

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: P331933

Luminaire Tested: **S123DIP-S560D805U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331933
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D805U835-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5271.8 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

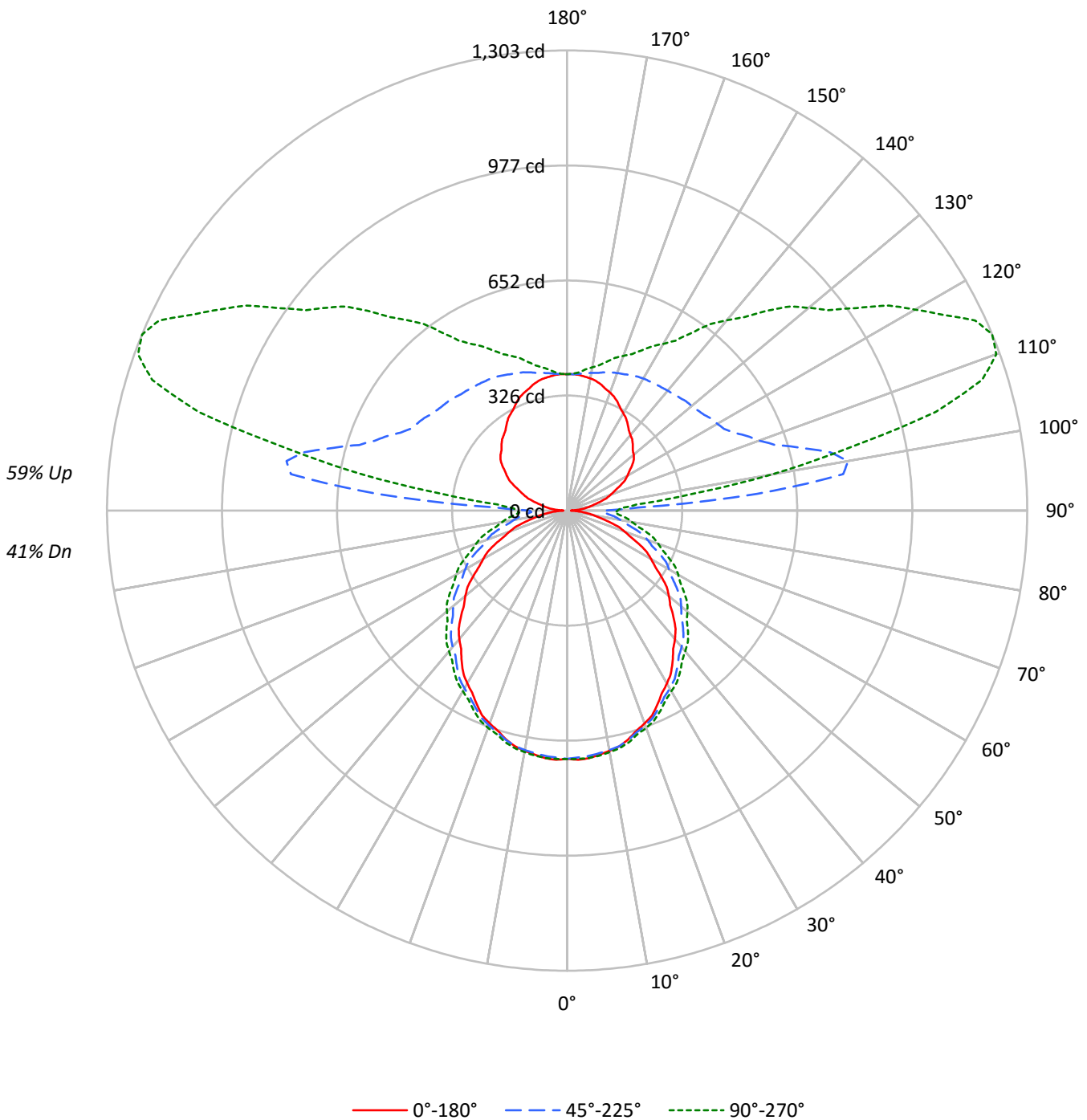
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	96	96	96	96	78	78	78	63	63	63	48	48	48	41
1	95	90	86	82	86	82	79	75	67	65	62	54	52	50	41	40	39	33
2	86	78	72	67	78	71	66	61	59	54	51	47	44	41	36	34	32	27
3	78	69	61	55	71	63	56	51	51	46	42	41	37	35	31	29	27	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	28	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	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	26	22	19	21	18	15	13
8	51	39	31	26	47	36	29	24	30	24	21	24	20	17	19	16	14	11
9	48	36	28	23	43	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	20	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7569	7569	7569
5°	7593	7378	7383
10°	7525	7209	7173
15°	7428	7016	6943
20°	7289	6795	6690
25°	7119	6541	6425
30°	6943	6313	6156
35°	6746	6072	5942
40°	6558	5852	5711
45°	6351	5641	5527
50°	6145	5433	5325
55°	5919	5219	5143
60°	5697	5003	4956
65°	5471	4772	4733
70°	5132	4514	4504
75°	4700	4216	4274
80°	4202	3924	4008
85°	3741	3722	3854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.3
10°-20°	190.0	3.6
20°-30°	284.2	5.4
30°-40°	339.4	6.4
40°-50°	355.1	6.7
50°-60°	333.2	6.3
60°-70°	278.3	5.3
70°-80°	199.1	3.8
80°-90°	121.7	2.3
90°-100°	289.4	5.5
100°-110°	663.4	12.6
110°-120°	635.3	12.1
120°-130°	498.4	9.5
130°-140°	385.9	7.3
140°-150°	283.0	5.4
150°-160°	195.9	3.7
160°-170°	115.1	2.2
170°-180°	37.4	0.7
0°-30°	540.9	10.3
0°-40°	880.3	16.7
0°-60°	1568.7	29.8
0°-90°	2167.9	41.1
90°-120°	1588.1	30.1
90°-150°	2755.5	52.3
90°-180°	3104.0	58.9
0°-180°	5271.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	704	702	698	704	703	67
15°	670	672	672	679	679	189
25°	605	613	615	625	625	279
35°	521	533	543	554	558	326
45°	426	444	463	478	484	328
55°	325	350	378	398	404	291
65°	224	255	288	310	319	222
75°	122	158	196	220	231	130
85°	38	76	116	141	150	39
90°	12	57	106	133	143	9
95°	35	125	540	234	198	35
105°	97	159	686	1177	1080	103
115°	164	214	521	1113	1275	163
125°	225	267	473	853	1000	200
