

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: P332912

Luminaire Tested: **S124RDIP-S575D810U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332912
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: S124RDIP-S575D810U835-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5244.8 lumens
Efficiency: N/A
Efficacy: 136.6 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

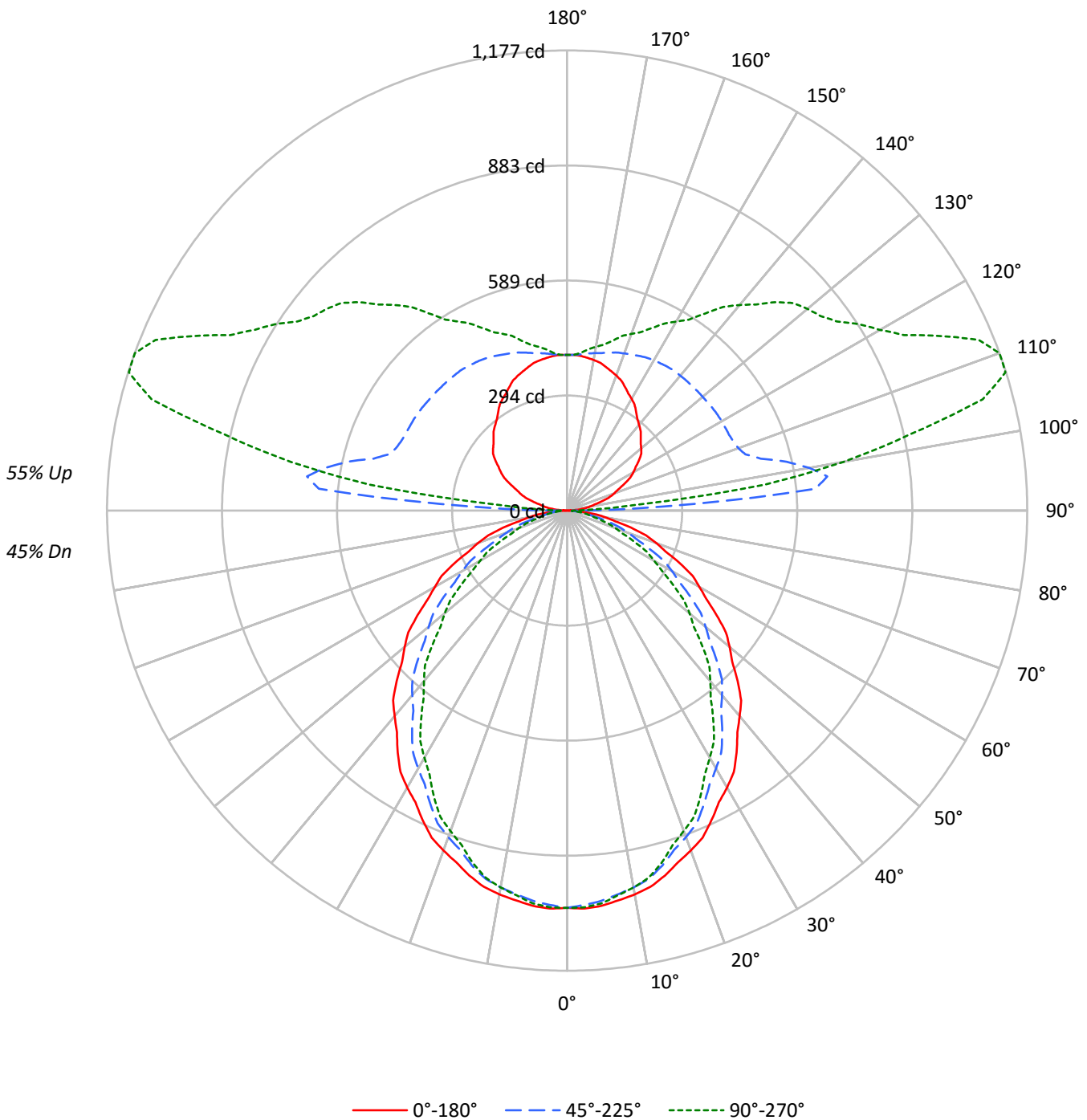
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45																				
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38																				
2	88	81	75	70	81	75	70	65	62	59	55	51	48	46	41	39	37	32																				
3	81	72	64	59	74	66	60	55	55	51	47	45	42	39	36	34	32	28																				
4	74	63	56	50	68	58	52	47	49	44	40	40	37	34	32	30	28	24																				
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	29	26	24	21																				
6	63	51	43	37	57	47	40	35	40	34	30	33	29	26	27	24	21	18																				
7	58	46	38	33	53	42	36	31	36	31	27	30	26	23	24	21	19	16																				
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17	15																				
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	21	18	16	13																				
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	19	16	14	12																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8205	8205	8205
5°	8223	8122	8173
10°	8171	8025	8025
15°	8078	7856	7798
20°	7948	7635	7494
25°	7784	7375	7187
30°	7623	7101	6804
35°	7447	6818	6419
40°	7233	6495	6003
45°	7036	6174	5579
50°	6812	5805	5130
55°	6572	5422	4643
60°	6307	5000	4146
65°	6065	4474	3656
70°	5712	3895	3104
75°	5268	3228	2523
80°	4593	2459	2315
85°	3890	2232	2093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	1.8
10°-20°	266.2	5.1
20°-30°	384.4	7.3
30°-40°	435.7	8.3
40°-50°	420.8	8.0
50°-60°	349.9	6.7
60°-70°	241.6	4.6
70°-80°	122.5	2.3
80°-90°	33.6	0.6
90°-100°	287.5	5.5
100°-110°	598.3	11.4
110°-120°	535.9	10.2
120°-130°	450.8	8.6
130°-140°	375.9	7.2
140°-150°	287.1	5.5
150°-160°	201.8	3.8
160°-170°	118.7	2.3
170°-180°	38.6	0.7
0°-30°	746.1	14.2
0°-40°	1181.8	22.5
0°-60°	1952.5	37.2
0°-90°	2350.2	44.8
90°-120°	1421.6	27.1
90°-150°	2535.4	48.3
90°-180°	2895.0	55.2
0°-180°	5244.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1015	1011	1002	1010	1008	96
15°	966	959	940	938	933	272
25°	874	859	828	815	807	402
35°	756	730	692	666	651	472
