

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: P332256-927

Luminaire Tested: **S123RDIP-S340D805U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332256-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D805U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3215.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

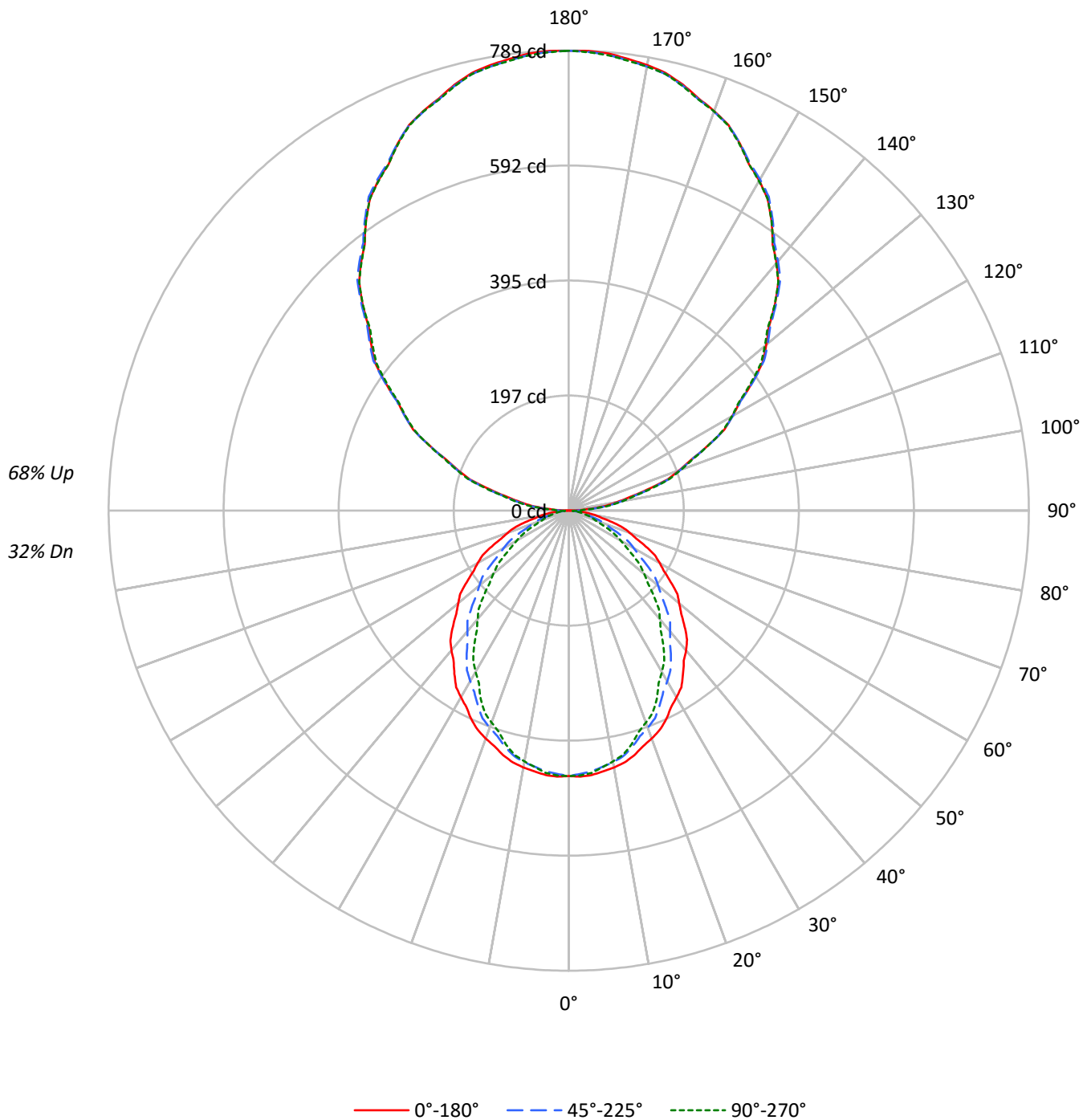
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RCR																	
0	103	103	103	103	93	93	93	93	73	73	73		56	56	56		40
1	94	90	86	83	84	81	78	75	64	62	60		49	48	47		35
2	86	79	73	68	77	71	66	62	57	53	50		44	41	39		31
3	78	69	62	57	70	63	57	52	50	46	42		39	36	33		28
4	72	61	54	48	64	56	49	44	45	40	36		34	31	29		25
5	66	55	47	41	59	49	43	38	40	35	31		31	28	25		23
6	60	49	41	36	54	44	38	33	36	31	27		28	25	22		21
7	56	44	36	31	50	40	33	29	33	28	24		25	22	19		19
8	52	40	33	27	47	36	30	25	30	25	21		23	20	17		17
9	48	36	29	24	43	33	27	23	27	22	19		21	18	15		16
10	45	33	26	22	40	30	24	20	25	20	17		20	16	14		15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4899	4899	4899
5°	4917	4850	4878
10°	4889	4790	4773
15°	4837	4677	4628
20°	4765	4537	4431
25°	4691	4380	4240
30°	4593	4197	3967
35°	4491	4016	3720
40°	4398	3801	3413
45°	4276	3589	3136
50°	4141	3349	2825
55°	4003	3076	2535
60°	3877	2781	2217
65°	3713	2463	1897
70°	3509	2068	1533
75°	3211	1626	1443
80°	2858	1444	1327
85°	2421	1272	1186

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	1.3
10°-20°	118.9	3.7
20°-30°	171.2	5.3
30°-40°	192.9	6.0
40°-50°	184.5	5.7
50°-60°	151.1	4.7
60°-70°	101.9	3.2
70°-80°	51.3	1.6
80°-90°	15.9	0.5
90°-100°	51.4	1.6
100°-110°	153.7	4.8
110°-120°	261.5	8.1
120°-130°	343.9	10.7
130°-140°	386.6	12.0
140°-150°	380.0	11.8
150°-160°	319.9	10.0
160°-170°	212.9	6.6
170°-180°	74.6	2.3
0°-30°	332.9	10.4
0°-40°	525.7	16.4
0°-60°	861.4	26.8
0°-90°	1030.5	32.1
90°-120°	466.6	14.5
90°-150°	1577.1	49.1
90°-180°	2185.0	68.0
0°-180°	3215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	455	453	449	452	452	43
15°	434	430	420	418	415	122
25°	395	385	369	361	357	182
35°	342	328	306	290	283	214
45°	281	264	236	215	206	217
55°	213	195	164	143	135	191
65°	146	125	97	79	74	144
75°	77	59	39	36	35	82
85°	20	12	10	10	10	22
90°	1	7	15	17	19	3
95°	36	41	46	48	48	41
105°	139	141	146	146	147	149
