

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: P332541-935

Luminaire Tested: **S124DIP-S575D365U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332541-935
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: S124DIP-S575D365U935-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3405.3 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

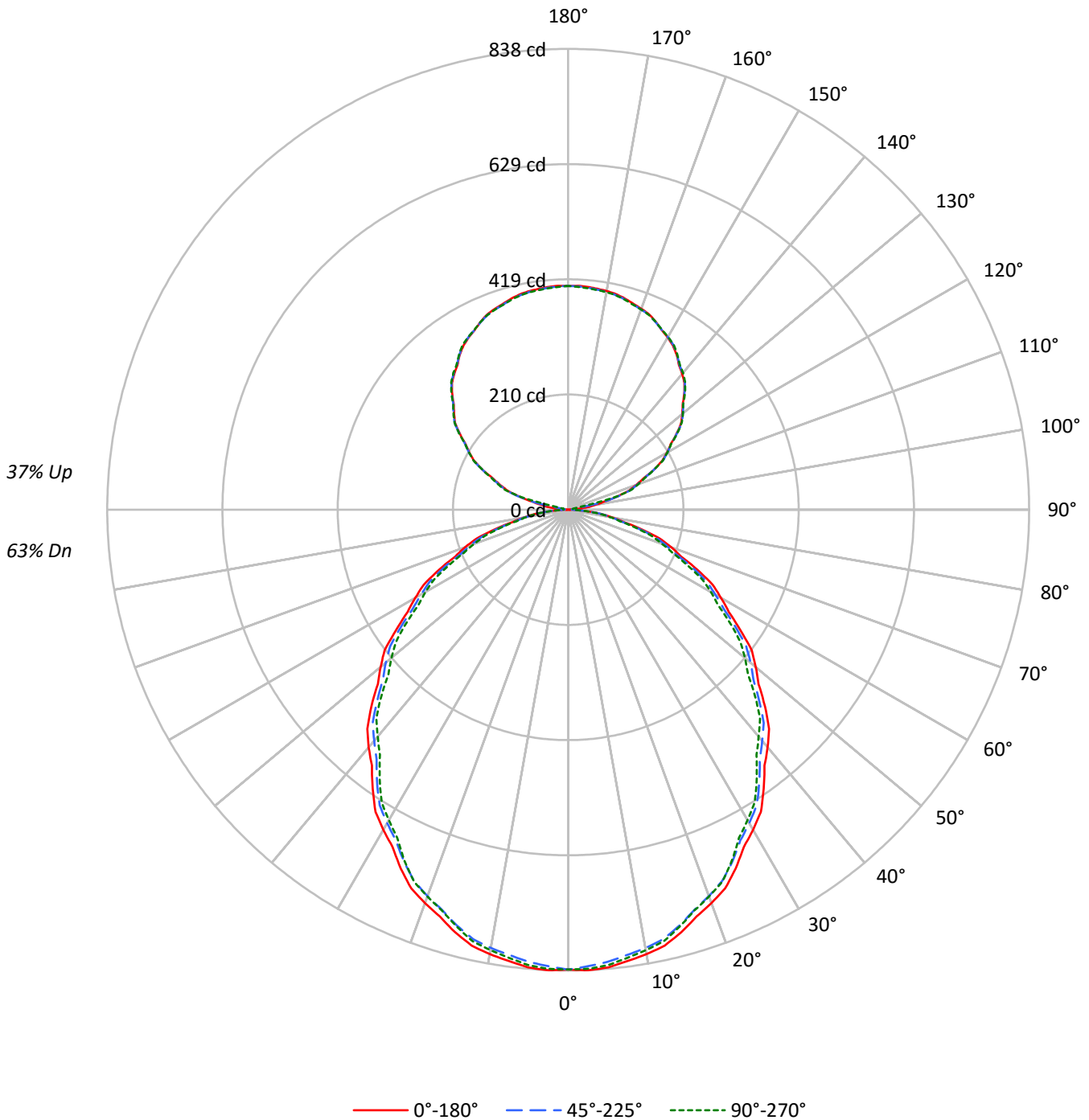
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	101	96	92	89	94	90	87	84	79	77	74	69	67	66	60	59	57	53
2	92	84	78	72	86	79	73	69	70	65	62	61	58	55	53	51	48	44
3	84	74	66	60	78	70	63	57	61	56	52	54	50	46	47	44	41	38
4	77	65	57	51	71	62	54	49	55	49	44	48	43	40	42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38	43	38	35	38	34	31	28
6	65	52	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	25
7	60	47	39	34	56	45	37	32	40	34	30	36	31	27	31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26	33	28	24	29	25	22	20
9	52	39	32	27	49	37	30	26	34	28	24	30	25	22	27	23	20	18
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6750	6750	6750
5°	6771	6689	6738
10°	6728	6634	6668
15°	6647	6541	6557
20°	6539	6424	6430
25°	6415	6290	6272
30°	6264	6134	6077
35°	6107	5969	5889
40°	5945	5782	5676
45°	5775	5599	5492
50°	5588	5436	5267
55°	5384	5225	5054
60°	5181	4986	4836
65°	4951	4762	4569
70°	4697	4459	4286
75°	4304	4095	3989
80°	3831	3673	3584
85°	3353	3233	3168



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	2.3
10°-20°	221.9	6.5
20°-30°	326.6	9.6
30°-40°	379.6	11.1
40°-50°	379.6	11.1
50°-60°	332.1	9.8
60°-70°	246.6	7.2
70°-80°	140.1	4.1
80°-90°	41.6	1.2
90°-100°	13.9	0.4
100°-110°	88.7	2.6
110°-120°	169.7	5.0
120°-130°	215.4	6.3
130°-140°	230.5	6.8
140°-150°	215.6	6.3
150°-160°	173.8	5.1
160°-170°	112.1	3.3
170°-180°	38.6	1.1
0°-30°	627.2	18.4
0°-40°	1006.8	29.6
0°-60°	1718.5	50.5
0°-90°	2146.9	63.0
90°-120°	272.4	8.0
90°-150°	933.9	27.4
90°-180°	1258.0	36.9
0°-180°	3405.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	836	833	825	832	832	79
15°	795	792	783	786	784	224
25°	720	715	706	707	704	331
35°	620	615	606	601	598	387
45°	506	501	490	483	481	390
55°	382	380	371	363	359	343
65°	259	256	249	243	239	257
75°	138	135	131	129	128	147
85°	36	36	35	35	34	40
90°	1	4	7	8	9	3
95°	17	7	7	8	9	22
105°	92	93	95	97	87	96
115°	171	172	172	172	172	168
