

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: P331558-940

Luminaire Tested: **S122DIW-S865D435U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331558-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D435U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4455.4 lumens
Efficiency: N/A
Efficacy: 96.4 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

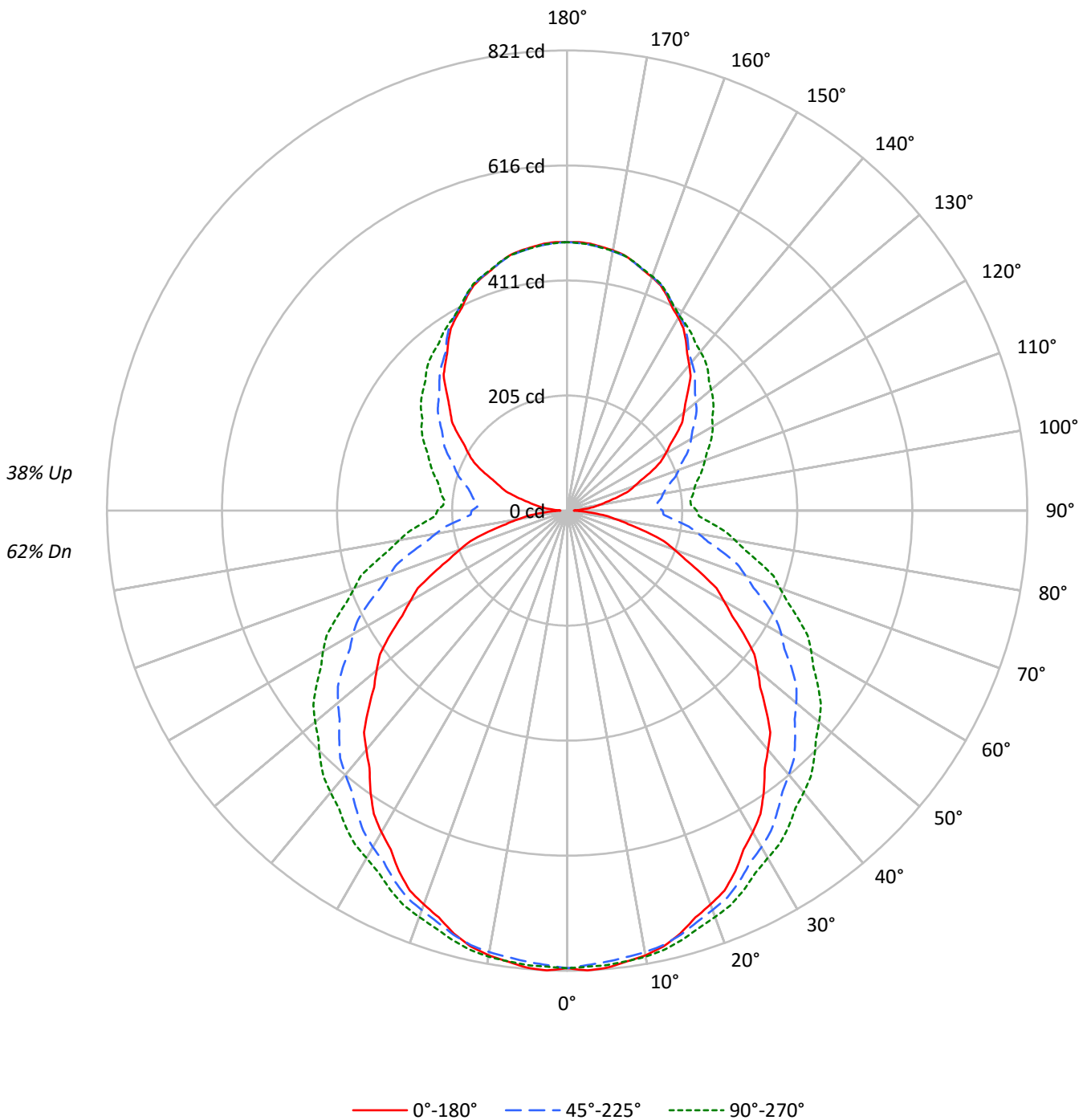
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67
1	99	93	89	85	92	87	83	80	76	73	70	66	64	61	57	55	53
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43
3	81	70	62	55	75	66	58	53	57	52	47	50	45	41	43	39	36
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	31
5	68	55	46	40	63	52	44	38	45	39	34	39	34	30	34	30	26
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	24	20
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.7
10°-20°	221.8	5.0
20°-30°	336.2	7.5
30°-40°	409.5	9.2
40°-50°	440.5	9.9
50°-60°	427.8	9.6
60°-70°	373.5	8.4
70°-80°	287.6	6.5
80°-90°	194.9	4.4
90°-100°	163.3	3.7
100°-110°	191.3	4.3
110°-120°	225.2	5.1
120°-130°	247.6	5.6
130°-140°	252.7	5.7
140°-150°	235.7	5.3
150°-160°	195.5	4.4
160°-170°	129.7	2.9
170°-180°	45.3	1.0
0°-30°	635.4	14.3
0°-40°	1044.8	23.5
0°-60°	1913.1	42.9
0°-90°	2769.1	62.2
90°-120°	579.8	13.0
90°-150°	1315.7	29.5
90°-180°	1686.0	37.8
0°-180°	4455.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	12	86	170	215	232	9
95°	30	91	162	205	220	32
105°	93	130	191	231	246	98
115°	166	184	234	268	281	164
125°	238	243	278	307	319	213
135°	305	310	322	346	355	236
145°	369	372	374	382	386	231
155°	422	423	425	426	425	194
165°	459	459	459	462	460	129
175°	478	477	476	478	476	45
180°	479	479	479	479	479	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.3	39.1	55.0	70.9	86.9	103.3	120.6	137.9	155.1	172.3	183.0
90°	12.2	28.5	44.9	61.3	77.6	95.1	114.0	132.7	151.5	170.3	180.7
92.5°	18.1	33.1	48.1	63.0	78.0	93.9	110.5	127.2	143.8	160.5	170.9
95°	30.5	43.7	57.0	70.3	83.5	98.1	114.0	130.0	146.0	161.9	171.9
97.5°	46.6	58.4	70.3	82.0	93.8	107.5	122.9	138.4	153.9	169.3	179.1
100°	59.6	70.0	80.5	91.0	101.4	114.1	129.1	144.1	159.1	174.1	183.8
102.5°	72.2	81.7	91.1	100.6	110.0	122.2	136.8	151.4	166.0	180.7	190.3