135°	263	313	452	692	800	203
145°	299	341	437	555	614	187
155°	338	365	423	481	501	156
165°	370	380	405	430	437	104
175°	385	386	389	394	393	37
180°	386	386	386	386	386	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	706.3	705.9	705.5	705.0	704.6	703.9	702.8	701.7	700.6	699.5	700.6
5°	704.0	703.6	703.3	703.0	702.6	701.9	700.9	699.9	698.9	697.8	699.2
7.5°	697.1	697.1	697.2	697.3	697.4	696.9	695.9	694.9	693.9	692.9	694.6
10°	691.0	691.3	691.6	692.0	692.3	692.1	691.2	690.4	689.5	688.7	690.4
12.5°	683.6	684.1	684.6	685.0	685.5	685.5	684.9	684.3	683.7	683.1	684.7
15°	670.3	670.8	671.3	671.8	672.3	672.5	672.3	672.1	672.0	671.8	673.5
17.5°	653.4	654.4	655.5	656.5	657.5	658.0	657.9	657.8	657.8	657.7	659.2
20°	641.2	642.2	643.2	644.2	645.2	645.9	646.3	646.6	646.9	647.3	648.8
22.5°	628.3	629.3	630.3	631.4	632.4	633.1	633.6	634.1	634.6	635.0	637.0
25°	605.2	606.9	608.6	610.3	612.0	613.1	613.6	614.1	614.6	615.1	617.3
27.5°	581.9	583.8	585.8	587.7	589.6	591.1	592.2	593.3	594.4	595.5	597.4
30°	565.3	567.5	569.7	572.0	574.2	576.0	577.3	578.7	580.0	581.4	583.5
32.5°	546.9	549.4	551.9	554.4	556.9	559.0	560.8	562.5	564.3	566.1	568.3
35°	520.9	523.6	526.3	529.1	531.8	534.3	536.5	538.7	540.9	543.1	545.7
37.5°	493.3	496.4	499.4	502.5	505.6	508.5	511.2	513.9	516.6	519.4	522.3
40°	474.9	478.0	481.1	484.1	487.2	490.4	493.8	497.2	500.6	504.0	506.9
42.5°	454.7	458.5	462.2	465.9	469.7	473.3	476.9	480.4	484.0	487.5	490.7
45°	425.9	430.0	434.1	438.2	442.2	446.4	450.7	454.9	459.2	463.4	466.7
47.5°	395.7	400.4	405.0	409.6	414.2	419.0	423.9	428.7	433.6	438.5	442.1
50°	376.1	380.9	385.6	390.4	395.2	400.2	405.5	410.8	416.0	421.3	425.2
52.5°	355.3	360.3	365.4	370.4	375.4	380.9	386.7	392.5	398.3	404.2	408.2
55°	324.8	330.4	336.0	341.6	347.3	353.1	359.3	365.4	371.5	377.6	382.2
57.5°	295.1	300.9	306.8	312.6	318.5	324.8	331.5	338.2	344.9	351.6	356.2
60°	274.2	280.4	286.5	292.6	298.7	305.3	312.3	319.3	326.2	333.2	338.0
62.5°	254.6	260.9	267.2	273.4	279.7	286.5	293.9	301.3	308.7	316.1	320.8
65°	224.4	231.1	237.7	244.4	251.0	258.1	265.6	273.0	280.5	288.0	293.1
67.5°	193.8	200.9	207.9	214.9	222.0	229.3	237.0	244.6	252.2	259.8	265.4
70°	172.4	179.7	187.0	194.3	201.6	209.4	217.5	225.7	233.9	242.1	247.5
72.5°	152.7	160.1	167.4	174.7	182.0	189.9	198.3	206.8	215.2	223.7	229.3
75°	121.8	129.8	137.8	145.8	153.8	162.1	170.6	179.1	187.6	196.1	201.7