45°	616	586	541	504	489	475
55°	467	435	385	346	330	418
65°	318	283	234	202	191	313
75°	169	140	104	86	81	178
85°	42	27	24	23	23	47
90°	1	6	14	16	16	3
95°	26	81	637	316	191	29
105°	92	133	513	1104	1100	98
115°	161	202	457	879	1056	160
125°	224	267	455	748	843	200
135°	267	317	451	664	754	206
145°	307	352	449	560	615	193
155°	350	377	436	494	515	161
165°	381	393	418	443	450	107
175°	397	398	401	407	405	38
180°	398	398	398	398	398	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1018.8	1018.2	1017.7	1017.1	1016.6	1015.5	1014.0	1012.5	1010.9	1009.4	1010.9
5°	1014.7	1014.0	1013.3	1012.6	1012.0	1010.6	1008.5	1006.4	1004.3	1002.3	1004.0
7.5°	1005.5	1004.8	1004.1	1003.4	1002.6	1000.9	998.2	995.5	992.8	990.1	991.2
10°	996.8	996.0	995.1	994.2	993.4	991.4	988.3	985.1	982.0	978.9	979.6
12.5°	985.6	984.6	983.6	982.6	981.6	979.3	975.6	971.9	968.3	964.6	965.0
15°	966.5	964.9	963.4	961.8	960.2	957.3	953.0	948.7	944.3	940.0	939.7
17.5°	943.3	941.0	938.8	936.5	934.3	930.6	925.4	920.2	915.0	909.8	908.9
20°	925.2	923.0	920.7	918.5	916.2	912.2	906.3	900.4	894.5	888.7	887.3
22.5°	905.3	902.8	900.3	897.7	895.2	890.8	884.5	878.2	871.9	865.6	863.5
25°	873.9	870.8	867.6	864.5	861.4	856.3	849.2	842.1	835.0	828.0	825.0
27.5°	840.9	837.0	833.1	829.2	825.2	819.5	811.9	804.4	796.8	789.2	785.6
30°	817.8	813.5	809.2	804.9	800.6	794.3	786.2	778.1	769.9	761.8	757.5
32.5°	793.6	788.7	783.8	778.9	774.1	767.4	759.0	750.6	742.2	733.8	728.8
35°	755.6	750.1	744.5	739.0	733.5	726.4	717.7	709.1	700.4	691.8	685.9
37.5°	715.0	709.3	703.6	697.9	692.1	684.5	674.9	665.3	655.8	646.2	639.6
40°	686.3	680.6	674.9	669.2	663.5	655.7	645.9	636.0	626.2	616.3	609.0
42.5°	658.9	653.0	647.0	641.0	635.0	626.9	616.6	606.3	596.1	585.8	578.4
45°	616.3	609.9	603.5	597.1	590.7	582.3	571.9	561.6	551.2	540.8	532.3
47.5°	572.3	565.7	559.0	552.4	545.8	537.1	526.3	515.6	504.8	494.0	485.2
50°	542.4	535.6	528.9	522.1	515.4	506.5	495.4	484.4	473.3	462.2	453.6
52.5°	511.9	505.3	498.7	492.1	485.4	476.5	465.1	453.8	442.4	431.1	422.3
55°	466.9	460.0	453.1	446.1	439.2	430.1	418.9	407.7	396.4	385.2	376.2
57.5°	422.4	415.2	408.0	400.8	393.6	384.5	373.4	362.3	351.3	340.2	331.1
60°	390.6	383.7	376.8	369.9	363.0	354.0	342.9	331.8	320.8	309.7	300.7
62.5°	362.0	354.8	347.6	340.4	333.2	324.0	312.6	301.3	289.9	278.6	270.3
65°	317.5	310.1	302.6	295.2	287.7	278.5	267.4	256.4	245.3	234.2	226.8
