

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: P333038-927

Luminaire Tested: **S124RDIW-S575D470U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333038-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S575D470U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3149.2 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

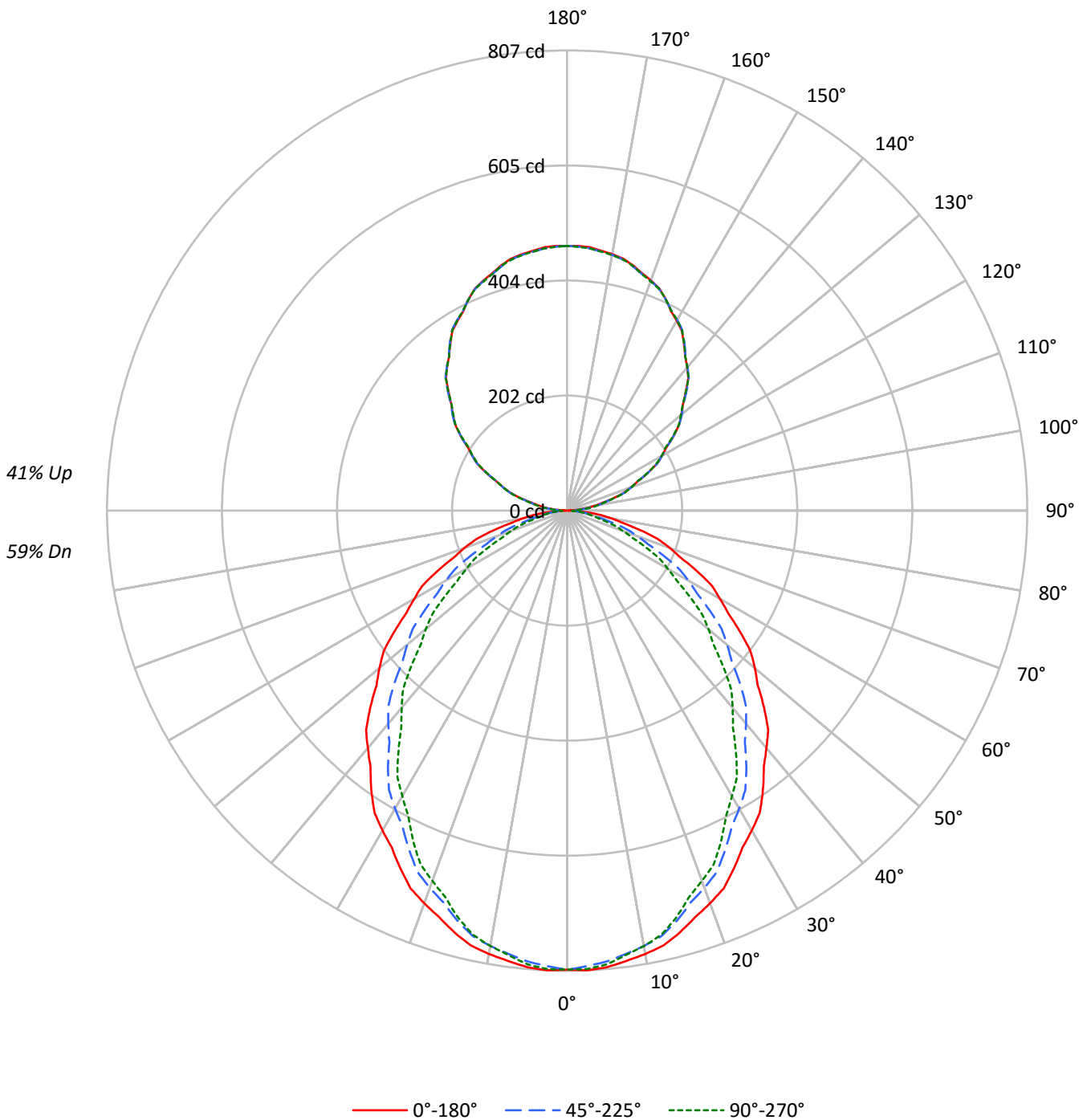
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	100	96	92	89	93	90	86	83	78	76	73	67	66	64	58	56	55	50
2	91	84	78	73	85	79	73	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	45	43	40	37
4	77	66	58	52	71	62	55	49	54	49	44	47	43	40	41	38	35	32
5	71	59	51	45	66	55	48	43	49	43	39	43	38	35	37	33	31	28
6	65	53	45	39	61	50	43	37	44	38	34	39	34	30	34	30	27	24
7	60	48	40	34	56	45	38	33	40	34	30	35	31	27	31	27	24	22
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	25	22	20
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6500	6500	6500
5°	6514	6434	6474
10°	6473	6357	6357
15°	6399	6224	6177
20°	6296	6048	5936
25°	6167	5842	5694
30°	6039	5626	5390
35°	5899	5401	5084
40°	5730	5145	4755
45°	5574	4891	4419
50°	5397	4598	4064
55°	5206	4294	3678
60°	4996	3961	3284
65°	4804	3543	2896
70°	4525	3085	2460
75°	4173	2558	1999
80°	3640	1948	1836
85°	3084	1769	1658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	2.4
10°-20°	210.9	6.7
20°-30°	304.5	9.7
30°-40°	345.2	11.0
40°-50°	333.3	10.6
50°-60°	277.2	8.8
60°-70°	191.4	6.1
70°-80°	97.0	3.1
80°-90°	26.3	0.8
90°-100°	30.6	1.0
100°-110°	90.7	2.9
110°-120°	153.9	4.9
120°-130°	203.0	6.4
130°-140°	227.9	7.2
140°-150°	224.0	7.1
150°-160°	188.4	6.0
160°-170°	125.3	4.0
170°-180°	43.9	1.4
0°-30°	591.0	18.8
0°-40°	936.2	29.7
0°-60°	1546.7	49.1
0°-90°	1861.4	59.1
90°-120°	275.2	8.7
90°-150°	930.1	29.5
90°-180°	1288.0	40.9
0°-180°	3149.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	805	805	805	805	805	
5°	804	801	794	800	799	76
15°	766	760	745	743	739	216
25°	692	680	656	646	639	319
35°	599	578	548	528	516	374
45°	488	465	428	399	387	376
55°	370	344	305	274	261	331
65°	252	224	186	160	152	248
75°	134	111	82	68	64	141
85°	33	22	19	18	18	37
90°	1	5	8	10	11	3
95°	22	25	27	28	28	24
105°	84	84	85	87	88	89
115°	156	156	156	155	155	154
125°	228	228	228	227	226	203
135°	294	296	296	295	294	227