125°	240	242	241	242	242	215
135°	298	298	299	300	300	230
145°	344	345	345	345	346	215
155°	377	377	376	378	377	174
165°	398	396	396	398	396	112
175°	407	405	405	408	404	39
180°	407	407	407	407	407	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1
2.5°	838.3	837.9	837.6	837.2	836.9	836.0	834.7	833.4	832.1	830.8	832.0
5°	835.5	834.9	834.3	833.7	833.1	832.0	830.3	828.7	827.1	825.4	827.1
7.5°	827.7	827.1	826.6	826.0	825.4	824.1	822.3	820.5	818.6	816.8	818.2
10°	820.7	820.2	819.6	819.0	818.4	817.1	815.2	813.2	811.3	809.3	810.5
12.5°	811.7	811.1	810.5	809.9	809.3	808.0	805.9	803.8	801.8	799.7	801.0
15°	795.3	794.7	794.1	793.5	792.9	791.5	789.3	787.0	784.8	782.6	783.4
17.5°	775.6	774.8	774.1	773.4	772.6	771.2	769.0	767.0	764.8	762.8	763.3
20°	761.1	760.3	759.7	758.9	758.1	756.6	754.4	752.2	749.9	747.7	748.1
22.5°	745.5	744.6	743.6	742.6	741.7	740.0	737.8	735.6	733.3	731.1	731.9
25°	720.2	719.2	718.2	717.1	716.1	714.5	712.4	710.3	708.3	706.2	706.4
27.5°	691.3	690.3	689.1	688.1	687.0	685.5	683.5	681.7	679.7	677.8	677.4
30°	672.0	670.8	669.6	668.4	667.3	665.6	663.7	661.8	659.9	658.0	657.4
32.5°	651.6	650.6	649.5	648.4	647.4	645.8	643.8	641.7	639.6	637.6	636.9
35°	619.7	618.7	617.7	616.6	615.6	614.0	611.9	609.8	607.8	605.7	604.6
37.5°	586.1	585.1	584.2	583.2	582.3	580.7	578.5	576.3	574.0	571.8	570.7
40°	564.1	562.9	561.7	560.6	559.4	557.7	555.4	553.2	551.0	548.7	547.3
42.5°	540.5	539.8	539.2	538.4	537.7	536.1	533.6	531.2	528.7	526.2	524.5
45°	505.8	504.8	503.8	502.7	501.7	500.0	497.6	495.2	492.8	490.4	488.8
47.5°	469.5	468.8	468.1	467.4	466.7	465.2	463.0	460.8	458.6	456.4	454.5
50°	444.9	444.3	443.7	443.1	442.5	441.2	439.1	437.0	434.9	432.8	430.8
52.5°	420.8	420.1	419.3	418.6	417.9	416.5	414.2	412.1	409.8	407.6	405.8
55°	382.5	382.1	381.7	381.3	380.8	379.5	377.5	375.3	373.2	371.2	369.4
57.5°	346.1	345.6	345.1	344.6	344.1	342.9	340.8	338.7	336.7	334.6	332.9
60°	320.9	320.2	319.4	318.7	318.0	316.6	314.7	312.7	310.8	308.8	307.5
62.5°	296.3	295.7	295.0	294.4	293.8	292.4	290.4	288.3	286.3	284.2	283.0
65°	259.2	258.6	257.8	257.1	256.3	255.2	253.7	252.2	250.7	249.3	247.7
67.5°	222.1	221.4	220.7	220.0	219.3	218.3	216.8	215.4	214.0	212.5	211.1
70°	199.0	197.9	196.9	195.9	194.8	193.7	192.5	191.3	190.1	188.9	187.8
72.5°	174.4	173.3	172.3	171.2	170.1	169.2	168.2	167.3	166.3	165.3	164.4