115°	263	265	264	264	264	260
125°	385	387	386	383	381	343
135°	500	503	503	500	499	385
145°	606	608	609	609	606	379
155°	694	694	695	697	693	319
165°	756	754	754	758	754	213
175°	787	784	784	787	784	75
180°	788	788	788	788	788	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	456.6	456.3	456.1	455.8	455.6	455.0	454.2	453.4	452.7	451.9	452.6
5°	455.1	454.7	454.3	453.9	453.4	452.8	451.8	450.8	449.8	448.9	449.6
7.5°	450.9	450.4	450.0	449.6	449.2	448.3	447.0	445.8	444.4	443.1	443.5
10°	447.3	446.8	446.2	445.7	445.0	444.0	442.6	441.1	439.6	438.2	438.2
12.5°	442.4	441.7	441.1	440.5	439.8	438.6	436.7	435.0	433.2	431.3	431.3
15°	434.1	433.2	432.3	431.3	430.5	428.9	426.6	424.3	422.0	419.7	419.3
17.5°	423.7	422.6	421.6	420.5	419.5	417.5	414.5	411.6	408.8	405.8	405.0
20°	416.0	414.7	413.4	412.1	410.7	408.5	405.4	402.3	399.2	396.1	395.0
22.5°	407.4	405.9	404.4	402.9	401.4	399.0	395.7	392.4	389.0	385.7	384.4
25°	395.0	392.9	390.9	388.8	386.7	383.8	380.1	376.3	372.5	368.8	367.0
27.5°	379.9	377.6	375.3	373.0	370.7	367.6	363.4	359.1	354.9	350.7	348.3
30°	369.5	367.0	364.6	362.1	359.7	356.1	351.5	346.9	342.3	337.7	334.9
32.5°	359.2	356.3	353.6	350.8	348.0	344.2	339.3	334.5	329.6	324.7	321.7
35°	341.8	338.8	335.9	333.0	330.0	326.0	320.9	315.8	310.7	305.6	302.1
37.5°	324.2	320.9	317.7	314.4	311.1	306.7	301.3	295.9	290.5	285.0	281.1
40°	313.0	309.4	305.8	302.2	298.6	293.8	288.0	282.2	276.4	270.5	266.3
42.5°	300.3	296.7	293.1	289.5	285.9	281.1	275.0	269.0	263.0	257.0	252.3
45°	280.9	277.2	273.5	269.8	266.1	261.1	254.8	248.5	242.2	235.8	231.2
47.5°	261.5	257.5	253.3	249.3	245.3	240.1	233.8	227.4	221.2	214.8	209.8
50°	247.3	243.4	239.6	235.8	231.9	226.6	220.0	213.3	206.7	200.0	195.0
52.5°	234.6	230.4	226.2	222.0	217.9	212.5	205.9	199.3	192.7	186.2	180.9
55°	213.3	209.3	205.3	201.3	197.3	191.8	184.8	177.8	170.9	163.9	159.1
57.5°	193.7	189.3	185.0	180.5	176.2	170.5	163.5	156.5	149.5	142.5	138.0
60°	180.1	175.6	171.1	166.6	162.1	156.5	149.6	142.8	136.0	129.2	124.8
62.5°	166.5	162.0	157.5	153.0	148.5	142.8	136.0	129.2	122.4	115.6	111.5
65°	145.8	141.3	136.8	132.3	127.8	122.3	115.9	109.5	103.1	96.7	92.7
67.5°	125.1	120.5	115.9	111.4	106.8	101.5	95.3	89.2	83.0	76.9	73.9
70°	111.5	107.0	102.6	98.2	93.8	88.6	82.9	77.2	71.5	65.7	62.8
