

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: P332558-935

Luminaire Tested: **S124DIP-S575D810U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332558-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D810U935-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4533.7 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

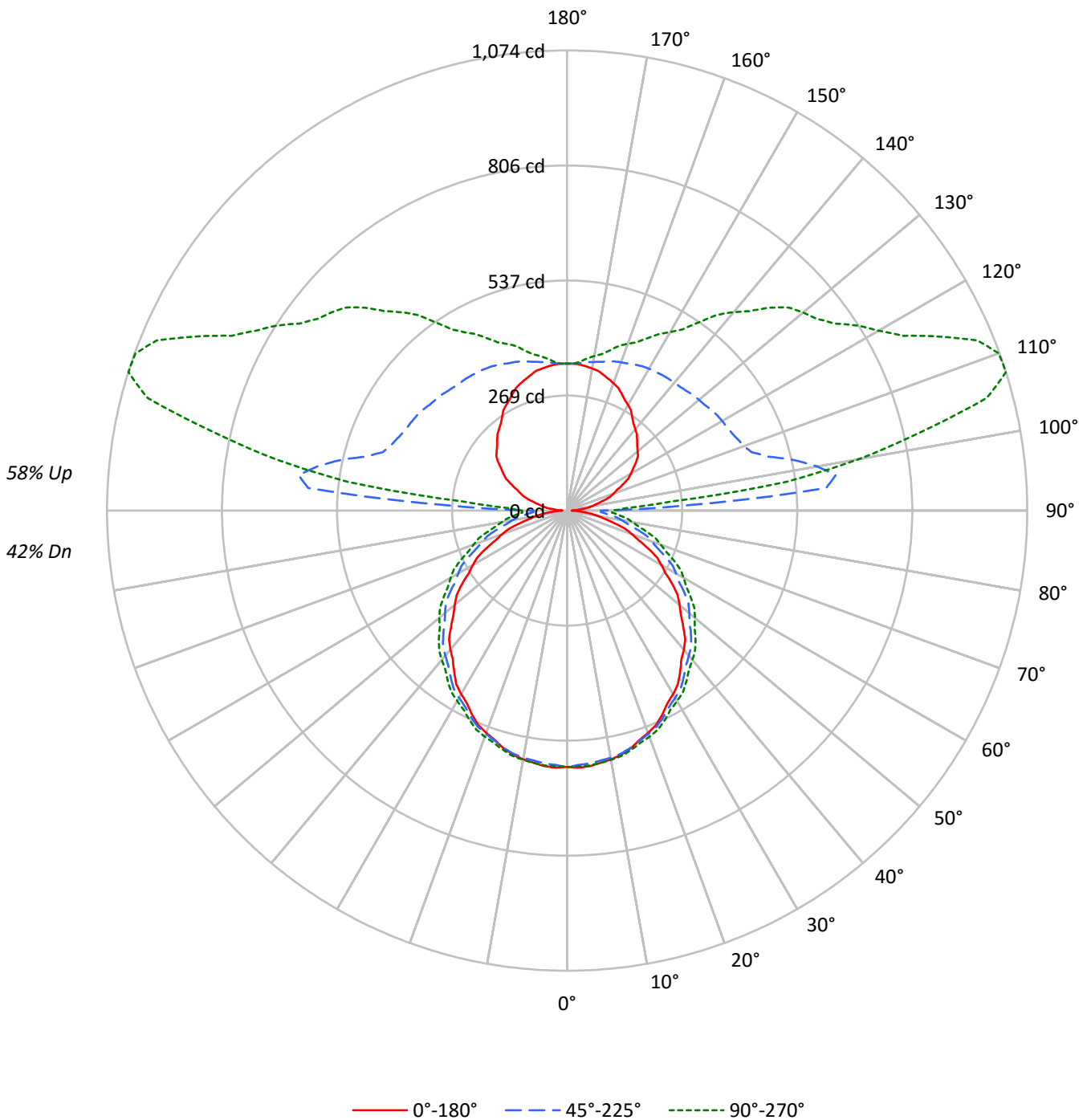
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42				
1	95	90	86	83	86	82	79	76	68	65	63	54	52	51	41	40	39	33				
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	32	27				
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23				
4	72	60	52	46	65	55	48	43	46	40	36	36	33	29	28	25	23	19				
5	66	54	45	39	59	49	42	36	41	35	31	33	29	25	25	22	20	16				
6	60	48	40	34	55	44	37	31	36	31	27	29	25	22	23	20	17	14				
7	56	43	35	30	50	40	33	27	33	27	23	27	22	19	21	18	15	13				
8	52	39	31	26	47	36	29	24	30	25	21	24	20	17	19	16	14	11				
9	48	36	28	23	44	33	26	21	27	22	18	22	18	15	17	14	12	10				
10	45	33	25	21	41	30	24	19	25	20	16	21	17	14	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.2
10°-20°	162.3	3.6
20°-30°	245.5	5.4
30°-40°	297.0	6.6
40°-50°	314.0	6.9
50°-60°	295.5	6.5
60°-70°	245.2	5.4
70°-80°	172.2	3.8
80°-90°	99.2	2.2
90°-100°	305.3	6.7
100°-110°	557.9	12.3
110°-120°	490.1	10.8
120°-130°	404.3	8.9
130°-140°	330.6	7.3
140°-150°	248.6	5.5
150°-160°	173.8	3.8
160°-170°	102.2	2.3
170°-180°	33.3	0.7
0°-30°	464.5	10.2
0°-40°	761.4	16.8
0°-60°	1370.9	30.2
0°-90°	1887.5	41.6
90°-120°	1353.4	29.9
90°-150°	2336.9	51.5
90°-180°	2646.0	58.4
0°-180°	4533.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	11	43	78	98	105	8
95°	31	101	607	347	247	32
105°	85	134	486	1011	1014	91
115°	143	185	425	802	960	142
125°	196	233	411	675	761	175
135°	231	275	394	588	670	179
145°	265	303	386	486	537	167
155°	301	325	376	426	444	139
165°	328	338	360	381	387	93
175°	342	343	345	350	349	32
180°	343	343	343	343	343	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.0	26.3	32.8	39.0	45.2	51.5	58.8	65.3	72.2	79.0	83.1
90°	11.4	18.7	26.7	33.3	40.0	46.1	56.6	62.9	70.7	78.4	82.1
92.5°	17.8	26.7	38.4	52.0	67.2	87.0	127.7	186.3	243.6	276.6	245.2
95°	30.9	37.9	49.5	63.2	84.2	118.0	182.7	299.2	466.2	607.0	626.5
97.5°	47.8	52.0	62.0	74.3	92.4	121.2	172.4	269.6	435.6	632.1	766.8