75°	138.0	137.2	136.6	135.8	135.0	134.3	133.5	132.8	132.1	131.3	130.7
77.5°	103.3	103.0	102.6	102.4	102.0	101.5	100.8	100.2	99.5	98.9	98.7
80°	82.4	82.0	81.5	81.1	80.6	80.2	80.0	79.6	79.4	79.0	78.8
82.5°	62.1	61.8	61.6	61.4	61.2	61.0	61.0	61.0	60.9	60.9	60.6
85°	36.2	36.2	36.2	36.2	36.2	36.0	35.7	35.5	35.1	34.9	34.9
87.5°	14.1	14.1	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.3
90°	0.9	1.6	2.4	3.2	3.9	4.6	5.1	5.6	6.1	6.7	7.1
92.5°	3.9	3.9	3.9	4.0	4.0	4.3	4.8	5.3	5.9	6.5	6.9
95°	16.7	14.5	12.1	9.8	7.6	6.5	6.5	6.5	6.6	6.7	7.1
97.5°	35.6	36.9	38.4	39.9	41.2	38.2	30.7	23.2	15.6	8.0	8.1
100°	49.9	51.1	52.3	53.6	54.8	50.7	41.4	32.0	22.7	13.4	12.2
102.5°	66.0	66.9	67.8	68.6	69.6	69.4	68.2	67.0	65.7	64.5	62.1
105°	91.6	92.0	92.4	92.8	93.2	93.6	93.9	94.3	94.6	95.0	95.6
107.5°	115.4	115.5	115.8	116.0	116.2	116.5	117.0	117.4	117.9	118.4	118.6
110°	131.5	131.6	131.8	132.1	132.2	132.6	132.9	133.4	133.8	134.2	134.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.1	147.4	147.7	148.1	148.5	148.8	149.0	149.1	149.3	149.6	149.5
115°	171.0	171.3	171.4	171.6	171.9	171.9	171.9	171.8	171.7	171.6	171.8
117.5°	192.6	192.9	193.1	193.5	193.7	193.9	194.1	194.2	194.3	194.5	194.5
120°	207.2	207.5	207.8	208.0	208.3	208.4	208.4	208.3	208.2	208.1	208.3
122.5°	220.8	221.0	221.2	221.4	221.5	221.6	221.7	221.8	221.9	222.1	222.1
125°	240.4	240.6	240.9	241.2	241.5	241.5	241.4	241.3	241.2	241.0	241.2
127.5°	258.9	259.0	259.0	259.1	259.2	259.3	259.7	259.9	260.3	260.6	260.5
130°	270.8	270.9	271.0	271.0	271.1	271.2	271.4	271.6	271.8	272.1	272.1
132.5°	281.8	281.9	282.0	282.1	282.2	282.4	282.7	282.9	283.2	283.4	283.5
135°	298.2	298.2	298.1	298.0	297.9	298.0	298.3	298.6	298.9	299.1	299.3
137.5°	312.7	312.8	312.8	312.8	312.9	313.1	313.3	313.6	313.9	314.2	314.4
140°	322.3	322.4	322.5	322.6	322.8	322.9	323.0	323.2	323.3	323.5	323.6
142.5°	330.8	331.0	331.2	331.5	331.7	331.9	332.0	332.1	332.2	332.3	332.3
145°	343.9	344.1	344.2	344.5	344.7	344.7	344.7	344.7	344.7	344.7	344.8
147.5°	354.2	354.6	355.0	355.4	355.8	355.9	355.9	355.8	355.7	355.7	355.7
150°	361.8	362.1	362.3	362.7	362.9	363.0	362.9	362.8	362.7	362.7	362.7
152.5°	368.2	368.3	368.6	368.8	369.0	369.0	368.9	368.8	368.7	368.6	368.7
155°	377.0	377.1	377.1	377.2	377.3	377.2	377.0	376.8	376.6	376.4	376.7