72.5°	97.9	93.6	89.2	84.8	80.4	75.7	70.4	65.2	60.0	54.7	52.4
75°	77.2	73.2	69.2	65.4	61.4	57.2	52.7	48.2	43.6	39.1	38.3
77.5°	58.2	54.7	51.1	47.5	44.0	40.8	37.9	34.9	32.1	29.2	28.8
80°	46.1	42.8	39.5	36.0	32.7	30.2	28.4	26.7	25.0	23.3	23.0
82.5°	34.6	31.7	28.8	25.9	23.0	21.2	20.4	19.6	18.8	17.9	17.7
85°	19.6	17.7	15.9	14.2	12.4	11.3	11.1	10.9	10.6	10.3	10.1
87.5°	7.2	6.7	6.3	5.9	5.4	5.4	5.7	6.1	6.4	6.8	6.9
90°	0.6	2.0	3.4	4.8	6.1	7.7	9.5	11.2	13.1	14.9	15.4
92.5°	15.0	15.9	16.9	17.8	18.7	19.7	20.8	21.8	22.7	23.8	24.2
95°	36.5	37.5	38.5	39.5	40.4	41.4	42.5	43.6	44.8	45.9	46.4
97.5°	64.9	65.6	66.3	67.0	67.8	68.5	69.3	70.1	70.9	71.7	72.3
100°	84.2	85.1	85.9	86.7	87.5	88.3	89.0	89.7	90.4	91.0	91.5
102.5°	106.5	107.0	107.5	108.1	108.5	109.2	110.1	111.1	111.9	112.9	113.3
105°	139.3	139.7	139.9	140.2	140.5	141.2	142.4	143.7	145.0	146.2	146.2
107.5°	177.5	177.7	177.8	178.0	178.2	178.5	179.0	179.5	180.0	180.5	180.9
110°	201.3	201.5	201.8	202.1	202.4	202.6	203.0	203.2	203.5	203.7	204.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.1	226.2	226.4	226.6	226.7	226.8	226.9	227.0	227.0	227.0	227.8
115°	263.2	263.6	264.0	264.4	264.9	265.0	264.7	264.4	264.1	263.9	264.0
117.5°	300.6	301.0	301.2	301.4	301.7	301.7	301.3	301.0	300.6	300.2	300.2
120°	323.9	324.7	325.6	326.4	327.3	327.3	326.6	325.9	325.3	324.6	324.4
122.5°	348.2	348.8	349.4	350.0	350.6	350.8	350.4	350.1	349.7	349.4	349.0
125°	385.2	385.6	386.0	386.5	386.9	387.0	386.7	386.4	386.1	385.9	385.3
127.5°	419.5	420.3	421.2	422.1	422.9	423.3	422.9	422.6	422.3	422.0	421.3
130°	442.2	443.3	444.4	445.5	446.6	446.9	446.6	446.2	445.8	445.3	444.7
132.5°	465.0	466.1	467.2	468.3	469.4	469.8	469.5	469.2	468.9	468.6	467.9
135°	499.8	500.7	501.5	502.3	503.1	503.5	503.4	503.2	503.0	503.0	502.4
137.5°	532.0	532.7	533.4	534.1	534.8	535.3	535.7	536.0	536.4	536.7	536.1
140°	554.3	555.0	555.7	556.4	557.1	557.5	557.6	557.8	557.9	558.0	557.9
142.5°	574.6	575.4	576.0	576.7	577.4	577.9	578.1	578.4	578.6	578.8	578.7
145°	606.3	606.7	606.9	607.2	607.4	607.8	608.2	608.6	609.0	609.4	609.3
147.5°	634.1	634.6	635.1	635.6	636.1	636.5	636.9	637.3	637.7	638.1	638.1
150°	653.4	653.7	653.9	654.3	654.5	654.8	655.1	655.4	655.6	655.9	655.9
152.5°	669.3	669.6	670.0	670.4	670.8	671.1	671.3	671.5	671.6	671.8	672.0