100°	58.5	62.4	71.0	82.9	99.6	126.0	171.5	253.4	396.6	592.2	768.5
102.5°	69.3	73.8	81.4	92.3	108.0	132.9	174.6	247.2	369.7	543.7	725.4
105°	84.8	89.8	96.2	107.2	122.3	146.0	183.9	245.3	345.0	485.9	647.8
107.5°	103.2	107.0	112.9	123.9	137.9	161.0	195.9	251.9	337.7	451.9	584.6
110°	115.1	118.6	124.0	134.1	148.4	170.1	205.0	257.4	336.6	439.5	552.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.4	129.6	135.3	144.7	158.7	180.3	213.8	263.2	337.4	431.9	533.1
115°	142.7	146.0	152.1	160.2	174.4	195.5	227.2	272.4	339.8	425.3	513.4
117.5°	160.3	163.1	168.0	176.2	189.0	210.5	240.5	282.1	342.7	420.6	502.2
120°	171.7	173.5	178.6	186.5	198.4	219.6	249.5	288.8	345.0	417.9	495.7
122.5°	182.4	183.8	188.6	195.6	208.3	228.6	258.3	295.2	347.4	414.7	488.7
125°	195.9	198.5	202.3	209.6	222.2	242.9	270.9	305.5	351.6	410.6	478.0
127.5°	208.3	210.3	215.0	223.3	236.5	256.8	283.1	314.4	354.3	405.1	464.3
130°	214.7	217.3	222.6	232.5	245.1	265.8	291.0	319.7	356.4	401.8	455.7
132.5°	221.8	223.8	230.6	240.0	253.7	273.1	297.9	325.5	358.5	399.2	448.1
135°	230.9	233.6	240.3	251.8	266.0	284.0	307.2	332.5	361.1	394.5	435.9
137.5°	240.7	243.1	250.4	261.1	275.7	292.6	313.8	336.9	362.0	391.2	425.6
140°	247.7	249.6	256.8	268.2	282.1	298.3	318.7	340.4	363.4	389.1	420.0
142.5°	254.8	256.8	263.6	274.5	288.0	303.6	323.1	343.0	364.7	388.1	415.4
145°	265.3	267.1	273.7	283.0	295.7	310.4	327.9	346.0	365.6	386.4	408.9
147.5°	277.2	277.8	283.5	293.1	303.6	316.8	333.3	349.1	366.3	384.0	403.1
150°	284.7	285.3	290.5	298.5	308.4	321.2	336.0	350.8	366.3	382.4	399.2
152.5°	291.3	291.4	296.7	304.2	313.2	324.9	338.1	351.8	365.2	379.7	394.9
155°	300.9	301.6	305.7	312.4	319.8	329.8	341.3	352.8	363.5	375.7	388.5
157.5°	310.5	310.5	314.3	319.5	326.0	333.9	343.6	352.8	361.8	371.5	381.9
160°	316.4	316.4	319.1	323.8	329.2	336.7	344.7	352.8	360.2	368.2	377.0
162.5°	321.8	321.2	323.4	327.6	332.4	338.2	345.8	352.8	358.6	365.1	372.7
165°	327.9	327.9	329.2	332.6	336.0	340.0	346.0	351.5	355.5	360.2	365.6
167.5°	333.9	333.3	333.9	336.5	338.4	341.5	345.9	349.8	352.2	355.3	359.1
170°	336.7	336.0	336.7	338.6	340.0	342.0	345.3	348.7	350.1	352.1	354.8
172.5°	339.3	338.6	338.8	340.3	341.0	342.5	344.8	347.7	347.9	348.9	351.0
175°	342.0	341.3	341.3	342.0	342.7	342.7	344.1	346.0	345.3	345.3	346.7