157.5°	384.5	384.4	384.4	384.4	384.4	384.2	384.0	383.7	383.5	383.3	383.7
160°	388.9	388.7	388.5	388.3	388.1	388.0	387.9	387.8	387.7	387.6	388.1
162.5°	392.8	392.5	392.3	392.0	391.8	391.6	391.5	391.4	391.4	391.3	391.8
165°	397.7	397.4	397.0	396.7	396.3	396.1	396.1	396.1	396.1	396.1	396.7
167.5°	401.6	401.2	400.9	400.5	400.2	400.0	399.9	399.9	399.8	399.8	400.5
170°	403.8	403.4	402.9	402.6	402.2	402.0	402.1	402.2	402.2	402.3	402.8
172.5°	405.3	404.8	404.4	404.1	403.6	403.5	403.6	403.6	403.6	403.7	404.2
175°	406.8	406.4	406.0	405.6	405.2	405.0	405.1	405.2	405.3	405.3	406.0
177.5°	407.6	407.2	406.8	406.4	406.0	405.9	406.0	406.1	406.2	406.3	406.8
180°	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	836.1	836.1	836.1	836.1	836.1	836.1	836.1	836.1
2.5°	833.2	834.4	835.6	836.1	835.9	835.9	835.8	835.6
5°	828.7	830.3	832.0	832.7	832.3	832.1	831.7	831.5
7.5°	819.5	820.8	822.1	822.7	822.5	822.3	822.2	821.9
10°	811.8	813.0	814.2	814.6	814.2	814.0	813.6	813.4
12.5°	802.4	803.7	804.9	805.4	804.9	804.5	804.2	803.7
15°	784.4	785.2	786.1	786.4	785.9	785.5	785.0	784.5
17.5°	763.9	764.4	765.0	765.1	764.8	764.5	764.2	764.0
20°	748.6	749.1	749.5	749.6	749.2	749.0	748.7	748.4
22.5°	732.7	733.5	734.3	734.4	733.9	733.4	732.9	732.3
25°	706.5	706.6	706.8	706.5	705.9	705.3	704.7	704.1
27.5°	677.1	676.7	676.3	675.8	675.0	674.3	673.6	672.8
30°	656.8	656.2	655.6	654.9	654.1	653.4	652.6	651.9
32.5°	636.1	635.4	634.7	634.0	633.3	632.5	631.7	631.0
35°	603.6	602.5	601.5	600.6	599.9	599.1	598.4	597.6
37.5°	569.6	568.3	567.2	566.2	565.2	564.2	563.3	562.2
40°	545.8	544.2	542.8	541.7	540.9	540.2	539.4	538.6
42.5°	522.8	521.0	519.3	518.1	517.7	517.2	516.7	516.2
45°	487.2	485.5	483.9	482.8	482.4	482.0	481.5	481.0
47.5°	452.7	450.8	449.0	447.5	446.4	445.2	444.1	443.0
50°	428.6	426.5	424.5	423.0	422.1	421.2	420.3	419.4
52.5°	403.9	402.1	400.3	398.7	397.6	396.5	395.4	394.3
55°	367.6	365.8	364.0	362.7	361.8	360.9	360.0	359.1
57.5°	331.2	329.5	327.8	326.5	325.6	324.8	323.9	323.0
60°	306.2	304.9	303.5	302.5	301.7	301.0	300.2	299.5
62.5°	281.8	280.5	279.3	278.4	277.6	276.9	276.1	275.3
65°	246.2	244.8	243.3	242.2	241.4	240.6	240.0	239.2
67.5°	209.7	208.3	206.8	206.0	205.8	205.6	205.3	205.2
70°	186.6	185.4	184.2	183.4	182.9	182.4	182.0	181.6
72.5°	163.4	162.5	161.5	160.8	160.4	160.0	159.5	159.0
