852.6	854.7	856.6	857.5	857.2	857.0	856.6	856.4
10°	849.1	851.3	853.5	854.5	854.2	853.9	853.7	853.4
12.5°	843.1	845.3	847.5	848.5	848.2	847.9	847.7	847.4
15°	832.2	834.6	837.1	838.3	838.0	837.7	837.4	837.1
17.5°	818.2	820.8	823.4	824.7	824.7	824.7	824.7	824.7
20°	807.0	810.1	813.1	814.6	814.6	814.6	814.6	814.6
22.5°	795.0	798.1	801.1	802.9	803.3	803.8	804.2	804.7
25°	776.3	779.7	783.0	785.1	785.9	786.8	787.6	788.4
27.5°	755.6	759.9	764.1	766.5	767.1	767.7	768.3	768.9
30°	741.1	745.5	750.0	752.6	753.4	754.2	755.1	755.9
32.5°	725.5	730.5	735.6	738.9	740.5	741.9	743.5	744.9
35°	703.2	709.3	715.4	719.4	721.4	723.3	725.3	727.2
37.5°	680.3	687.1	693.8	698.2	700.3	702.4	704.4	706.5
40°	664.1	671.4	678.6	683.5	686.0	688.4	691.0	693.5
42.5°	648.5	656.4	664.3	669.4	672.0	674.5	676.9	679.5
45°	624.4	633.1	641.6	647.3	650.1	652.9	655.7	658.4
47.5°	599.5	608.5	617.5	623.5	626.6	629.7	632.7	635.8
50°	582.4	591.8	601.3	607.6	610.6	613.6	616.7	619.7
52.5°	563.9	573.5	583.2	589.6	592.9	596.2	599.5	602.8
55°	536.1	546.0	556.0	562.8	566.4	570.1	573.6	577.2
57.5°	506.6	517.4	528.2	535.3	539.0	542.7	546.3	550.0
60°	487.1	497.7	508.3	515.5	519.3	523.3	527.2	531.0
62.5°	466.5	477.7	488.9	496.4	500.0	503.7	507.4	511.0
65°	435.1	446.5	457.9	465.4	469.0	472.5	476.2	479.8
67.5°	403.3	414.8	426.3	434.0	437.7	441.5	445.3	449.1
70°	381.2	393.1	405.1	412.7	416.0	419.4	422.7	426.1
72.5°	359.8	371.5	383.2	391.1	395.1	399.1	403.1	407.1
75°	327.5	339.4	351.4	359.1	362.7	366.4	370.0	373.6
77.5°	295.9	307.8	319.7	327.6	331.4	335.3	339.2	343.1
80°	274.4	286.2	297.8	305.6	309.5	313.3	317.2	321.1
82.5°	254.5	266.1	277.8	285.4	289.1	292.8	296.4	300.1
85°	225.8	237.4	249.1	256.8	260.7	264.6	268.5	272.4
87.5°	203.4	214.7	226.1	233.6	237.2	240.7	244.3	247.8
90°	196.3	206.9	218.6	226.1	229.4	232.8	236.1	239.4
92.5°	202.8	210.1	218.6	223.9	227.1	229.4	233.0	235.9
95°	240.3	233.3	231.7	232.3	231.9	232.9	235.4	239.0
97.5°	329.6	307.9	287.0	273.0	262.4	258.6	257.7	258.5
100°	408.5	383.0	353.8	325.6	304.8	295.5	290.2	288.0
102.5°	458.0	460.0	441.2	410.7	387.8	369.7	362.4	358.4
105°	476.9	519.2	532.6	529.5	514.7	499.9	490.6	489.6
107.5°	444.2	502.6	541.8	562.0	567.3	569.4	570.0	567.6
110°	418.7	479.1	524.9	554.5	569.9	578.5	584.1	586.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	394.6	453.0	501.2	534.3	554.6	566.8	574.8	579.4
115°	363.3	416.0	462.0	497.4	520.9	537.2	547.7	553.4
117.5°	337.0	384.2	426.6	460.0	483.6	500.5	511.2	516.2
120°	322.3	365.8	404.1	435.7	458.9	475.6	487.0	492.8
122.5°	309.7	349.9	386.4	415.2	435.9	451.8	461.8	466.8
125°	290.2	327.4	360.3	386.9	406.0	419.5	429.2	434.0
127.5°	271.1	304.8	335.6	360.2	377.2	390.0	398.6	402.9
130°	258.9	290.3	319.8	343.2	359.5	371.5	379.5	384.1
132.5°	246.9	276.3	303.6	325.8	341.9	353.9	361.5	365.7
135°	230.2	255.0	279.9	300.0	314.7	326.4	333.8	337.2
137.5°	215.4	236.4	256.6	274.1	287.3	297.4	303.9	307.4
140°	206.1	224.4	242.1	257.8	268.7	277.9	283.8	287.2
142.5°	199.1	214.4	229.3	242.5	252.7	260.9	266.2	268.0
145°	190.3	201.5	212.1	221.9	230.2	236.5	240.8	243.0
147.5°	183.8	191.6	198.8	205.4	211.7	216.3	218.9	220.1
150°	180.9	187.3	193.3	198.4	202.8	206.3	208.0	208.3
152.5°	178.4	184.3	189.4	193.9	197.3	200.2	201.5	201.6
155°	174.9	179.4	183.8	186.9	190.1	192.2	193.3	192.7
157.5°	170.8	174.6	178.2	180.8	183.0	184.7	185.2	185.2
160°	168.2	171.4	174.6	176.6	178.6	180.0	180.3	180.3
162.5°	165.7	168.4	171.1	172.7	174.7	175.7	175.9	175.7
165°	161.9	163.9	165.9	167.1	168.2	169.4	169.4	169.1
167.5°	158.2	159.8	161.2	162.2	162.7	163.4	163.3	163.0
170°	156.5	157.3	158.4	159.0	159.3	160.1	159.9	159.3
172.5°	154.3	155.0	155.9	156.2	156.5	156.9	156.6	156.3
175°	152.1	152.4	152.7	153.0	153.0	153.3	153.0	152.4
177.5°	150.5	150.5	150.7	150.7	150.7	150.7	150.5	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8

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