155°	694.3	694.3	694.3	694.3	694.3	694.3	694.5	694.7	694.8	694.9	695.5
157.5°	715.6	715.4	715.3	715.1	714.9	714.9	715.0	715.2	715.3	715.3	716.0
160°	729.0	728.7	728.4	728.2	727.9	727.8	727.8	727.8	727.8	727.8	728.4
162.5°	740.8	740.5	740.1	739.7	739.3	739.2	739.3	739.4	739.5	739.7	740.3
165°	756.2	755.8	755.4	755.0	754.6	754.4	754.4	754.4	754.4	754.4	755.2
167.5°	768.5	767.9	767.4	766.8	766.3	766.1	766.2	766.3	766.4	766.5	767.4
170°	775.5	774.9	774.4	773.8	773.2	772.9	772.9	772.9	772.9	772.9	774.0
172.5°	780.9	780.4	779.8	779.3	778.7	778.4	778.4	778.4	778.4	778.4	779.3
175°	786.6	786.0	785.5	785.0	784.4	784.1	784.1	784.1	784.1	784.1	785.0
177.5°	788.9	788.5	788.1	787.6	787.2	787.0	787.0	787.0	787.0	787.0	787.6
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	453.3	454.0	454.8	455.0	455.0	454.8	454.6	454.6
5°	450.4	451.1	451.8	452.1	451.9	451.8	451.6	451.5
7.5°	444.0	444.4	444.8	444.9	444.6	444.3	444.0	443.8
10°	438.3	438.4	438.5	438.3	437.9	437.5	437.0	436.7
12.5°	431.3	431.2	431.2	430.9	430.4	429.9	429.4	429.0
15°	418.8	418.4	418.0	417.6	417.0	416.4	415.8	415.3
17.5°	404.1	403.2	402.3	401.5	400.6	399.7	398.9	398.1
20°	394.0	392.8	391.8	390.8	389.8	388.8	387.9	386.8
22.5°	383.1	381.8	380.4	379.3	378.3	377.5	376.5	375.7
25°	365.3	363.6	361.9	360.5	359.7	358.8	357.8	357.0
27.5°	345.9	343.6	341.2	339.3	337.9	336.5	335.2	333.7
30°	332.2	329.4	326.6	324.6	323.2	321.9	320.6	319.2
32.5°	318.6	315.6	312.5	310.3	309.0	307.6	306.2	304.8
35°	298.6	295.0	291.5	289.0	287.6	286.1	284.6	283.1
37.5°	277.0	273.0	269.0	266.1	264.3	262.4	260.6	258.8
40°	262.1	257.8	253.5	250.4	248.5	246.7	244.8	242.9
42.5°	247.6	243.0	238.4	235.2	233.5	231.8	230.1	228.4
45°	226.5	221.8	217.1	213.8	211.9	209.9	207.9	206.0
47.5°	204.6	199.6	194.5	191.1	189.3	187.6	185.8	184.0
50°	189.9	184.8	179.7	176.3	174.4	172.5	170.6	168.7
52.5°	175.6	170.3	165.1	161.6	159.9	158.2	156.5	154.8
55°	154.4	149.6	144.9	141.6	140.1	138.4	136.7	135.1
57.5°	133.5	129.0	124.5	121.5	120.2	118.7	117.4	116.0
60°	120.3	115.9	111.5	108.5	107.2	105.8	104.4	103.0
62.5°	107.3	103.1	98.9	96.1	94.7	93.2	91.7	90.3
65°	88.6	84.7	80.6	78.2	77.2	76.4	75.5	74.5
67.5°	70.9	67.9	64.9	62.9	61.9	61.0	60.0	59.1
70°	60.0	57.1	54.2	52.4	51.4	50.5	49.6	48.7
72.5°	50.1	47.8	45.4	44.0	43.6	43.3	42.9	42.5
75°	37.5	36.7	35.8	35.3	35.2	35.0	34.9	34.7