145°	357	359	359	359	358	223
155°	409	409	409	410	409	188
165°	445	444	444	446	444	126
175°	463	462	461	464	461	44
180°	464	464	464	464	464	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1
2.5°	807.1	806.6	806.2	805.7	805.3	804.5	803.3	802.1	800.8	799.6	800.8
5°	803.8	803.3	802.7	802.2	801.7	800.6	798.9	797.3	795.6	794.0	795.4
7.5°	796.5	796.0	795.4	794.9	794.2	792.9	790.8	788.6	786.5	784.3	785.2
10°	789.6	789.0	788.3	787.6	787.0	785.4	782.9	780.4	777.9	775.5	776.0
12.5°	780.8	780.0	779.2	778.4	777.6	775.8	772.9	769.9	767.1	764.1	764.5
15°	765.6	764.4	763.2	761.9	760.7	758.4	754.9	751.5	748.1	744.7	744.4
17.5°	747.3	745.4	743.7	741.9	740.1	737.2	733.1	729.0	724.8	720.7	720.0
20°	732.9	731.2	729.4	727.6	725.8	722.6	718.0	713.3	708.6	704.0	702.9
22.5°	717.2	715.2	713.2	711.1	709.2	705.7	700.7	695.7	690.7	685.7	684.0
25°	692.3	689.8	687.3	684.8	682.4	678.3	672.7	667.1	661.5	655.9	653.6
27.5°	666.1	663.1	660.0	656.9	653.7	649.2	643.2	637.2	631.2	625.2	622.3
30°	647.8	644.4	641.0	637.6	634.2	629.2	622.8	616.4	609.9	603.5	600.1
32.5°	628.7	624.8	620.9	617.0	613.2	607.9	601.3	594.6	588.0	581.3	577.3
35°	598.6	594.2	589.8	585.4	581.1	575.4	568.5	561.7	554.8	548.0	543.4
37.5°	566.4	561.9	557.4	552.9	548.3	542.2	534.6	527.0	519.5	511.9	506.7
40°	543.7	539.2	534.6	530.1	525.6	519.4	511.7	503.8	496.1	488.2	482.4
42.5°	522.0	517.3	512.5	507.8	503.0	496.6	488.5	480.3	472.2	464.1	458.2
45°	488.2	483.2	478.1	473.0	467.9	461.3	453.0	444.9	436.7	428.4	421.7
47.5°	453.4	448.1	442.8	437.6	432.4	425.5	416.9	408.4	399.9	391.3	384.4
50°	429.7	424.3	419.0	413.6	408.3	401.2	392.4	383.7	374.9	366.1	359.3
52.5°	405.5	400.3	395.1	389.8	384.5	377.5	368.4	359.5	350.5	341.5	334.5
55°	369.9	364.4	358.9	353.4	347.9	340.7	331.8	323.0	314.0	305.1	298.0
57.5°	334.6	328.9	323.2	317.5	311.8	304.6	295.8	287.0	278.3	269.5	262.3
60°	309.4	304.0	298.5	293.0	287.6	280.4	271.6	262.8	254.1	245.3	238.2
62.5°	286.8	281.1	275.4	269.7	264.0	256.7	247.6	238.7	229.7	220.7	214.1
65°	251.5	245.7	239.7	233.9	227.9	220.6	211.8	203.1	194.3	185.5	179.7
67.5°	214.9	209.2	203.6	198.0	192.3	185.4	177.3	169.1	161.1	152.9	147.8
70°	191.7	185.9	180.2	174.4	168.7	161.9	154.1	146.3	138.5	130.7	126.2
72.5°	167.1	161.8	156.6	151.5	146.2	140.0	132.6	125.2	117.8	110.4	106.6