105°	92.7	100.7	108.5	116.5	124.4	135.3	149.1	162.9	176.8	190.6	200.0
107.5°	114.7	121.2	127.7	134.2	140.6	150.4	163.5	176.6	189.8	202.9	211.8
110°	128.0	133.8	139.6	145.3	151.1	160.5	173.3	186.3	199.1	212.0	220.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	143.5	148.4	153.4	158.4	163.3	171.8	184.0	196.3	208.4	220.6	228.8
115°	166.3	169.8	173.2	176.6	180.0	187.6	199.2	210.9	222.6	234.3	242.0
117.5°	188.0	190.6	193.1	195.7	198.4	204.9	215.3	225.8	236.2	246.6	254.2
120°	203.1	204.9	206.7	208.4	210.2	216.0	225.8	235.6	245.4	255.2	262.5
122.5°	217.0	218.3	219.6	220.9	222.1	227.5	236.8	246.3	255.7	265.0	272.0
125°	237.5	238.3	239.1	240.0	240.8	245.2	253.3	261.4	269.7	277.8	284.6
127.5°	258.6	259.3	260.1	260.8	261.6	265.2	271.7	278.1	284.6	291.1	297.3
130°	271.8	272.8	273.7	274.6	275.4	278.6	283.9	289.3	294.6	300.0	306.0
132.5°	286.7	287.4	288.1	288.7	289.4	291.9	296.2	300.5	304.9	309.2	314.9
135°	305.4	306.4	307.4	308.4	309.3	311.2	314.1	316.8	319.7	322.4	327.9
137.5°	326.3	327.1	327.8	328.6	329.3	330.4	331.8	333.2	334.6	336.0	340.7
140°	338.9	339.5	340.0	340.5	341.1	341.9	342.9	343.8	344.8	345.8	350.0
142.5°	351.9	352.4	352.9	353.5	354.0	354.5	354.9	355.3	355.7	356.1	359.6
145°	369.3	369.9	370.5	371.1	371.8	372.4	372.9	373.4	374.0	374.5	376.2
147.5°	385.8	386.6	387.4	388.1	388.9	389.4	389.8	390.1	390.5	390.8	391.2
150°	397.2	397.7	398.2	398.8	399.3	399.8	400.1	400.5	400.8	401.2	401.4
152.5°	407.2	407.7	408.2	408.8	409.3	409.8	410.2	410.6	411.1	411.5	411.9
155°	422.1	422.4	422.7	423.0	423.3	423.6	423.8	424.1	424.4	424.6	425.1
157.5°	435.1	435.2	435.4	435.6	435.8	435.9	436.0	436.2	436.4	436.6	437.2
160°	442.8	443.0	443.2	443.4	443.5	443.6	443.7	443.8	443.9	444.0	444.5
162.5°	449.9	450.0	450.0	450.0	450.0	450.1	450.2	450.3	450.4	450.5	451.0
165°	459.3	459.2	459.1	459.1	459.0	459.0	459.0	459.0	459.0	459.0	459.6
167.5°	467.3	467.0	466.7	466.5	466.2	466.0	466.0	466.0	466.0	466.0	466.6
170°	471.4	471.2	470.9	470.6	470.4	470.2	470.1	470.0	469.9	469.8	470.5
172.5°	474.4	474.1	473.9	473.6	473.3	473.1	473.1	473.0	472.9	472.8	473.4
175°	478.0	477.7	477.4	477.2	476.9	476.6	476.4	476.3	476.1	475.9	476.5
177.5°	479.4	479.2	478.9	478.8	478.5	478.3	478.2	478.0	477.9	477.8	478.2