77.5°	28.3	27.8	27.4	27.1	26.9	26.8	26.6	26.5
80°	22.7	22.5	22.3	22.1	21.9	21.7	21.5	21.4
82.5°	17.4	17.2	17.0	16.8	16.8	16.7	16.7	16.7
85°	10.0	9.8	9.7	9.6	9.6	9.6	9.6	9.6
87.5°	6.9	7.0	7.0	7.0	7.0	7.0	7.0	7.0
90°	16.0	16.5	17.0	17.5	17.7	18.1	18.3	18.6
92.5°	24.6	25.1	25.5	25.7	25.5	25.3	25.2	25.0
95°	46.9	47.5	48.0	48.3	48.3	48.3	48.3	48.3
97.5°	73.0	73.6	74.2	74.5	74.5	74.5	74.4	74.3
100°	91.9	92.3	92.7	93.1	93.3	93.6	93.9	94.1
102.5°	113.7	114.1	114.5	114.7	114.6	114.5	114.5	114.5
105°	146.2	146.2	146.2	146.3	146.6	146.9	147.1	147.4
107.5°	181.3	181.8	182.3	182.4	182.2	182.0	181.9	181.7
110°	204.9	205.4	206.0	206.1	205.8	205.6	205.3	205.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	228.4	229.0	229.7	230.0	230.0	229.9	229.8	229.8
115°	264.1	264.3	264.4	264.4	264.3	264.1	264.0	263.9
117.5°	300.2	300.2	300.2	299.9	299.6	299.2	298.8	298.4
120°	324.2	324.2	324.0	323.8	323.5	323.2	323.0	322.7
122.5°	348.6	348.2	347.9	347.5	347.1	346.7	346.3	345.9
125°	384.8	384.2	383.7	383.1	382.5	382.0	381.4	380.9
127.5°	420.5	419.7	419.0	418.3	417.6	417.0	416.4	415.7
130°	444.3	443.7	443.1	442.4	441.4	440.5	439.5	438.5
132.5°	467.3	466.6	466.0	465.2	464.5	463.7	463.0	462.3
135°	501.8	501.3	500.7	500.3	500.0	499.8	499.5	499.2
137.5°	535.6	535.0	534.4	533.9	533.4	532.8	532.3	531.8
140°	557.8	557.6	557.5	557.0	556.0	555.0	554.1	553.1
142.5°	578.6	578.5	578.3	577.9	577.1	576.4	575.6	574.9
145°	609.2	609.0	608.9	608.6	608.0	607.4	606.9	606.3
147.5°	638.1	638.1	638.1	637.6	636.8	636.0	635.2	634.4
150°	655.9	655.9	655.9	655.5	654.7	653.9	653.0	652.2
152.5°	672.2	672.4	672.6	672.4	671.7	671.0	670.3	669.6
155°	696.0	696.6	697.1	696.9	695.9	695.0	694.0	693.1
157.5°	716.5	717.1	717.6	717.6	716.8	716.1	715.3	714.5
160°	729.1	729.8	730.5	730.6	730.0	729.4	728.9	728.3
162.5°	741.0	741.7	742.4	742.3	741.4	740.5	739.7	738.8
165°	756.1	756.9	757.7	757.6	756.7	755.7	754.7	753.8
167.5°	768.3	769.1	769.9	769.9	769.1	768.3	767.4	766.5
170°	774.9	775.9	776.8	776.8	775.9	774.9	774.0	772.9
172.5°	780.1	781.0	781.8	781.8	780.8	779.8	778.9	777.9
175°	785.8	786.6	787.4	787.3	786.4	785.4	784.4	783.5
177.5°	788.3	788.9	789.6	789.6	788.8	788.0	787.3	786.5
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5

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