77.5°	94.8	102.9	111.0	119.0	127.1	135.4	144.0	152.6	161.2	169.8	175.7
80°	75.8	84.2	92.5	100.9	109.2	117.8	126.6	135.5	144.4	153.2	159.0
82.5°	59.3	67.8	76.2	84.7	93.2	101.9	110.9	119.9	128.9	137.9	143.7
85°	37.5	46.0	54.6	63.1	71.6	80.3	89.4	98.4	107.4	116.4	122.2
87.5°	20.7	29.5	38.3	47.2	56.0	64.9	74.0	83.2	92.3	101.5	107.1
90°	11.5	21.4	31.3	42.0	51.9	62.0	73.0	84.1	95.1	106.1	111.1
92.5°	19.0	31.3	45.3	59.0	73.1	92.7	121.7	163.9	205.4	201.9	178.0
95°	35.0	44.0	59.2	79.2	106.1	144.1	218.9	343.7	480.3	539.5	457.2
97.5°	52.9	59.6	72.3	89.9	115.9	155.9	227.3	366.6	588.4	788.8	844.1
100°	64.7	71.0	81.9	98.3	122.5	159.6	222.2	345.7	559.2	807.0	966.0
102.5°	77.3	83.6	93.3	108.6	130.3	164.6	221.4	327.3	518.1	762.7	968.4
105°	96.8	103.3	112.0	125.5	144.4	174.4	223.9	311.8	466.8	686.0	915.2
107.5°	116.9	122.7	130.7	143.4	160.8	188.5	232.5	306.4	432.5	617.8	826.1
110°	131.3	136.7	143.6	155.3	171.7	198.5	240.5	306.7	418.3	579.1	770.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.0	149.9	156.3	167.4	183.2	209.0	248.2	309.8	408.6	551.7	720.9
115°	164.1	169.3	176.0	185.9	201.2	226.4	262.2	316.1	401.9	521.4	660.8
117.5°	183.8	188.7	193.8	202.3	218.4	241.5	276.6	324.9	398.3	501.0	622.1
120°	197.0	200.2	204.9	213.6	229.3	252.1	285.8	332.1	397.9	491.1	601.3
122.5°	208.8	211.6	216.0	224.9	239.5	263.2	296.1	339.0	399.5	483.7	583.8
125°	225.1	226.7	231.4	240.0	254.8	278.4	310.7	350.0	401.9	473.3	560.5
127.5°	238.1	240.3	245.9	254.5	270.7	293.8	324.3	359.3	405.6	465.9	539.4
130°	246.2	248.4	255.3	264.5	280.7	303.5	332.7	365.8	408.3	460.9	527.5
132.5°	251.9	254.8	262.4	273.7	290.0	311.9	339.8	371.6	409.6	457.2	516.2
135°	262.7	265.6	274.0	285.6	301.9	323.8	349.9	378.4	411.5	451.7	500.9
137.5°	272.8	276.0	284.3	296.7	312.8	332.8	357.1	383.5	412.4	446.3	487.6
140°	279.1	283.0	290.8	303.3	319.0	338.8	362.0	385.9	413.0	443.2	479.4
142.5°	286.6	289.7	298.1	309.2	324.7	343.0	365.1	388.0	412.8	439.5	471.7
145°	298.6	300.8	307.7	319.2	332.4	350.3	370.6	391.7	413.6	437.0	463.4
147.5°	310.1	311.5	318.4	328.5	341.3	356.7	375.3	394.2	413.6	434.1	455.9
150°	318.2	319.0	325.2	335.4	346.3	360.4	378.4	394.8	413.6	431.6	451.1
152.5°	326.3	326.5	332.7	341.7	351.3	364.8	380.3	396.1	411.7	428.4	446.1
155°	338.5	338.5	343.2	351.0	359.6	370.6	383.9	396.4	409.7	423.0	438.6
157.5°	348.2	348.8	352.6	359.5	366.8	375.3	385.9	397.2	407.0	418.1	430.2