177.5°	343.2	342.7	342.2	342.7	342.7	342.7	343.2	344.3	343.2	343.2	343.7
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	87.6	92.0	96.5	99.3	100.7	102.2	103.3	104.7
90°	87.0	92.0	97.0	99.8	101.7	103.6	104.1	105.2
92.5°	203.7	175.2	159.1	148.4	141.5	139.1	138.0	139.2
95°	565.2	464.9	378.7	316.1	284.4	264.8	254.1	246.7
97.5°	799.0	764.1	702.1	634.5	587.5	548.2	529.3	516.5
100°	870.9	888.4	859.4	812.1	754.6	714.5	695.4	691.0
102.5°	864.2	934.9	948.3	930.1	895.4	866.8	846.6	843.5
105°	805.7	925.9	996.3	1026.3	1028.8	1024.7	1016.4	1013.6
107.5°	724.8	852.5	949.9	1012.4	1046.7	1063.2	1071.0	1073.8
110°	675.9	795.7	896.8	973.2	1022.2	1051.6	1065.0	1072.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	639.0	745.3	840.9	917.1	972.6	1008.0	1026.1	1037.2
115°	600.9	687.0	769.0	835.8	890.0	931.4	954.1	960.4
117.5°	579.8	651.4	716.4	773.4	819.9	855.1	878.1	883.5
120°	569.3	634.9	691.7	741.7	781.2	812.0	830.7	839.3
122.5°	560.2	623.6	675.6	719.5	753.0	779.5	795.3	803.7
125°	545.5	606.2	655.5	694.4	722.2	742.6	756.3	761.3
127.5°	527.7	585.7	634.7	671.8	699.8	718.2	730.0	735.0
130°	514.3	570.2	618.6	656.1	684.6	702.3	713.9	718.8
132.5°	500.6	553.1	600.4	637.7	665.7	685.6	696.7	701.6
135°	480.7	526.8	570.3	605.6	633.4	653.2	664.9	669.8
137.5°	463.0	502.3	539.1	570.9	596.8	616.2	625.9	631.5
140°	452.9	486.5	518.8	548.4	572.7	588.2	598.4	604.5
142.5°	443.8	473.4	501.1	526.8	548.2	562.6	571.5	576.0
145°	431.3	455.1	476.2	495.8	513.2	525.2	532.6	536.6
147.5°	421.0	439.3	455.6	470.7	483.5	493.9	499.5	501.1
150°	415.3	430.8	444.4	456.4	467.3	476.0	480.0	480.7
152.5°	409.5	422.8	435.1	445.1	454.3	461.4	463.8	464.5
155°	400.5	411.4	421.5	429.6	436.3	441.6	443.7	443.7
157.5°	391.0	400.0	408.5	415.0	420.1	424.1	425.3	425.3
160°	385.1	392.5	399.9	405.3	409.3	413.4	414.1	414.1
162.5°	379.2	385.5	391.3	396.1	399.1	403.1	403.8	403.3
165°	370.9	375.0	379.7	383.1	385.7	388.5	387.8	387.1
167.5°	363.0	366.1	369.9	371.9	373.2	375.0	374.9	374.3
170°	358.2	360.2	362.9	364.9	366.3	366.9	366.3	366.3
172.5°	353.9	355.3	357.0	358.4	359.2	359.9	359.2	358.2
175°	348.1	348.7	350.1	350.1	350.1	351.5	350.1	348.7
177.5°	344.3	344.8	344.8	345.3	344.8	345.3	344.3	343.2
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7

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