67.5°	271.3	264.1	257.0	249.9	242.8	234.1	223.8	213.5	203.3	193.0	186.6
70°	242.0	234.7	227.5	220.2	213.0	204.4	194.5	184.7	174.8	165.0	159.3
72.5°	210.9	204.3	197.7	191.2	184.6	176.7	167.4	158.1	148.7	139.4	134.6
75°	168.9	162.5	156.1	149.7	143.3	136.0	127.9	119.7	111.6	103.5	99.5
77.5°	126.2	120.8	115.4	109.9	104.5	98.5	91.9	85.4	78.8	72.2	69.9
80°	98.8	93.8	88.8	83.8	78.8	73.7	68.5	63.3	58.1	52.9	52.4
82.5°	75.2	70.6	66.0	61.4	56.8	53.0	50.0	47.0	44.1	41.1	40.7
85°	42.0	38.6	35.1	31.6	28.2	26.2	25.7	25.2	24.6	24.1	23.8
87.5°	14.5	13.7	13.0	12.1	11.1	10.5	11.3	11.2	11.4	11.5	11.2
90°	0.8	2.3	4.7	5.5	6.3	6.3	10.9	10.9	12.5	14.1	13.3
92.5°	8.9	13.0	20.3	29.9	41.3	57.5	97.3	157.9	217.1	248.0	206.6
95°	25.8	28.1	36.0	46.1	64.9	97.7	165.8	294.0	480.9	637.3	655.3
97.5°	46.3	46.3	53.0	62.4	78.5	106.0	158.4	264.3	450.1	671.2	823.2
100°	59.4	59.4	64.9	74.3	89.1	114.2	160.3	248.7	408.2	628.7	828.8
102.5°	71.9	73.2	78.0	86.8	101.0	124.8	166.5	244.3	380.0	575.5	781.9
105°	91.5	93.8	97.7	107.1	121.2	143.9	181.4	246.3	355.8	512.9	696.7
107.5°	113.1	114.6	118.5	128.5	142.0	164.4	198.8	257.9	351.4	477.9	627.9
110°	127.5	129.0	132.9	142.3	156.4	177.5	211.9	266.6	352.6	466.0	593.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	141.2	142.8	147.3	156.1	170.1	191.3	224.4	276.0	356.4	460.4	574.1
115°	161.1	163.4	168.9	176.7	191.6	212.7	244.0	290.9	363.6	457.4	555.9
117.5°	181.7	183.9	188.8	197.4	211.3	233.2	262.9	306.0	371.3	456.6	547.8
120°	195.5	197.0	202.5	211.1	224.4	246.3	276.0	316.7	376.9	456.6	543.4
122.5°	208.0	209.6	215.0	223.0	237.5	258.8	288.5	326.7	382.5	456.0	538.4
125°	224.4	227.5	232.2	240.8	255.7	277.6	305.7	341.7	391.0	455.1	530.1
127.5°	239.0	241.5	247.1	256.9	272.4	294.5	321.7	354.7	397.7	453.4	519.0
130°	247.1	250.2	256.5	268.2	283.1	305.7	332.3	362.8	402.7	452.7	512.2
132.5°	255.2	257.7	265.9	277.0	293.1	314.5	341.1	370.9	407.1	452.1	505.9
135°	266.6	269.8	277.6	290.9	307.3	327.6	353.4	381.6	413.6	451.2	496.5
137.5°	278.1	281.0	289.6	302.3	319.3	338.7	362.8	389.1	417.5	451.0	488.4
140°	286.2	288.5	297.1	310.4	326.8	345.6	369.1	394.1	420.7	450.4	484.0
142.5°	294.9	297.3	305.3	317.9	333.7	351.9	374.7	397.8	423.2	450.4	480.3
145°	307.3	309.6	317.5	328.4	343.3	360.5	380.8	401.9	424.6	448.8	473.8
147.5°	321.2	322.0	328.9	340.1	352.5	368.0	387.1	405.5	425.4	446.0	468.1
150°	330.0	330.8	337.0	346.4	358.1	373.0	390.2	407.4	425.4	444.1	463.7