75°	130.1	129.5	129.0	128.5	128.4	128.3	128.1	127.9
77.5°	98.5	98.3	98.2	97.9	97.5	97.1	96.7	96.3
80°	78.4	78.2	77.8	77.7	77.5	77.3	77.2	77.1
82.5°	60.4	60.3	60.1	59.9	59.8	59.7	59.5	59.3
85°	34.9	34.9	34.9	34.8	34.6	34.4	34.4	34.2
87.5°	14.4	14.5	14.6	14.6	14.6	14.6	14.6	14.7
90°	7.5	7.9	8.4	8.6	8.7	8.9	9.0	9.1
92.5°	7.2	7.7	8.1	8.3	8.4	8.4	8.4	8.4
95°	7.5	7.9	8.4	8.5	8.6	8.7	8.8	8.8
97.5°	8.1	8.2	8.2	8.3	8.4	8.4	8.4	8.5
100°	11.1	9.9	8.8	8.3	8.4	8.4	8.4	8.5
102.5°	39.7	27.3	14.9	8.7	8.7	8.7	8.8	8.8
105°	96.2	96.8	97.4	96.4	94.0	91.6	89.1	86.7
107.5°	119.0	119.2	119.6	119.9	120.1	120.4	120.6	120.9
110°	134.5	134.6	134.7	134.9	135.1	135.3	135.5	135.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	149.5	149.5	149.4	149.6	149.8	150.1	150.3	150.6
115°	171.9	172.0	172.2	172.2	172.2	172.2	172.2	172.2
117.5°	194.4	194.4	194.4	194.3	194.3	194.3	194.3	194.2
120°	208.4	208.5	208.7	208.7	208.5	208.4	208.3	208.1
122.5°	222.1	222.2	222.3	222.3	222.1	222.1	221.9	221.8
125°	241.4	241.6	241.8	241.9	242.0	242.1	242.1	242.2
127.5°	260.5	260.5	260.5	260.4	260.4	260.3	260.2	260.2
130°	272.2	272.2	272.3	272.3	272.3	272.3	272.3	272.3
132.5°	283.6	283.7	283.8	283.8	283.7	283.6	283.6	283.5
135°	299.4	299.5	299.6	299.8	299.9	300.1	300.2	300.3
137.5°	314.5	314.7	314.8	314.9	314.8	314.8	314.7	314.7
140°	323.8	324.1	324.3	324.4	324.5	324.5	324.6	324.7
142.5°	332.5	332.7	332.8	332.9	332.9	332.9	332.9	332.9
145°	344.9	345.0	345.0	345.1	345.3	345.4	345.5	345.7
147.5°	355.8	355.9	355.9	355.9	356.0	356.0	356.1	356.2
150°	362.7	362.7	362.7	362.7	362.8	362.9	362.9	363.0
152.5°	368.8	368.9	369.0	369.0	368.9	368.9	368.9	368.9
155°	376.9	377.2	377.5	377.5	377.3	377.1	376.9	376.7
157.5°	384.0	384.4	384.7	384.7	384.4	384.0	383.7	383.3
160°	388.5	388.9	389.3	389.3	388.9	388.5	388.1	387.6
162.5°	392.1	392.5	393.0	392.9	392.4	392.0	391.5	391.1
165°	397.3	397.8	398.4	398.3	397.7	397.1	396.5	395.9
167.5°	401.1	401.7	402.2	402.2	401.5	400.8	400.1	399.5
170°	403.4	403.9	404.4	404.3	403.7	403.0	402.3	401.7
172.5°	404.8	405.4	405.9	405.8	405.1	404.3	403.6	402.9
175°	406.6	407.2	407.8	407.7	406.8	406.0	405.2	404.4
177.5°	407.3	407.7	408.1	407.9	407.3	406.7	406.0	405.4
180°	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8

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