180°	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	193.7	204.4	215.1	222.0	225.4	228.8	232.2	235.6
90°	191.0	201.3	211.7	218.5	221.7	225.0	228.2	231.5
92.5°	181.2	191.5	201.9	208.7	211.8	215.0	218.2	221.3
95°	181.9	191.9	201.9	208.4	211.3	214.4	217.3	220.3
97.5°	188.9	198.6	208.3	214.7	217.8	220.9	223.9	227.0
100°	193.5	203.2	213.0	219.3	222.0	224.9	227.7	230.5
102.5°	199.9	209.5	219.1	225.2	228.1	230.9	233.6	236.5
105°	209.4	218.8	228.2	234.3	237.2	240.0	243.0	245.8
107.5°	220.6	229.5	238.4	244.2	246.6	249.1	251.6	254.0
110°	228.8	237.3	245.7	251.2	253.8	256.5	259.0	261.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	237.0	245.2	253.3	258.9	261.5	264.2	266.9	269.6
115°	249.8	257.6	265.4	270.6	273.2	275.9	278.5	281.1
117.5°	261.8	269.4	276.9	281.9	284.3	286.8	289.2	291.6
120°	269.9	277.2	284.6	289.6	292.2	294.9	297.5	300.1
122.5°	278.9	285.8	292.7	297.4	299.6	301.9	304.2	306.5
125°	291.4	298.3	305.1	309.7	311.9	314.2	316.5	318.8
127.5°	303.4	309.7	315.8	319.9	322.0	324.0	326.1	328.1
130°	312.2	318.3	324.5	328.4	330.1	331.9	333.7	335.4
132.5°	320.6	326.3	332.0	335.7	337.5	339.4	341.2	343.0
135°	333.3	338.8	344.2	347.9	349.6	351.5	353.4	355.2
137.5°	345.5	350.3	355.1	358.1	359.5	361.0	362.4	363.8
140°	354.2	358.4	362.6	365.3	366.5	367.7	369.0	370.1
142.5°	363.0	366.5	369.9	372.1	373.1	374.2	375.1	376.1
145°	377.8	379.5	381.2	382.5	383.4	384.4	385.3	386.3
147.5°	391.6	392.1	392.4	392.8	393.1	393.4	393.7	394.0
150°	401.7	402.0	402.3	402.3	402.0	401.7	401.4	401.2
152.5°	412.1	412.5	412.9	412.9	412.5	412.1	411.9	411.5
155°	425.5	426.0	426.4	426.5	426.2	426.0	425.7	425.4
157.5°	437.7	438.4	439.0	439.1	438.6	438.2	437.8	437.4
160°	445.1	445.6	446.1	446.2	445.9	445.5	445.1	444.8
162.5°	451.7	452.3	452.9	453.0	452.5	452.1	451.7	451.3
165°	460.2	460.8	461.5	461.5	461.1	460.7	460.2	459.8
167.5°	467.3	467.9	468.5	468.6	468.1	467.6	467.2	466.7
170°	471.1	471.7	472.3	472.4	471.9	471.4	470.8	470.3
172.5°	474.0	474.7	475.3	475.3	474.7	474.2	473.7	473.1
175°	477.2	477.8	478.4	478.5	478.0	477.4	476.9	476.4
177.5°	478.7	479.0	479.5	479.5	479.0	478.7	478.2	477.8
180°	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8

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