75°	133.8	128.7	123.7	118.6	113.5	107.7	101.3	94.8	88.4	82.0	78.8
77.5°	100.0	95.7	91.4	87.1	82.8	78.0	72.8	67.7	62.4	57.2	55.4
80°	78.3	74.3	70.3	66.4	62.4	58.4	54.3	50.1	46.0	41.9	41.5
82.5°	59.6	55.9	52.3	48.6	45.0	42.0	39.6	37.2	34.9	32.6	32.2
85°	33.3	30.6	27.8	25.0	22.3	20.8	20.4	20.0	19.5	19.1	18.9
87.5°	11.6	10.9	10.1	9.4	8.7	8.4	8.4	8.5	8.5	8.5	8.5
90°	1.1	2.0	2.9	3.7	4.6	5.3	6.0	6.7	7.3	7.9	8.4
92.5°	7.7	8.7	9.7	10.7	11.7	12.4	12.9	13.3	13.8	14.2	14.5
95°	21.5	22.3	23.0	23.7	24.4	25.0	25.6	26.1	26.7	27.3	27.5
97.5°	37.6	38.2	38.7	39.4	39.9	40.6	41.2	41.8	42.5	43.2	43.4
100°	50.2	50.5	50.9	51.2	51.6	52.0	52.8	53.5	54.2	54.9	55.1
102.5°	63.5	63.6	63.7	63.8	64.0	64.4	65.0	65.7	66.3	67.0	67.2
105°	83.7	83.7	83.8	83.9	84.0	84.1	84.4	84.8	85.1	85.4	85.6
107.5°	104.8	104.9	105.0	105.1	105.2	105.3	105.4	105.4	105.4	105.4	105.7
110°	119.1	119.3	119.5	119.6	119.8	119.9	119.8	119.7	119.6	119.5	119.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	134.1	134.1	134.2	134.2	134.3	134.2	134.0	133.9	133.7	133.6	133.6
115°	156.5	156.5	156.5	156.5	156.5	156.5	156.3	156.1	156.0	155.8	155.7
117.5°	177.6	177.7	177.8	177.8	177.8	177.8	177.8	177.6	177.5	177.4	177.1
120°	191.7	192.0	192.3	192.7	193.0	193.0	192.7	192.5	192.3	192.0	191.6
122.5°	206.4	206.4	206.6	206.7	206.8	206.8	206.8	206.6	206.5	206.4	206.1
125°	227.9	227.9	227.9	227.9	227.9	227.9	227.8	227.8	227.7	227.6	227.4
127.5°	247.6	247.8	248.0	248.3	248.5	248.6	248.4	248.3	248.2	248.0	247.9
130°	261.3	261.6	261.8	262.1	262.3	262.4	262.4	262.4	262.4	262.4	262.2
132.5°	275.4	275.6	275.8	275.9	276.1	276.2	276.1	276.0	276.0	275.9	275.8
135°	294.0	294.5	294.9	295.4	295.9	296.1	296.1	296.1	296.1	296.1	296.0
137.5°	314.3	314.5	314.7	314.9	315.1	315.3	315.4	315.6	315.7	315.8	315.6
140°	327.7	327.9	328.0	328.2	328.4	328.4	328.4	328.4	328.4	328.4	328.4
142.5°	340.1	340.2	340.4	340.6	340.7	340.8	340.7	340.6	340.6	340.5	340.5
145°	357.2	357.5	357.8	358.1	358.5	358.6	358.7	358.8	358.9	358.9	358.9
147.5°	374.1	374.5	374.9	375.3	375.7	375.8	375.7	375.7	375.7	375.6	375.5
150°	384.4	384.8	385.1	385.4	385.7	385.9	385.9	385.9	385.9	385.9	385.9
152.5°	394.2	394.4	394.6	394.8	395.0	395.1	395.1	395.2	395.3	395.4	395.5
155°	409.2	409.2	409.2	409.2	409.2	409.2	409.1	409.0	408.9	408.8	409.2