160°	355.7	355.7	358.9	365.1	370.6	378.4	387.8	397.2	405.8	414.4	424.5
162.5°	361.4	361.4	363.9	368.9	373.7	380.3	388.4	396.5	403.3	410.6	418.9
165°	369.8	369.0	370.6	374.5	377.6	383.1	389.3	394.8	399.5	405.0	411.2
167.5°	376.2	375.3	376.1	379.0	381.2	384.7	389.2	393.6	395.8	399.4	403.9
170°	380.0	378.4	379.2	381.5	383.1	384.7	388.6	391.7	393.3	395.6	399.5
172.5°	382.5	381.5	381.7	383.4	384.3	385.3	388.6	391.1	391.4	392.5	395.1
175°	385.4	384.7	383.9	385.4	385.4	386.2	387.8	389.3	388.6	388.6	390.1
177.5°	386.8	386.2	385.6	386.2	386.2	386.2	386.8	388.1	386.8	386.2	386.8
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	701.7	702.8	703.9	704.4	704.2	704.1	704.0	703.8
5°	700.6	701.9	703.3	703.9	703.7	703.5	703.4	703.2
7.5°	696.3	698.0	699.8	700.5	700.3	700.1	699.9	699.7
10°	692.1	693.8	695.5	696.1	695.8	695.5	695.1	694.8
12.5°	686.3	687.8	689.4	690.0	689.7	689.3	689.0	688.7
15°	675.2	676.9	678.6	679.4	679.2	679.0	678.9	678.7
17.5°	660.8	662.3	663.8	664.5	664.2	664.0	663.8	663.5
20°	650.4	651.9	653.4	654.3	654.4	654.6	654.8	654.9
22.5°	638.9	640.9	642.8	643.7	643.6	643.5	643.4	643.3
25°	619.5	621.8	624.0	625.1	625.1	625.1	625.1	625.1
27.5°	599.3	601.2	603.1	604.2	604.3	604.4	604.6	604.7
30°	585.5	587.5	589.6	590.6	590.6	590.6	590.6	590.6
32.5°	570.4	572.6	574.8	576.1	576.5	576.9	577.3	577.7
35°	548.2	550.8	553.3	554.9	555.6	556.3	557.0	557.7
37.5°	525.1	528.0	530.9	532.7	533.2	533.7	534.3	534.8
40°	509.8	512.7	515.6	517.4	518.1	518.8	519.4	520.1
42.5°	493.8	497.0	500.2	502.2	503.2	504.1	505.1	506.0
45°	469.9	473.1	476.4	478.7	480.0	481.4	482.8	484.1
47.5°	445.8	449.4	453.0	455.4	456.4	457.5	458.6	459.6
50°	429.1	433.1	437.0	439.5	440.7	441.9	443.1	444.3
52.5°	412.3	416.3	420.4	423.1	424.6	426.0	427.5	429.0
55°	386.8	391.4	396.0	399.0	400.4	401.7	403.1	404.5
57.5°	360.9	365.5	370.1	373.2	374.8	376.4	378.0	379.6
60°	342.8	347.5	352.3	355.6	357.5	359.3	361.2	363.1
62.5°	325.6	330.4	335.1	338.4	340.1	341.8	343.6	345.3
65°	298.2	303.3	308.5	311.9	313.6	315.3	317.0	318.7
67.5°	271.0	276.6	282.2	285.7	287.1	288.5	290.0	291.4
70°	253.0	258.4	263.9	267.4	269.1	270.8	272.5	274.2
72.5°	234.8	240.4	246.0	249.7	251.4	253.1	254.8	256.5
75°	207.3	213.0	218.6	222.4	224.4	226.5	228.5	230.6
77.5°	181.6	187.5	193.4	197.2	198.8	200.3	201.9	203.5
80°	164.8	170.6	176.4	180.1	181.8	183.5	185.2	186.9