152.5°	338.1	338.3	344.5	353.3	363.8	377.4	392.7	408.6	424.1	441.0	458.7
155°	349.5	350.3	355.0	362.8	371.4	383.1	396.4	409.7	422.2	436.3	451.2
157.5°	360.6	360.6	365.0	371.1	378.6	387.8	399.1	409.7	420.2	431.5	443.5
160°	367.5	367.5	370.6	376.1	382.4	391.0	400.3	409.7	418.3	427.7	437.9
162.5°	373.8	373.1	375.6	380.5	386.1	392.8	401.6	409.7	416.5	424.0	432.9
165°	380.8	380.8	382.4	386.3	390.2	394.9	401.9	408.2	412.9	418.3	424.6
167.5°	387.8	387.1	387.8	390.8	393.0	396.6	401.8	406.3	409.1	412.7	417.1
170°	391.0	390.2	391.0	393.3	394.9	397.2	401.1	405.0	406.6	408.9	412.1
172.5°	394.1	393.3	393.5	395.2	396.1	397.8	400.5	403.8	404.1	405.2	407.7
175°	397.2	396.4	396.4	397.2	398.0	398.0	399.6	401.9	401.1	401.1	402.7
177.5°	398.6	398.0	397.4	398.0	398.0	398.0	398.6	399.9	398.6	398.6	399.2
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1012.5	1014.0	1015.5	1016.2	1016.1	1015.9	1015.8	1015.7
5°	1005.7	1007.5	1009.2	1009.9	1009.5	1009.2	1008.8	1008.5
7.5°	992.3	993.4	994.6	994.8	994.3	993.7	993.2	992.6
10°	980.3	981.0	981.7	981.7	981.0	980.3	979.6	978.9
12.5°	965.4	965.8	966.3	966.0	965.0	964.1	963.1	962.1
15°	939.3	939.0	938.6	937.9	936.6	935.4	934.2	933.0
17.5°	907.9	906.9	905.9	904.5	902.7	900.9	899.0	897.2
20°	885.9	884.5	883.1	881.3	879.1	876.8	874.6	872.3
22.5°	861.5	859.4	857.3	855.4	853.5	851.7	849.9	848.0
25°	822.1	819.1	816.2	813.9	812.1	810.4	808.7	806.9
27.5°	781.9	778.3	774.7	771.6	769.1	766.6	764.2	761.7
30°	753.2	748.8	744.5	741.0	738.2	735.4	732.7	729.9
32.5°	723.8	718.8	713.7	709.9	707.3	704.7	702.0	699.4
35°	680.0	674.1	668.3	663.8	660.7	657.5	654.4	651.3
37.5°	633.0	626.5	619.9	615.1	611.9	608.8	605.7	602.6
40°	601.8	594.5	587.2	582.1	578.9	575.8	572.7	569.6
42.5°	571.0	563.6	556.2	550.9	547.6	544.4	541.1	537.9
45°	523.9	515.4	506.9	501.1	498.0	494.9	491.8	488.7
47.5°	476.4	467.6	458.8	452.7	449.3	445.9	442.5	439.0
50°	444.9	436.3	427.6	421.7	418.4	415.1	411.8	408.5
52.5°	413.5	404.7	396.0	389.9	386.4	383.0	379.6	376.2
55°	367.2	358.2	349.2	343.1	339.8	336.5	333.2	329.9
57.5°	321.9	312.8	303.7	297.9	295.4	292.9	290.4	287.9
60°	291.7	282.7	273.7	267.9	265.1	262.3	259.6	256.8
62.5°	262.0	253.7	245.4	240.1	237.9	235.7	233.5	231.3
65°	219.4	211.9	204.5	199.7	197.7	195.6	193.5	191.4
67.5°	180.2	173.8	167.4	163.1	160.8	158.5	156.2	153.9
70°	153.6	147.9	142.1	138.4	136.7	135.0	133.2	131.5
72.5°	129.7	124.8	119.9	116.7	115.1	113.5	111.9	110.3