157.5°	421.8	421.7	421.6	421.4	421.3	421.2	421.2	421.2	421.1	421.1	421.4
160°	429.4	429.3	429.2	429.1	429.0	429.0	428.9	428.8	428.7	428.6	428.9
162.5°	436.3	436.0	435.8	435.6	435.4	435.2	435.1	435.1	435.0	434.9	435.4
165°	445.4	445.2	445.0	444.7	444.5	444.3	444.2	444.0	443.9	443.7	444.2
167.5°	452.6	452.3	451.9	451.6	451.2	451.1	451.1	451.1	451.1	451.1	451.6
170°	456.6	456.2	455.8	455.4	455.0	454.9	455.0	455.0	455.1	455.2	455.7
172.5°	459.5	459.1	458.8	458.5	458.1	458.0	458.0	458.0	458.0	458.0	458.6
175°	463.4	463.0	462.6	462.2	461.8	461.6	461.5	461.4	461.4	461.3	461.8
177.5°	464.7	464.4	464.1	463.7	463.4	463.3	463.3	463.3	463.3	463.3	463.7
180°	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1
2.5°	802.1	803.3	804.5	805.0	804.9	804.8	804.7	804.6
5°	796.7	798.1	799.5	800.0	799.7	799.5	799.2	798.9
7.5°	786.1	787.0	787.9	788.1	787.7	787.2	786.8	786.3
10°	776.6	777.1	777.7	777.7	777.1	776.6	776.0	775.5
12.5°	764.8	765.1	765.5	765.2	764.5	763.7	763.0	762.2
15°	744.1	743.9	743.5	743.0	742.0	741.0	740.1	739.1
17.5°	719.2	718.4	717.6	716.5	715.1	713.7	712.2	710.7
20°	701.8	700.7	699.6	698.2	696.4	694.6	692.8	691.0
22.5°	682.5	680.8	679.1	677.6	676.1	674.7	673.3	671.8
25°	651.3	648.9	646.6	644.8	643.3	642.0	640.6	639.2
27.5°	619.4	616.6	613.7	611.2	609.3	607.3	605.4	603.4
30°	596.7	593.2	589.8	587.0	584.8	582.6	580.4	578.2
32.5°	573.4	569.4	565.4	562.4	560.3	558.3	556.1	554.1
35°	538.7	534.0	529.4	525.9	523.4	520.9	518.4	515.9
37.5°	501.5	496.3	491.1	487.3	484.7	482.3	479.8	477.4
40°	476.7	471.0	465.2	461.1	458.6	456.1	453.7	451.2
42.5°	452.3	446.5	440.6	436.4	433.8	431.3	428.6	426.1
45°	415.0	408.3	401.6	397.0	394.5	392.1	389.6	387.1
47.5°	377.4	370.4	363.5	358.6	355.9	353.2	350.5	347.8
50°	352.4	345.6	338.7	334.1	331.4	328.8	326.2	323.6
52.5°	327.6	320.6	313.7	308.9	306.1	303.4	300.7	298.0
55°	290.9	283.8	276.6	271.8	269.2	266.6	264.0	261.3
57.5°	255.0	247.8	240.6	236.0	234.0	232.0	230.0	228.1
60°	231.1	223.9	216.8	212.2	210.0	207.8	205.7	203.4
62.5°	207.6	201.0	194.4	190.2	188.5	186.7	185.0	183.2
65°	173.8	167.9	162.0	158.2	156.6	155.0	153.3	151.6
67.5°	142.8	137.7	132.6	129.2	127.4	125.6	123.7	121.9
70°	121.7	117.2	112.6	109.6	108.3	106.9	105.5	104.2
72.5°	102.7	98.9	95.0	92.4	91.2	89.9	88.6	87.4
75°	75.7	72.6	69.4	67.4	66.5	65.8	65.0	64.1