82.5°	149.5	155.2	161.0	164.8	166.5	168.2	169.9	171.6
85°	128.0	133.8	139.6	143.3	145.0	146.7	148.4	150.1
87.5°	113.1	119.0	125.0	129.0	130.6	132.4	134.3	135.8
90°	117.7	124.3	130.8	136.1	137.0	139.5	142.0	142.9
92.5°	158.8	150.8	150.4	149.9	150.1	149.3	151.7	151.8
95°	367.8	282.4	246.3	221.6	208.5	203.1	199.4	197.9
97.5°	782.1	647.5	551.7	461.6	405.6	372.1	352.7	347.7
100°	998.3	939.9	853.4	745.7	668.4	613.0	584.2	586.7
102.5°	1067.5	1070.3	1021.8	954.6	894.9	851.4	827.6	811.3
105°	1083.4	1166.3	1185.9	1168.7	1134.3	1106.1	1082.6	1080.3
107.5°	1016.0	1147.5	1220.6	1251.4	1253.5	1245.0	1238.1	1232.4
110°	953.8	1102.1	1205.1	1262.7	1285.9	1293.5	1293.3	1293.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	891.7	1043.0	1157.7	1230.9	1272.5	1293.4	1300.8	1302.6
115°	809.5	949.6	1068.6	1156.6	1216.6	1252.3	1269.3	1274.6
117.5°	748.2	869.7	977.0	1066.1	1128.6	1169.3	1193.2	1199.8
120°	715.5	825.0	922.7	1004.2	1067.2	1112.1	1132.1	1138.0
122.5°	689.0	788.3	879.1	954.9	1010.9	1051.5	1073.4	1080.5
125°	653.2	742.0	820.6	885.6	936.8	972.4	993.1	999.8
127.5°	621.3	700.7	771.7	830.9	876.7	907.2	926.0	932.2
130°	601.1	674.7	741.2	796.5	839.0	868.2	885.6	892.9
132.5°	582.1	649.9	712.0	764.8	804.9	834.2	849.9	855.4
135°	556.3	614.9	668.8	715.3	754.5	778.8	793.7	800.0
137.5°	532.7	580.9	627.3	667.7	700.8	725.4	738.2	742.6
140°	518.7	561.1	601.2	636.5	667.1	689.8	703.2	703.3
142.5°	505.1	541.6	576.4	607.2	633.4	653.6	665.7	665.8
145°	489.8	517.0	543.3	567.0	587.3	604.4	611.3	613.5
147.5°	477.4	498.3	518.9	535.5	551.0	562.7	569.2	570.5
150°	469.1	487.1	503.5	518.5	530.6	539.5	544.6	544.9
152.5°	462.2	477.7	492.2	504.6	513.9	522.0	524.8	524.9
155°	451.9	464.4	476.1	485.5	492.5	498.8	500.4	501.1
157.5°	440.9	451.4	460.5	467.8	473.9	478.6	479.9	479.7
160°	434.7	443.3	451.1	456.6	462.1	466.7	466.7	466.0
162.5°	427.2	434.5	441.7	446.6	450.2	454.2	454.2	453.5
165°	417.5	422.2	427.7	431.6	434.7	437.8	437.0	437.0
167.5°	409.0	412.6	415.8	418.6	420.0	422.2	421.4	421.4
170°	403.4	405.8	408.9	410.5	411.2	412.8	412.0	412.0
172.5°	398.4	400.1	402.6	403.6	403.7	405.3	403.9	403.3
175°	391.7	392.5	394.0	394.0	394.0	394.8	394.0	393.3
177.5°	387.5	388.1	388.7	388.7	388.1	388.7	387.5	387.5
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2

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