75°	95.5	91.6	87.6	85.1	84.0	83.0	82.0	80.9
77.5°	67.6	65.3	62.9	61.6	61.3	61.0	60.7	60.4
80°	51.9	51.4	50.8	50.5	50.3	50.1	50.0	49.8
82.5°	40.3	39.9	39.6	39.3	39.1	38.9	38.8	38.6
85°	23.4	23.1	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	11.3	11.3	11.3	11.3	11.6	11.9	11.9	12.0
90°	14.1	14.9	15.6	15.6	16.4	17.2	16.4	16.4
92.5°	153.6	115.6	92.0	76.3	67.1	62.9	60.2	60.2
95°	579.4	458.2	353.4	277.6	239.3	215.0	201.0	190.8
97.5°	856.0	811.0	734.5	652.9	596.8	549.7	526.2	510.0
100°	943.0	958.6	920.3	862.5	794.4	746.7	723.3	717.0
102.5°	938.6	1016.2	1027.3	1003.2	961.5	926.9	902.2	897.2
105°	875.8	1011.0	1088.4	1120.5	1122.1	1115.8	1104.9	1100.2
107.5°	786.5	930.5	1039.5	1109.2	1147.9	1165.7	1173.5	1175.5
110°	732.7	867.9	981.3	1067.3	1122.8	1155.7	1169.8	1176.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	693.3	812.9	920.0	1006.0	1069.0	1108.8	1128.5	1139.9
115°	653.7	749.9	841.3	916.4	978.2	1025.1	1050.1	1056.4
117.5°	634.3	713.9	785.8	849.5	902.2	941.6	966.9	971.8
120°	625.5	698.3	760.8	816.3	860.9	895.3	915.6	924.2
122.5°	618.0	688.2	745.2	793.8	831.5	860.9	878.1	886.7
125°	605.2	672.5	726.4	769.4	800.7	823.4	838.2	842.9
127.5°	589.6	653.8	707.6	748.5	779.9	800.1	812.6	817.3
130°	577.1	638.8	692.0	733.4	765.5	785.1	797.6	802.3
132.5°	563.9	621.9	673.9	715.3	746.7	768.8	780.7	785.4
135°	545.8	596.6	644.3	683.4	714.7	736.6	749.1	753.8
137.5°	529.4	572.4	612.6	647.9	677.1	698.7	709.0	714.7
140°	520.0	556.7	591.9	624.8	652.1	669.3	680.3	686.5
142.5°	511.2	543.6	573.8	602.2	626.5	642.4	652.1	656.5
145°	498.9	525.5	548.9	570.8	590.4	603.6	611.5	615.4
147.5°	488.7	509.8	528.6	545.8	560.2	571.6	577.5	578.9
150°	482.4	500.4	516.1	530.1	542.7	552.8	557.5	558.3
152.5°	475.6	491.0	505.4	517.0	527.6	535.9	538.7	539.5
155°	465.2	477.8	489.5	498.9	506.7	512.9	515.3	515.3
157.5°	454.1	464.6	474.5	482.0	487.9	492.6	494.0	494.0
160°	447.3	455.9	464.5	470.7	475.4	480.1	480.9	480.9
162.5°	440.4	447.7	454.5	460.1	463.5	468.2	469.0	468.4
165°	430.8	435.5	441.0	444.9	448.0	451.2	450.4	449.6
167.5°	421.6	425.2	429.6	431.9	433.5	435.5	435.4	434.7
170°	416.0	418.3	421.5	423.8	425.4	426.1	425.4	425.4
172.5°	411.0	412.7	414.6	416.3	417.2	418.0	417.2	416.0
175°	404.3	405.0	406.6	406.6	406.6	408.2	406.6	405.0
177.5°	399.9	400.5	400.5	401.1	400.5	401.1	399.9	398.6
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0

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