77.5°	53.6	51.7	49.8	48.8	48.6	48.3	48.1	47.8
80°	41.1	40.7	40.2	40.0	39.8	39.7	39.6	39.5
82.5°	31.9	31.6	31.4	31.1	31.0	30.8	30.7	30.6
85°	18.5	18.3	18.0	17.9	17.9	17.9	17.9	17.9
87.5°	8.5	8.5	8.4	8.5	8.6	8.8	9.0	9.0
90°	8.9	9.3	9.8	10.1	10.3	10.5	10.6	10.8
92.5°	14.8	15.1	15.4	15.5	15.7	15.8	15.8	15.9
95°	27.7	28.0	28.2	28.4	28.4	28.4	28.4	28.4
97.5°	43.7	44.0	44.3	44.4	44.4	44.4	44.4	44.4
100°	55.2	55.4	55.5	55.6	55.6	55.6	55.6	55.6
102.5°	67.4	67.7	67.9	68.0	68.0	68.1	68.2	68.3
105°	86.0	86.2	86.4	86.7	86.9	87.1	87.4	87.6
107.5°	105.9	106.2	106.4	106.5	106.5	106.5	106.4	106.4
110°	119.2	119.1	118.9	118.9	119.1	119.4	119.6	119.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	133.6	133.5	133.5	133.5	133.6	133.6	133.6	133.6
115°	155.7	155.6	155.5	155.4	155.3	155.3	155.2	155.1
117.5°	176.9	176.6	176.3	176.1	175.9	175.8	175.6	175.5
120°	191.2	190.8	190.4	190.4	190.5	190.7	190.8	191.0
122.5°	205.9	205.6	205.3	205.0	204.8	204.5	204.1	203.9
125°	227.3	227.1	227.0	226.8	226.6	226.5	226.3	226.2
127.5°	247.7	247.6	247.4	247.2	247.2	247.0	246.9	246.8
130°	262.1	261.9	261.7	261.5	261.2	260.9	260.5	260.2
132.5°	275.6	275.4	275.3	275.1	275.0	274.9	274.7	274.6
135°	295.8	295.6	295.5	295.3	295.1	294.9	294.6	294.4
137.5°	315.4	315.2	315.0	314.9	315.0	315.0	315.1	315.1
140°	328.3	328.2	328.1	328.0	328.0	327.9	327.8	327.7
142.5°	340.5	340.5	340.5	340.4	340.4	340.4	340.4	340.4
145°	358.8	358.7	358.6	358.5	358.2	358.0	357.7	357.5
147.5°	375.4	375.3	375.3	375.3	375.2	375.1	375.0	374.9
150°	385.9	385.9	385.9	385.9	385.8	385.7	385.6	385.6
152.5°	395.8	395.9	396.2	396.1	395.9	395.7	395.5	395.3
155°	409.5	409.8	410.1	410.1	409.8	409.5	409.2	408.8
157.5°	421.6	421.8	422.1	422.1	421.8	421.5	421.3	421.0
160°	429.1	429.4	429.6	429.5	429.1	428.7	428.3	427.9
162.5°	435.8	436.3	436.7	436.7	436.3	435.9	435.5	435.1
165°	444.7	445.1	445.6	445.7	445.4	445.0	444.7	444.4
167.5°	452.1	452.6	453.0	453.0	452.6	452.1	451.5	451.1
170°	456.1	456.6	457.1	457.0	456.5	455.9	455.3	454.8
172.5°	459.1	459.7	460.2	460.2	459.6	459.1	458.5	458.0
175°	462.4	463.0	463.5	463.5	463.0	462.4	461.8	461.3
177.5°	464.2	464.6	465.1	465.0	464.5	464.1	463.5	463.0
180°	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1

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